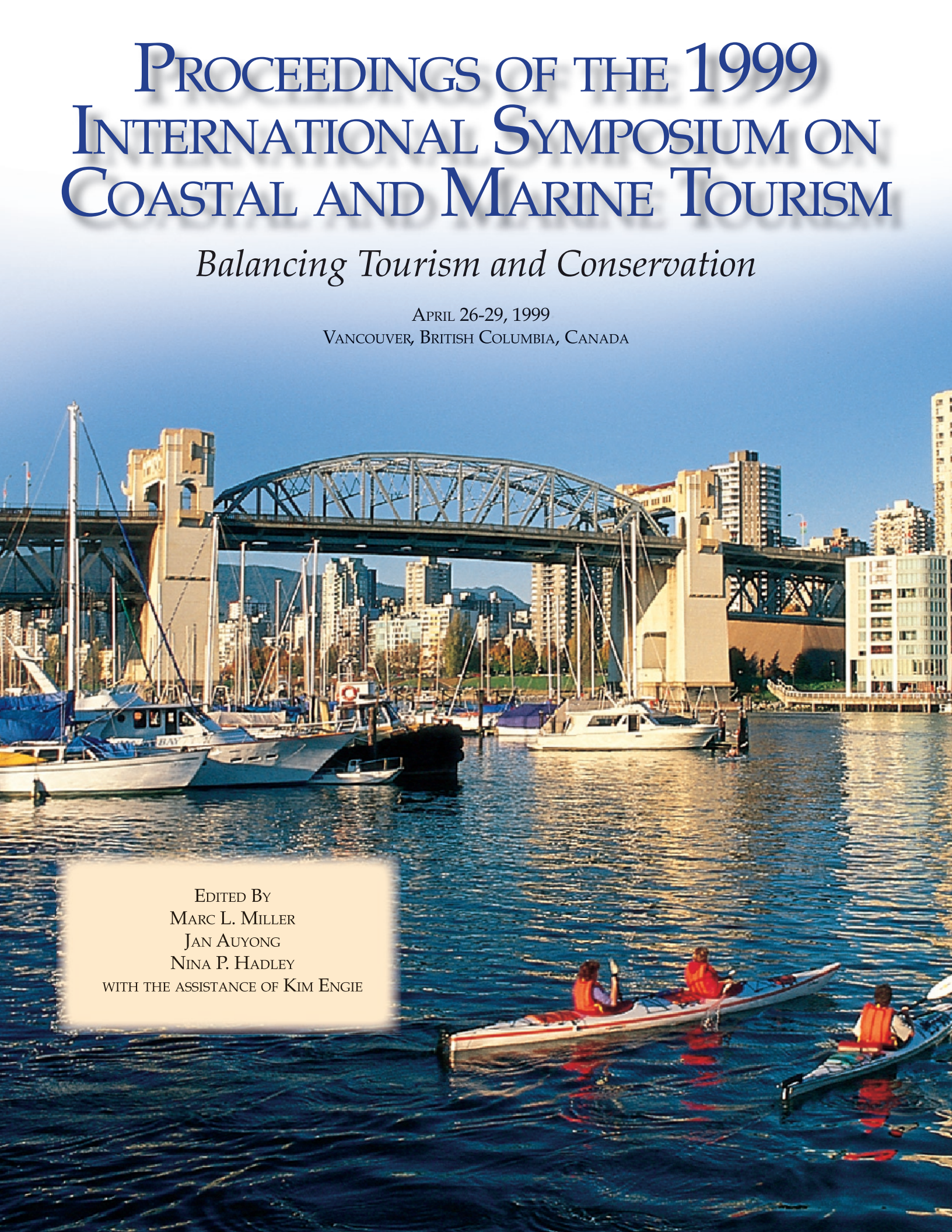


PROCEEDINGS OF THE 1999 INTERNATIONAL SYMPOSIUM ON COASTAL AND MARINE TOURISM

Balancing Tourism and Conservation

APRIL 26-29, 1999

VANCOUVER, BRITISH COLUMBIA, CANADA



EDITED BY
MARC L. MILLER
JAN AUYONG
NINA P. HADLEY
WITH THE ASSISTANCE OF KIM ENGIE

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SCHOOL OF MARINE AFFAIRS
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Preface

In 1990, the first Congress on Coastal and Marine Tourism was a response to the growing need to bridge economic development and conservation of our coastal resources. What we learned at CMT90 from participants was that the mixed record of coastal and marine tourism required immediate and sustained study by a wide range of disciplines as well as a disciplined application of that information.

At the World Congress on Coastal and Marine Tourism which followed in 1996 we wanted to learn whether we had progressed in our knowledge and abilities regarding sustainable tourism on the coast. Discussions at CMT96 showed that we still had a long way to go in achieving sustainability in coastal tourism. However, we did learn that there was a widespread acceptance of the need to address coastal and marine tourism growth issues by governments, industries, and others.

As a result, International Symposium on Coastal and Marine Tourism was convened in 1999 to focus not so much on the *ends*, but rather on the *means* of achieving more sustainable development. The selected theme for CMT99, "Choices, Responsibilities, and Practices," reflected this focus. The venue for CMT99, Vancouver, BC, Canada, was influential in showing that environmentally sensitive, nature-based tourism could be

responsibly implemented in urban as well as rural settings. CMT99 workshops, field trips, and plenary sessions explored programs and steps taken to promote the development of practical programs and strategies for environmentally responsible tourism in port/coastal cities, including greater community involvement and awareness.

We believe CMT99 was a success and we hope you will find this *Proceedings of the International Symposium on Coastal and Marine Tourism* to be provocative and to stimulate continued attention to the important problems and opportunities associated with coastal and marine tourism.

Jan Auyong

Chair, 1999 International Symposium on Coastal and Marine Tourism Convening Committee

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***1999 International Symposium on
Coastal and Marine Tourism***

PAPERS

SUSTAINABLE COASTAL TOURISM: CHALLENGES FOR MANAGEMENT, PLANNING, AND EDUCATION

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Abstract: Coastal tourism development is an inherently controversial and increasingly complex phenomenon that forces deliberation over marine life and habitat conservation, economic improvement, and quality of life objectives. With this situation, the ideal of sustainable coastal tourism has found much support by brokers who control tourism, locals who witness tourism, and varieties of (eco)tourists. Mechanisms that have shown potential for shaping coastal tourism systems in positive ways include tourism management, tourism planning, and tourism education. However, the attainment of sustainable coastal tourism goals will also depend on multidisciplinary tourism research, enhanced broker-broker communication and cooperation, and the commitment of tourists to be alert to ecological and cultural consequences of their travel.

Keywords: sustainable development, coastal tourism systems, tourism brokers, tourism locals, tourists, tourism ethics

Introduction

"A [young man traveling] must have some entrance into the language before he goeth. ... Let him carry with him also some card [map] or book describing the country where he travelleth, which will be a good key to his inquiry. Let him keep also a diary. ... When a trav-

eller returneth home, let him not leave the countries where he hath travelled altogether behind him, but maintain a correspondence by letters with those of his acquaintance which are of most worth."

--- Francis Bacon, *The Essays*
(1985 [1625]: 114)

In the seventeenth century at the time the Grand Tour was just taking shape as a touristic institution and rite of passage in Europe, Francis Bacon recommended in his essay "Of Travel" that tourists who gain an education in foreign lands not only prepare for their trips but also maintain "a correspondence" with people encountered. Today, the obligations of tourists (and those in government and commerce who promote tourism) have expanded. Sustainable tourism requires understanding of the cultural and sociological, the economic and political, and the ecological and biological consequences of travel.

Coastal tourism is a process involving tourists and the people and places they visit, particularly the coastal environment and its natural and cultural resources. Most coastal tourism takes place along the shore and in the water immediately adjacent to the shoreline. Today, tourists travel to the coastal zone for parts of a day, for weekends, for

short vacations, and for prolonged stays. Depending on the circumstances, they may travel alone, with family, or in groups. They may stay in coastal tourism accommodations ranging from small residences and camping sites rented out as opportunities arise, to single bed-and-breakfast and hotel rooms, to luxury suites in resort enclaves. Some coastal tourism is organized for a special purpose such as ecotourism, adventure tourism, scientific tourism, and dive tourism. As with other human endeavors in the coastal zone associated with development, tourism is viewed positively by some for the opportunities it creates, while others condemn coastal tourism for its unacceptable consequences.

Coastal tourism destinations fall along an urban-rural continuum. At one end of the scale are major cities and ports (Hong Kong, Venice, New York, Rio de Janeiro, and Sydney come to mind) known for their cultural, historical, and economic significance. At the other end of the continuum are the relatively isolated and pristine coastlines found around the world that are valued for their natural beauty, flora and fauna. Of course, many coastal tourism destinations offer rich mixtures of cultural, historical, social, environmental, and other values to visitors.

Coastal tourism technologies of travel include both those which carry tourists from their homeland (e.g., airplanes, ships, cars, buses, and trains) and which are regarded by travelers as mere means to the end of arriving at destinations, and those which transport tourists at coastal destinations but which become part of the touristic experience (e.g., cruise ships, high-speed catamarans, personal watercraft, sailboats, dive boats, motorcycles, and bicycles). Transportation technologies can, depending on the circumstance, be important for being both convenient and for being interesting or pleasing.

In a manner of speaking, tourism is a matter of supply and demand. With this perspective, coastal tourism is a business for those who make a living by developing accom-

modations and attractions, and by providing touristic and recreational products and services. Competing marketing programs of a multifaceted industry alert tourists and would-be travelers to coastal tourism properties, amenities and activities. In fact, many coastal tourism activities count as a business for those in the tourism industry and as an experience for tourists. Scuba diving, for example, provides an excellent example of how advances in technology have provided foundations for business and have facilitated touristic access to the marine environment. Other coastal activities that have a business aspect (involving, for example, guides and instructors, or special equipment) include recreational and sportfishing, boating, sailing and parasailing, and whale and bird watching. Then too, there are many forms of coastal tourism—swimming and body surfing, snorkeling, beachcombing, hiking and rock climbing, sketching and painting, photographing, sightseeing—that are “free,” but for which costs to providers are recovered indirectly through taxes, or are incorporated in standard hotel or accommodation billing practices.

Coastal tourism is inherently controversial. At the same time that coastal tourism fosters economic relationships between industry producers and tourist consumers, the process has shown itself to be an enormously potent force in transforming the natural environment and the lives of people who are neither part of the business of tourism nor a member of the community of tourists. The coastal zone is a scarce resource prized not only by those who engage in and profit by tourism, but also by those with personal residences near the sea, and those who find employment in fishing, aquaculture, maritime shipping, nuclear energy, and national defense, among other industries. Congestion and competition in the coastal zone frames the characterization and the resolution of tourism issues. Coastal tourism problems and opportunities are therefore properly debated as “multiple-use” or “multiple-value” conflicts.

Magnitude of Coastal Tourism

Although there are no standardized practices for reporting tourism statistics within the coastal zone, it is not difficult to see how tourism has a major coastal aspect. Only several dozen out of well over 200 nations in the world lack coastlines (Miller and Auyong, 1991b: 80-89). Of the world's top 15 tourism destination countries in 2000, 12 were countries having coastlines (WTO, 2001: 2).

International Trends

World Tourism Organization (WTO) statistics confirm that tourism is the world's largest industry as measured by the number of people involved and by economic impacts. International tourism arrivals totaled 693 million in 2001 (WTO, 2002: 1). By the year 2020, it is estimated that international tourist arrivals will reach over 1.56 billion. Statistical estimations for total tourist arrivals by region show that in 2020 the top three receiving regions will be Europe (717 million tourists), East Asia and the Pacific (397 million tourists), and the Americas (282 million tourists), followed by Africa, the Middle East, and South Asia (WTO, 2001: 6).

In 1995, travel and tourism generated an estimated USD\$3.4 trillion in gross output creating employment for 212 million people and producing nearly 11% of the world gross domestic product (WTO, 2001: 2). International tourism receipts for 2001 amounted to USD\$463 billion (WTO, 2002: 1).

A selection of international trends and statistics illustrates the significance of tourism to coastal economies:

- According to the International Fund for Animal Welfare (IFAW), whale-watching is a billion-dollar worldwide industry (Bridges, 2001: 5).
- Gamefish tournaments and derbies which attract international anglers are proliferating throughout the Pacific (Miller, et al., 2001).
- According to Cruise Lines International Association figures, the number of North American cruise vacationers in 2000 was nearly 6.9 million, an increase of nearly 17% over the previous year (Bridges, 2002: 192).
- The Pacific Asia Travel Association's (PATA) Pacific statistical region (composed of Australia, New Zealand, American Samoa, the Cook Islands, Fiji, Guam, Hawaii, New Caledonia, the Northern Mariana Islands, Palau, Papua New Guinea, Samoa, the Solomon Islands, Tahiti, Tonga, and Vanuatu) has benefited from an annual (visitor) arrival growth rate of 3.6% since the mid 1990s (Bridges, 2002: 148).
- Sun, beautiful beaches, and warm ocean waters have become standard vacation requirements for many tourists. Forty-nine percent of those visiting the Caribbean do so for the beaches, while 28 percent are primarily interested in sightseeing, and 17 percent in water sports. Moreover, roughly 25% of the jobs in the Caribbean are directly or indirectly tourism related (Bridges, 2002: 93-94).

US Trends

In 2000, the number of international visitors to the US totaled 50.9 million persons, a value second only to that of France (75 million) The US ranked first in the world in 2000 in generating USD\$85.2 billion in tourism receipts (excluding international transport) (WTO figures reported in Bridges, 2002: 6).

The Office of Travel and Tourism Industries (Department of Commerce) anticipates that the number of international visitor arrivals to the US in 2002 will reach 46.7 million, a 2.2% increase over the figure for the previous year (Travel Industry Association of America, 2002a: 3).

Foreign tourists are especially attracted to US coastal states (Houston, 1996: 4). In 1995, overseas visitors to the US increased by 12% to 20.6 million; three coastal states (Florida, California, and New York) hosted 74% of these visitors (Bridges, 1997: 63). More than 50 million people visit US beaches each summer; this activity accounts for 85% of all tourist revenue and generates USD\$640 billion a year for the US economy (Bridges, 2002: 8). US coastlines are popular sites for tourism and recreational activities, but coastal tourism and recreation activities often overlap and are not always confined to the marine and coastal environment. For example, diving, fishing and whale watching are often done while boating; surfing, swimming and bird watching are usually done while visiting beaches and shorelines; and not all recreational boats are used exclusively in marine and coastal waters. Beach travelers take longer and more expensive vacations, and are more likely to rent a timeshare or condominium than average tourists (Travel Industry Association of America, 2002b: 1).

As in many locales around the world, comprehensive and time-series statistics measuring employment, and the economic and social value of coastal tourism and recreation in the US are not available. Quantitative and reliable data measuring involvement in specific coastal recreation and tourism activities in the US are limited (and often proprietary). Nonetheless, many small and unconnected studies have been conducted on specific tourism topics and destinations in the coastal zone.

Several boating and fishing statistics provide some idea of the economic and social importance of coastal tourism. In 2000, registered boats in the 50 states and US territories numbered nearly 12.8 million (National Marine Manufacturers Association, 2000a: 2). In 2001, 69.5 million people participated in recreational boating and recreational boaters spent nearly USD\$225.6 million on new and used boats, motors and engines, trailers, accessories, and other associated

costs (National Marine Manufacturers Association, 2000b: 1).

A recent report of outdoor recreation in the US revealed that for a 1994 -95 study period 9.5 million people engaged in saltwater fishing, 1.1 million people participated in sailboarding and windsurfing, and that 7.2 million people participated in snorkeling and scuba activities (Cordell et al., 1997: 9-10).

Tourism Development

As described above, coastal tourism has become a major facet of modern life. Further, tourism development in the coastal zone has become a constant since the end of World War II. Well-known examples are found on the coastlines and islands of Europe, North and South America, Africa, and Asia (Miller and Auyong, 1991a and 1998a; Conlin and Baum, 1995; Lockhart and Drakakis-Smith, 1997). Tourism development often leads to changes in the environment and society of some kind. While conclusions about the "appropriateness," "success," "inappropriateness," or "failure" of coastal tourism development projects vary to a degree with the political and economic orientations, aesthetic standards, and environmental philosophies of analysts and observers, there is no question about the power of tourism development to quickly effect dramatic change.

From an environmental perspective, tourism development can lead to degradation of ecosystems. This, of course, is unavoidable with the building of airports, ports, road systems, hotels, resorts and other facilities. This said, tourism development can also provide financial support for the protection of the marine environment and endangered species, as for example, in the creation of underwater and marine parks and protected areas.

From a societal point of view, tourism development promises better quality of life. In theory, poverty is alleviated through the creation of new jobs. Personal income and

taxes derived from tourism then fosters better health, education, and other social services. In practice, these goals are only sometimes met. In many cases, failures of political institutions have led to unfair distributions of tourism-generated revenues and to problems of environmental justice.

In some instances, changes in the community that are derivative of tourism are undeniably positive. In other cases, the effects are negative. In a study of tourism in a Mexican coastal community, McGoodwin (1986) has identified a *tourist impact syndrome* which identifies the possible cultural costs to tourism system locals as including: 1) loss of political and economic autonomy (including loss of real property), 2) loss of folklore and related cultural institutions, 3) social disorganization (including radical changes in value orientations and in norms regarding social relations; heightened desire for material objects; changes in norms regarding work, sexual behavior, and drug use; promotion of illusory life aspirations; and loss of parental control and of respect for elders), and 4) hostility towards tourists (e.g., thievery, hustling, verbal aggression).

Over the last decades, there has been growing recognition of the social and environmental trade-offs of tourism and also of the unintended consequences and economic externalities of tourism development (see, for example, Mathieson and Wall, 1982; Edwards, 1988; Pearce, 1989; Clark, 1996; Orams, 1999). With this, coastal tourism development is increasingly designed, debated, and evaluated against the ideal of *sustainable development*. Two prominent statements on this important concept follow (emphases added):

“Economic growth always brings risk of environmental damage, as it puts increased pressure on environmental resources. But policy makers guided by the concept of

sustainable development will necessarily work to assure that growing economies remain firmly attached to their ecological roots and that these roots are protected and nurtured so that they may support growth over the long term.” (World Commission on Environment and Development, 1987: 40)

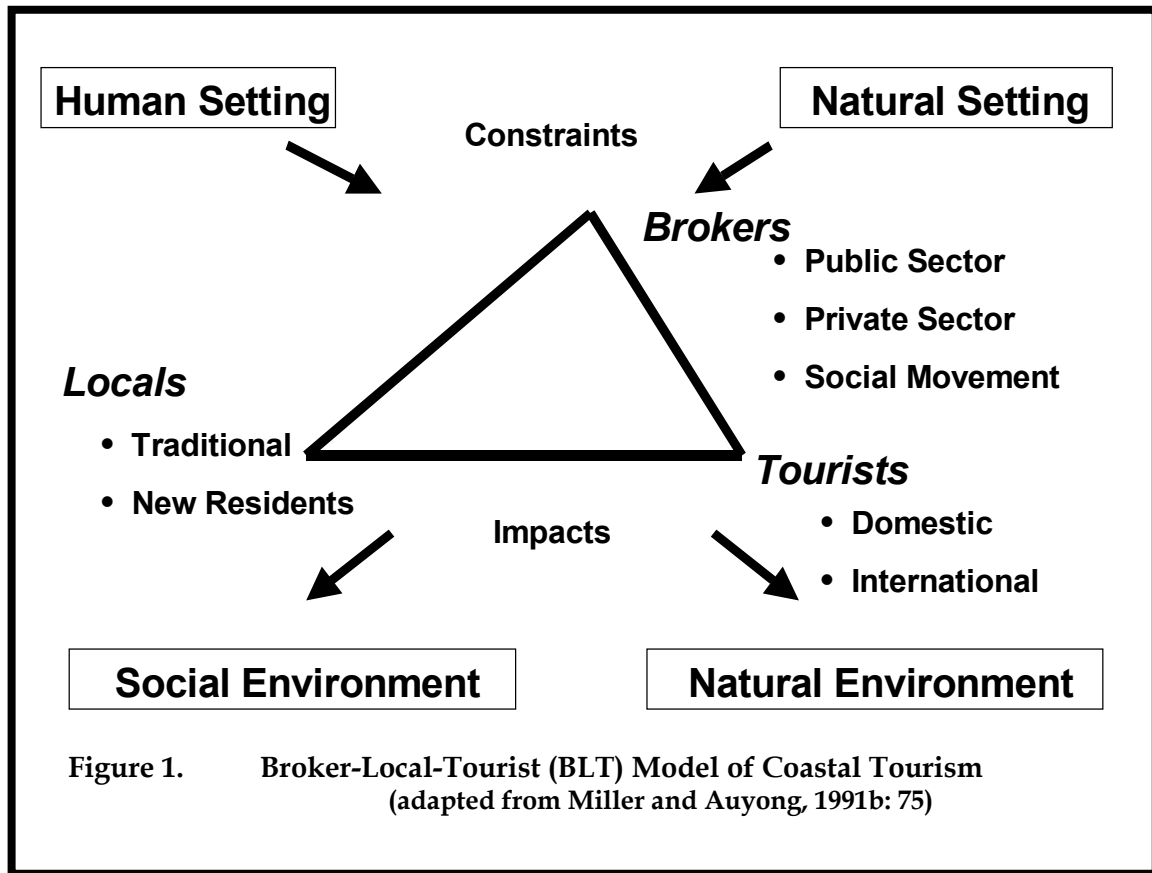
“(Sustainable development means) improving the capacity to convert a constant level of physical resource use to the increased satisfaction of human needs.” (World Conservation Union, the United Nations Environment Programme, and the World Wide Fund for Nature, 1990: 10)

In working toward more sustainable coastal tourism, an understanding about people-place and people-people interactions would be beneficial.

Coastal Tourism Systems

Coastal tourism systems involve interactions between people and place in destinations that include small communities and villages, self-contained resorts, and cosmopolitan cities. From a sociological perspective, coastal tourism systems have three kinds of actors --1) *tourism brokers*, 2) *tourism locals*, and 3) *tourists* (Miller and Auyong, 1998b). Interactions within and between these actors can affect the speed and character of development.

A “broker-local-tourist” (BLT) model of a coastal tourism system is displayed in Figure 1 (see, Miller and Auyong, 1991b; 1998b). Tourism brokers consist of persons who in one way or another pay professional attention to tourism. Main subcategories include 1) private sector brokers who are



part of the tourism industry, 2) public sector brokers at various levels of government who study, regulate, and plan tourism, and 3) social movement brokers in non-governmental, non-profit, and environmental organizations who address tourism issues. Tourism brokers of these and other types do not necessarily agree on the kind of tourism that is “best” for coastal tourism systems. Indeed, broker-broker conflict is as common as cooperation. Tourism locals consist of persons who reside in the general region a coastal tourism destination, but do not derive an income from tourism or engage in its management and regulation. Finally, tourists consist of persons of domestic and international origin who travel for relatively short periods of time for business, recreation, and educational purposes before returning home. The tourism process provides incentives for locals to become tourism brokers. The lives, then, of both locals and new brokers are changed by coastal development.

System Dynamics

Coastal tourism systems change in size and character over time. To understand and ultimately predict these changes, and also to plan for desired societal and environmental outcomes, analysis must focus on the behavior of components of the system. In this regard, two processes merit attention.

First, population dynamics of the BLT model should be monitored. It is not unusual for individuals in the system to change statuses. This can occur as, for example, tourists who visit a coastal destination decide to stay and take on a residence, either as a broker of some kind (for example, as a scuba dive shop entrepreneur or restaurant owner), or as a local (for example, as a lawyer or teacher). Other transformations in status take place as locals change occupations and become private sector brokers by engaging in a tourism business, or become public sector brokers by finding government employment that concerns tourism. Of

course, locals and brokers take on the role of a tourist when they vacation on travel of their own.

Second, power dynamics of the BLT model should be taken into account. Tourism is often examined as a product of the aggregate decisions of individual tourists. The relationship forged between the tourist and the local is accordingly depicted as socio-economic in nature; tourists and locals interact as "guests" and "hosts" or as consumers and producers. Where power relationships are perceived to exist (as, for example, between First World tourists and Third and Fourth World locals), it is argued that these reveal the colonial and imperialistic leverage tourists have over those whom they visit. From this perspective, tourism systems are controlled and determined - often in unfortunate ways - by the behavior of tourists.

While there certainly are many instances in which tourists have exercised their influence to selfish and inappropriate advantage in coastal tourism settings, a narrow concentration on the power of tourists can result in analysts missing the power of tourism brokers. As Cheong and Miller (2000) have pointed out, tourists are frequently vulnerable to the power and control of brokers and locals. This is the case when, for example, tourists abide by laws and regulations of public sector brokers, and when they follow the advice and instructions of private sector brokers such as tour guides and travel agents.

Toward the Resolution of Coastal Tourism Issues

Coastal tourism has been seen to be responsible for both positive and negative impacts to the natural and social environment (see Figure 1). The impacts of coastal tourism on the social environment involve social, cultural, political and economic issues. On the positive side, coastal tourism can foster community pride, improved quality of life and new job opportunities; on the negative

side, coastal tourism can lead to problems of overcrowding, social displacement, and crime. Impacts on the natural environment are often biological, physical, and ecological in nature. Increased protection and conservation of many areas and species has been a positive result of coastal tourism; nevertheless problems of erosion, pollution, and loss of species diversity occur far too frequently. It should not surprise that many coastal tourism issues simultaneously affect the social and natural environment.

The viability of coastal tourism systems and the natural environment in which they occur is very much dependent on human behavior. The resolution of coastal tourism issues can arise from the work of tourism system brokers and also from the individual decisions of locals and tourists.

Of the multiple ways available to society to control human conduct, three mechanisms are prominent in the coastal tourism context. These mechanisms are *tourism management*, *tourism planning*, and *tourism education*.

Tourism management, planning, and education are crucial to the sustainable evolution of a touristic destination. It is therefore imperative that each are administered in such a way as to provide for the social and economic needs of the community, while at the same time ensuring that environmentally sensitive areas and ecologically important habitats are identified and excluded from tourism pressure. It is also recognized that tourism management, planning, and education are necessary not only for scientific purposes and to conserve the environment for the benefit of residents, but also for the protection of long-term investments in tourism infrastructure, attractions, facilities, services, and marketing programs. It deserves to be noted that coastal tourism management, planning, and education programs are often designed and implemented by the same agencies and organizations. This overlap is often desirable and is found in some instances of larger efforts of government to promote integrated coastal zone manage-

ment (see Clark, 1996; Cicin-Sain and Knecht, 1998).

The manner in which a country, region, or community chooses to conduct touristic management, planning, and education activities is framed by societal (political, economic, etc.) and environmental (geography, natural resource, etc.) constraints. In the long run, the wisest course of action is to balance environmental, business, management, and social concerns so that tourism development is recognized as a potentially dangerous, but also potentially valuable and responsible course of action.

Coastal Tourism Management

Very generally, management concerns the actions of an executive decision-making entity in accordance with overarching goals of the larger enterprise in which it is housed. Although resorts, hotels, restaurants, transportation businesses, and many other firms in the coastal tourism sector do make decisions in strategic and professional ways, management, as the term is employed here, points to work engaged in or sponsored by public sector brokers to address problems and opportunities of coastal tourism.

Throughout the world, coastal tourism is managed by regulatory entities in accordance with the structure and procedures of the prevailing political system. In practice, coastal tourism management is conducted by public sector brokers at all levels of government, by private sector brokers in businesses, and by some NGOs and environmental and social movement brokers. An array of tourism management tools (e.g., licensing regulations, zoning rules, tourist quotas, time and areas restrictions, and carrying capacity and limits of acceptable change regulations) have been used successfully throughout the Pacific, in the Caribbean, in the Atlantic and elsewhere (see, Pearce, 1989; Miller and Auyong, 1991a and 1998; Conlin and Baum, 1995; Lockhart and Drakakis-Smith, 1997; Orams, 1999). The concepts of *zoning* and *carrying capacity* deserve further attention due to their particu-

lar applicability to the management of tourism in coastal areas.

Two very significant parks utilize zoning as a means of tourism management. The Great Barrier Reef Marine Park in Australia is a multiple-use protected area. With zoning, conflicting uses are physically separated. The range of protection in the park varies from virtually no protection to zones where human activity is conditionally permitted. The adoption of this zoning scheme allows the park authority, in association with interested members of the public and with other agencies, to develop and apply a tourism strategy for the entire Great Barrier Reef Marine Park. Zoning ensures that the Reef will not become overpopulated with tourist and other structures, but also allows for careful development in areas which are suitable for that purpose. The Galapagos Islands National Park in Ecuador also employs zoning strategies. The park is effectively managed with intensive use, extensive use, and scientific use (off limits to all but a few visitors) zones.

Carrying capacity regulations illustrate the "precautionary principal" method of natural resource management and are highly regarded by practitioners of tourism management. Coastal tourism managers who seek to determine the appropriate level of use that can be sustained by the natural resources of an area are well aware that carrying capacities and use-intensity limits of tourism destinations are dynamic, and depend greatly on the biological and ecological processes of natural resources.

Coastal area carrying capacity can be evaluated in four ways (Sowman, 1987). Physical carrying capacity is concerned with the maximum number of "use units" (e.g., people, vehicles, boats) which can be physically accommodated in an area. Economic carrying capacity relates to situations where a resource is simultaneously utilized for outdoor recreation and economic activity. Ecological carrying capacity (sometimes referred to also as physical, bio-physical, or environmental carrying capacity) is con-

cerned with the maximum level of recreational use that can be accommodated by an area or an ecosystem before an unacceptable or irreversible decline in ecological values occur. Social carrying capacity (also referred to as perceptual, psychological or behavioral capacity) is concerned with the visitor's perception of the presence (or absence) of others simultaneously utilizing the resource of an area. This concept is concerned with the effect of crowding on the enjoyment and appreciation of the recreation site or experience.

The *limits of acceptable change* (LAC) framework developed by Stankey et al. (1985) enables managers to move beyond calculation of carrying capacity figures to address actions needed for management goals. This approach concentrates on establishing measurable limits to human-induced changes in the natural and social setting of parks and protected areas, and on identifying appropriate management strategies to maintain and/or restore desired conditions (Stankey et al., 1985). Knowledge of the natural (physical, biological) setting is combined with knowledge of the human (social, political) setting in order to define appropriate future conditions.

The LAC method employs nine steps as follows: 1) identification of area concerns and issues, 2) definition and description of opportunity classes, 3) selection of indicators of resource and social conditions, 4) inventory of resource and social conditions, 5) specification of standards for resource and social indicators, 6) identification of alternative opportunity class allocations, 7) identification of management actions for each alternative, 8) evaluation and selection of an alternative, and 9) implementation of actions and monitoring of conditions. To date, the LAC system has proved to be a valuable tourism management tool in several wilderness areas in the US and has direct applications to coastal areas as well.

Coastal Tourism Planning

Planning, broadly conceived, entails the consideration of a range of actions likely to contribute to the attainment of organizational goals. In some instances, overarching goals are well known in advance and planning professionals concentrate on the means that will ensure these ends. In other situations, the determination of goals requires prolonged deliberation.

Coastal tourism planning is often integrated with other resource analyses in the development of coastal area or region. Planners take into account not only visitation rates and statistics, but also the fact that tourists increasingly insist that destinations be high-quality and pollution-free, as well as inherently interesting. Therefore, it is in both the public and private sector brokers' interest to implement a tourism planning strategy. The goals and policies of government agencies and businesses are, however, frequently different from one other and may even be in direct conflict. To minimize and even prevent disruptions and loss of time, communication between tourism brokers is crucial.

The success or failure of a tourism project frequently hinges on the conditions of natural amenities in the surrounding environment. This is especially true for tropical environments found, for example, on Pacific and Caribbean islands. Parks and natural resource areas, scenic vistas, archaeological and historic sites, and coral reefs are all touted tourism attractions. Marketing strategies for coastal, marine, and island tourism especially promote destinations for being close to white sand beaches. However, development of permanent structures for tourism near beaches often exacerbates beach erosion, property damage, and requires construction of shore protection structures. If touristic facilities are to be sited near beaches, proper planning is essential for the protection of the coastal zone and private property.

In many numerous coastal and island states located in the Mediterranean, Caribbean and

the Pacific where tourism is a major economic force, major national-level departments of government shape coastal tourism through the design of investment incentives and international joint venture opportunities. In nations such as Mexico and Costa Rica, these activities are linked to the preparation of strategic tourism plans.

In the US - and with notable exceptions such as those provided by the National Park Service - very little coastal tourism planning takes place in the federal government. At the state level, it is commonplace for departments of tourism to promote tourism. While many states have experienced great success in attracting tourists with advertising strategies, most state departments of tourism have yet to augment the marketing of tourism with the monitoring and assessment of coastal tourism's effects on the environment and quality of life. At the local level, many city governments have utilized their planning departments to recommend approaches to issues having to do with public use of the shoreline and natural resources, the revitalization of waterfronts, and zoning appropriate to resort and marina development.

Coastal tourism planning generally falls into two main categories, depending on whether the project in question is driven by a preservation or a development ethic. Preservation goals predominate in the planning of recreational areas, in national park and marine protected area planning, and in planning that is part of natural resource management. The development framework has found application in seaside resort and theme park planning, in condominium time-share planning, and in varieties of coastal city planning. There are many examples worldwide of coastal tourism zones, replete with both preservation and development projects, that extend from major cities. The Costa Brava in Spain, the French Riviera, the Yucatan Peninsula, the East Coast of Australia, and the coastlines of the US and many Polynesian islands illustrate mixed planning.

Because coastal tourism planning efforts are attuned to local conditions, constituencies, and financial constraints, there is no single planning process for guaranteeing success. This said, most professional planning endeavors share a general structure. Grenier et al. (1993) suggest a three-phase tourism planning process. With this, a first "Front-end Planning" phase encompasses scoping (entailing a statement of project philosophy, pre-assessments of key issues and themes, and formulation of objectives) and research (involving data collection and analyses supporting cultural, institutional, and environmental profiles; site reconnaissance; eco-determinant mapping; and analyses of constraints and opportunities). A second "Project Planning" phase is focused on refinement of project objectives, design and evaluation of alternative development plan concepts, and selection and approval of the preferred development plan concept. A third and final "Project Management" phase concerns activities of implementation, monitoring and evaluation, and refinement.

Within the private sector, coastal tourism planning is an established professional specialty. Firms of all sizes develop coastal tourism plans tailored by expert consultants to the needs of developer clients. Increasingly, social movement brokers are being seen to engage in professional coastal tourism planning. Such planning efforts incorporate motivational or satisfaction theories to attract tourists or manage tourist systems and attractions. While there are many psychological, social psychological, and social concepts and frameworks for accounting for tourism, only a few are mentioned here.

First and looking to the motives of tourists, Miller and Ditton (1986: 11) suggest that the fundamental promise of travel "lies in its promise of contrast." In elaboration, these authors show that individual trips and vacations allow opportunities for contrast or personal change along three dimensions. *Recreational tourism* as engaged in by the athlete or escapist has a restorative purpose, and provides for change in the physiological or emotional state of the tourist. *Educational*

tourism as pursued by the student has a philosophical purpose and provides a basis for change in the intellectual and artistic understanding of the tourist. *Instrumental tourism* as involving entrepreneurs, reformers, and pilgrims exhibits an economic, political, or religious purpose and leads to change in business, network, or moral opportunities available to the tourist. With this framework, a trip by one tourist to, say, a South Pacific island might be experienced as highly recreational, mildly educational, and not at all instrumental. Those accompanying such a tourist could, of course, experience the trip with different weightings along the three dimensions of touristic contrast.

A second way of considering the motivation of tourists emphasizes their intention to experience a psychological state of *challenge* that Csikszentmihalyi (1975, 1990) terms *flow* or *optimal experience*. When in a state of flow--as one might be when surfing, sailing, scuba diving, or even engaging in stimulating conversation--the tourist has found a fine match between his or her abilities and the physical, intellectual, or social challenge at hand. According to Csikszentmihalyi (1975: 38-48) the flow experience is engaged in for its own sake and is marked by 1) a merging of action and awareness, 2) a centering of attention on a limited stimulus field, 3) a feeling variously described as "loss of ego," "self-forgetfulness," "loss of self-consciousness," and even "transcendence of individuality," and "fusion with the world," 4) a feeling of control over one's actions and the environment, 5) coherent, noncontradictory demands for action, and clear unambiguous feedback, and 6) its autotelic [from Greek *auto* = self and *telos* = goal, purpose] nature.

It is often remarked that people who travel together gradually develop a kind of touristic solidarity. By seeing and doing the same things, by sharing emotions and reactions, by facing a common set of logistic obstacles, and even by jointly creating a set of "story lines" with which they might talk about a trip with others, tourists are brought to-

gether through the small and multiple secular rituals of travel.

In acknowledging this ritual potential, a third perspective on touristic motivation stresses the passionate commitment that some tourists exude in performing their favorite coastal activity. In studies of amateurs, volunteers, and hobbyist in sports, science, and the arts, Stebbins (1992: 3) noted intense levels of personal involvement and high levels of technical competence, and coined the term *serious leisure* to describe commitment that was tantamount to professionalism:

"[S]erious leisure can be defined as the systematic pursuit of an amateur, hobbyist, or volunteer activity that is sufficiently substantial and interesting for the participant to find a career there in the acquisition and expression of its special skills and knowledge."

In the realm of coastal tourism, tourists who pursue serious leisure are omnipresent as evidenced by scuba divers, sailors, whale watchers, amateur naturalists and marine conservationists, and the like.

In summary, coastal tourism planning has been fostered by public sector brokers at all governmental levels, by consultants among other private sector brokers, and by an impressive range of non-governmental and environmental organizations in roles they have taken on as social movement tourism brokers. Coastal tourism planning practitioners have developed an array of planning methodologies (e.g., comprehensive land-use planning, integrated coastal zone planning, and strategic and special use planning) and have utilized these throughout the world, in many instances by cooperating with tourism brokers with management expertise (see, Gunn, 1988; Pearce, 1989; Miller and Auyong, 1991a and 1998a; Conlin and Baum, 1995; Lockhart and Drakakis-Smith, 1997; Orams, 1999; Hadley, 2001).

Coastal Tourism Education

The two mechanisms for the control of human behavior in coastal tourism systems discussed above - management and planning - are similar to one another in that the tourism experts who analyze coastal tourism situations channel their recommendations upward to regulatory and planning authorities. These tourism brokers then implement policies and plans downward, influencing tourism businesses, tourists, and locals.

A third mechanism concerns coastal tourism education and communication. Although education about coastal science and environmental issues is effectively transmitted in classrooms, discussion here focuses on education and outreach in non-traditional settings and how people learn through the experience of being tourists or learn in the course of daily life. Guided tours, museums, brochures, public lectures, newspapers, and signage are but a few of the devices that figure importantly in the educational processes linked to coastal tourism.

In a manner of speaking, tourism education contrasts with management and planning in that the first clients of analysts are not managers and planners in positions of authority, but tourists and locals. Whereas managers achieve goals through policies and regulations and planners depend on plans, coastal tourism educators succeed when people take personal initiative to change their own behavior because they have been taught something. Tourism education, then, is a process in which analyst brokers direct their ideas outward to people involved in tourism. Tourism educators and communicators do not evaluate success or failure at attaining their goals with studies of "enforcement" or "compliance." This is so because successful education motivates individuals by persuasion, not coercion.

By definition and referring to Figure 1, coastal tourism educators are public sector, private sector, and social movement brokers. These brokers design products and

strategies to educate people and through this to change human behavior in coastal tourism systems. While educator brokers seek to impart their message to tourists and to locals, they also educate one another as, for example, when a non-governmental organization (NGO) educates public sector and private sector brokers.

Efforts to resolve problems and opportunities of coastal tourism through education are steadily growing throughout the world. Tourism brokers who are advancing this promising agenda are benefiting from the work of educators who have focused on environmental and sustainability issues. Monroe (1999) has characterized successful environmental education and communication projects as having features that allow for: 1) empowerment of local communities and use of their expertise, 2) attention to scientific, social, economic, political, and cultural topics, 3) identification of a variety of stakeholders and integration of them into the process, 4) advancement of an environmental ethic as well as assistance to residents in developing decision-making skills, 5) development of a gender component, 6) flexibility in project design (including realistic timetables), and 7) project evaluation.

Coastal tourism brokers (for example, those in government or in NGOs) that provide international aid in developing and poverty-plagued states have also benefited from the cross-cultural advice of Brazilian educator and philosopher, Paulo Freire. Freire has contended that the education process has for too long been regarded as a "delivery service" from the scientific and technological elite of the Western World to those suffering in the Third World. Freire's (1999: 61, emphasis added) solution lies in education projects that emphasize collaborations between experts and clients at all stages of the process:

"Through dialogue, the teacher-of-the-students and students-of-the-teacher cease to exist and a new term emerges: teacher-student with student-teachers. The teacher is no

longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all learn."

Few would disagree with the proposition that coastal tourism education has great potential to enhance the quality of tourism for tourists and locals, and to also protect the environment through responsible human conduct. The importance of education (and of overlapping fields such as communication, journalism, and environmental and science reporting by the media) is recognized by virtually all marine scientists and researchers (see, Pearce, 1989; Miller and Auyong, 1991a and 1998a; Conlin and Baum, 1995; Lockhart and Drakakis-Smith, 1997; Orams, 1999). Still, many opportunities to integrate coastal tourism education with the mechanisms of management and planning have been missed.

Challenges Ahead

Over the last several centuries, the world's coastlines have been substantially transformed to support recreational and touristic pursuits. In some cases, coastal tourism dominates the shoreline. In others, tourism is one of many industries. As coastlines become more populated and sometime inaccessible, it is ever more clear that however beneficial coastal tourism is to the tourist, it is neither a panacea that will invigorate any local economy, nor a pollution that will necessarily ruin environments and corrupt cultural traditions and values. Coastal tourism is a process amenable to management, planning, and education. Sustainable coastal tourism obliges humanity to have respect for other life forms and the environment, while it affords opportunities for people to learn, recreate, and reach their potential as individuals through travel.

Because the stakes are high and because mistakes can be virtually irreversible, socie-

tal resolution of pressing tourism and coastal development issues requires imagination as well as sustained scientific and policy attention. Work to be done falls in the areas of research, and tourism broker and individual responsibility.

Tourism Research

Researchers in government, academe, and in the private and social movement sectors constitute a first group of practitioners whose work induces positive change in coastal tourism systems. Fundamental questions about physical, biological, ecological, social, cultural, economic, demographic, and political processes of coastal tourism are posed and answered in assessments, impact statements, profiles, and other products of natural, biological, and social scientists. With reference to the condition of the environment and society, the possibilities of coastal tourism development raise not only the question "What is?" but also questions about "What is ethical?," "What is fair?," and "What is beautiful?" As a result, analyses by professionals with backgrounds in the humanities and arts have proven to be useful in complementing those of scientists.

The need to formally study tourism is recognized more than ever in academe. Tourism research methods are under continual development in such fields as public affairs, business and marketing, architecture, urban planning and design, political science, sociology, geography, cultural anthropology, marine affairs, and environmental studies (see for example Gunn, 1979; Murphy, 1985; Ritchie and Goeldner, 1987; McIntosh and Goeldner, 1990, France, 1997). Additionally, we are seeing growth in new tourism associations and journals focusing on managing tourism development and more sustainable growth.

Tourism Broker Responsibilities

A second professional group made up of the different types of coastal tourism brokers will be counted upon heavily in the future to cooperate with one another. This can occur, for example, when investors and developers

in the private sector coordinate goals and activities with those of government agencies and NGOs to make sustainable tourism a reality. Another kind of cooperation calls for tourism brokers to work effectively with government, business, and non-governmental organizations in other economic sectors. Better understandings of tourism-fishery interactions, tourism-aquaculture interactions, and tourism-ocean shipping interactions can lead to an improvement on single-sector governance with partially (or, under ideal conditions, fully) integrated coastal management.

In the aftermath of the terrorism attack on the World Trade Center in 2001, the responsibilities of tourism brokers have been enlarged. Brokers now must function not only as stewards of the coastal environment, businessmen, and representatives of constituencies, but also as protectors of residential and traveling publics.

Uncertainties generated by the terrorism of 2001 will change the ways in which coastal tourism is conducted in the US and elsewhere. It has long been known that too much tourism can be bad by when it leads to degraded ecosystems and undesirable changes in quality of life. Now it is apparent that too little tourism can put entire coastal economies at risk. Declines in coastal tourism can create serious social problems in the same way declines in fishery resources can threaten livelihoods. Ultimately, coastal tourism and recreation destinations negatively affected by security-related changes in itineraries will become sustainable only to the extent brokers make tourism safe.

An excellent example of broker-broker cooperation is to be found in the 2002 Seoul Oceans Declaration adopted by 21 representatives from member economies of the Asia-Pacific Economic Cooperation (APEC) at the First APEC Oceans-related Ministerial Meeting in South Korea. APEC members include Australia; Brunei Darussalam; Canada; Chile; People's Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand;

Papua New Guinea; Peru; Republic of the Philippines; Russia; Singapore; Chinese Taipei; Thailand; USA; and Vietnam.

In one of sixteen elements of the Seoul action plan, the APEC Ocean-related Ministers resolved to "increase efforts to sustainably manage tourism activities that affect or potentially affect marine and coastal environments" (Kim, 2002: 10). In the Seoul Ocean Seminar held in conjunction with the meeting, participants identified a range of coastal tourism topics of concern and recommended integrated coastal zone management, responsible ecotourism, and the adoption of best tourism practices among other measures to the APEC ministers.

Individual Responsibilities

The discussion above has concerned the proactive roles researchers and brokers can play in promoting sustainable tourism and coastal development. To this must be added a comment about the personal responsibilities of tourists and locals to contribute toward sustainability in the coastal tourism systems which they visit or in which they live.

To a certain extent, the social role of the ethical tourist can be formulated to resemble that of the good citizen. Good citizens learn from their families and schools to reach their potential in society while knowing how to behave in socially appropriate ways. Using this template, tourists would be expected to behave in ecologically and culturally appropriate ways in the course of their domestic and international travel. Ecotourism (Grenier et al., 1993; Miller, 1993a and 1993b; Miller and Kaae, 1993; Honey, 1999) and ethnic tourism are two forms of tourism that have emerged to stress this self-conscious orientation. Many tourism brokers in business, in government, and in non-governmental organizations are now promoting the development of "best practices" and "tourism guidelines" to this end.

It is obvious that there are many benefits of coastal travel that accrue to the tourist.

These are found in recreational, aesthetic, and educational activities. In exchange, the ethical tourist will strive to behave in a culturally and environmentally responsible manner. As this occurs, locals are given an added incentive to orient their conduct to the same ends. Improvements in the behavior of tourists and locals toward one another and toward the coastal environment will assist tourism providers and managers as they do their part to monitor and control tourism, and improve the tourism experience for all involved.

1999 International Symposium on Coastal and Marine Tourism

Coastal tourism has demonstrated its considerable power to influence the fundamental configurations of coastlines and the social structures these support. Coastal tourism is sometimes found to be unfortunate in every respect. Coastal tourism can, however, be designed to improve the lives of tourists and those who are part of the tourism industry, conserve natural resources and protect the environment, and not offend locals. Certainly it is also important to share and publish lessons learned about how best to address the problems and opportunities of coastal tourism.

The first Congress on Coastal and Marine Tourism in 1990 (Miller and Auyong, 1991a) was proposed in response to the growing need to bridge economic development and conservation of our coastal zone resources. The Congress participants shared experiences and results, as well as techniques and tools by which to create and implement coastal and marine tourism. Participants concluded that the mixed record of tourism required immediate and sustained study by a wide range of disciplines.

The subsequent World Congress on Coastal and Marine Tourism (Miller and Auyong, 1998a) examined the status of activities since the initial Congress and asked whether there was growth in our knowledge and abilities

to implement sustainable tourism. Participants indicated that we still had a long way to go in achieving sustainability in coastal tourism and that there was a need for direct, application-oriented information and processes. It was also clear that the need to address coastal and marine tourism growth issues was widely accepted by governments, industries, and others. Coastal tourism needed to be understood and better managed rather than ignored.

With this evolution of analytical attention, the 1999 International Symposium on Coastal and Marine Tourism was organized to emphasize the means of achieving more sustainable development rather than the ends. Participants were asked to focus on analytical tools and concepts, evaluation tools and methods, planning procedures, etc. The theme of "Choices, Responsibilities, and Practices" was selected to recognize that our decisions play an immense role in outcomes. Further, the location of the 1999 Congress in Vancouver, British Columbia, Canada, showed that environmentally sensitive, nature-based tourism can be responsibly implemented in urban as well as rural settings.

Based on the comments of participants and the quality of the papers which follow in these *Proceedings*, it may be concluded that the 1999 International Symposium on Coastal and Marine Tourism was successful in sustaining attention to the challenges of balancing tourism development and marine conservation. One would hope that the insights gained by tourism experts at the Symposium will contribute to more responsible coastal tourism policies and to more harmonious relationships linking human-kind and the coastal environment.

Authors' Note

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AUSTRALIA'S CRC PROGRAM: COLLABORATIVE SCIENCE FOR SUSTAINABLE MARINE TOURISM

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Abstract: *Australia's Cooperative Research Centres Program supports long-term, high quality scientific and technological research that contributes to national objectives, including economic and social development, through collaboration between the public and private sectors.*

Each Centre links together outstanding groups of research providers with research users from industry, government and the community. In 1993, a Cooperative Reef Research Centre (CRC) was created to increase collaboration between major science institutions, management agencies and industry groups in a joint venture for ecologically sustainable use of the Great Barrier Reef World Heritage Area.

Tourism on the Great Barrier Reef is a major and growing industry. Currently, it is estimated as worth more than AUD\$1 billion per annum and, in 1997, attracted about one and a half million visitors per year. Reef tourism is mostly nature-based and generally non-extractive involving about 600 commercial operators providing a wide range of activities including scuba diving, snorkelling, sailing and island resort activities.

The paper will show how an integrated CRC program of research and development, training and extension, enhances Reef-based industries and provides information for better tourism management and decision making. The \$50 million, seven-year program is funded jointly by tourist operators (sourced through an environmental management charge to visitors), State and Commonwealth governments, and research institutions.

The paper will outline how formal research networks, innovative joint funding and collaborative partnerships with tourism operators and Reef managers help resolve social, environmental and economic issues including people pressures, coastal development, codes of practice, visitor experience, water quality and marine conservation policies. It will also show how interactive planning and communication can overcome opposition and competition, and develop a "culture of collaboration" between these often disparate groups.

Case studies on sustainable diving practices, vessel moorings near coral reefs, tour guide training courses, marine park planning databases and visitor interpretation will be given to demonstrate the application of the CRC strategic knowledge for industry groups and public policy.

Keywords: *cooperative research, marine science, integrated coastal development, ecotourism, sustainable use, Great Barrier Reef, marine park, World Heritage Areas, CRC*

Great Barrier Reef Tourism

Marine tourism takes advantage of Australia's extensive and diverse coastline and, as an industry, has an important role in the stewardship of many unique environmental and tourism resources. A recent survey by the Department of Industry, Science and Resources (1998) concluded that marine tourism in '87/'88 was worth \$5.9 billion,

growing to \$22.7 billion in 93/94, and growing further to \$31.6 billion in 95/96, representing 15.7% of GDP today. Tourism is a relatively labour intensive industry, employing around 694,000, or 8.4% of the Australian work force. Over the last ten years to 1995, inbound tourism increased at an annual rate of 11% (Environment Australia, 1998). Growth potential of this type requires careful and specialised management. In an environment as vulnerable, and as poorly understood as our oceans, such growth requires professionally administered re-search and monitoring at the highest level.

The Great Barrier Reef (GBR) is a major tourist destination and contributor to the economic value of the Australian industry. Tourism in the GBR has been active for many years but it is only in the last decade and a half that it has matured to a highly professional and comprehensive range of enterprises. The GBR tourism industry of private sector operators and investors has developed in a framework of government management of the Great Barrier Reef Marine Park and the Great Barrier Reef World Heritage Area. Like the GBR tourism industry, the Marine Park management agencies have been innovative and world leaders in their approach to the conservation, protection and wise use of the GBR. The development of the industry and the Park have not been without conflict and this history provides a model for consideration in other parts of Australia and globally.

GBR tourism has an estimated economic value of more than AUD\$1 billion and involves more than 1.6 million visitors (GBRMPA, 1998). Fishing and shipping/port industries in the GBR World Heritage Area are also significant economic activities.

The structure of the GBR tourism industry is made up of three main parts: island resorts, mainland resort/accommodation and vessel access to reef sites. In 1996/7, according to the Queensland Tourist and Travel Corporation website, <www.qttc.com.au/research> total visitor day trips to off-shore reefs (one

person on a reef for a day) was 1,541,850 (QTTTC, 1999).

However, 26 resorts on 22 islands are also popular destinations and account for 16% of the commercial accommodation in the GBR region, including mainland resorts. Green Island, for example, is a major day-trip island destination, attracting 200,000 visitors per year. Over the last 15 years, the number of resorts has increased by six (most islands are Queensland National Parks and sites are limited) and total bed numbers have more than doubled to more than 7000 beds in 2,780 rooms in 1996/7 (QTTTC, 1999). A total number of 1,355,000 domestic and international visitor nights were spent in the region during 1996/7.

The GBR tourism industry is predominantly environmental or nature-based, and generally involves tourists in boat/vessel activities although some helicopter and fixed-wing aircraft flights occur locally. Visitation is predominately by vessel-based day-trips with extended and overnight cruises, cruise ships, yacht charter, island transits and charters for specific activities (e.g., game-fishing) representing specialist and additional activities.

A special feature of the tourism industry in the GBR has been the development and installation of floating pontoons at offshore reef sites throughout the area, especially offshore from Cairns. The 19 pontoons throughout these regions serve as day-trip destinations serviced by modern, luxury high-speed (30 knots) catamaran and "wavepiercer" vessels, often carrying up to 400 passengers. Mainland-to-pontoon transits of up to two hours provide opportunity for "educational" briefings on the GBR and special features of the destination. Major tourist activities at resort islands and pontoon destinations include: scuba diving, snorkelling, glass bottom boat semi-submersible trips, underwater observatories, and limited reef walking.

Elsewhere seasonal whale watching, "bare-boat-charter" sailing, windsurfing, and mo-

torised sports (waterskiing, paraflaying) and fishing are major demand activities. The diving industry has expanded enormously with more than one million scuba dives in 1993 (David Windsor, pers. comm.). Camping on coral cays and opportunities for "wilderness experiences" are niche markets of ecotourism operations.

Passive and active tourism opportunities and activities differ regionally throughout the Great Barrier Reef, reflecting Reef access and natural structure, and support infrastructure, such as international and domestic airports. Domestic visitations exceed international visitor numbers although there are regional differences, again reflecting direct airport access.

The Cairns sector is strongly commercial with day-trips to Reef pontoons, Green Island and Low Isles and diving and fishing expeditions dominating over private recreational visits. The region attracts a high level of international tourists flying directly to Cairns International Airport. Domestic tourists predominate in the Whitsundays and southern region. The Whitsundays, with 74 island national parks, is a mecca for sailing enthusiasts and hosts a strong "bareboat" industry for self-charter groups. There is also a growing cruise shipping industry of larger domestic and international vessels in the region. Over the last 15 years, the combined tourism industry has increased dramatically and is predicted to continue growing, particularly with the Sydney Olympics and other millennium events in the year 2000.

Today's highly professional tourist industry in the Great Barrier Reef developed as a result of innovative approaches by private sector operators to sustainably utilise the unique natural features of the Reef. Key features have been the development of new technologies (vessels, pontoons, marine engineering infrastructure), improved and expanded transportation and infrastructure, and private sector investment for quality of visitor experience.

Technology improvements for new and faster vessels carrying up to 600 passengers at 30-40 knots is likely to expand day-cruise, pontoon tourism activities. Tourism demand for more educational and science-based ecotourism experiences is also expected to increase.

Reef Management and Development

In 1975, the Australian Government enacted the Great Barrier Reef Marine Park Act, which provided a legal framework for planning and managing the Great Barrier Reef. The Act provided for the establishment of the Great Barrier Reef Marine Park Authority (GBRMPA) to manage a multiple-use marine protected area and plan for protection, conservation and "wise use" of the Reef. The Act established a Consultative Committee of interest groups and government agencies, specified functions of the Authority (including preparation of zoning and management plans, education and management programs). Australia has a federal system of government and the Act provided for cooperation with the Queensland State Government. In 1981, the Great Barrier Reef was entered into the World Heritage List.

The federal Great Barrier Reef Marine Park Authority is the principle management agency for the Area, with the Queensland State Parks and Wildlife Service responsible for most day-to-day management activities and management of state marine parks and island national parks. Other Queensland authorities are responsible for relevant activities including fisheries and shipping.

The Great Barrier Reef Marine Park Authority has as its goal, "to provide for the protection, wise use, understanding and enjoyment of the Great Barrier Reef in perpetuity through the care and development of Great Barrier Reef Marine Park" (GBRMPA, 1993). In practice its management objective has been to provide for conservation and multi-

ple use. Human use is integral to the approach and managed on an “ecologically sustainable” basis (Craik, 1992), whereby economic development and environmental maintenance are not antagonistic but are compatible goals. (ESD, 1990).

An early cornerstone in managing the Great Barrier Reef Marine Park has been the use of zoning plans to limit extractive activities and separate potentially conflicting activities. While some areas are protected from certain uses, other areas are suitable for particular activities (Kenchington, 1990) e.g., *General Use Zones*, *National Park Zones* and *Preservation/Scientific Zones*. Commercial and recreational use (including fishing) is allowed in the *General Use Zones*. The *National Park ‘A’ Zones* allow for “look but don’t touch or remove” activities.

Zoning plans allow for tourism, under permits, to occur in 99.8% of the Marine Park. Zoning plans are complemented by a range of special area/use instruments including Plans of Management (gazetted in 1998 and expected to come into legal effect in July 1999) that cap existing tourism levels for high use areas such as Cairns and the Whitsundays. In practice, it has been estimated that tourism utilises 0.02% of the total Park area (Burgess 1993). However in areas offshore from Cairns and the Whitsundays the use is much more intensive.

Enhanced public awareness over the last two decades of the unique and special qualities of the Great Barrier Reef is apparent in the wider community and in the boardrooms and actions of the Reef industry users. “Education not regulation” has been a deliberate approach by GBRMPA and other day-to-day management agencies. Putting aside this awareness and any sense of altruism, it makes sound commercial sense for the tourism industry, with investments of millions of dollars in expenditure, to ensure the sustainable nature of the Great Barrier Reef environment on which each enterprise depends.

The 25 Year Strategic Plan for the Great Barrier Reef World Heritage Area 1994 - 2019 helps “to ensure the persistence of the Great Barrier Reef World Heritage Area as a diverse, resilient, and productive ecological system, while retaining the opportunity for a diverse range of experiences and is consistent with Australia’s obligations under the World Heritage Area”. The Plan is the product of three years consultation between more than 60 organisations representing management agencies (Commonwealth, Queensland State), Aborigine and Torres Strait Island groups, Reef user groups (tourism, fisheries, scientific) and interest groups (conservation, coastal land use and agriculture). The internationally acclaimed Strategic Plan has extensive “ownership” by the array of stakeholder organisations who individually and collectively are implementing the Plan in their activities of use and management. The Plan has been used as the basis for strategic planning by stakeholders and the CRC Reef Research Centre.

In recent years the Australian government has been acting to enhance a range of international agreements, treaties and concepts relating to the environment and especially to the marine sector. For example, United Nations Convention on Law of the Sea (UNCLOS and EEZ commitments), International Convention for the Prevention of Pollution from Ships (MARPOL) including “Special Area” designation for compulsory pilotage in the Great Barrier Reef, United Nations Conference on Environment and Development (UNCED) (Agenda 21). National legislation dealing with Native Title (GBRMPA, 1994) and Queensland State legislation for a revised Fisheries Act have implications for the processes and mechanisms of management and use of the Great Barrier Reef which are currently being evaluated. Other major international conventions Australia has agreed to, affecting natural resource legislation and management policy, include the World Heritage Area and Ramsar conventions.

In 1993, an Environmental Management Charge (EMC) was instituted by the Australia

lian Government (through GBRMPA) levying a charge of \$1 per head per day on tourism activities in the Marine Park to assist in meeting the increasing cost of management and associated research on the Reef. This was raised to \$4 per person per day in 1997. The introduction of the EMC was not without discontent in the tourism industry - it remains applicable only to commercial tourism and does not apply to other users of the Reef.

The EMC adds more than AUD\$4 million annually to help manage the Marine Park but equivalent reductions have been made to GBRMPA's annual operating budget. A percentage of the EMC revenue (approximately 75% of the first \$1) is applied annually to key research issues through the CRC Reef Research Centre - a joint venture between the tourism industry, the management agencies (GBRMPA, Queensland State agencies) and research agencies (Australian Institute of Marine Science, James Cook University). Currently, the total annual cash and in-kind contribution by the tourism industry to CRC research and education programs is 11 percent (CRC Reef Research Centre, 1998).

Cooperative Research and Development

In the early 1990s Australia mapped out a vision to increase the effectiveness of our national research and development effort. A series of Cooperative Research Centres were established to link outstanding teams of researchers with knowledge users, from industry sectors and government agencies to address Australia's social, environmental and economic goals.

The goals of the CRCs are: to keep pace with rapid scientific and technological progress; to make Australian industry sectors more internationally competitive; to enhance environment management capabilities; to capture the benefits of research in commercial and public policy applications; and to

stimulate graduate education and industry training programs.

One of the principle reasons the Federal Government introduced CRCs was to "change the research culture" of Australia. The Government was concerned there was not enough ready uptake of research innovation by industry, particularly after considerable investment in research through universities and the Commonwealth Scientific and Industrial Research Organisation (CSIRO). An independent report to the Government (Changing Research Culture, 1995) found positive changes in research culture were extending to industry who are now more willing to become actively involved with longer term and more basic research. The review committee stated that the following attributes when taken together give the CRC Program its distinctive nature:

- Based on strategic collaboration
- Develops research user linkages
- Has a central education and training objective
- Tightly focused and outcome oriented
- Has upfront industry commitment of funds and resources based on legally binding agreements
- Places the onus on participants to achieve good governance and management control
- Places the onus on CRCs to be accountable for their own direction, progress and outputs
- Represents a significant united funding base
- Selects CRCs on merit against published selection criteria and in competition with other bids

Some of these attributes are also present in other Australian and overseas programs but the CRC Program encourages a synergistic approach combining all the attributes. This synergistic approach and the level of upfront industry commitment are two factors attracting international interest in the program. The federal government funds are seen as the "glue" attracting contributions

from participants: approximately one-third government and two-thirds participants.

The concept underlying the CRC program is to bridge the gap between scientists, research institution government agencies and private industries. It aims to build on action-centered collaborative teams that enable members to still retain their separate institutional affiliations. It focuses the research on challenging national issues or emerging industries in mining, medicine, agriculture, manufacturing and the environment. CRCs are networked around universities to strengthen their education and research programs. It involves research users in the plans and operations of each CRC so as to enhance the uptake of research outcomes. Further information about the program is found on the website <www.disr.gov.au/CRC/index>.

The key word in a CRC is *cooperative*. Anyone studying the Australia CRC model must examine the meaning of words like cooperation and collaboration to understand why some collaborations work well and others don't.

Groups cooperate because they see an advantage in working together. "To let us achieve something that would be more difficult, or more unlikely, to achieve without the collaboration often, we collaborate with others to share intellectual property or physical resources to do a better job. We seek an advantage and so do our partners. There are advantages to individuals, organisations and countries through collaboration." (Cullen, 1996). There are benefits to individuals and organisations.

Individual Benefits

- Get access to additional intellectual, technical or physical resources
- Learn from associated parties at both an individual or team level
- Increase status by working with particular people on important issues

- Energise individuals through interactions with new ideas or problems
- Participate in interdisciplinary and multi-agency research teams

Organisational Benefits

- Gain access to new ideas, intellectual property and technologies
- Spread the risk and costs of some ventures
- Learn new technical skills or strategic planning processes
- Develop industry standards, methods or approaches
- Increase access to useful information by pooling financial and human resources
- Increase public and user support for collective products and services

Initially, each CRC is given a seven-year life span and all are reviewed regularly (one, three and five years) to ensure they are meeting their key objectives. CRCs seeking funding support beyond their initial term of seven years must submit entirely new applications in relevant selection rounds and compete against other CRCs as well as potential newcomers to the program. On average, each CRC has an annual budget of AUD\$7 million, which covers operating costs and wages for staff. This includes cash and in-kind support by other core participants including companies, government agencies and universities. Industry contributions as a percentage of total resources allocated to the national program have increased from 12% at the start to around 25% today. (CRC Association) Many CRCs operate from several sites, depending on the location of their research partners; typically there is a small secretariat in one location with staff working in offices/labs of the participating organisations. Funds go to projects rather than bricks and mortar. CRCs are like "virtual organisations".

In the CRC for the Ecologically Sustainable Development of the Great Barrier Reef, collaboration is strategic, aimed at providing long-term benefit, and tactical, to enable

completion of particular tasks. In addition to a formal agreement by our five core participants with the Commonwealth Government there are various other formal and informal management structures or systems to enhance our collaborative efforts.

The CRC Reef Research Centre is (at this time) an unincorporated joint venture between the Great Barrier Reef Marine Park Authority, James Cook University, the Australian Institute of Marine Science, the Queensland Department of Primary Industries, the Association of Marine Park Tourism Operators, the Queensland Commercial Fishermen's Organisation and Sunfish. In addition to these core participants, more than 30 other organisations collaborate with the Centre's research network on a regular basis. The parties have signed an agreement to commit specified resources (cash and in-kind) and nominated personnel over the seven-year life of the CRC.

The management structure consists of a Board, Director, Secretariat and several advisory committees. Operations are carried out through research, education and extension programs, each with a range of specific projects that address problems or needs based on collaborative planning by participants organisations and user groups. Each program has a leader, and various chief investigators are responsible for managing specific projects.

Planning, discussion and debate is important in forging collaboration. The CRC has brought together a number of marine scientists, resource managers, tourism operators, consulting engineers, academics, government officials and commercial fishers who had no great history of working together. The CRC has led to better collaboration in terms of critical comment on the work of others, through the various reviews and planning activities, and through general support for teamwork rather than individual work. In addition to existing links that each research task has with a Reef user group, extra effort has been made to increase internal collaboration, promote re-

search to community groups and increase awareness of coastal management through the media (CRC Reef Research Centre Annual Report, 1997-8).

The CRC encourages management agency or industry associates to work with researchers for each research task. These representatives help focus the quality of research output. They act as partners with researchers, helping to achieve goals, and ensure studies are practical, to publish information to stakeholders and to implement changes from results. Their time is recognised as in-kind support to the Centre. A Users Advisory Group reviews applications of research tasks and maintains contact with stakeholders. The group helps convey results and information to Reef management agencies, shipping, fishing and tourism industries.

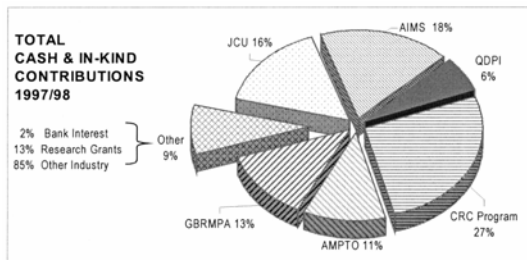
Experience in the CRC has shown that the boundary between users and providers of knowledge is a complex one, and does not work well if dominated by users. Hence, the Australian CRC model is really a large-scale experiment in collaborative research.

The model aims to establish partnerships between users and providers of knowledge and the relationship is a complex one, and does not work well if dominated by one group (Cullen, 1996).

Ultimately, it is the interaction between individuals that is at the heart of effective, creative collaboration, and arrangements exist to facilitate these interactions. Individuals are the "glue" that cements research and management efforts in an effective CRC. The CRC relies on creative people working together to stimulate interest in coastal and marine issues at hand and letting them find a common interest.

The boundary between science, resource management and industry in coastal and marine tourism is turbulent. Marine operators, managers and scientists come from different backgrounds and work in remarkably different cultures. They often

have a fairly poor understanding and tolerance of each other. But creating an action-orientated network can help break down the barriers. The mix of different disciplines and cultures can lead to a “bigger bang for the buck” and the multiplier effect from this synergy can achieve more than organisations working independently. In a review of the Reef CRC’s first five years, an independent panel found that the Centre “has made excellent progress in converting research outcomes into products, processes and assistance to decision-making needed by its industry participants and the community in general... The panel has no doubt that the Centre is adding value through cooperative research, which would not have been attained by the participants acting individually.” (CRC Reef Research Centre, 1998). Funding is shared by all participants in the CRC’s original seven-year agreement and from 1993 to 2000, was more than \$50 million pledged as cash and in-kind contributions by our core participants. This figure was surpassed with input from additional grants, income and in-kind support particularly by the tourism sector and new associate organisations. The following graph indicates the relative percentages of contributions and expenditure (CRC Reef Research Centre Annual Report, 1997-8).



That both industry and Australia’s public research institutions and university are benefiting strongly from their closer ties was shown by the favourable report in 1995 by the Program Evaluations Steering Committee, and again in 1997 by the Mercer report, “Review of Greater Commercialisation and Self Funding in the CRC Program”, conducted by former ANZ Banking Group CEO, Don Mercer and the federal govern-

ment’s Chief Scientist, Professor John Stocker. Nevertheless, both reports made recommendations to improve all CRCs and the program as a whole – particularly enhancing the commercialisation and utilisation of the research outputs of the CRCs. Comprehensive guidelines for applicants and general principles for operations of centre ensure each CRC has:

- A strong, independent Board with a majority of users or of independent members.
- A highly qualified chief executive officer to manage the committed resources to achieve agreed outcomes.
- A focus on technology transfer to industry and public policy, including extension and training programs.
- A commitment to developing innovative approaches to education of higher degree students and training for the particular needs of industry
- Regular selection rounds (approximately every two years) and reviews to evaluate performance and encourage competition between new and existing CRCs
- An increasing involvement by the private sector in research and development

The guidelines including those for selection and evaluation are available on the internet through the Australian Department of Industry Science and Tourism’s website <www.dist.gov.au/CRC/index>.

Examples of Cooperative Marine Tourism Research Outcomes

A range of CRC Reef Research Centre outcomes and applications have influenced public policy and industry practices in the GBR World Heritage Area. Some of these achievements are mentioned here.

Studies into the effect of scuba divers on coral reefs have influenced Dive Queen-

sland's scuba training programs and codes of practice used by dive operators, such as revised pre-dive briefings and instructor training programs. Studies into the impacts of snorkelers and divers have received considerable overseas interest. Results have contributed to coral reef diver codes of conduct and on-site management of marine parks in the Red Sea, Florida Keys, Yemen, Malaysia and the Mediterranean. The Professional Association of Dive Instructors (PADI) is incorporating aspects of the CRC volunteer reef monitoring study into the revised Research Diver Speciality Course. A training manual for volunteer monitoring of coral reefs has been produced to assist dive masters, tourism operators and volunteer groups in implementing "state of the reef" monitoring studies that are consistent with scientific programs. Research evaluations of potential tourism impact concerns, such as SCUBA diving and fish aggregation at pontoons, have demonstrated existing management and industry practices are ensuring no significant impact by Reef visitors.

Tourism researchers have helped a government agency, Tourism Queensland, marine park management staff and regional tour operators to better understand the motivation and segmentation of Reef tourists, in better marketing of their products and the provision of quality services to domestic and international Reef visitors. With support from regional tourism associations including Tropical North Queensland, Townsville Enterprise and the Whitsunday Tourism Bureau, more than 6,000 visitors have been surveyed and coded into a database for use by stakeholder and interest groups. Information on demographic trends, activity preferences and satisfaction levels is now available to industry on the database at James Cook University.

Industry can now access information on Japanese, Korean, Chinese, German and British visitor numbers and characteristics in the Cairns, Townsville and Whitsunday regions. Database workshops for resource managers and business operators have helped in utilisation and access of results,

including the development of a website for research summaries. Tourism Queensland continues to support the project and provide unit data from the Queensland Visitor Survey. Purdue University in the United States provides international survey data. The "one-stop" visitor database describes all types of visitors to the Reef region and surrounding coastal centres, and assists tour operators and associations develop better marketing strategies and products. The CRC research team provides a direct advisory service to any organisation wanting help on visitor issues.

Reef Tourism 2005, a research and development program involving Cairns marine tourism industry groups working with government management agencies and research institutions, is implementing a regional strategy. The CRC has provided more than \$400,000 of in-kind support to RT 2005 since 1994 to support a range of economic, training, environmental and social initiatives in the region.

A training needs analysis was conducted for the marine tourism industry in the Cairns section through the Reef Tourism 2005 project group and used to establish a marine tourism training committee and project officer. An implementation strategy is currently improving career pathways for local industry staff, developing accreditation standards, helping young people with traineeships and employment, and conducting staff training programs to address environmental and cultural issues.

Queensland tour operators are improving their professional environmental interpretation services for visitors. A Heritage and Interpretive Tourism (HIT) certificate course helps graduates take up new jobs in national parks, outback centres, marine parks and world heritage areas. The HIT course, expanded by the Centre through a Commonwealth grant, is now offered through 10 regional TAFE colleges and several secondary schools. The Centre helped revise and publish new student learning guidelines, to conduct planning workshops and informa-

tion networks, and produce a “how to get started” kit for industry. More than 40 large tourist operators in Queensland actively support the course with industry placement programs. It is now expanding to other popular tourist regions throughout Australia.

CRC engineering research into seabed capacities of new screw anchor systems have assisted one marine company, Pacific Marine Group, install 180 “eco-friendly” anchor systems at popular mooring spots within the Marine Park. Working with GBRMPA and Queensland Parks and Wildlife staff who identified each mooring site, the permanent anchors, averaging about \$5,000 each to install, are reducing anchor damage to corals by commercial and recreational vessels which previously anchored over coral or tied chains around coral outcrops.

Draft engineering “Guidelines for Infrastructure Development in Reef and Coastal Environments” are being prepared for the Reef tourism industry, private engineering consulting companies, GBRMPA and the QPWS to streamline future tourist pontoon development proposals.

Groundwater studies have tested whether effluent irrigation systems on island resorts affect local fringing reef environments. Many resorts use treated sewage effluent systems for golf courses, lawns and gardens. Results are being used to develop better island land use management studies and maintain high standards of water quality. With logistic support from *Club Med* and *Australian Resorts*, CRC researchers have developed numerical models for predicting the subsurface fate of nitrogen at four different island resorts. Results show that islands will need to be considered individually to determine the most effective waste disposal procedures. Key results have been utilised by GBRMPA and QPWS staff to refine existing wastewater management policies. Industry guidelines and local government planning codes for effluent irrigation may also be developed.

Conclusion

The CRC Program is becoming internationally recognised as a cost-effective model for other countries to adopt. Several positive observations have been documented from abroad. Professor Glen Edwards of the Colorado School of Mines who chaired a review of the CRC for *Materials Welding and Joining* wrote, “I was very impressed with this Australian government program, which incubates long-term and meaningful relationships between strategic industrial sectors, research laboratories, professional organisations and academic institutions... During my recent CRC review experience I observed creative and cost-effective collaborations resulting from this program that would be the envy of any nation, if publicized.” (Fletcher, 1998). This CRC model can be utilised by any group of private and public organisations concerned with the sustainable use of marine and coastal areas.

The CRC Reef Research Centre has recently revised its research programs following renewal by the federal government and its participants for continued support. The six new programs will be:

- Management for Sustainability
- Sustainable Industries
- Managing Ecosystem Quality
- Information Systems
- Education and Communication
- International and Advisory Services

Acknowledgements

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ECONOMIC ISSUES IN ENVIRONMENTALLY SUSTAINABLE COASTAL TOURISM

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Abstract: *There is a great deal of confusion about the precise implications of sustainable tourism. This paper attempts to clarify the concept and its implications for practical economic analysis of tourism development projects. To do this, the paper describes a simple model of community behavior focusing on tourism-related, economic and environmental variables. Using this, the basic notion of sustainable tourism is examined from a profit maximizing, industry point of view and from a quality-of-life maximizing, residential point of view. Three findings are that 1) different views of sustainability may not be compatible, 2) certain target levels of environmental quality may not sustain a tourism industry, and 3) industry objectives and short planning periods may lead to destruction of the natural resource.*

The theoretical model of sustainability assumes that information is known for current as well as future generations. Given this, an optimal development path could be charted to sustainability. In the real world however, we can, at best, determine "where we are" and "which way is up". We may also have some information about how to control the system toward "a better place". The information for understanding "where we are" and how to change is provided by a variety of methods and data sources. Community indicators and benefit cost analysis are recommended. A carefully selected discount rate can be used to conceptualize our value for a future that is just like the present, but this limits us to preferring it more or less than the present. We have difficulty conceiving of a different future. To reduce risk from that uncertainty we recommend a bequest of specific environmental qualities to future generations. We must analyze current preferences to anticipate future values and existing processes to forecast future change. Other than that the best we can do is speculate

about the future – our own and that of future generations. This may require some new analytical techniques.

It is our strongest recommendation that tourism project analysis be conducted from the community point of view. This requires that the local natural and human interdependencies be recognized and that attention be given to different recipients of costs and benefits. While all differing viewpoints will not be reconciled, those that are will provide a base of support for a development project. Furthermore, the prospect of environmentally sustainable tourism will be much more likely.

Keywords: *community development, economic analysis, sustainable tourism*

Introduction: Sustainability and Tourism

Tourism is a community industry. It cannot exist without support of public services, public resources and public acceptance of congestion and other externalities. The notion of environmental sustainability, when added to tourism gives added emphasis to the interdependence of community activities and the natural resources upon which the tourism industry depends.

This paper tries to reconcile the long-term goals of environmental sustainability and tourism industry feasibility using dynamic economic theory. It elaborates on a previous paper (Tyrrell, 1998) and is intended for non-economists.

The Brundtland Report

The World Commission on Environment and Development report entitled "Our Common Future" (1987), also referred to as the Brundtland Report, has given us the most widely recognized definition of sustainable development:

"(D)evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Brundtland report (1987: 49) goes on to suggest strategies that must be implemented:

1. Changing the quality of growth
2. Meeting essential needs for jobs, food, energy, water and sanitation
3. Ensuring a sustainable level of population
4. Conserving and enhancing the resource base
5. Reorienting technology and managing risk
6. Merging environment and economics in decision making

These strategies suggest undisputed societal goals. However, for practical decision-making we need to decide how society values environmental goods in comparison to man-made goods, and how society values the future in comparison to the present. We also need to understand the dynamics of the ecosystem, the tourism industry and the rest of the community economic system. Once these are understood we can begin to chart a course toward an environmentally sustainable tourism. Specific tourism policies and investments can be used to keep a community on that course.

Sustainability

Webster defines sustainable as "being capable of being prolonged or endured" from the Latin word *sustinere* "to hold up". The definition does not indicate the nature of the thing that is to be sustained. However, its recent use in phrases describing economic activity seems to imply sustainability is a good thing. We have

heard about the desirability of "sustainable agriculture" and "sustainable economies" but these could easily refer to the perpetuation of non-mechanized agriculture or pre-market economies. It is unlikely that users of the phrases had these ideas in mind. "Sustainable poverty" is just as meaningful as "sustainable prosperity", but the latter is clearly preferred. Thus, the word "sustainability" does not, by itself, provide us with a useful guide for business plans or government policies for economic development. In fact, it implies a wide range of possibilities.

A mathematical modeler's definition of sustainability might be something like: "the ability to maintain a variable at a constant level." This implies that the variable might be manipulated to take on some value and keep it until eternity. Both definitions imply that there are factors that can affect sustainability and that the planning period is infinitely long. These are the only traits of sustainability that we accept in this paper. We apply them to environmental quality and consider the implications for tourism.

Environmentally Sustainable Tourism

"Environmentally Sustainable Tourism" is a level of tourism that can be based on a sustainable environment. The primary emphasis is placed on maintaining a certain level of environmental quality. The secondary emphasis is placed on the economic viability of the tourism industry. However, environmentally sustainable tourism will be impossible without both a sustainable environment *and* a viable tourism industry.

Coastal tourism is no different from other forms of tourism, except that the tourist is attracted, in part, by the unique features of the coastal environment. All forms of tourism depend on attracting, entertaining, feeding and housing visitors. But the first task of the industry is to attract the visitor. The unique character of a coastal environment can provide the means to accomplish this. Thus, the maintenance of a

high quality coastal environmental quality can be a profitable tourism industry strategy.

Community Tourism

The dependence of the tourism industry on the local community is frequently overlooked. It is unlike other industries in that respect. Attractions and services are packaged at the community level to create the image of a unique and interesting destination. Tourism development is promoted by local public and private partnerships representing a broad constituency. Formal regulation by local government and informal societal pressures can exert considerable control on the industry. Often, a large share of attractions and facilities are locally owned and/or operated. Most importantly, the greatest benefits and costs of tourism are borne at the community level.

The precise definition of a “community” is not important – it can be a small village or an entire province. It is simply viewed as a group of people who affect each other by their actions and who have some collective decision-making authority. The joint use of recreation areas, transportation services and public utilities by residents and visitors requires community-wide decision-making for this industry. While enclave tourism developments can be successful private investments, tourism projects with community support and involvement bring the greatest and most enduring societal benefits.

The remainder of this paper outlines a simple dynamic model of the tourism community. Environmental sustainability is given a very specific meaning and the objective functions of the tourism industry and residents are formulated as functions of numbers of visitors and environmental quality. From these formulations, optimal paths to sustainability can be derived.

A Simple Model

A mathematical model can describe conditions for the existence of environmentally sustainable tourism at the community level and illustrate potential conflicts between groups. Such a representation makes important concepts precise and provides a simple means of exploring the implications of alternative assumptions about behavior. For example, the differences between preferences of community residents and tourism industry planners might be described simply in terms of their relative valuations of the environment and their rates of discounting the future.

We denote environmental quality by X , tourism industry profit by Π and residential quality of life by U . These variables are all modeled as depending on Q , the numbers of visitors. A simple community model of an environmentally based tourism industry can be written in three equations relating these variables. The first equation describes the dynamic behavior of a renewable resource; the second describes the objective of the tourism industry and the third describes the objective of residents. Optimal control theory (Chiang, 1992) provides a means of translating these behavioral equations into an optimal profit-maximizing strategy for the tourism industry and an optimal utility-maximizing strategy for residents of the community. These strategies can be viewed as development paths to a point of sustainability for each. The lessons learned from optimal control solutions can be helpful in identifying practical considerations for analyzing coastal tourism development projects that promote environmental sustainability.

Dynamics of Renewable Resources

Coastal environmental resources such as fisheries and coastal forests grow, reproduce and die. If left undisturbed they would

reach some level where birth and growth would just balance decay and death. This point, the natural carrying capacity of the resource, would be sustainable, although it would not necessarily support a tourism industry. In the modern world resources are not left undisturbed and tourism is one of the reasons. The mangroves and coral reefs around Phuket, Thailand have been replaced by coastal tourism businesses. Fisheries and coastal forests in Brazil have also been irreversibly changed by tourism development.

In our simple model the condition of all renewable resources in the community is measured by one index variable X and referred to simply as “environmental quality¹.” This index consolidates the notions of natural resource quality and ecosystem service productivity for all types of renewable resources into the same single variable. Non-renewable resources are not considered in this model².

We assume that environmental quality will change in proportion to the growth or decline of the underlying resource. As the forest or coral reef grows or renews itself, the qualities that enhance residential qualities of life and tourist experiences also increase. Further we assume that growth might appear as a “ \cap ”-shaped curve on a graph with growth on the horizontal axis and level of quality on the vertical axis. The bottom of the growth curve will touch the quality-axis - indicating that there will be no growth when the resource is dead. When the resource is alive but small, environmental quality will be low and growth will be slow. At its maximum, \bar{X} , there will be no growth, by definition. Growth will be fastest at some point between 0 and \bar{X} , peaking at a point of “maximum sustainable yield”.

When visitors disturb the resource, some of its growth will be applied to recovery from its use³. In general we assume that higher levels of visitor use (Q) are associated with higher rates of environmental damage.

An equation describing total changes in environmental quality will reflect both the negative influence of visitors and the positive influence of natural growth⁴. Sustainability of environmental quality depends on finding a balance between natural growth and visitor damage. Clearly, at its “natural carrying capacity”, environmental quality is sustainable only if there is no use by visitors. At a level of X slightly less than its maximum, some growth could occur and some visits could be made without changing quality. In the middle of the range of environmental quality where the natural rate of growth is the highest, the level of sustainable visitation is also the highest. A possible pattern of sustainable levels of environmental quality and tourist visits is labeled $\dot{X} = 0$ in Figure 1. Each point along this curve identifies a sustainable (visitors, quality)-pair, as long as tourism itself is economically viable at that number of visitors.

Figure 1 may be somewhat intimidating to the non-economist. The next pages will explain that it illustrates the dynamic relationships between the resource, the tourism industry and residents by three lines: the one just described gives all possible levels of environmental sustainability, the other two describe optimal development paths for the tourism industry and residents, respectively.

Tourism Industry Objectives

Tourism is the business of marketing goods and services locally to customers that come from beyond the local area. It is a business devoted to earning profits for private investors and generating taxes and foreign exchange for governments. From the community standpoint, it is a business that provides a source of income to local residents. Success for all these purposes depends upon positive visitor impressions and enjoyable experiences with natural resource attractions. Thus, it is in the best interest of all to protect and maintain the

qualities of those attractions in order for benefits to be sustained into the future.

While a community tourism industry may pursue a variety of objectives, profit maximization is generally the predominant one, especially for publicly held companies. An equation describing the profit objective should reflect the positive influences from both the number of visitors and the level of environmental quality⁵. Profits can be controlled directly through the number of visitors Q , which in turn can be manipulated through advertising, promotion and infrastructure development. Profits can also be controlled indirectly through environmental quality.

It is reasonable to characterize the long-term industry objective as one of maximizing the sum of discounted profits over time. In the same way a bank recognizes the time value of money by charging borrowers interest, the industry recognizes the cost of waiting for future profits by discounting them. The relationship between the value of profits earned now and the value of profits earned in the future plays a key role in determining the behavior of the industry and the potential for sustainability. The discount rate⁶ measures this relationship. See Lind (1991).

An optimal control solution to the tourism development problem provides a path of output levels that maximizes the industry objective over time, while accounting for indirect changes in the resource quality⁷. In Figure 1 two time paths, each labeled "T", one from higher levels of X and one from lower levels of X , lead to a point where the optimal combination of number of visitors and environmental quality never changes. This point is referred to as a "steady state" and is identified by a star on the $\dot{X} = 0$ curve⁸. These are the only two paths among an infinite number that satisfy certain optimality conditions and lead to a steady state. All others lead away from the steady state - either to points outside the range of possible environmental quality

levels or to negative numbers of visitors. (Two of the inferior paths are illustrated by dashed arrows above and below T.) The optimal paths describe a best long term strategy for the tourism industry facing a specific current level of quality X : attract the number of visitors Q on path T associated with the current level of environmental quality X and follow this optimal path to the steady state point of environmentally sustainable tourism. The industry could deviate from this path to obtain short-term gains, but long-term losses will be incurred.

Residential and Other Objectives

The above analysis suggests that the first practical question to answer about environmentally sustainable tourism is:

1. Does an economically feasible steady state exist for the tourism industry?

A second, equally important question to the community is:

2. If it does exist, does it also satisfy residential and other objectives?

The answer to the first question depends strongly on whether the level of sustainable use that can be made of the resource is great enough to warrant the development of tourism industry infrastructure. It is possible that the only economically feasible path will drive the resource into extinction. Such a path seems to have been taken in Pattaya, Thailand where development of the coastal tourism industry has lead to severe pollution problems that make the water virtually unswimmable. Other entertainment-based attractions have replaced the coastal environmental resources as a draw for the local tourism industry.

The answer to the second question depends on residential and other objectives. Suppose we could formulate an objective function that describes the way residents benefit

from the combination of wages earned from tourism and amenities derived directly from the natural resource base^{9 10}. Given such a residential “utility” or “quality of life” objective and a residential discount rate we can derive an optimal path for development according to the residential viewpoint. We expect this to be different from the path for the tourism industry. In Figure 1 two illustrative optimal paths for residents are labeled R and lead from any value of X to a new point on the $\dot{X} = 0$ curve.

Just as we expect the objective function for residents to be different from the one for the tourism industry, we also expect that a single objective function will not characterize all residents. Nor will there be a common solution path or steady state point. For moderate to high-income residents, who derive significant aesthetic and other non-market benefits from environmental quality, we might expect an optimal solution path to lead to a steady state point with higher environmental quality than for the tourism industry. For low-income residents who value income for its use in purchasing subsistence goods, we might expect a path leading to a lower point. The community will be comprised of a variety of resident types – high and low incomes, dependent and independent of tourism to produce income.

Different paths and steady state points could also exist for other groups in the community. For the analysis of a tourism development project we would want to examine, for example, the objectives and discount rates of tourists, seasonal residents, permanent residents, local government and non-local governments. Major conflicts can arise over the differences. A common solution will require compromise. If, for example, the residents represented in Figure 1 can persuade the tourism industry to accept lower long-term profits or the industry can persuade the residents to accept lower long-term environmental quality, the illustrated conflict might be resolved.

A set of minimum acceptable levels of environmental quality might also be used to define the objectives of residents, the industry and other groups. These might be above or below steady state levels. One is illustrated as the dotted line in Figure 1. As long as the steady state level of environmental quality remains above the minimum acceptable level, the optimal path for residents will be the same as before. If it is higher, a different path leading to that level should be taken (not illustrated). Of course if the minimum acceptable level for residents is higher than the steady state solution for the tourism industry, conflict will again occur.

Lessons from Optimal Control Theory

The optimal control problem is based on the assumption that the resource can renew itself and recover from a certain amount of damage inflicted by tourist visits, the “control” variable. In practice the nature of the resource and the type of use will have a critical influence on the potential for sustainability and the possible levels of sustainable use. Eco-sensitive tourism technologies can sustain considerably higher numbers of visits than traditional tourism.

The optimal control solution specifies the path for the control variable that will maximize the objective function for any particular interest group when moving between two environmental quality levels. The steady state is not the ideal (visitors, quality)-pair for all time but rather the ultimate destination of an optimal path along an infinite planning period. Alternative, ad hoc paths to this point are possible but not optimal. In practice the industry or government will be required to manipulate the number of tourists through advertising, capacity controls, fees or direct investment in the resource and its protection. Bermuda, for example, has set a strict limit on the number and arrival times

of cruise ships in order to preserve quality. (See Riley, 1991.)

The length of time that is spent on any paths is factored into the optimal control solution by means of the objective function, but the solution path as illustrated in Figure 1 is independent of time. The hatch marks on the upper R path suggests how movement slows down as the steady state is approached. The practical interpretation of the speed traveled along the optimal path is that development should be cautious especially near the steady state. One should steadily approach an agreeable level of environmental quality that can be sustained by natural processes. If a sub-optimal path is chosen, it could lead to the destruction of the resource or the industry, or simply lower profits and qualities of life.

The control problem posed in the simple model above assumes an infinitely long planning period because of the assumed definition of sustainability. If, for some reason the planning period is finite then there will be no benefit from leaving any positive environmental quality at the end of the period. In this case the optimal solution will lead to total destruction of the resource unless a minimum acceptable level is set or a specific level is bequeathed to society at the end of the period. Solutions to each of these finite problems bring us to the same practical solution as for the infinite problem of emphasizing a target or minimum acceptable level of environmental quality.

The chief lessons from the optimal control theory exercise are:

- That an understanding of the dynamics of the bio-economic system is critical for understanding issues of sustainability. This requires information on a) natural resources, b) industry and residential objectives, and c) externalities produced by industry activities.
- That differences between objective functions and discount rates can

explain conflicts over steady state levels of environmentally sustainable tourism

- That the length of a planning period can determine the economic feasibility of sustainability - short term goals may lead to the destruction of the resource or the industry.
- That minimum acceptable or target environmental quality levels can promote sustainability.

Recommendations

This paper has described a simple model of the behavior of tourism-related, economic and environmental variables in a community over time. Using this, it examined the basic notions of sustainable tourism from a profit maximizing, industry point of view and a quality of life - maximizing residential point of view. Three primary findings are that 1) different views of sustainability may not be compatible, 2) certain target levels of environmental quality may not sustain a tourism industry, and 3) certain industry objectives or short planning periods may lead to destruction of the natural resource.

While information about the behavior of people, industry and natural resources is desirable, it is never completely attainable and is generally expensive to obtain. The model of sustainability assumes that such information is known for current as well as future generations. Given this, an optimal development path could be charted to sustainability.

In the real world we can, at best, determine "where we are" and "which way is up". We may also have some information about how to control the system toward "a better place". The information for understanding where we are and how to change is provided by a variety of methods and data sources. Monitoring "community indica-

tors” and conducting “benefit cost analyses” are recommended.

A carefully selected discount rate can be used to conceptualize our value for a future that is just like the present, but this limits us to preferring it more or less than the present. We will have difficulty conceiving of a different future. To reduce risk from that uncertainty we recommend a bequest of specific environmental qualities to future generations. We must analyze current preferences to anticipate future values and existing processes to forecast future change. Other than that the best we can do is speculate about the future – our own and that of future generations. This may require some new analytical techniques.

Finally, it is our strongest recommendation that tourism project analysis be conducted from the community point of view. This means that the local natural and human interdependencies are recognized and that attention be given to different recipients of costs and benefits. While all viewpoints will not be reconciled, those that are will provide a base of support for the project. Furthermore, the prospect of environmentally sustainable tourism will be much more likely.

Notes:

¹ In some future discussion we might extend the concept of natural environment to include the human social and cultural environment – another renewable visitor attraction.

² Resources that are non-renewable, such as oil and mineral deposits, imply a different model, the solution for which is total preservation or depletion of the resource.

³ We assume the impacts of residents on the environment are already accounted for in the natural growth rate.

⁴ An example is the logistic function:

$$\dot{X} = \frac{\partial X}{\partial t} = \gamma X \left(1 - \frac{X}{X}\right) - \delta Q^2$$

where γ and δ are parameters that capture the regeneration rate of the resource and the damage rate of visitor use, respectively.

⁵ An example is the equation:

$$\Pi(Q, X) = \alpha Q^{\beta_1} X^{\beta_2}$$

where

$$\alpha > 0, \beta_1 > 0 \text{ and } \beta_2 > 0.$$

⁶ If one dollar is invested at an annual rate of 100r%, then at the end of one year the investment will be worth $1+r$ dollars. The investor is indifferent between the two situations. Looking at it the other way, the present value of a dollar to be received in one year is $1/(1+r)$ dollars. In this form the interest rate is more generally referred to as a discount rate.

⁷ A stylized description of the objective of the tourism industry is offered by changing from specific units of time (such as years and months) to a continuous concept of time. The summation is consequently replaced by the integral and the unit of time becomes infinitesimally small. Thus, the long-term objective of the industry can be written as a maximization problem:

$$\text{Maximize } \int_0^{\infty} \Pi(Q, X) e^{-rt} dt \text{ with respect to } Q.$$

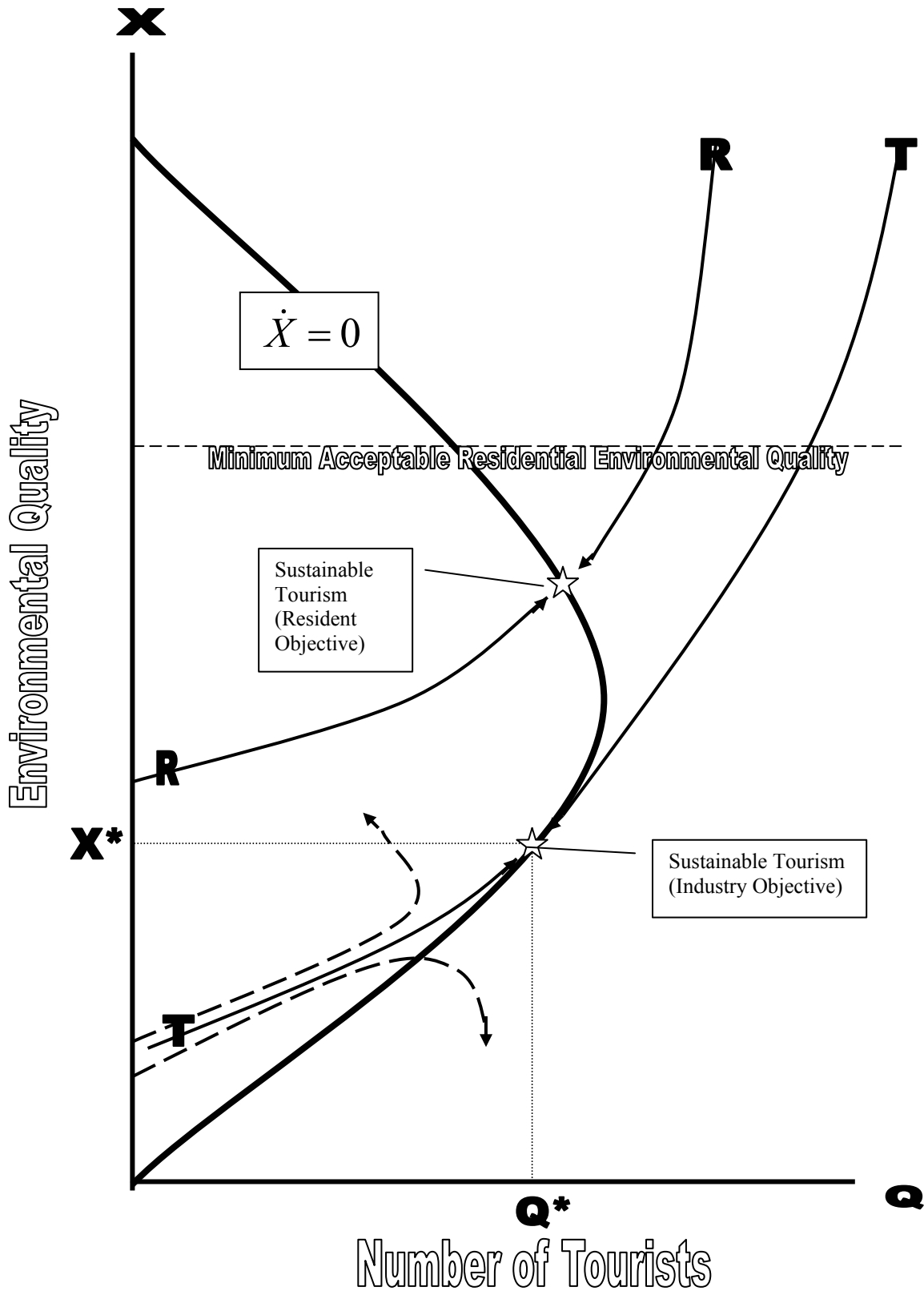
This objective function says that the industry wishes to maximize the sum of all discounted (e^{-rt}) profits ($\Pi(Q, X)$) from now ($t=0$) until the end of time.

⁸ Specifically, this is the point where $\dot{Q} = 0$ and $\dot{X} = 0$

⁹ For example, we could hypothesize the same equation for residents as we did for the tourism industry $\alpha Q^{\beta_1} X^{\beta_2}$, where the coefficients are the same $\beta_1 = \beta_2$ for the tourism industry and $\beta_1 < \beta_2$ for residents.

¹⁰ It is clear that tourist visits can also have a negative influence on the social and cultural environment through increased crime and congestion.

Figure 1. Phase Space Diagram for Environmentally Sustainable Tourism



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MANAGEMENT OF MARINE TOURISM ON AUSTRALIA'S GREAT BARRIER REEF: PUBLIC AND PRIVATE DIMENSIONS OF REGULATION

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Abstract: *This paper examines the main planning and management strategies used to guide and regulate marine tourism on Australia's Great Barrier Reef. Much of the analysis focuses on the operations of two principle government agencies, The Great Barrier Reef Marine Park Authority and the Queensland Department of Environment. The former is in charge of functions like zoning, planning and the issuance of permits, while the latter has responsibility for day-to-day implementation and enforcement. Since government is not the only stakeholder on the Reef, the paper also assesses the various approaches to self-regulation that are being taken by the industry, itself. Fieldwork was done in 1998 during the course of a sabbatical.*

Keywords: *Parks and Protected Areas, Management, Ecotourism*

Introduction

The purpose of this paper will be to examine the management of tourism on Australia's Great Barrier Reef (GBR). In doing so, we will look at the marine tourism industry, at the Reef and at the public agencies that oversee it. With regard to the work of these agencies, the paper will treat four different subjects: (1) the planning and management tools currently being utilized, (2) the mechanisms of implementation, (3) the encouragement of self-regulation by the tourism industry and (4) the generation of a research capability. Fieldwork for this paper was undertaken in 1998 as the focus of a sabbatical. Data were gathered from interviews with stakeholders in both the public and private sectors plus standard archival sources.

To understand the nature of our subject, we must begin with a discussion of the size and diversity of the resource itself. Although called The Great Barrier Reef, it is really a marine system composed of some 2900 individual reefs and approximately 900 islands. Located near the equator in the state of Queensland on Australia's northeast coast, it runs north/south for more than 2000 kilometers (1200 miles). In terms of area, it is equal in square miles to one-half of the state of Texas. If sheer size were not daunting enough, add to the complexity of the management job the staggering diversity and variety of marine life found in these warm waters. The GBR is home to 400 different varieties of hard and soft corals, 1500 species of fish, 4000 different mollusks, thousands of different sponges and crustaceans plus countless other creatures.

For millennia this colossal ecosystem slumbered on, undisturbed by any outside forces. With European discovery of Australia came major changes whose pace has accelerated dramatically in the last quarter century. Fearing that this vast resource might be in considerable danger from the effects of late 20th Century life, the Australian Commonwealth Government sought to permanently protect it by creating The Great Barrier Reef Marine Park in 1975. According to the law that set it up, the Park's main purpose is conservation, and the pursuit of that purpose was made the primary responsibility of its management agency, The Great Barrier Reef Marine Park Authority (GBRMPA). The 1975 law instructs the Authority to regulate use of the Reef so that it will be protected but at the same time to allow for "reasonable use" of it for various extractive activities such as commercial fishing. The

same statute mandates that some areas be left completely undisturbed and that others be made available for the appreciation and enjoyment of the public. It is this last element that, of course, forms the connection with tourism, but the great boost for that particular use of the Reef came in 1981 when it was listed as a World Heritage Site under the international World Heritage Convention (Lucas, Webb, Valentine and Marsh, 1997).

Today GBRMPA follows a multiple-use strategy that attempts to balance the values of conservation with those of four main user groups, or constituencies: the commercial fishing industry, Queensland citizens who are recreational users, a sizeable Aboriginal population and the commercial tourism industry. Each of these groups has different needs and puts different types of demands on both the Reef and the management agency, but it is tourism that is the Reef's major commercial use. Commercial fishing comes in second, but the economic value of tourism is four times greater.

Reef Tourism

Tourism in Australia generates enormous economic activity (Driml and Common, 1995; Wearing, 1991), and to that the GBR region leads the way, creating approximately 10% of the region's economic activity. In addition to being high, it has been growing at a rapid rate in recent years. More than 3.5 million people visited the region in 1995, and nearly half of them took part in some type of reef-related activity. In 1997 more than 1.7 million visitor days were spent on the Reef. This figure was up from approximately 900,000 in 1990.

While many factors help to explain this phenomenal rate of growth, part of it is technology driven, with bigger and faster boats being able to deliver far larger numbers of passengers to what were once remote areas of the Reef. If acceptable travel time for the day visitor is two hours in each

direction, then in 1985, most boats could traverse twenty miles of ocean in that amount of time; by 1990 they could cover fifty miles in two hours and by 1998 new, high-speed, high-tech, catamarans could reach cays and islands 75 miles from port in the same two hours. It is estimated that by the year 2001 they will have a one-way range of 100 miles, enough to put almost the entire Reef within the reach of the day visitor. Such changes pose enormous challenges for the Authority in regulating some components of the marine tourism industry.

On The GBR this industry is composed of eight major sectors:

- Island transfer - boats that bring visitors out to island resorts
- Day tour operators - taking visitors to reefs for a single day of activity
- Live aboard dive boats - multi-day tours, usually scuba
- Fishing charters
- Bareboat charters - boats rented to visitors for their own use and piloting
- General charter
- Cruise ships
- Miscellaneous - operators of businesses engaging in helicopter and aircraft sightseeing, water sports activity such as jet skis, water skiing, etc.

These eight sectors are composed of 660 different commercial operations in the Park, and together they use approximately 900 vessels. However, while the numbers are large, the industry itself is highly concentrated with the five largest firms accounting for more than one-third of the total visitor days per year. With such a far-flung constituency the Authority's management task is enormous, and thus we must examine the devices on which it relies.

Management Tools

The most comprehensive management tool available to marine resource managers is

zoning (Salm, 1982; 1985) and GBRMPA has relied on it extensively (Orams, 1999). Most people are familiar with how this device is utilized on land, grouping similar uses and activities together. Similarly, in a marine park, uses that are alike are kept together (Ceballos-Lascurain, 1996). Thus, for example, commercial fishing areas are separated from conservation zones, as in The Galapagos Islands (deGroot, 1983). Because the GBR covers such an enormous area, the Authority has first divided it into four geographic sections: The Far North Section, The Cairns Section, The Central Section and The Mackay / Capricorn Section. Each of these sections has, in turn, been divided into a number of different activity zones such as the:

- Preservation Zone
- Scientific Research Zone
- National Park Zone
- Buffer Zone
- Conservation Park Zone
- Estuarine Conservation Zone
- Habitat Protection Zone
- General Use Zone

While not all of these zones will be found in all four sections, the basic idea on which they are all based is to set an increasing level of limitation on human activity as one goes up this list from the General Use Zone (least restrictive) to the Preservation Zone (where no unauthorized entry of any sort is permitted). Together these zones regulate a broad range of activities like aviation, shipping, trawling, recreational fishing, specimen collection and tourism (GBRMPA, 1992). While certain dangerous activities such as mining and oil exploration are completely prohibited through-out the entire Park, other highly destructive practices are permitted -- but not everywhere. For example nearly 1,000 trawlers dredge for sea scallops or drag the sea bottom for prawns in the Marine Park, but not in all zones. Because the practice cannot be stopped, the idea of zoning is to regulate it by limiting the areas where it can be undertaken.

As a management tool, zoning has been useful, but because the zones are so broad and the reef is so vast, this technique is only the first, and crudest, tool in the overall management plan for the Reef. Because tourism is now by far the most substantial economic activity there, the Authority has moved beyond zoning and developed a new management approach to deal with it: the Plan of Management or POM (Tourism Review Steering Committee, 1997). POMs have become essential because the main role of zoning has been just to delineate where extractive activities like trawling can be pursued. Tourism is not an activity that was ever specifically addressed in the zoning plans. Part of the reason for this was simply that in the Park's early days, tourism levels were extremely low. In such a setting the Authority could regulate visitation through a permit system where each proposed operation was examined in terms of its own requirements. Thus, as long as an operator could secure a permit, he could carry on tourism activities in all zones except those set aside for Scientific Research or Preservation, which together cover less than one percent of the entire park.

In terms of tourism, the most heavily used part of the Park is the Cairns Section. Because it is so intensively impacted - hosting over 60% of the Reef's annual visitors - we can focus on it here to illustrate how a POM is structured. The Authority applies a four-level hierarchy to management areas like Cairns. Thus, an area is divided into sectors; sectors are divided into localities; localities into locations and locations into sites. Cairns begins with six different geographic sectors. Within each sector there are a number of localities. For example in the very popular Ribbon Reefs Sector one of the localities is known as Cod Hole, a place seen in countless television documentaries with divers hand feeding the enormous cod that lurk there. Each of these localities is, in turn, composed of a set of locations, and within each location are the individual sites. The locations are the separate reefs, cays, etc. to which a tourist might be taken, and the sites are the very specific geographic points on

the reef where he might be allowed to dive or where a mooring might be placed. To appreciate how such an approach allows for very finely tuned resource management and protection, consider the following scenario involving two operators visiting the same reef-location. The first is allowed to anchor at a site 25 meters from the reef, above a sandy sea-bottom. He is allowed no closer because he uses an anchor and the reef's delicate corals would be damaged by it. To limit such impact, a mooring buoy has been placed at an adjacent site and the other operator can stop there if he has the right to use it; something stipulated by his permit. The two sites are side-by-side, but through the POM they are controlled in a way very different from that which would be possible under a simple zoning plan.

Utilizing this hierarchical and spatial system, the Authority's planners now rely on a combination of scientific studies and site-visitation data sets, to make assessments of the carrying capacities and vulnerabilities of major sectors, localities, locations and sites in the Cairns Area. The concept of carrying capacity, of course, refers to a site's ability to absorb visitation without suffering degradation (Clark, 1991). Each reef or island can accommodate only so many boaters or divers per day before their pressure begins to generate an unacceptable level of impact on the resource. The maximum "load" that can be sustained is referred to as the carrying capacity of the resource (Manning, 1996) and to manage it, GBRMPA planners generate numerous regulations, all of which vary with location. There are maximum boat sizes and there are caps on the numbers of visitors who may be brought to a site. A reservation and booking system regulates the number of operators who can voyage to any one reef on any one day. For example, a certain popular location may have two public moorings, but because there are ten tour operators who wish to go there on a particular weekend, they must call ahead and make reservations. Otherwise they will not be allowed to bring divers there.

In addition, there are stipulations regarding the placement and operation of large, floating platforms called pontoons. These are extensive, man-made structures permanently moored in one place, miles from shore. Many of the newer ones are floating, two-story buildings, complete with small theaters, underwater observatories, dining areas and catering for several hundred people. Some even come equipped with helicopters that can land on the deck and then take visitors out for a quick fun-flight. All of these amenities are in addition to the usual provisions for diving, snorkeling and swimming.

Each day modern, high-speed ferry boats deposit hundreds of passengers on each one. That same evening they return them to the port from which they left in the morning, usually Cairns. Obviously this type of mass, or "industrial", tourism needs to be carefully regulated and monitored if resource damage is to be kept to a minimum (Pigram, 1990). Authorities therefore have a legitimate interest in everything on a pontoon from visitor behavior that may directly damage coral to the structural integrity of a facility's waste-water holding tanks.

However, despite its best efforts at managerial innovation, it is doubtful that the Authority can deal effectively with a tourism industry that is growing at a rate of 11% annually and using a geographic area larger than Britain. Part of the problem is that certain locations on of the Reef are so very heavily used. Not only do high-speed boats bring hundreds of tourists to individual pontoons, but there are particular islands that are becoming almost urban in character. The largest of these is Hamilton Island, a miniature city that attracts thousands of visitors to its beaches, shops, restaurants, 20-story hotel and high-rise apartment buildings. Of course, even small cities produce enormous amounts of waste and these directly impact a resource like The Reef (Green and Hunter, 1992; Pearce, 1985). Another heavily used site is Green Island where ferry boats can deposit more than 1,000 people daily on a single reef. In cases

such as these, the term “enlightened marine resource management” really means just minimizing the damage (Mieczkowski, 1995).

Of course, not all GBR tourism is so intensive and thus each day scores of more modest boats bring small numbers of divers, fishermen and others to more remote sites. In earlier days they might have just thrown an anchor overboard, upon arrival, but today GBRMPA is eliminating this practice. Not only does a thrown anchor explode onto fragile coral like a wrecking ball, but the heavy chain attaching it to the boat destructively rakes over other nearby coral for hours as the craft swings back and forth with the wind and tide.

Today, in order to decrease such damage, GBRMPA is using the POMs to encourage tour operators to install permanent moorings instead of continuing to anchor. Moorings are far less environmentally destructive because they do not inflict multiple impacts. Instead, they rely on a one-time securing of a line from a floating surface buoy to the reef or sea bottom. With the buoy in place, the operator merely has to clip his boat to it each time he arrives at the site. Under the Cairns POM, the Authority has licensed the installation of more than 250 such devices with 115 more still planned.

The connection between these individual operators and the POMs is the regulatory device known as the permit or license (Wallace, 1993). Anyone who wishes to go into the business of transporting or otherwise assisting paying visitors out to the Reef must apply for a permit from GBRMPA. Currently some 850 individuals and firms hold such permits. Before the advent of the POM (1998), when the only tool that existed was zoning, a customized permit had to be written for each operator stating where he could go and what he could, and could not, do upon arrival. The process was widely criticized as inefficient (Brown, 1997). Given the size of the GBR, some permits could run to dozens of pages in length and take a year or more for approval. Now, since accept-

able and unacceptable practices have been spelled out for each location, the licensing process has been greatly streamlined. When the document is issued, the Authority needs only to list those places that the operator is allowed to visit. Once there, the standards to which one must conform (boat size, number of passengers, etc.) are already in place.

Five years ago these various management tools, along with a consideration of challenges and goals, were brought together when the Authority published its Twenty-Five Year Strategic Plan (GBRMPA, 1994). The purpose of this document was to establish a general framework for both the conservation and the ecologically sustainable development of the Reef. To do this the Authority brought a wide range of stakeholders into the planning process: tourism, fishing, conservation groups, Aboriginal interests, state and local governments, etc. All participated in discussions of the Reef's future and how to ensure it via responsible management. Because this document laid out a long-range vision for the resource, it has served for years as a standard against which to judge day-to-day management decisions.

The Plan has also served as a lightning rod for conflict, and its provisions frequently pit tourism against other industries like fishing and shipping, a phenomenon that is extremely common in this field (Boo, 1990). In addition, there is considerable conflict within the tourism industry itself, with small, “life-style” operators frequently on one side and the large pontoon and ferry boat operators on the other. They differ on issues relating to taxation, conservation practices and licensure, to mention just a few.

Enforcement and Implementation

We have seen that planning and rule making are the primary responsibility of GBRMPA, but we have not yet dealt with the question of who enforces these rules.

Implementation is one of the most important parts of the entire public policy process (Elliott, 1997), and on The Reef the discharge of this function rests with the Queensland Department of Environment (DOE). This is the agency that operates the patrol boats and surveillance aircraft to ensure compliance. Its staff of 106 is also responsible for the development and maintenance of infrastructure projects, such as island campgrounds, public moorings and docks (DOE, 1997). Because it is the department with the personnel actually in the field, it is also in a unique position to observe problems and make reports to other agencies. These reports, in turn, frequently result in efforts to change the ways in which things are done. For example, when existing rental-boat regulations allow for unforeseen crowding on certain islands in an area known as The Whitsundays, the impetus for changing these regulations is likely to come from the DOE because it is the agency dealing with the problem on a day-to-day basis.

Furthermore, DOE surveillance boats and aircraft in The Whitsundays have filed numerous reports on reef and island damage caused by inexperienced sailboat captains. The "bareboat" industry rents boats to customers with neither crew nor captain (i.e., the boat is bare), and the customer sails the boat himself. Such individuals are likely to have never sailed in the area before and thus do not know all of the dangers -- both to themselves and to the Reef's flora and fauna. Coral is damaged; islands are left in an unsanitary condition; nesting turtles and sea birds are disturbed. When patterns like this appear, it is DOE that initiates action. However, it must be remembered that there are a mere 106 employees to watch over the entire 1200 miles of reef. Inevitably, many impacts go unreported.

The careful reader has undoubtedly noticed that there are two different levels of government involved in Reef management (Hall, 1995; Pearce, 1989). GBRMPA is a federal agency reporting to a minister in The Commonwealth Government in the national capital, Canberra, while DOE is a state

agency administered by the government of Queensland. The establishment of the federal Marine Park in 1975 sparked considerable conflict and debate between these two levels of government as to who would actually be in charge, a problem that occurs quite frequently in tourism politics (Hall, 1994; Innskeep, 1991). The result of this debate was a document called "The Emerald Agreement" which divided their activities into policy making, which was lodged at the national level, and administration, which was lodged at the state level. While easily distinguishable in theory, the two functions have always overlapped in practice. Nowhere is this more true than in matters relating to the DOE's budget where each level provides half of the approximately \$(AUD)8 million that is spent each year. Since, under terms of The Emerald Agreement, each level contributes fifty percent of the total, the national government has considerable leverage in shaping exactly what types of management practices are used by DOE. This affects everything from construction and maintenance priorities to personnel and accounting techniques. But the practice of joint contribution also means that there is considerable continuity in levels of funding. Even when the political parties controlling either government have changed, the aggregate budget has not been dramatically affected because the commitment of the other side has remained constant. Of course, there is no guarantee that this pattern of cooperation and back-stopping will continue in the future, and thus there are many who predict considerable management instability in the future. If they are correct, this instability will occur at the same time that the demands of tourism and all of its side-effects are continuing to grow.

Much of the money used by both DOE and GBRMPA is generated by a user fee known as the EMC, Environmental Management Charge (GBRMPA, 1998). A user fee is a payment collected either directly or indirectly from visitors (Lindberg and Huber, 1993). Based on what is known as the "user pays principle," it provides for the funding of a resource by those who benefit from it.

First levied at the Reef in 1993, the EMC is now \$(AUD)4.00 per visitor, per day with all proceeds earmarked for reef agencies and not for automatic return into the general fund of the federal government. In this way, monies generated by the resource can be used for its management and protection (Cater, 1994).

The fee itself is collected by the tour operators and this has been a source of considerable friction between the Authority and the industry. Businessmen have been fearful that the additional payment would serve as a disincentive to travel, but when the \$4 fee is seen as a percentage of a visitor's overall travel budget, it is minuscule. No data exist demonstrating that the existence of the charge has caused tourists to cancel their trips. The main problem for the operators is really one of overhead. It is they and their employees who collect the fees, do all of the paperwork and ultimately make the payments to government. Such activities have become an additional cost of doing business, but a cost that helps to preserve the resource on which firms like these depend (Dixon and Sherman, 1991).

Beyond the question of budgets and funding, the interplay of policy and administration goes on daily (Barborak, 1995). A good example of its dynamic nature was apparent in the early 1990's when criteria had to be set regarding the building of artificial reefs. Because such structures create additional habitat, both the sportfishing and recreational diving industries supported their construction. While it was GBRMPA that would ultimately be responsible for granting or withholding most licenses, it did this jointly with DOE. The policy-level standards that would apply in making such decisions were adopted with DOE input. The state agency provided data, made recommendations as to placement and submitted early drafts of criteria. DOE may be referred to as a management agency, but it is not without discretion.

Industry Self-Regulation

In spite of this extensive regulatory regimen, private industry continues to be a vigorous force on the Reef, as it is at tourism venues worldwide (Holdan, 1992). To illustrate this contention we may refer to the issue of moorings, discussed above. Once licensed, a mooring is owned by the operator and, having the right to use it 365 days per year, he has several choices. He can use it himself to take visitors to the site. He can rent it to other operators for dates when he judges such a decision to be profitable. In the long run, he may opt to sell the site and mooring outright to another businessman. This course of action is open to him because the licenses are fully transferable. This tradability gives them financial value, and because of this fact current owners know that they will realize greater returns on investment if the sites are kept in an ecologically healthy condition. In other words, part of the strategy behind self-regulation is to make the pursuit of conservation profitable in the long run (Sherman and Dixon, 1991). Of course, tradability does nothing to help with short-term situations in which a captain may decide to flush a bilge tank illegally or bring too many divers to a particular site.

While most moorings are owned by individual operators, the Authority has recently embarked on yet another approach to regulation that relies heavily on the free market and the private sector. Known as self-regulation, the system works as follows (Wachenfeld, Oliver and Morrissey, 1998). In each area of the Reef there are locally-based marine tourism associations composed of businessmen whose boats have the same ports and visit the same geographic areas each day. Instead of issuing the mooring licenses exclusively to the individual businesses, the Authority now dispenses a certain number of them to the associations. Once this is done, the site is listed as belonging to the association, and only "members in good standing" can use it. In his famous essay written more than a quarter of a century ago, Garrett Hardin (1968) argued that

when a resource is owned by everyone, it is as though it is owned by no one because all have an interest in overusing it. This problem is diminished when there are Codes of Practice and other types of ethical guidelines (Wight, 1993; McAvoy, 1990) requiring that members remain "in good standing."

It has been in the self-interest of the associations to develop Codes of Practice and to begin privately policing their own members. These Codes generally focus on matters such as mooring and anchoring procedures, visitor education, safety and conservation practices. Boats operating in an ecologically harmful manner can be fined or even excluded from use of the moorings. All of this is done by the operators themselves, not by "big government," and it is done because such policing is in their mutual self-interest. An irresponsible operator is a threat to the group and the group now has the authority to punish. Of course, having this authority is not the same thing as actually using it, and thus the effectiveness of The Code of Practice approach is far from certain. The program is new, and the Authority does not yet have sufficient information on the extent to which these businessmen are actually regulating one another. On this matter, only time will tell.

Around the world, another popular vehicle for bringing together the public and private sectors is the protected area advisory council (Munro, 1995; Murphy, 1985; Eagles, 1984). In Australia, GBRMPA has done this through its Regional Marine Resource Advisory Committee (RMRAC) system. Ranging along the 2,000 kilometers of the Reef's length are a dozen major towns or cities, and in each of them a RMRAC has been formed. Committee membership is composed of a broad cross-section of stakeholders. Aboriginal groups, tourism interests, commercial fishing, recreational boating and fishing interests, local governments and conservation organizations all participate. Together their purpose is to advise GBRMPA and DOE on a host of issues that affect them: development, planning, pollution, etc. In other words they provide the

two agencies with input on problems and on how regulations affect their lives and livelihood.

Research

Whether the regulations are public or private, the ultimate rationale behind the POMs is to protect the reefs by monitoring the cumulative effects of usage. Such a goal requires the existence of a substantial scientific research capability and for this the Authority usually turns to an organization called The Cooperative Research Center-Reef (CRC-Reef). A partnership founded in 1993 between industry (including marine tourism), James Cook University, the Commonwealth Government and the Queensland Government, CRC-Reef has an annual budget of AUD\$9.2 million, which it focuses on off-shore research. The research agenda includes marine ecology and biology, fisheries engineering design, tourism and its impacts, hydrodynamic modeling and water quality analysis.

One of the most dramatic examples that might be cited of this organization's importance to the sustainability of the reef-tourism environment did not deal directly with tourism at all. Instead, it dealt with shipping. Every year, through the mid-1990s, some 2500 large commercial ships, about 10% of which were oil tankers, navigated the sometimes-elusive channel that runs between the Reef and the mainland; it is actually a channel that runs between 2900 separate reefs and an ever-changing coastline. More than 50 ships have run aground or collided since 1979. In 1995 CRC-Reef released a study entitled "Shipping Risk Analysis for the Great Barrier Reef". In it scientists focused on this commercial bulk shipping allowed in the interior waters of the Marine Park. In the wake of well-known accidents such as the one involving the Exxon Valdez in Alaska, the fear was that a large oil spill could have devastating consequences for the Reef and thus CRC-Reef was asked to do a risk assessment. As a direct result of this study, federal shipping policy

was altered to require that most bulk shipping routes be moved outside the Reef. Loss of this inner passage cost the maritime shipping industry both time and money, but the study clearly demonstrated the old policy to be too environmentally hazardous. It should be obvious that while this study did not deal directly with tourism, it was indirectly of great value and relevance to it.

The Authority and CRC-Reef also monitor numerous ecological impacts that are specific to tourism, and just a brief sampling of these should alert the reader to the tremendous complexity of the task. Whether in Australia or elsewhere, the presence of tourists on small islands may interfere with nesting seabirds and turtles (Jacobson and Figueroa-Lopez, 1994; Burger and Gochfeld, 1993), but scientists and policy makers need data on both the extent and intensity of this interference (Claridge, 1997). Once the data are gathered and conclusions drawn, recommended changes can be worked into the POMs. Furthermore, humpback whales migrate annually from Antarctica to GBR waters for calving, and marine creatures known as dugong frequent the shallow offshore areas. Both species are involved in frequent collisions with boats, especially small, fast recreational craft. Data are being gathered on the dimensions of this problem as well. To make informed policy, the Authority also needs hard data on coral damage that is the unintended consequence of island and resort development. When resort access channels for boats are cut through reefs, the result can be a draining of lagoons during low tide and the consequent death of hundreds of acres of coral due to loss of seawater coverage. Mitigation can be undertaken, but to be effective it must be based on good data.

Other threats to the reef have been more difficult to deal with. Coastal development of infrastructure for tourism facilities such as resorts and marinas can cause massive environmental problems: loss of habitat, the dumping of dredge spoil, increased effluent discharge from resorts plus spilled fuel and anti-fouling preparations from ma-

rinars (Frankel, 1995; Bacon, 1994). A good example of both the promise and the failure of tourism management in the Marine Park area is provided by the case of a planned resort development known as Port Hinchinbrook. During most of the 1990s, developers and conservation groups battled over this proposed mega-resort. Port Hinchinbrook was designed as an integrated tourism and residential facility with both shopping/business areas and a central recreational core: an extensive marina providing access to the GBR. While the developers referred to their plan as being ecologically friendly, environmental groups such as The Marine Conservation Society and The Australian Conservation Foundation opposed it as being far too destructive. Ultimately it was the developers who won, even though the project required extensive dredging of mangrove and sea-grass areas. Although they opposed the project, neither GBRMPA nor DOE staffers were able to stop it because their recommendations were subject to review by political officials at both the State and Commonwealth levels.

Going beyond tourism, CRC-Reef claims that terrestrial development, in general, is the single greatest threat to this delicate ocean environment. Development creates change in land use and this change can bring massive siltation when it rains. When one adds to this fact the migration of fertilizer and pesticide residues from agribusiness, it becomes clear that run-off creates enormous problems for reef sustainability. In addition, urban development brings with it the discharge of wastewater that can poison inlets and nurture the growth of algae that cover and thereby kill coral.

Conclusion

It has been the purpose of this paper to discuss the main types of challenge faced by management agencies in charge of marine tourism on the GBR. While one of their primary goals is conservation, there are ever-growing numbers of visitors from

around the world who want first-hand experience of a World Heritage Site like this one. In addition, since Australia is dedicated to the principles of a free-market economy, businessmen are allowed to operate in these waters. The commercial fishing industry along with cargo shipping firms place demands on the Reef Region as do tourism operators, Aboriginal groups and Queensland residents in search of recreational opportunities close to home. Of course, such a high level of utilization carries with it the danger of over-use and the consequent danger of resource degradation.

In such situations, interviewees agreed that there is no alternative but informed management. We have seen that on Australia's GBR, the lead agency in this endeavor, The Great Barrier Reef Marine Park Authority, has evolved a system that is both spatially and behaviorally structured (zoning and POMs). It is assisted by the Queensland Department of Environment which is in charge of day-to-day management. These two agencies have primary responsibility for zoning, planning and regulation, but they share some of these functions with private industry. Tourism operators have been given a substantial stake in their own self-regulation through the use of Codes of Practice. While this public-private partnership is a useful innovation, it also seems certain that new problems and obstacles will continue to surface as Reef tourism continues to grow and as technology delivers ever-faster and ever-bigger boats.

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THE CHALLENGE OF ECOTOURISM IN THE NEXT MILLENNIUM: OVERCOMING STRUCTURAL CONSTRAINTS WITH LOCAL POTENTIAL

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Abstract: *Many countries in the Caribbean, long invested in traditional tourism in which sand, sea and sun are the major attractions, are exploring ecotourism as a development strategy. The successful pursuit of ecotourism will be enhanced if the logic of extraction of this natural resource is appropriately understood so that pertinent policy and institutions can be devised to ensure ecological and therefore economic sustainability. In an effort to contribute to the implementation of appropriate policy this paper examines the limitations imposed by the structure of the global tourist industry and analyzes the conditions in some Caribbean countries that might allow for the successful pursuit of an ecotourism strategy. The paper works on the theoretical hunch that tourism, as traditionally managed, suffers from the same sorts of constraints of other export-led development strategies: significant damage to the natural environment; substantial income leakages through expatriation of profits; limited forward and backward linkages and high vulnerability to global economic changes. What is the likelihood that ecotourism can define an alternative logic that can sustain local economies and environments? Recent planning efforts in some islands have conceptualized the new form of tourism as "community-based heritage tourism" to reflect a focus on sustainable rural development. What are the prospects for such a locally oriented model in the face of global economic constraints? This paper argues that certain factors such the small geography of the territories; type of tenure under which resources are held; the formal and informal institutions under which they are managed; the nature of the extraction of the resources and the potential beneficiaries (domestic and global) define the arena for potential success.*

Keywords: *community development, ecotourism, integrated planning, social, economic, environmental impacts*

Introduction

The global tourist industry is valued at somewhere between USD\$3 to \$3.5 trillion and considered to be second only to perhaps the oil industry. Many developing countries, have been, and are, disappointed with past attempts to capture some of that value in tourism and convert it into meaningful development. The advent of ecotourism and the parallel decline in dominant agricultural sectors have encouraged struggling economies to pursue ecotourism strategies that promise to reverse that trend. Ecotourism has emerged as a new hope, which, with appropriate planning, and with significant grassroots participation, is expected to overcome past pitfalls. But what is the likelihood that ecotourism can deliver what it promises? To what extent does the structure of the global tourist industry, within which ecotourism is considered to be a niche market, affect the potential of domestic economies to capture the benefits that ecotourism promises? To be successful the logic of extraction of the natural resources associated with ecotourism which involve the ecological as well as socioeconomic environment, must be appropriately understood so that pertinent policy and institutions can be devised to ensure ecological and therefore economic sustainability.

The Caribbean territories are faced with some of the same basic economic problems which plague other developing countries. How do countries, in this case small island states, which rely on the export of a few agricultural and mineral products as the main income earning activity, generate growth and development in a global economy in which, on the one hand, free trade is advocated and on the other, developed countries form protectionist economic associations which impose quotas and other trade barriers to restrict Caribbean imports? The search for new exports to capture niche markets is a constant challenge. The ability of export-led models and policies of market liberalization to encourage development in the Caribbean region, however, are questionable (Deere et al. 1990). The successful application of these models generally relies on injections of foreign capital lured by cheap labor, duty free zones and tax holidays. Traditional tourism very much fits in this model. There is substantial leakage of the income generated, and little opportunity for states to accrue resources for investment in domestic projects such as infrastructural development, education and other services. The employment generated tends to be for low-paying, unskilled jobs with limited multiplier effects in the economy. Yet few alternatives seemed available until the advent of ecotourism.

The definition of ecotourism as a concept or as a development strategy is far from established. It is sometimes simply equated to "nature tourism" or tourism targeted at travelers who seek to see or experience nature. In some of the literature ecotourism is understood to be tourist visits to protected areas or parks which allows for a unique experience and simultaneously generates income which, in part or whole, finances the preservation and/or conservation of these areas. Essentially ecotourism in such cases provides economic justification for conservation that might not otherwise be protected (Boo, 1990). Although ecotourism is subject to multiple definitions, it is typically contrasted to traditional tourism. Its attraction is derived essentially from the ecological

and economic sustainability it is supposed to embody. In theory, the method of accessing the products offered can be designed to be simultaneously of low ecological impact and financially viable. Utilizing policies that range from controlling the method of consumption to the intensity of consumption, it is argued that ecological integrity and economic viability can be sustained. Actual experience suggests that the ideal is more often than not compromised in the process of implementation - investment and sustainability strategies are often at odds.

Even as the island territories are about to embark on their ecotourism agendas, however, the long admired Costa Rican model is facing some serious challenges. Costa Rica's success with ecotourism was defined by an extensive system of conservation parks supported by significant external funding and, critically, a healthy economy. International economic instability and the corresponding slump in the marketability of Costa Rican exports have translated into increasing financial difficulty for economic development. The sustainability of the parks have been jeopardized as earnings from that sector are moved to social and infrastructural programs rather than reinvestment into conservation programs. A recent World Bank Report consequently lamented Costa Rica's failure to reinvest in the park system and its apparent "lack of political will" to pass laws to discourage deforestation outside of the parks (National Public Radio 'Morning Edition', 1997).

Is it only lack of such will or are there deeper global and local constraints that continue to undermine any meaningful attempt to successfully configure an extractive export-led development strategy? Could it be that the investment and trade mechanisms which dictate the conditions under which developing countries are integrated into the global economy continue to restrict the potential for developing countries to define alternative paths to development? And if this is the case, what kinds of domestic and/or international circumstances, if any,

may allow constrained states to overcome some of these limitations?

To be successful, ecotourism conceptualized as an economic strategy cannot exist or be managed as an enclave economy divorced from the wider economy. States in the developing world ultimately have a social responsibility to all their citizens. In the final analysis, the successful pursuit of this strategy will be defined in part by two criteria: first, if lessons can be learned from the deficiencies associated with comparable export-led strategies, and the errors committed avoided, and second, if the logic of extraction of this natural resource is appropriately understood so that pertinent policy and institutions can be devised to ensure ecological, social and economic sustainability. Developing countries caught in a global economic system in which they are increasingly less able to define their domestic development agendas (Mittelman, 1997) will be forced to find innovative strategies for economic and ecological survival.

From that perspective, the island territories of the Caribbean region such as St. Lucia present a unique set of conditions to explore some innovative paths. Indeed, the fact that islands cannot hope to compete in the arena of biodiversity with territories such as Costa Rica means they must continue to rely on the traditional attractions. They are challenged to reconceptualize a more intimate relationship between rural communities that have too often been by-passed by the traditional tourism enclave economy.

The recent establishment of the St. Lucia Heritage Tourism Programme is distinguished by its emphasis on sustainable rural development. This reconceptualization of tourism within the context of the particular colonial history of the region and current pattern of integration into the global economy raise some interesting issues about how the specific socioeconomic conditions of territories may provide opportunities to define successful alternative development agendas.

Essentially, this paper argues that the small size of the island states, their social capital significantly defined by their history with communal property resources and the associated informal institutions that manage them, and attraction as tourist destinations, delineate the grounds for making the theoretical argument for a carefully planned community-based ecotourism agenda that mitigates some of the negative aspects of export-led development models. The very nature of the product of ecotourism and its method of extraction coupled with the socioeconomic conditions under which this extraction is to take place define the arena for potential success. Indeed, if according to Brandon (1996), the success of an ecotourism strategy essentially depends on the planning process prior to ecotourism initiatives and the management controls and involvement of stakeholders once they begin there is cause to be hopeful that some Caribbean states, among them St. Lucia, have some critical attributes that may facilitate success.

In this paper I briefly describe the nature of the global tourist trade and how it has shaped traditional tourism in the Caribbean. I then define ecotourism and attempt to delineate, in broad terms, how the theoretical conceptualization of this form of tourism may be contrasted to traditional tourism so that the objectives of ecological and economic sustainability assume critical significance in the formulation of development objectives. This is followed by a theoretical discussion of how ecotourism could be managed if it is to avoid the pitfalls associated with previous export-led strategies. Within that context the objectives of current efforts to pursue rural development through heritage tourism will be briefly examined. An argument is made that the very nature of the product of "ecotourism" and current communal patterns of ownership of primary resources may be conducive to the definition of a different logic that is more appropriate to ecological sustainability and economic development.

The Caribbean and the Global Tourist Industry

The global tourist industry upon which ecotourism relies significantly for infrastructure and marketing is commonly considered to be the second biggest in the world. Largely controlled by multilateral corporations, the key sectors are airlines, tour operators and hoteliers. In many cases these sectors are vertically integrated under ownership of one corporation. The international hotel business is dominated by U.S. multinationals that account for 13 of the top 20 operators (Nicholson-Lord, 1997).

In most of the Caribbean region traditional tourism typically ranks among the top three industries in generating foreign exchange and although the Caribbean's share of number of tourists is less than two percent, it ranked ninth in the world on the basis of its tourism receipts in 1990 (Patrullo, 1996). Yet in some states as much as 80 percent of nominal inflows of foreign currency flow out again to the accounts of the tour operators, airlines and travel agents (Nicholson-Lord, 1997). It is widely accepted that although tourism does generate some employment and foreign exchange, its success as a development strategy has remained elusive. Employment is largely restricted to seasonal, low-skilled jobs; there are substantial leakages of income out of the countries through extended tax holidays and free repatriation of profits offered as incentives to external investors and through the establishment of all-inclusive hotels in which vacation packages which cover travel, lodging and food are pre-paid to travel agencies that are externally located. Linkages with the agricultural sector through the provision of food for the industry have never materialized.

From one set of perspectives, the logic of ecotourism as a development strategy is very much like that of other non-traditional export-led strategies. Ecotourism may be conceptualized as an extractive industry with an export product. In some ways this

product is like a primary agricultural product in the sense that there is little processing or value added and the product is highly vulnerable to global economic fluctuation.

However, there are obvious and significant differences in terms of identifying the product and its mode of extraction, determining sustainable levels of extraction and configuring the institutions and avenues through which benefits from the sector will be distributed. The product removed is not tangible, but over time and depending on the intensity of extraction, there is an obvious (visual and physical) depreciation or depletion of the resource directly linked to the movement of consumers who return to their places of origin. Consumers, predominantly in first world countries, select the products from the shelves of travel agencies. They then travel to the product site and infrastructure such as airports, harbors, lodging/hotels and access routes must be in place to facilitate extraction. This infrastructure requires heavy capital investment and it is not always the case that the income generated actually covers this cost or makes its way back into the economy to fuel development (Deere et al., 1990).

The path of least resistance of attracting investment with excessive incentives and expecting linkages and multiplier effects to translate into growth and development cannot be repeated under ecotourism. Indeed, successful implementation of ecotourism entails in large part, efforts to correct the damage and leakages occurring under traditional tourism and to chart out an environmentally sustainable and economically coherent path to development. The critical question which must be asked, however, is: was the traditional strategy just a policy failure, the inability to implement policy that would lead to different outcomes or was it a problem in political economy in which planners were limited by internal and external interest groups seeking to take advantage of a profit making venture? Theoretically the obstacles lie in the latter explanation. The tourism industry is highly competitive in the Caribbean and in order to

attract investment, planners often compromise appropriate development policy. International investors essentially negotiate for extended tax holidays, prime beach front locations and the supply of a list of infrastructural needs by threatening to move to competing islands with similar tourism potential and just as anxious for the investment.

What evidence is there that the structural space, appropriate institutions and resources for planning, research, monitoring and marketing for this new effort in ecotourism exist, or can be created, when they have proven to be so elusive under traditional tourism? Under such circumstances the challenge is to identify some form of ecotourism which can provide some wiggle room to overcome the pitfalls. It may well be that such flexibility will come from various combinations of particular circumstances, for example: territories small enough that monitoring is effective; domestic planners skilled in identifying investors committed to socially responsible ecotourism; internal investors allied to traditional tourism but who can be persuaded not to undermine the ecotourism project and communities already knowledgeable in the use of communal institutions to regulate resource use.

The Ecotourism Agenda

The Ecotourism Society defines ecotourism as:

“the purposeful travel to natural areas to understand the culture and natural history of the environment, taking care not to alter the integrity of the ecosystem, producing economic opportunities that make the conservation of natural resources beneficial to local people” (Ecotourism Society, 1991).

For countries considering ecotourism as part of a development strategy the primary objectives are, understandably, somewhat different. According to the general manager of the National Development Council in Do-

minica referring to that island, “Our perception is that the Nature Island of the Caribbean (Dominica) is not a national park in which we live. It has got to provide for the people to enjoy a quality of life. Tourism has got to be a tool for development” (Patrullo, 1996: 126). Similarly, following a seminar in 1998, CANARI, the Regional Agency for Tourism (Martinique) and the Ajoupa Bouillon Office of Tourism developed a definition for ecotourism that emphasizes economic improvement of communities as much as secure and appropriate management of natural and cultural resources (Geoghegan, 1997: 4).

As an ideal concept in a development strategy, ecotourism essentially derives its attraction from a combination of the gains to be made from marketing a product that exists in its natural state in specific geographic locations and the potential to make such trade ecologically, economically and socially sustainable. As a distinct form of tourism, ecotourism is being considered in St. Lucia as the new path to follow in revitalizing and in stimulating a growth spurt within rural communities, but not necessarily replacing, the traditional tourist sector.

The opportunity to experience a different culture is also typically described as ecotourism. Here the argument is made that in addition to generating income, residents are encouraged to preserve their culture in a rapidly changing global environment that erodes local traditions. Of course, some critical and disturbing questions about the nature and impact of commodification of native cultures have also been raised, but these discussions are outside of the scope of this paper. Worthy of note in these definitions is the fact that the attraction of the experience of nature and culture and an opportunity to generate foreign exchange or income are prominent.

In a review of key issues in ecotourism, Brandon (1996: i), concludes that, “despite tremendous differences in size and management of protected areas, cultures, types of ecotourism enterprises and government

involvement, in most cases, ecotourism and nature-based tourism have not lived up to expectations." How can the new strategy be made more viable and sustainable and what are the mechanics, policy and institutional arrangements that will lead to these targets? The peculiar characteristics of some states may allow them some space to overcome the overwhelming odds and achieve significant successes.

Theoretical Considerations

This optimism for the potential of the Caribbean region to succeed with an ecotourism agenda is founded on a number of contingencies, socio-historical, political and geographical. Admittedly, these may not be replicable elsewhere, but nonetheless they point to the peculiar circumstances that can allow for flexibility and opportunity for these territories to capture some of the benefits of the booming global tourist trade in spite of structural constraints they face. This section attempts to delineate how these contingencies may define the potential for success.

The major concerns in establishing a successful ecotourism strategy are anchored around two sets of issues: first, balancing income generation and maintaining the ecological sustainability of the natural resources and, second, the responsibility for management/caretaking of natural resources and corresponding distribution of the income generated. Successful ecotourism projects are critically dependent on the type of management controls adopted and the involvement of stakeholders in defining resource use and benefits distribution (Brandon, 1996; Magno unpub., 1997). Ecotourism is expected to stimulate economic improvement at the local level and eventually at the national level. In discussions of the creation or maintenance of protected areas it is generally accepted that the individuals or communities of people whose livelihoods are linked to these areas, or will be adversely affected, should be incorporated into the ecotourism projects at levels

of either management or benefactors, or both, through employment related activities or as recipients of lump sums of income (Boo, 1990).

Several arguments can be made why community orientation may prove to be more effective, efficient and equitable than, for example, a state-directed approach in which communities may lose sight of the need to accept responsibility for regulating use. Ecotourism involves trade in a non-tangible product. Unlike other export products, it is logically difficult to associate supply or production of individuals, in any concrete or measurable way. This means that innovative ways must be developed for assigning work effort and distributing gains. Granted, individuals may engage in different levels of service (tour guides etc.), or may access income through subsidiary activity such as provision of lodging or selling of crafts, but additional institutional mechanisms are required to link individual beneficiary outcomes to an interest in the conservation or sustainable ecological maintenance of the resources. An effective instrument needs to be developed to create stake-holders and caretakers out of beneficiaries. Community institutions such as care-taking services on a rotating basis, or by selected community employees and producer fees to be invested in community projects (for example infrastructure) may be more effective at encouraging responsible and sustainable development than an alternative system in which the responsibility associated with income gain is not obvious.

The involvement of local communities in resource management and access to income generated is emerging as pivotal in achieving the primary goals of ecological sustainability of the resources involved and some form of democratic distribution of benefits at the local level. Failing that kind of involvement it is likely that interests external to the communities, national or global, may step in and bypass the needs of the local economy. But not all communities are appropriately equipped with the institutional infrastructure to manage the resources

and/or distribute the benefits or have the appropriate background knowledge to define their meaningful participation as stakeholders. In such cases the expectation is that some form of intervention either from governments or non-governmental organizations could supply the regulatory infrastructure or facilitate a process that will eventually encourage the creation of such institutions. The conceptual framework and practical recommendations developed by CANARI (1997) and the recent establishment of St. Lucia Heritage Tourism Programme to facilitate collaboration between the government, the communities and private sector bode well for future institutional infrastructure building. Both of these efforts emphasize the participatory involvement of communities; equitable access to established channels for marketing and promotion; infrastructural support in the form of credit facilities; and other incentives such as tax holidays commonly used to lure large-scale foreign investment but which have traditionally not been available to local communities.

But perhaps as promising for local ecotourism success is the prior existence of common property resource regimes in which the institutional arrangements for inducing self-governing cooperative strategies among community members are already established. A major opportunity provided by the tourism or ecotourism product is that as a collective good it creates room for public participation in management, and as such transfers the advantages of a high premium product with local content to communities. Common property resource regimes can overcome many of the usual pitfalls associated with all collective goods. The institutions under which they operate are founded on rules and conventions which are routinely activated to overcome collective action problems, particularly the incentive for individual "free-riding" - the irresponsible exploitation of resources by individuals because they do not bear the costs (Olson, 1965).

In Caribbean societies with the legacy of plantation production, the existence of the communal land variant, often referred to as family land, is unlike more traditional forms of communal land tenure in other developing regions such as Sub-Saharan Africa and Latin America, which evolved prior to contact with capitalist forms of production. The evolution of communal land among small farmers in the Caribbean was within a context of contestation following slave emancipation as newly freed African laborers attempted to become landed (Dujon, 1995).

Caribbean communal land evolved within the context of market forms of production and an export-led plantation growth model with essential linkages to an international economy (Dujon, 1997). Nonetheless it operates like other common property resources in that there is a clearly identified membership and there are rules to regulate the use of resources through the establishment of institutions which have endured in a long term basis. There are clearly defined rights and social obligations. Rule breakers are sanctioned through the installation of effective monitoring and information systems. In addition, aside from the existence of sanctions a major part of the reason why people cooperate is the presence of social capital which consists of social resources embodied in norms of trust, reciprocity and mutual aid (Dujon, 1997; Magno, 1997).

Doubts about the continued economic relevance of family land and common property resource regimes in at least one Caribbean territory, St. Lucia, which is currently considering ecotourism, were thwarted in the late 1980s when landowners, the majority small, opted not to convert to private tenure during a USAID sponsored land registration program (Dujon, 1995). To the contrary, investigation of the unexpected outcome revealed that the communal land institution continues to be vibrant and is critical to the agricultural sector both in social and economic terms (Dujon, 1995; 1997).

The affirmation of institutional mechanisms for collective control of natural resources,

invites the speculation that such mechanisms might be effectively incorporated/transferred into community based ecotourism strategies. Although current experience with collective control has been within groups linked by kinship, the existence of relevant frameworks and models for wider community application across such lines is cause to be optimistic. The critical research question is, of course, what is the likelihood that this approach might be successfully applied across kinship lines. Field research scheduled for the near future will provide some interesting insights to answer this question.

What other local conditions might enhance success? Smallness of scale has been acknowledged as a significant factor in facilitating collective action. Smaller groups are better able to monitor behavior of members, in the process increasing cooperative behavior (Taylor, 1982). If this is the case small Caribbean communities certainly are at an advantage. The relatively small geographic size of the islands and the fact that all major natural resource sites - beaches, coastal zones and watershed tropical rain forests - as well as historic sites, are publicly owned, are conducive to the design of a system of controlled extraction, monitoring and income distribution, in which communities of individuals are stakeholders and assume the responsibility of gatekeepers in product delivery and conservation. Communities themselves can assume responsibility for developing appropriate institutions and mechanisms for distributing gains.

In addition to the issues of sustainable management of resources and distribution of gains at the local level, massive income leakages that have usually resulted from inadequate linkages to the local economy, expatriation of profits and marketing controlled by multinational corporations under traditional tourism are a major concern. The agricultural sector which has for decades focused on the export of cash crops must be redirected in part to supply food crops to the tourist sector. Indeed the rapid decline of the agricultural sectors of some states,

particularly the banana producing states (Dominica, St. Lucia, St. Vincent, Grenada), may stimulate this redirection of production.

With greater participation and control by local stakeholders in maintaining and delivering the ecotourism product (currently essentially open access public areas or protected areas under government management), the expectation is that local communities will be able to capture a greater share of a high premium product and in the process staunch some of the income leakage.

As currently conceptualized in smaller Caribbean territories, ecotourism is being explored not as a replacement to traditional mass-based tourism but as a complement to it - an attempt to take advantage of a growing niche in the wider global industry or in more technical terms: to diversify the portfolio of tourism activities (Brandon, 1996). To that effect, the excursions into nature by tourists would be in the form of "add-ons" - individuals who have already decided to visit a country for various reasons and are now motivated to visit natural sites or to partake in indigenous culture. Such small scale attempts at ecotourism have the advantage of not incurring any additional overhead in terms of marketing, thereby creating new potential for income leakage and at the same time have the potential to redefine how people in small communities can be integrated into a larger pre-existing tourist economy.

Conclusion

This paper suggests that developing states in search of avenues for economic survival in this current global economy may have to look to the particular sets of conditions that allow their economies some potential to define paths to success. Caribbean territories like St. Lucia seem to be endowed with certain assets in the form of small geographic size, well established common property resource institutions and natural resources

which are ideally matched with the logic of extraction of the ecotourism product.

Ecotourism presents a challenge and opportunity to redefine the logic of traditional tourism, and in so doing capture the gains that have so far eluded it. This new conceptualization of tourism which incorporates sustainability and community participation as central elements, is conducive to an alternative theoretical framework of development in which the focus is on development from below rather than a trickle down perspective. In the Caribbean where sun, sea and sand (all nature products) have been the major tourist attractions and continue to be, the conceptual difference between traditional tourism and ecotourism is essentially one of product differentiation. In territories with established traditional tourist sectors and looking for a way out of the persistent problems, certain conditions might make it possible to recycle parts of the traditional structure into new communally managed sectors that integrate communities into the wider industry in ways that are more economically meaningful to them, and which allow for effective conservation of resources, natural and cultural.

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A PROFILE OF VISITORS TO NATIONAL ESTUARINE RESEARCH RESERVES: IMPLICATIONS FOR INTERPRETIVE PROGRAMS

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Abstract: *The purpose of this project was to develop a profile of visitors to the National Estuarine Research Reserve System which could be used to assist National Oceanic and Atmospheric Association (NOAA) and National Estuarine Research Reserve System administrators and education coordinators in meeting the educational needs of visitors to National Estuarine Research Reserve (NERR) sites. The National Estuarine Research Reserve Visitor Study found that the majority of the respondents were between 40 and 59 years old, were married, had at least a four year college degree, and had a household income of USD\$40,000 or more in 1997. Just over a quarter of the respondents were somewhat or very familiar with the National Estuarine Research Reserve System. Respondents spent an average of 5.6 hours at the NERR site they most recently visited, three-fourths traveled 100 miles or less to their most recent NERR destination and 23.6% of the respondents to a NERR site were on an overnight trip from home. Six out of ten respondents observed wildlife during their most recent visit to a NERR site and nearly two-thirds visited an interpretive or nature center. Respondents strongly agreed that exploring and discovering new things was a reason why they visit a NERR site. Potential topics for environmental education programs included water pollution, endangered and threatened species and the natural history of the area. The results of this study provide a baseline of visitor information. However, it is recommended that a*

visitor monitoring system that collects standardized information across the National Estuarine Research Reserve System be designed and implemented. The monitoring system could be used to track changes in the visitation patterns and characteristics of NERR customers, visitor satisfaction and measures of program outcomes.

Keywords: *ecotourism, education, recreation, management, education, marketing*

Introduction

Estuaries such as bays, sounds, marshes, swamps, inlets and sloughs are home to a wide variety of mammals, birds, fish, reptiles, shellfish, and unique plant life. Estuaries also act as nature's water treatment facilities, flood control areas, buffers against storm damage and protection of shoreline erosion. Recognizing the natural values of estuaries as well as the human threats to these unique areas, the United States Congress created the National Estuarine Research Reserve System in 1972. The National Estuarine Research Reserve System is dedicated to fostering a system of estuary reserves that represent the wide range of coastal and estuarine habitats found in the United States and its territories. Currently, 425,000 acres in 18 states and Puerto Rico

are protected by National Estuarine Research Reserve System. The National Estuarine Research Reserve System is coordinated by the Sanctuaries and Reserves Division of the National Oceanic and Atmospheric Association (NOAA) and works with federal and state authorities to establish, manage and maintain the reserves and to provide for their long-term stewardship.

The partnership between NOAA and state and local resource management agencies has resulted in a cooperative program of stewardship, education and research. The National Estuarine Research Reserve System is intended to enhance informed management and scientific understanding of the nation's estuarine and coastal habitats and supports estuarine research, education, and resource protection. The program is dedicated to promoting healthy coasts by improving awareness, understanding and appreciation of estuarine and coastal resources by local residents and for the traveling public. As a result of the National Estuarine Research Reserve System program, many National Estuarine Research Reserve (NERR) sites have developed visitor or interpretive centers and interpretive programs.

Problem Statement

Environmental education and interpretation has played an important role in the management of the National Estuarine Research Reserve System. Successful education programs include student curricula, field trip programs, adult lectures, teacher workshops, volunteer programs and a wide variety of print media. However, little is known about the general visitors to NERR sites. If NERR managers and educators are to meet their goal of the long-term stewardship of these reserves, more information is needed about the interests, attitudes and actions of these visitors to NERR sites. In addition, information is needed on the effectiveness of NERR educational programs for general visitors.

Background

Information about visitors to the NERR sites is limited, especially the general visitor who may not be a part of an organized group. Tilden (1977) recommends that development of interpretive programming be based on information about the user. Research of visitors' demographic profiles and their expectations of interpretive programs and centers would provide this information. Tilden also advocated relating interpretation to the personality and experience of the visitor to avoid sterile interpretation. Kreag (1995) recommends that:

1. Applied research efforts matching visitor interests with valued resources will need to be under-taken.
2. The understanding of a variety of current and potential new visitor markets (i.e., nature-based tourists) will become very important.
3. Interpretation will need to become more than educational if it hopes to attract tourists -- it may need to integrate its messages with other visitor interests, include entertainment elements, and come as a complete high quality packaged experience.
4. The general interest mass market and small groups with specific interests.
5. Growing interest in heritage and culture will also offer many new opportunities to create linkages between interpretation and tourism.

The purpose of this National Estuarine Research Reserve Visitor Study was to develop a profile of general visitors to the National Estuarine Research Reserve System. Specifically, the research objectives were to develop a socio-demographic profile of the general visitor to the National Estuarine Research Reserve System, to assess general visitor knowledge and experience with the National Estuarine Research Reserve System, to learn about general visitors' most recent visit to a NERR site, to better understand the trip characteristics of NERR visitors (i.e., trip purpose, activities participated

in), to assess the outcome of the visitors' experience, and to identify potential educational topics for future programming. By identifying the travel characteristics, interests, opinions and actions of visitors, this information can then be used by NOAA and NERR staff and educators to develop and better communicate their site, programs and facilities to the general public. The results can also be used to determine if the National Estuarine Research Reserve System is meeting its educational goals and objectives.

Research Methods

The National Estuarine Research Reserve Visitor Study was conducted in the fall of 1998. Twelve of the twenty-two NERR sites participated in this nationwide mail survey of previous visitors. A total of 3,766 names and addresses of visitors to NERR sites in 1997 were submitted to the researchers. Of those, 1,086 were legible and were included in the study and a systematic sample with a random starting point was used to select the survey sample. A total of 886 individuals were sent an eight page questionnaire which addressed: 1) visitor knowledge and experience with the National Estuarine Research Reserve System, 2) information about respondent's most recent visit to a NERR site, 3) ratings of potential educational opportunities at NERR sites, 4) questions on wildlife and viewing wildlife, and 5) socio-demographic information (e.g., age, gender, income).

A modified version of Dillman's (1977) "total design method" was used to collect the data. This consisted of an initial mailing of the questionnaire with a cover letter and a postage paid return envelope, followed by a postcard one week later. Three weeks after the initial mailing, a second mailing with a replacement questionnaire, cover letter and a postage paid envelope was mailed. A total of 377 respondents returned a completed questionnaire for an adjusted response rate of 46.0% (66 questionnaires were undeliverable). A non-response test consisting of a

one-page questionnaire and a self-addressed return envelope was also conducted. The additional analysis did not reveal any significant demographic differences between respondents and non-respondents.

Findings

In order to develop an accurate profile of visitors to National Estuarine Research Reserve sites, "socio-demographic" and "tripographic" information was collected from the respondents. This information describes the visitors to NERR sites as well as characteristics of their most recent trip to a NERR. The remainder of the study introduces information that can be used to develop educational programs for independent visitors to NERR sites.

Sociodemographic Characteristics

The respondents to the national NERR visitor survey were predominately female (almost 65%), most were white, married and had an average age of 52 years. Almost 90% of the visitors were educated past high school, 60% were employed full time and almost 70% had an income between \$20,000 and \$80,000.

Trip Characteristics

Interestingly, seven out of ten (71.5%) of the respondents indicated that they were not at all or were slightly familiar with the National Estuarine Research Reserve System. Most of the visits had occurred during warmer months from April through October. Six out of ten (63.1%) of the respondents reported visiting a NERR only once in the last twelve months. Only 47% of the respondents replied that the NERR site was their primary destination. Over one-half (57.3%) of the respondents reported staying two hours or less at the NERR site they most recently visited. Three out of four respondents (76.5%) had traveled less than a hundred miles to the NERR site and therefore, did not stay overnight. Over three-fourths (76.4%) of the respondents indicated that their most recent visit to a NERR site was a

day trip. For those individuals on an overnight trip from home, the average length of stay was 7.8 nights. However, the median was five nights and the mode was only one night away from home. Prior to their visit, one-third of the respondents acquired information about the NERR from a friend or relative. Another third received information about the NERR from printed material or the media and another 17% got information directly from the NERR site.

Over one-third (34.4%) of the respondents reported that the primary purpose for their most recent visit to a NERR site was to sightsee. Other important reasons included the desire to be in a natural environment (18.0%), to observe or photograph wildlife (13.2%), to participate in an educational program (11.7%), and to learn about estuaries (11.0%). Respondents were asked to indicate what activities they had participated in on their visit to a NERR site. The three most frequently reported activities that respondents were participants in were: 1) going to a visitor center (63.7%), 2) observing wildlife (59.9%), and 3) going for a walk (59.4%). Other activities participated in by about one-third of the visitors included photography (36.1%), birding (30.0%), and pleasure driving (29.3%).

Respondents participated in a wide range of educational activities on their most recent visit to a NERR site. The two most frequently reported educational activities were a visit to an interpretive or nature center (62.0 %) and taking a self-guided nature walk or hike (55.3 %). Other popular educational activities included observing interpretive signs or exhibits (39.9%), speaking with a NERR employee (39.9%), walking along a self-guided interpretive trail (31.4%) and utilizing publications provided by the NERR (25.0%). Most of the respondents (93.6%) had not attended an off-site outreach program sponsored by the NERR site which they most recently visited.

Respondents explored many habitats during their most recent visit to a NERR. The most predominant habitats visited were salt marshes (40.7%), tidelands (37.9%), open

channels/water (32.0%), beaches and dunes (28.2%) and fresh marshes (27.9%). Other habitats explored to a lesser extent were forests, non-tidal marshes, mangroves or other wetlands, meadows, and fields.

Wildlife Observation

Four out of ten (44.2%) respondents reported that observing or photographing wildlife was very or extremely important. Respondents observed or photographed a variety of water birds (67.1%), waterfowl (58.3%), birds of prey (48.7%) and songbirds (41.2%), as well as frogs, turtles and crabs (65.2%) and small land mammals (42.8%). Only a few (3.9%) of the visitors reported that their expectations for observing or photographing wildlife were not met on their most recent visit to a NERR site. As a result, 56.6% of the respondents were very or extremely satisfied with their chance to observe or photograph wildlife. Satisfaction with their wildlife experience also resulted in the majority (57.5%) of the respondents reporting that they were very or extremely likely to return to a NERR site in the next two years to observe or photograph wildlife.

Outcomes

Respondents reported many positive outcomes to their most recent visit to a NERR site. These included an increased understanding and appreciation of the National Estuarine Research System (59.9%), learning about estuaries from various perspectives (48.8%), and becoming familiar with coastal issues (36.3%). Other outcomes of their experience were exposure to the concept of estuaries (36.3%) and the development of a sense of stewardship (34.4%). Surprisingly, 13.3% of the respondents reported that they were encouraged to participate in local, regional, state and national associations related to estuary and coastal issues after their most recent visit to a NERR.

Visitor Satisfaction

Visitors overwhelmingly felt that their expectations had been met during their most recent visit to the NERR site. Nearly nine out of ten (85.7%) of the respondents re-

ported that their visit had met or exceeded their expectations. That probably explains why 83.0% of the respondents were very satisfied or extremely satisfied with their most recent visit. Only 4.3% of the respondents reported that they did not think it was likely they would return to any NERR site in the next two years.

Potential Educational Opportunities at NERR Sites

In an effort to assist NERR Education Coordinators with future educational programming and exhibit development, respondents were asked why they visit NERR sites and to rate potential topic areas for future programs. On a seven item scale based on a range of 1 = Strongly Disagree to 5 = Strongly Agree, the most important reason for visiting a NERR site was to explore and discover new things (mean = 4.4), to have their interest captured (mean = 4.3), to have their curiosity aroused (mean = 4.2), to search for answers to questions (mean = 4.1) and to feel involved in what is going on (mean = 4.0). Respondents were then asked to rate 18 potential topics for educational programs or exhibits on a scale of 1 = Not at all Interested to 5 = Extremely Interested. The highest rated topics were endangered and threatened species (mean = 3.9), natural history of the area (mean = 3.8), marsh and wetland habitat (mean = 3.8), water pollution (mean = 3.7) and habitat restoration (mean = 3.7), bird identification (mean = 3.7) and animal identification (mean = 3.7).

Discussion

Results of the National Estuarine Research Reserve Visitor Study revealed that respondents were familiar with the NERR site they visited, but very few were familiar with the National Estuarine Research Reserve System. Additional efforts are needed with local and state partners to clearly communicate that these sites are part of a nationwide system. In essence, NOAA needs to build a National Estuarine Research Reserve "brand image" in an effort to create greater aware-

ness of NERR sites. Like many outdoor recreation destinations, visitation to NERR sites by general visitors fluctuated by seasons. It is recommended that NERR sites examine the potential for additional year-round programming targeted to general visitors who have time available in the fall, winter and spring. Because the majority of usage is from people within 100 miles, innovative programming is needed to build an ongoing "relationship" with local NERR visitors to encourage their involvement and commitment to the individual site and to the system. In addition, NERR sites need to coordinate with destination marketing organizations in order to attract tourists from outside the region.

Based on the quantitative and qualitative data, the individuals appear to visit NERR sites as individuals and with organized groups. Further work is needed to "cross-market" organized group participants to return as individual visitors. However, additional product development is needed to meet the needs of individual visitors. One of the major recommendations that emerged from open-ended comments is that NERR sites have to do a much better job in communicating their facility and the entire system. Most visitors have a short planning horizon on their decision to visit a NERR site. As a result, the individual NERR sites must continue to work with local media or through an "in-house" publication designed to communicate their upcoming programs and activities.

Visitor or nature centers are critical components of NERR experiences and should be designed and programmed with topics and activities of interest to potential visitors. This research provides detailed information on the type of experiences desired by NERR visitors. It is recommended that the NERR management take on a more "market orientation." The majority of NERR visitors are participating in passive recreation and nature study. The general visitor is interested in both the environment and recreation. NERR educators and staff must develop products and services that capture both the

leisure and educational components of the experience.

While one on one attention is critical to a NERR visit, respondents to the study indicated that they like to do things at their own pace, and on their own schedule. Once again, unique opportunities have to be developed for independent visitors as well those attending a group activity. As expected, water-based habitats are the preferred setting for NERR visitors. Observing and photographing all types of wildlife appears to be important, specifically, endangered species. It is recommended that the NERR sites do not underestimate the lure of viewing wildlife in reaching out to new visitors. The majority of the respondents reported a greater understanding and appreciation of the NERR systems and increased their knowledge of estuaries. However, it is recommended that the NERRS develop a strategy and mechanism to encourage individuals to participate in estuary and coastal issues.

In conclusion, this research confirmed what other nature-based tourism researchers are discovering...that people interested in the environment are also interested in the history of the region. Educators need to address the need to provide solid ecological/biological information with the history of the area and the role of man (both positive and negative). Most visitors have a short planning horizon on their decision to visit a NERR site. As a result, the individual NERR sites must continue to work with local media or be designed to communicate their upcoming activities. This research provides detailed information on the type of experiences desired by NERR visitors which can be used by NERR management and educators to take on a more "market orientation" in its interpretive program design and development. Finally, it is recommended that a visitor monitoring system be

put in place that collects standardized information across the NERR system

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THE GREEN HOST EFFECT: AN INTEGRATED APPROACH TO SUSTAINABLE TOURISM AND RESORT DEVELOPMENT

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Abstract: *This paper offers recommendations for responsible tourism and resort development in the tropics, to both minimize the industry's negative environmental and social impacts and increase the overall positive contribution of tourism to conservation and local well-being. It describes a series of management practices and technologies that developers can use to increase the environmental and social sustainability of their developments, as well as a series of planning and policy tools for governments to guide the development of tourism in their countries. Although these tools are principally for the public and private sector, they will also be useful to groups such as non-governmental organizations, development agencies and local communities seeking to become more informed participants in tourism development.*

Keywords: *land-use planning, tourism scale and facility development, conservation, community development, industry efforts, regulatory management*

Background

In the last 50 years, international tourism has grown from an occasional pastime of the rich and adventurous to a central source of employment, foreign capital, and cultural exchange for many countries around the world. However, the industry also brings large numbers of people, increased resource demand, land degradation, pollution and

waste into some of the world's most biologically and culturally diverse areas, often causing adverse impacts on the environment and local communities. In 1950, there were 25 million international tourist arrivals worldwide (WTO, 1997). Today, that number is nearly 25 times larger, with 613 million international tourist arrivals in 1997 (WTO, 1998).

Tourism in natural areas in the tropics is growing even more rapidly than the industry as a whole (The Ecotourism Society, 1998), with growth focused primarily on coastal areas. In the Caribbean, for example, the majority of tourism facilities are located within 800 meters of the high water mark (Jackson, 1984), and the majority of tourist activity takes place in the area between the back bays and fronting reefs. Two-thirds of identified environmental impacts in the Caribbean occur in this same area (Potter, 1996: 11).

In the tropics, the natural environments which hold the most appeal to tourists - including beaches, coastal zones, islands, primary forests, savannas and mountainous areas - are also some of the most environmentally significant and fragile. These ecosystems are home to a highly complex and rich diversity of species, many of which are found nowhere else on earth. For example, coral reefs support the highest number of living organisms per area of any ecosystem

in the world (Schoorl and Japp, 1991: x), providing a home for more than one-quarter of all known marine fish species while occupying less than one quarter of one percent of the planet's total marine area (Bryant et al., 1998: 7). The implications for poorly planned and implemented development are thus particularly high.

As tourism has grown, so has awareness about the industry's potential to be either the cause of serious environmental and social damage, or a positive source of support and resources for conservation and community development. Although tourism development has degraded ecosystems around the world, it also represents one of the best opportunities to promote economic development without serious negative impacts. If tourism can be developed responsibly, with careful planning and design, it can provide a relatively non-destructive source of income and development, especially in comparison to other large industries, such as oil, mining, timber, agriculture, or manufacturing.

Moving from ideals of sustainability to responsible practice will require a fundamental shift in the industry as a whole, in coordination with governments, local communities, international development agencies, non-governmental organizations (NGOs) and international tourism organizations. Sustainable tourism development will require an integrated approach, comprised of 1) participatory land-use planning, 2) private sector practices which both mitigate negative impacts and actively support conservation and local benefit, and 3) the implementation of a range of public sector policies to promote responsible development.

Promoting Responsible Tourism Development Through Participatory Land-use Planning

Although many nations are now beginning to implement impact management measures, the majority have done so only after

environmental degradation or local discontent have reached serious proportions (Sorensen, 1990: 37-63). While reactive policies can be an effective and necessary step toward reducing impacts, trying to change established patterns of behavior often causes conflicts and can be an expensive process (Manning and Dougherty, 1994: 14-15). Furthermore, reactive control cannot affect siting decisions, which may allow inappropriate and damaging development to proceed in some of the most environmentally and culturally sensitive areas of a country or region. As governments become increasingly aware of the potential pitfalls of tourism and the practices necessary to avoid them, early planning for tourism development has been increasingly recognized as a necessary and preferable option to trying to correct damages after the fact. Early planning can promote long-term sustainability, minimize social costs and conserve valuable natural areas for future generations.

More generally, successful land-use plans will require a shift in the objectives of tourism development away from the traditional "growth at all costs" approach. In many cases, this will mean that tourism development must be limited and shaped by social and environmental criteria. Land-use plans should specify where tourism can be developed and to what degree, ensuring that appropriate types of tourism development are sited in appropriate places (Middleton, 1998: 95). This will allow developers to move beyond simply mitigating impacts wherever they choose to locate, toward siting in appropriate areas and providing support for key conservation areas.

The Importance of Participatory Planning

Traditionally, tourism and other land-use plans have been designed by experts, with local participation limited to brief interviews that provide little substantive contribution to the final design. As a result, local priorities often have not been represented, leading to conflicts and forcing governments to divert limited financial resources toward enforcement or negotiation (Bonilla, 1997: 120).

Some land-use plans may simply become impossible to implement because of a lack of support from key stakeholder groups, including regional and national government agencies, the private sector, local communities, community and conservation NGOs, and funding agencies (Bonilla, 1997: 6-8). Thus, successful development and implementation of a land-use plan will rely on active stakeholder involvement and consensus-building among all participants.

Involving all stakeholders in participatory or "bottom-up" planning allows people to set priorities for their area, which will increase their stake in and support for the final plan (Middleton, 1998: 82). Equally important, it allows plans to take advantage of the knowledge and skills of each group (Bonilla, 1997: 9). Active participation by local stakeholders can often reveal key information about potential tourist attractions, local interests, potential conflicts and important environmental areas (Ziffer et al., 1994). Below, we present a three-step process for developing a national or regional tourism land-use plan.

Setting Objectives and Assigning Roles

The first step in land-use planning for tourism is to determine concrete objectives of tourism development, and assign roles and responsibilities among people in involved agencies. Objectives should be based on social, environmental, political and economic conditions, problems and opportunities (Rader, 1998). Setting specific objectives can make final decisions more credible to communities, aid agencies and other concerned parties, and provide critical guidance for designing and evaluating policies (Rader, 1998). As with each stage of the planning process, designing objectives that accurately reflect the needs, values and goals of all affected parties should be done in a participatory way, involving all stakeholders. At the same time that objectives are being set, the roles and responsibilities of the various government agencies with jurisdiction over tourism must be resolved. These can include agencies in charge of tourism, environmental regulation, economic planning, pro-

tected areas management, and cultural resources (Bonilla, 1997: 31).

Mapping and Ranking Areas by Priority for Tourism, Conservation and Local Interest

The second major step in developing a tourism land-use plan is the mapping and ranking of areas within the region in terms of their priority for tourism, local communities and conservation. There are many methodologies for priority setting (see, for example, Johnson, 1995). The most appropriate in each situation will depend on existing information, the amount of area to be covered, technical capacity, and budgetary considerations. Criteria for evaluating areas for tourism priority should include the quality of natural environmental and cultural attractions, existing facilities and services, areas that could be improved to support tourism and accessibility (Dowling, 1993: 24-5). Priorities for conservation should also be evaluated based on a range of criteria, including endemism (species that occur only in a particular region and nowhere else on Earth), biodiversity, level of disturbance and historical features. Social and economic priorities can be determined based on information such as local land ownership, land claims, interest in or resistance to tourism, the presence of other industries, infrastructure such as roads, and future development concessions.

Synthesizing Priorities

After priority maps for tourism, conservation, and socioeconomic constraints and opportunities are developed, they can be synthesized into a land-use plan. As with the other steps in the land-use planning process, synthesizing priorities into a land allocation scheme that is acceptable to all stakeholders will require a participatory, consensus-building approach, which may be difficult, but necessary to use. Planners and stakeholders should overlay tourism, environmental and socioeconomic priority maps, and, based on levels of priority and where priority areas are separate or overlapping, they should work to allocate land

areas to various levels of tourism development (Dowling, 1993). Although the details are beyond the scope of this paper, information should also be used to designate areas for a range of conservation importance. Land allocation should focus on finding areas where appropriate levels and types of tourism can be compatible with environmental and social priorities (Dowling, 1993). Many areas should not be used for any type of tourism, because of critical conservation importance, priority for local people or other economic sectors, or a lack of tourism resources.

Private Sector Practices for Mitigating Negative Impacts and Increasing Positive Benefits

In the context of ensuring that different levels of development are located appropriately, the practices of the private sector will obviously be critical. Moving towards responsible tourism development requires a shift in thinking to include environmental and social parameters in all aspects of design, construction and operations. Understanding the long-term implications of resource use and management decisions will help to ensure that tourism development is compatible with long-term sustainability goals and can result in significant economic benefits for the developer.

Two broad changes are necessary to improve the environmental and social performance of the tourism industry to a point where it can be considered sustainable in the long term. First, individual developments need to focus on long-term strategies for mitigating the negative environmental and social impacts of their activities, based on improvements in siting choices and design, efficient use of resources, and the involvement of local communities. Second, the concept of good practices must be expanded beyond impact mitigation to include positive and proactive contributions to the well-being of surrounding communities and local bio-diversity conservation efforts.

Practices promoting these concepts are possible at all stages of development. During infrastructure and facility development, they will include site decisions, land-clearing, construction, and design and landscaping choices. During operations, they range from water and energy use, waste disposal and sewage treatment, to recreation, transportation and interaction with local people.

Conducting Early and Thorough Environmental and Social Impact Assessments

Understanding the potential environmental and social impacts of a project before it is begun will help developers determine how best to mitigate these impacts. Evaluations should be conducted as early as possible to allow the results to be used before much money has been invested. In some cases, the project as it was originally conceived will pose too big a threat to local environments or communities and will need to be re-worked or relocated. Early knowledge of such a situation can save considerable time and expense for a developer.

Choosing an Appropriate Site

The impact of a resort development on the natural and cultural environment depends significantly on where and how the resort is sited. In all cases, developers should build only where local people are in favor of development and in areas where the environment can support the proposed development. Developments should not be located in critically important ecosystems, such as national parks, or culturally sensitive sites. Instead, developers should seek to understand ecosystem functioning and choose their site to minimize disruption. Avoiding building on steep slopes or too close to the coast are basic ways to avoid damage.

Minimizing Land-Clearing

Appropriate site choice will also allow developers to minimize land-clearing, another common cause of damage. Traditionally, tourism developers have seen land for their developments as simply a plot that needs to

be fully cleared prior to construction. However, the development site is not only a plot of land but an ecosystem that contains potentially valuable characteristics for developers. It is not necessary - and in most cases it will be less cost effective - to completely clear the land prior to construction. Maho Bay Camps, in St. John, US Virgin Islands, developed its property without clearing any land. Benefits from this approach include a cooler, more pleasant climate for guests, fewer insects, and beautiful surroundings (Selengut, 1998).

Responsible Design and Facilities Choices

In design, an understanding of the natural processes of the ecosystem in which the tourism development is planned will allow developers to avoid the need for costly ecosystem modification, and to take advantage of wind, shade, gravity, water sources and vegetation. During the design phase, architects should consider the local landscape and take advantage of natural climate conditions. For instance, shade and cross-breezes can contribute significantly to cooling. Due to design which uses shade from trees and cross ventilation from wind, the Coconut Beach Resort in Queensland, Australia, does not need any air conditioning in its luxury rooms. Guests appreciate the lack of noise and closeness to nature fostered by the architecture (Commonwealth of Australia 1995, 2: 5).

Some facilities may not be appropriate in many areas. For instance, golf courses can be one of the most serious causes of damage in a resort. An average course uses between 800,000 (Asia Golf Tourism, 1997) and 1.3 (Chatterjee, 1993) million gallons of water per day. This same quantity of water is enough to meet the daily needs of thousands of local residents; for instance, 800,000 gallons per day would meet the needs of approximately 5,000 rural families in Mexico. (Author's calculation from Robbins, 1998). The quantity of pesticides, herbicides and fertilizers necessary to maintain the grass on a golf course averages about 1,500

kilograms per course per year (Chatterjee, 1993), equivalent to seven times the amount used per acre by large-scale agriculture in the United States (Chamberlain, 1998). These chemicals can pollute surrounding areas through infiltration and runoff, especially where sewage infrastructure is inadequate. Chemicals used to maintain golf courses have been associated with pollution of water resources, the death of wildlife, and increased diseases, including cancer, among humans (Chamberlain, 1998).

Efficient and Responsible Resource Use and Disposal

The resource demands of tourism development in a tropical environment are usually many times greater than that of the existing local communities. Increased resource needs can mean additional stress on the environment and greater damage from pollution and waste disposal. All resources, from water to energy, should be utilized in the most efficient way possible, minimizing use and promoting recycling and reuse. When it comes time to dispose of used resources, from solid waste to sewage, developments should use the most effective technologies to minimize their impact on their surroundings.

Minimizing the Negative Impact of Tourist Activity on Local Ecosystems and Cultures

The private sector can also have a significant effect on reducing negative impacts by working with tourists. Depending on the activity, providing guidelines, for instance regarding what souvenirs are harmful to buy, requiring the use of guides, or requiring tourists to receive instruction may all be useful in changing behavior. Developers and operators should also consult with local people directly before developing facilities or tours. When the majority of people who live in or use an area do not want tourism development, developers should respect this choice.

Making a Positive Contribution to Conservation

There are a range of ways in which the private sector can provide critical support to conservation. One way to achieve this goal is through buying and setting aside areas as private reserves. The Lapa Rios resort in Costa Rica maintains a 1,000-acre private reserve, which, in addition to protecting important habitat directly, also provides a buffer to encroachment in the neighboring Corcovado National Park. The reserve also allows the resort to offer its guests a range of activities that depend on access to a beautiful and uncrowded natural area, such as professionally guided rainforest tours, bird watching, hiking, horseback riding, fishing and kayaking (The Ecotravel Center, 1998). Other stewardship activities include donating money and time, providing in-kind support to people involved in conservation, working with local communities on conservation projects, giving access to underutilized resources, and working on education projects involving both tourists and local communities.

Partnering with and Employing Local People

Local people often receive little benefit from development that may cause serious impacts on their way of life. Developers can increase local benefit and the quality of their tourism product by working in partnership with local groups and entrepreneurs, using locally provided services and hiring and training local people. They can also directly support locally beneficial projects. The Punta Cana Beach Resort, in the Dominican Republic, supports a program that teaches fishermen new practices for improving sustainability. The resort also has a cooperative from which local women can sell handicrafts to guests (The Ecotravel Center, 1998).

Public Sector Policy Tools for Mitigating Negative Impacts and Increasing Positive Benefits

Responsible development will also depend centrally on the effective implementation by governments of appropriate policy tools and strategies to ensure that development is compatible with long-term environmental and social goals. Effective policy will depend on the capacity, training and resources of government sectors responsible for regulating tourism, and increasing this capacity should be a priority of any tourism policy strategy. Standards and guidelines should be formalized in specific legislation and then implemented through both traditional and innovative programs, including direct regulation, economic and financial tools that increase incentives for the private sector to improve its practices, and awareness-building among all stakeholders. A strong set of monitoring and enforcement tools will be the final piece of an effective tourism policy strategy. In general, a broad mix of policy tools will be necessary to achieve the stated objectives of responsible development. Most broadly, these can include:

Increasing Governmental Capacity

Implementing strategies to regulate and monitor the tourism industry will require a great deal of political knowledge, ability and will. Thus, before a broad-scale policy approach is designed and implemented, it is important to assess and improve the level of capacity within the public sector agency or agencies that will be managing the strategy. Although the most obvious way to increase public sector capacity is to increase the skills and funding of government offices, capacity-building can also come through the coordination of actions among all relevant actors, at the local, national, and international levels.

Awareness-Building among Stakeholders

Even with the required capacity and abilities, however, the public sector will have

difficulty carrying out significant policy strategies without the endorsement of the local population, the private sector and other stakeholders. Thus, it is equally important to increase awareness of and support for environmental and social policies through education and training. Although appropriate material will vary by situation, campaigns might include information about the roles and responsibilities of each group in preserving a healthy environment, the interaction between people and the environment (McAlpine, 1998), and the reasons for and importance of environmental and social policies (Schoorl and Visser, 1991: 1).

Direct Regulations and Controls

There are a range of policy tools designed to place limits on various aspects of development, including location, size and type of business, levels of tourism, and specific activities and impacts. Direct controls over the industry include contracts, regulations, licenses and permits. While these tools are not specific to the tourism industry and, in most cases, were developed for other industries or sectors, they can be effective forms of control for a growing tourism industry. In order to minimize conflicts and disincentives to private sector investment, direct controls should be designed in a collaborative and sensitive way, with relevant stakeholder input (Jamieson, 1997: 128).

Economic and Financial Tools

Economic and financial tools, including traditional strategies such as taxes, subsidies and entrance fees, as well as more innovative approaches such as performance bonds, trust funds and offsets, can be an important and effective supplement to direct regulations. While direct controls allow governments to focus on the specific scale and nature of tourism, control through fiscal tools is based on creating positive or negative incentives via rewards or penalties. Financial mechanisms can also have important advantages over direct regulation in certain cases. Taxes, for instance, in addition to controlling impacts also raise revenue. Positive incentives, on the other hand, can influence de-

velopers to benefit local communities and conservation without the conflicts which might arise from requiring the same behavior. Performance bonds and trust funds can help to ensure that money will be available to mitigate any unexpected environmental or social damages. Fiscal controls may also have the advantage of allowing the private sector to make its own choices of behavior, based on the new set of costs it faces, which may result in a more dynamic and adaptable private sector and fewer illegal activities (Janssen, 1995: 76).

Positive Contributions to Responsible Tourism Development

In addition to the use of direct regulatory controls and financial incentives for guiding the development of the tourism sector, governments can implement a variety of proactive policy strategies designed to offer support for and promote the growth of an environmentally and socially responsible tourism industry in their country. These actions can include becoming more involved in the global marketing of a country's image as a destination, providing infrastructure for development, supporting local employment and ownership, and instituting award and certification programs recognizing good environmental and social practices. In all cases, proactive promotion of a responsible industry will require coordination and consultation with the private sector and other stakeholders to determine where these government policies can have the greatest impact.

Enforcement and Monitoring and Evaluation

Regardless of which policy strategies a government chooses, it is important to include provisions for both enforcement and monitoring and evaluation (M&E) in any broad-scale tourism sector management plan. In many countries, poor enforcement has rendered even the most well-designed policies ineffective through lack of compliance (Jamieson, 1997: 121). In addition, monitoring and evaluation of policy effectiveness will allow the public sector to adapt

its policy strategies to changing information availability, conditions and needs within a country's tourism industry. By using an M&E system to evaluate whether or not policies are promoting the goals of responsible tourism, governments can constantly improve their policies to most effectively promote the goals of tourism development and conservation.

Conclusion

The strategies and tools described in this document will help to increase the sustainability of tourism developments by minimizing their negative impacts on surrounding ecosystems and cultures while increasing their positive contributions to biodiversity conservation and community development. The use of these tools must take place in the context of a fundamental shift in thinking - among developers, governments and other stakeholders - about the traditional models and goals of tourism development. Areas that are developed for tourism without the consideration of environmental and social factors will ultimately prove unsustainable and lose the very resources on which they depend for attracting tourists. Thus, good environmental and social practices also make good business sense, not only for protecting key tourism attractions, but also for appealing to increasingly environmentally conscious consumers throughout the world and saving money on disposal, mitigation and resource costs.

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"BEST PRACTICE" & GUIDELINES: PLANNING TOOLS FOR SUSTAINABLE COASTAL TOURISM IN AUSTRALIA?

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Abstract: *Considering Australia's island status, it is unsurprising that coastal and marine environments play an important role in the nation's tourism industry. These environments are also vulnerable to impacts and changes as a result of tourism and recreational use. Sustainability in tourism requires a reconsideration of our priorities, current planning systems and future visions. Various types of guidelines are increasingly produced to promote effective planning in the coastal zone. These self-regulatory guidelines can apply at different scales: to an individual development, on a wider regional level and as part of policy. It is suggested that guidelines could provide a basis for fostering improvement, particularly as planning increasingly moves towards performance-based approaches. Current best practice and other guidelines in relation to sustainable coastal tourism in Australia will be reviewed with an assessment of their effectiveness as a planning tool. This forms part of a broader research project to determine the performance of land use planning in achieving sustainable tourism.*

Keywords: *sustainable tourism, coastal and marine environment, Australia, land use planning, self-regulatory guidelines*

Introduction

"Best practice" is often used to refer to guidelines and codes of practice. Best practice has become somewhat of a buzz word and is referred to by many other similar terms. Although it is doubtful that all "best practice" documents represent the ultimate, it represents an important trend in operations and planning. This paper will deal with not only documents entitled best practice but the broader group of non-regulatory

documents specifically related to planning for sustainable tourism in coastal environments.

Coastal environments provide the setting for much of Australia's tourism and are increasingly recognized as the focus of environmental pressure, in need of comprehensive and innovative environmental management and planning.

It has been found that there are increasing numbers of self-regulatory guidelines being produced on an international, national, state and local scale which have implications for the current planning framework for tourism development. This paper takes as a focus a number of documents prepared to assist in planning for coastal and particularly coastal tourism development.

Reconsideration of Planning Approaches in Coastal Environments

The Globe 90 Conference on Environment and Industry defined sustainable tourism as, "...the management of tourism resources in such a way that fulfills economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems" (Inskip, 1991: 31).

The rationale for pursuing sustainable tourism policy is convincing. It is recognised as being a desirable policy option due to the uncertainty associated with environmental impacts of tourism, the concept of irreversibility and the fact that a large majority of previous tourism development decisions have been based on short-term, market driven criteria, rather than

considering and reflecting future costs and benefits.

There has been increasing interest in utilizing planning to manage coastal environments sustainably. Many planners are increasingly using a diversity of approaches to achieve sustainable development of tourism, one of which can be referred to as best practice or non-regulatory guidelines. "Coastal programmes have become a melting pot for various planning and management techniques which have crossed over from other disciplines" (Kay and Alder, 1999: 340).

It should be noted that what is considered best practice planning is specific to location and situation, and unless particularly broad, principles cannot always be transferred from one place to another. It can be argued that there is no single "correct" format for either land use planning or environmental assessment and caution should be taken in transferring systems developed in one place to another, as any system needs to be sensitive to particular political and administrative structures. "This said, any management tool should be amenable to positive change, incorporating aspects of best practice from elsewhere" (Hunter and Green, 1995: 177).

Planning as a profession and as an activity is constantly struggling to maintain a balance between regulation and flexible arrangements. Performance based approaches are increasingly gaining favor and are presented as a stakeholder inclusive approach to achieving sustainability.

Best Practice – What is It?

The term "best practice" originated in business organization theory with its strongest expression in manufacturing, however it is also being promoted in the services sector and in natural resources management. Most people involved in tourism would be familiar with the term, and many tourism industry associations and organizations develop their own best practice policy. Pigram (1997:

118) defines best practice as, "...best practice is the best way of doing things relative to levels of performance in comparable firms and operations". Good practice, excellent practice etc., are similar terms used in both similar and different contexts.

Best practice is a term that is increasingly being applied to business activities as a means of achieving quality management, and tends to be viewed as, "...the way in which leading edge companies are able to manage and organize their operations - to deliver world class standards of performance..." (Department of Industrial Relations, 1992: 3; Davis, K., Knox, S. and Luckie, K. 1996: 6).

Best practice sets environmental performance targets as a result of regulation, growing community awareness and environmental concern. "However, it also demonstrates a proactive commitment to the environment which transcends regulatory requirements and permits" (Pigram 1997: 118). "This response translates and extends best practice into 'best practice environmental management' as a means of achieving sustainable growth in a competitive world. Best practice environmental management calls for radically different organizational structures and attitudes designed to bring about continuous improvement in a firm's environmental performance" (Pigram 1997: 118).

These principles, guidelines and manuals can include information about strategic planning (in relation to regulatory requirements and state/regional planning contexts), design, community consultation, water use, energy efficiency and construction practices or a combination of all of these. It appears that these sorts of documents deal with many of the issues pertinent to any sustainable development on an individual and wider scale. Best practice also implies that some sort of monitoring and evaluation should occur to assess whether in fact best possible practice is being achieved, or what is required to better their practice. Best practice methodology involves establishing appropriate performance indicators to meas-

ure and set standards by which organizations and authorities can look for quality management.

Tourism has been particularly keen to adopt best practice and non-regulatory guidelines as a business improvement strategy and as a pseudo planning and management measure.

Self Regulation and Planning

In terms of this paper, "planning" is land use (or town and country) planning, operationalised in legislation and carried out primarily by local and state governments. Planning helps us to define decision situations and is quite distinct from what is often referred to as "tourism planning". The distinction between these is important to make clear:

"...much of what is called planning in the tourism context is, in fact, marketing and promotion, ... This has resulted in much inappropriate development and in many cases overdevelopment of tourist areas. Ignorance, politics and economics seem to work contrary to the attainment of the goal of sustainable development as far as tourism is concerned" (Pearce and Butler 1993: 136).

Planning has the potential to play an important role in ensuring the long-term success of tourism while minimising negative impacts. Planning can articulate future visions and assess individual projects with approval given to those proposals consistent with policies and plans. Gunn (1994: xvi) suggests that sound planning is the way that all of the multi-faceted elements of tourism can be incorporated. Professional planners can have an impact in their role of guiding future development of tourism and other land use within regions. Without plans or planning systems, the development of tourism is ad hoc without sufficient consideration given to its interaction with other sectors and its possible impacts.

Self-regulation and planning may seem to be at different poles on the spectrum, but as

planning increasingly moves towards performance-based approaches, best practice guidelines can play an integral role as they are more readily amended and adapted than statutory planning schemes. They may also be perceived as more user-friendly and are typically written in lay-terms or plain English. Planning acts and regulations are perceived to be complicated and legalistic, despite recent efforts to use plain English language. Particularly in coastal settings, "Manuals are becoming increasingly important in Australian coastal management efforts ... they are designed to describe clearly the range of approaches available to coastal managers, and to discuss their strengths and weaknesses. Manuals can also be designed to include case study materials, as well as technical appendices as required" (Kay and Alder 1999: 119).

Guidelines and best practice principles may be seen as effective planning tools but they are not able to ensure that tourism operators and industry adopt these principles when they do not have a regulatory or legal basis. Apart from promotional and education type strategies it has been suggested that the adoption and implementation of best practice guidelines by developers could be encouraged by fast tracking regulatory planning requirements, those applications which meet best practice principles. This would seem to be desirable for tourism interests considering the continuing suggestions that the planning approvals process should be streamlined. In addition to reduced approvals/assessment time and expense, these sort of measures are argued for on the basis of encouraging imaginative design. Innovative and new design approaches would appear to be important in tourism development, particularly considering the environmentally sensitive and unique locations of many operations. An Australian review of government planning from a tourism development perspective suggested that, "Planning legislation at the Local Government level has a tendency to focus on compliance with development standards at the expense of innovative, ecologically sustainable or high quality design. The move towards perform-

ance-based assessment could be embraced by State and Local Government" (Tourism Task Force 1997: 37).

If this sort of planning is to increase in the future then it is even more important to ensure ongoing monitoring and evaluation of tourism development. The adoption of best practice and other guidelines/manuals will not replace statutory planning but should be complementary to minimum statutory planning requirements.

The challenge in encouraging adoption of appropriate measures and aiming for improvement of environmental performance is "...to convince the disparate elements of the tourism industry to move beyond the minimum of passive regulatory compliance" (Anderson, 1994; Pigram, 1995; Davis, K., Knox, S. and Luckie, K. 1996: 7). Despite the aims of planning for sustainable development and maintenance of environmental quality, minimum planning requirements are sometimes grudgingly adhered to by tourism interests. Anything beyond that is often seen as needless additional paperwork and attempts at government control.

"Consultation with the stakeholders in coastal tourism development has revealed that there are operational problems associated with legislative overlaps and the consequent lack of certainty, consistency and inflexibility associated with regulatory approaches. These sorts of issues and the growing awareness of environmental problems is encouraging many travel and tourism businesses to develop voluntary environmental policies and programs, or other self-regulatory measures that are deemed to be a preferable alternative to regulatory procedures" (World Travel and Tourism Environmental Research Centre, 1993) (Davis, K., Knox, S. and Luckie, K. 1996: 3).

Further, "Other market forces, such as increased consumer resistance to degraded environments, evidence that sound environmental practices have long-term economic benefits, financial incentives to improve environmental practices, and the

likelihood of media exposure for bad practice developments indicate that self-regulatory measures are likely to be the most effective approach to encourage best-practice environmental planning and management for tourism development" (World Travel and Tourism Environmental Research Centre, 1993).

Despite the argument that voluntary proactive approaches may be more likely to promote a long-term commitment to ensuring environmental improvements, there needs to be some enforcement of sustainability due to the variable ethical position of various interests. It is therefore argued that a mixture of both regulatory and voluntary approaches are needed.

Current Use of Non-Regulatory and Best Practice Approaches

Since the Manila Declaration on World Tourism in 1980, more than 60 international non-regulatory agreements that address the environmental practices of tourism developments have been produced (World Travel and Tourism Environmental Research Centre, 1993). These agreements differ on the basis of the aims of the promoting body (e.g., various operators, trade associations, governments, and NGOs) and the target audience, but they include declarations, codes of practice and more specific guidelines (Centre for Coastal Management 1996: 3).

The Australian tourism industry has developed its own codes of environmental practice. The Australian Tourist Commission & Tourism Council Australia 1998 has issued a "Code of Sustainable Practice" and the Ecotourism Association of Australia has a Code of Practice for Ecotourism Operators. They aren't entitled "best practice", but sustainable practice could perhaps be seen on a par. Although these are well intentioned they aren't specific to particular tourism settings and do not

provide guidance in relation to particular coastal development pressures and issues.

International agreements and guidelines have been endorsed by the Australian Government, who have in turn undertaken national inquiries to develop various policy and strategy documents (e.g., The Commonwealth Coastal Policy, 1995; National Tourism Strategy, 1992). The Office of National Tourism has produced a document entitled, "Best Practice Ecotourism: A Guide to Energy and Waste Minimisation" (1997).

The "*Coastal Tourism - a manual for Sustainable Development*" is the result of the revision and amalgamation of several documents. It aims to be a practical document providing a "stimulating tool to help tourism developers and operators, and those involved in the approval process for development applications, make future tourism developments environmentally, socially and economically sustainable" (Commonwealth Coastal Action Program 1997: v). It was intended to serve as a demonstration model for the tourism industry, planners, decision makers and the community (Davis, K., Knox, S. and Luckie, K. 1996: 5).

"*Good Practice Guidelines for Integrated Coastal Planning*" 1998, were developed as part of the capacity building component of the Commonwealth's Coasts and Clean Seas program. "They are intended to assist planners to understand and put better coastal planning techniques into practice. ...The guidelines provide practical advice to planners to help them reconcile competing demands and make decisions that enhance the level of ecological sustainability in the use and development of coastal resources." These guidelines aren't specifically related to tourism, but considering the concentration of tourism development on the coast it is very relevant. They are also seen as a companion document to the Coastal Tourism Manual.

"The guidelines focus on the integration of the principles of Ecologically Sustainable

Development (ESD) into decision making about the use and development of coastal resources. The philosophy for coastal planning is well developed. However, current processes do not always deliver a good product. This is partly because principles embodied in the philosophy of ESD are not built into the decision making that occurs as part of the planning process" (Department of the Environment 1998: ii). The material contained in these Best Practice Guidelines provide guidance only. The actual implementation will depend on legislative and administrative arrangements in each State. There is a requirement for commitment from key players and decision makers in coastal areas in order for the guidelines to assist achievement of better outcomes.

Coastal zone policy documents have also been developed by State government departments for state and regional application. Western Australia has been the most proactive and produced a number of environmental planning guidelines and eco-ethics for tourism developments (Western Australian Tourism Commission and Environmental Protection Authority, 1989a; 1989b), and a guide to tourist destination and resort planning design and principles (Western Australian Tourism Commission, 1989) (Davis, Knox and Luckie 1996: 5).

The NSW (then) Department of Planning has produced guidelines for various regions - i.e., "North Coast Design Guidelines" (1989) and then "Tourism Development Along the NSW Coast - Guidelines" (1992), containing practical guidelines for development design.

At a local scale, increasingly, coastal tourism development pressure issues are being addressed in local planning documents, both regulatory and guideline based. However, lack of resources and expertise often limits local government dealing with these issues.

On a more focused scale, codes and guidelines are being adopted by some larger operators, with emphasis on operations and procedures rather than as part of a

International	Australia	State	Local	Operation
International Non-Regulatory Agreements (>60). <i>E.g. Manila Declaration on World Tourism 1989.</i>	Both Tourism Industry & Government created: <i>Tourism Industry:</i> <ul style="list-style-type: none"> • ATC/TCA 1998 • EAA Code <i>Government:</i> <ul style="list-style-type: none"> • Commonwealth Coastal Policy; • National Tourism Strategy; • Office of National Tourism ("Best Practice Ecotourism"). • "Coastal Tourism - a manual for Sustainable Development" • "Good Practice Guidelines for Integrated Coastal Planning" 	Some planning has incorporated tourism issues in sustainability context. <ul style="list-style-type: none"> • WA - <i>enviro planning guidelines; eco-ethics for tourism; and guide to tourist destination and resort planning.</i> NSW - <i>various regional design guidelines (North Coast</i>	National & State guidelines should be incorporated in local planning activities and strategic documents. <i>Due to recent release of national guidelines it may be some time before there will be any indication of how or if local government is utilising guidelines and best practice principles as planning requirements.</i>	Specific Codes of Best Practice and Sustainable Practice documents. <i>(e.g. Couran Cove Resort on South Stradbroke Is. Has various guidelines to minimise environmental impacts of the resort with reduced energy use, effective interpretation/guest education).</i>

Table 1. Different level of guidelines and planning for sustainable tourism

wider context of tourism development and its impacts (Davis, Knox and Luckie 1996: 5-6).

Effectiveness as a Planning Tool

Tourism has been swamped by codes of practice, best practice principles and guidelines containing much of the "sustainability" and "eco" rhetoric. Guidelines produced in Australia at the different scales, outlined above, generally include

recognition of core principles contained in most environmental codes of practice. "However, it is important to note that it is unclear whether these documents have been widely distributed and if the guidelines have been promoted by planning and decision making authorities, or adopted by any tourism developers and operators" (Davis, Knox and Luckie 1996: 5).

As we strive towards the nirvana of sustainability in all our activities, continual improvement is desirable. There are no

magical solutions to sustainability, but incremental and gradual improvement is a more realistic approach. This can be seen in the growing development of best practice principles and guidelines, but it is suggested that best practice is a basis for fostering improvement, in addition to minimum requirements of regulatory frameworks.

The Coastal Tourism Manual contains some good information and advice and was distributed through the Local Government Association to local government offices. It involved lots of different stakeholders, and although fairly general it covers a huge scope. But has it made any difference to the sustainability of coastal tourism?

“A possible benchmark which could be used to monitor the effectiveness of the dissemination and adoption of national guidelines and policies could be to record the number of tourism operations which prepare their own guidelines and policies to encourage improved environmental performance in response to exposure to these broader coastal tourism development guidelines” (Davis, K. Knox, S. and Luckie, K. 1996: 10). There does appear to be a need now for some sort of evaluation of how these guidelines are being utilized, if at all. Time and resources, though, will most probably prevent such an activity from taking place.

It is doubtful if the level of detail provided by many of these best practice guidelines is adequate to influence developments and it will be necessary to supplement it with more detailed guidance at a more local level (Hunter and Green, 1995: 110). It appears that the detail of the Australian coastal document has scope for further expansion according to local conditions.

There is opportunity for guidance documents to assist in guiding the general applicability of major tourism developments. Design guidance however is not necessarily regulatory, and nor should it be. Regu-

lation should guide development with minimum requirements to ensure sustainability but at the same time should ideally provide scope for creative design and innovation. Many documents provide practical design or other guidance.

To transform tourism into a sustainable (in every sense) industry will require concerted action by all levels of government, host communities and the industry itself. Whether this takes the form of voluntary, non-regulatory, action to translate principles into practice, “command and control” approaches, including land-use planning, and increasingly, economic instruments in the form of incentives and deterrents, remains to be seen.

“The task ahead is to put in place effective procedures for introducing and monitoring 'greener', more environment-ally compatible forms of tourism development, and so avoid the imposition of sanctions to satisfy mandatory compliance measures” (Pigram, 1997, in Cooper and Wanhill: 127). The pursuit of best practice in tourism is an exercise in intelligent marketing. Tourism is a very visible industry with international and domestic scrutiny. To visibly be constantly trying to improve practice would be beneficial to many operations.

“Encouraging harmony between tourism and the environment requires the developers and operators of tourism developments to evolve their own sets of ethics about the use of the environment. However, local and state government agencies have tended to avoid the development of self-regulatory or voluntary approaches, such as guidelines or codes of practice, due to their lack of rigor and credibility when exposed to legal scrutiny” (Davis, K., Knox, S. and Luckie, K. 1996: 3).

Guidelines and examples of best practice can not only assist applicants or operators of tourism ventures in letting them know what is expected, but it can also inform planning policy. National or international

guidelines, best practice principles etc., should guide and inform the development of strategic plans on the local or regional scale. Best practice is about constantly striving for improvement, and to do this requires review and amendment of plans. While controls on tourism development may be imposed by state policies, local councils should be in a position to amend their specific planning instruments (Tourism Task Force, 1997: 58). Perhaps there will be a need for a review of Australia's coastal policy, in the short term, similar to the recent policy assessment process in the United States.

The concept of "best practice" has merit, indeed "...there are obvious advantages in studying and applying examples of what seems "excellent practice" (rather than "best") from elsewhere. How does one improve if not through emulation of a better operation?" (Farrell, 1999:1). However, the adherence to best practice models should also be encouraged with caution, as outlined by Farrell (1999) in correspondence. Best practice should not lull operators into a false sense of security. Times and conditions change and continual adaptation is required. There is also a dilemma with the interpretation of "best" which implies judgement within a particular philosophy. Which philosophy? Who judges what's best, whose values are used and where, geographically and culturally, does 'best' apply? Is it best for the people, the environment, or best say, for the investor. It could be said that "...there appears the implicit aim of maximizing rewards and usage within a limited range (narrow focus), a business operation or sector, rather than striving to optimize within a whole system (wide range) approach..." (Farrell, 1999: 2)

The scale of application is also questioned. "In business one can see the advantage of best practice, especially where individual plants or operations or the export sector are involved. ...Compared to many other businesses tourism's ramifications are wide, world wide, and its impacts and

relationships reach out deeply into economies, environments and societies not only in the host region but in numerous far-flung regions and countries with dynamic linkages between its various parts. So is best practice to be applied to an individual operation disregarding disparate parts, to a region or to the complex tourist system?..." (Farrell, 1999:2).

Guidelines and best practice principles should not be seen as an end, but a minimum or beginning from which to constantly improve and as starting points for local focus and development. The "Commonwealth Coastal Tourism: a Manual for Sustainable Development" provides guidelines which were developed by an array of stakeholders and is general enough to necessitate filling in of the details to suit local conditions. The document also avoids using the term best practice, perhaps in relation to some of the misinterpretations, misgivings regarding particularly prescriptive guidelines/'best practice' and underlying assumptions that can accompany this.

Conclusion

As planning adapts and changes to the new boundaries of sustainability and focuses on greater efficiency and performance, best practice examples and guidelines are becoming a part of the planning and management of tourism development. So far much of the tourism industry's effort in adopting sustainable best practice principles has been reactive, but as increasing numbers of codes and manuals of best practice emerge the industry will be forced to be more proactive in the self regulation of its activities, considering economic efficiency of individual operators and the net social benefit for tourist destinations.

The origins of best practice in the business scene may prove an acceptable management tool to the tourism industry which those responsible for planning in coastal

environments should utilize. Best practice principles and guidelines are being produced for Australian coastal environments and specifically for tourism development. It now remains to be seen through further research and monitoring how effective these documents are in planning for sustainable coastal tourism.

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COASTAL RESOURCE MANAGEMENT AND SUSTAINABILITY OF TOURISM: A COMPARATIVE STUDY OF HIKKADUWA, SRI LANKA AND GOA, INDIA

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Abstract: *As worldwide tourist arrivals increase, a significant share seek the pleasure of tropical beach holidaying particularly in the Asia/Pacific Region. This leads to pressure on coastal environmental resources resulting from the attempts to accommodate increased arrivals. Various studies carried out recently have noted that unplanned and uncoordinated mass tourism in the Asia/Pacific Region have caused degradation of coastal environmental resources which in turn threaten the sustainability of tourism in the long run. Further expansion of tourism will inevitably lead to further degradation and downturn of the benefits generated through tourism activities in these sites. Therefore, the need for management of coastal environmental resources to obtain the maximum benefits in the long run with minimum harmful effects has become a key issue to be addressed by planners, policy makers, professionals, businessmen as well as academics. This paper examines the implications of tourism in relation to Hikkaduwa in Sri Lanka and Calangute in the Goa State of India which are known to be two of the most popular coastal tourism sites in Asia. These two sites also are the victims of unplanned and ad hoc development of coastal tourism. The paper aims at identifying key management issues and proposes a strategy for the development of coastal areas which are subject to adverse ecological, environmental, physical, economic and socio-cultural implications of tourism.*

Keywords: *Tourism Carrying Capacity, Sustainable Coastal Tourism, Coastal Resource Management, Special Area Management*

Introduction

The Asian region is endowed with extensive coastal resources such as sandy beaches,

clear waters, exotic landscapes, coral reefs, coral fish, and other wildlife which attract tourists particularly interested in beach holidays (Smith, 1994). The governments recognize this potential and are continuing with their attempts to promote tourism as a means of generating foreign exchange and employment opportunities, and for expanding economic activities. This outward looking policy will certainly attract more tourists, out of which a significant part will seek beach holidays. However, most of the sites that they have to offer are already faced with problems resulting from ad hoc tourism development and improper management of resources. Further pressure without paying attention to the proper management of resources, will only aggravate the existing problems and the result will be further degradation of natural environmental resources. If the peacefulness and natural beauty is lost, tourism in such sites will not be sustainable and these countries will no longer be able to promote their coastal sites for beach holidays. This calls for more attention to be paid to the conservation aspects of the attractive sites while making attempts to promote more tourist arrivals.

The present paper is an attempt to investigate the problems existing particularly in Asian coastal tourism sites and identify issues relating to the proper management of such sites to ensure sustainable tourism. The degree and the permissible limits of tourism development have been examined using the "carrying capacity" concept. The paper focuses on two coastal tourism sites as case studies - Hikkaduwa, Sri Lanka and Calangute, Goa, India. Hikkaduwa is the most popular coastal tourism site in Sri Lanka

and Calangute is popularly known as the "Queen of Beaches". These two sites have undergone similar paces of tourism development and become victims of mass-tourism and ad hoc tourism development. The peaceful environment and natural beauty have already been affected and coastal resources are under threat by over development of tourism infrastructure. The resident population looks at tourism with suspicion as it has brought more disadvantages than advantages to the local community. The two sites also have historical and cultural links. The Western coastal belt of Sri Lanka where Hikkaduwa is located had been under rule by the Portuguese in the 16th Century. The state of Goa in which Calangute is located had been a Portuguese colony until the 1960s. While making a detailed analysis of problems of resource management in relation to the two sites, a comparative assessment is carried out to arrive at more appropriate development strategies in relation to other similar coastal tourism sites in the region.

The data for the study were collected from primary sources as well as from secondary sources. Primary data collection was based on field investigations, personal interviews and questionnaire surveys. Four separate questionnaires were adopted to survey: (i) Foreign Tourists (ii) Domestic Tourists, (iii) Business community, and (vi) Local residents. In order to make the comparative analysis possible, attempts have been made to adopt the same questionnaires in both sites.

Tourism in Hikkaduwa

Hikkaduwa is situated approximately 100 km from Colombo - the capital of Sri Lanka and about 150 km from the Katunayaka International Airport. The total length of the beach is about four km. The Marine Sanctuary which is endowed with beautiful coral reefs and marine life is the focal point of the tourist attraction of Hikkaduwa (CRMP, 1994). As revealed by questionnaire surveys,

there are a variety of other attractions to supplement the Marine Sanctuary. These are: warm sunny climate, clear blue sea, sandy beaches, shopping local handicrafts, opportunities for diving, surfing and snorkeling, interaction with friendly and helpful people, indigenous cultural performances etc.

Hikkaduwa is visited by both foreign and domestic tourists. German nationals are the most prominent foreign tourist category in Hikkaduwa. Foreign tourists usually come for long beach holidays and the length of stay is approximately 20 days which is greater than the national average which is approximately 10 days. The season starts for foreign tourists in November and ends in March which coincides with the winter season of the Western countries. Domestic tourists are mainly day visitors to the Marine Sanctuary. Because their stay in Hikkaduwa is limited to a few hours, their economic impact is not as significant as in the case of foreign tourists. The tourism business is comprised of accommodation, restaurants, recreation facilities and tourist shops. However, there are two types of establishments: formal establishments and informal establishments (Tantrigama, 1994). The formal establishments are properly registered with the tourism and local authorities and mainly comprise hotels which are located at the south end of Hikkaduwa Beach. The north part of the coast is comprised of a large number of guest houses, restaurants and shops which in most cases are run without proper licenses and are therefore classified as informal establishments. Scale-wise also, informal establishments are small when compared with formal establishments. However, these informal establishments play a major role by providing meals and accommodation facilities, and other amenities such as shopping, sports, recreation etc. at significantly lower prices than the formal establishments. For this reason, these informal establishments have been able to satisfy the needs of foreign tourists who seek longer stays at a relatively lower cost (Tantrigama and White, 1994).

Implications of tourism in Hikkaduwa

The adverse implications caused by tourism in Hikkaduwa are summarized below:

1. *Degradation of the coral reef.*

This is caused by a number factors. The main contributory factor is the use of glass bottom boats to view the corals and coral fish by tourists. The over loaded boats touch and damage the top of the coral. In addition, to have a closer look at the corals some tourists are inclined to jump out of the boats thus causing damage to the coral reef. There are fishing boats anchored within the Sanctuary which cross the coral reef every day. They usually clean the boat and throw gasoline and oil discharges in the sea which cause harmful effects on the coral and marine life in the Sanctuary. The demand created by tourists and other parties for corals and beautiful fish found in the Sanctuary has resulted in the breaking of corals and catching coral fish for illegal trade.

2. *Solid waste and sewerage disposal.*

Due to the ad hoc development that took place in tourism business establishments there is no proper systems of solid waste and sewerage disposal. These tourism establishments use their limited premises or the beach attached to them to discharge the solid waste and sewerage. As these tourism establishments are located very near to the coastal water, such discharges to the ground through septic tanks and pits contaminate the groundwater, thereby causing sea water pollution. Some establishments discharge the sewerage through pipes extended to the sea by which the sea water is directly polluted with effluents.

3. *Traffic congestion, noise and speeding vehicles.*

The highway between Colombo and Matara (capital of the Southern Province) goes through the tourism area of Hikkaduwa. This road is narrow and usually used by all types of vehicles and also pedestrians. The

tourists have voiced negative feelings about traffic congestion and noise which disturbs the quiet environment and the peacefulness of the area. There are incidents of traffic accidents every year where in some cases tourists have been knocked-down by speeding vehicles.

4. *Conflicts among different user groups.*

The recent survey does not support the hypothesis of the existence of a conflict situation between tourists and other groups such as the business sector and residents. However, conflicts among businessmen themselves and between residents and businessmen is evident. This is due to a number of reasons. Residents find tourism to be a "white elephant" of little or no benefit to the local inhabitants. It has affected the social fabric and traditional lifestyle of the local population. Although the people who are employed in tourism and related activities appreciate the benefits of tourism, ordinary citizens have no positive opinion about the way tourism is operated in their area. Conflicts among tourism businesses are mainly a result of competition among them for business. There is no cooperation at all among them on pricing and other business promotion policies.

5. *Garbage dispersal and environmental pollution.*

Garbage dispersal and pollution of the environment are done by all parties concerned in varied proportions. The tourists - both foreign and domestic, the establishments, the general public, are all responsible for littering items such as plastic bottles, paper bags and other wastes on the road and beaches. In addition, the garbage collection system of the local authority is not efficient enough to keep the roads and beaches free from garbage.

Analysis of Tourism Carrying Capacity in Hikkaduwa

The concept of "carrying capacity" is used in a variety of subjects to assess the permis-

sible limits of development. In the context of tourism it refers to the level of visitor use an area can accommodate with high levels of satisfaction for visitors and least impacts on resources (WTO, 1992). The present analysis focuses on three aspects, namely: (i) ecological, (ii) physical and (iii) environmental carrying capacities (Tantrigama, 1998). In the context of ecological carrying capacity of Hikkaduwa, what has been taken into consideration is mainly the impact of tourism on the coral reef and marine life. Physical carrying capacity refers to the availability of infrastructure and space for development. In assessing the environmental carrying capacity the use of the beach by tourists and its implications were taken into consideration.

Ecological Carrying Capacity

The assessment of ecological carrying capacity revealed that the maximum number of tourists allowed in glass bottom boats on the basis of 4 boats at a time with 9 adults or 12 school children is approximately 38 adults or 48 children. The maximum number of tourists to engage in snorkeling on the basis of allowing one third of the area for snorkeling is 86 persons at a time. Similarly the maximum number of tourists to engage in sea bathing without damaging the coral or marine life is expected to be 104 persons at a time.

Physical Carrying Capacity

A detailed analysis of physical carrying capacity is not required to assess the level of development as it is obvious that there are no adequate infrastructure or additional space left to support further physical development of the tourism facilities in the area.

Environmental Carrying Capacity

With regard to environmental carrying capacity, it is estimated that the maximum number of tourists allowable on the beach is expected to be 1,500 at any point of time.

The carrying capacity analysis revealed that there is a potential for accommodating 30,000 foreign tourists per peak season in

Hikkaduwa while the present number of arrivals is estimated to be approximately 15,000 (1996). Therefore, there is a capacity to further increase the number of arrivals to Hikkaduwa.

Tourism in Calangute

Calangute is located approximately 16 km North of Panaji - capital of the state of Goa, India. It is the most popular beach in India and known to be one of the top ten bathing beaches in the world. It is visited by both foreign and Indian (domestic) tourists. Unlike at Hikkaduwa, length of stay of domestic tourists may not necessarily be limited to a few hours. There are Indians originating from other states of India who come to spend their holidays in Goan beaches where a significant number select Calangute for their stay. British nationals are the most prominent among foreign tourists arriving in Calangute. The season falls between 1st October and 16th June while 20th December to 5th January is considered to be high season (peak season). The off season is between 16th June to 1st October. The tourism facilities are spread in the countryside as well as along the coast. There is no further space found in coastal area for providing accommodation and other facilities.

Implications of Tourism in Calangute

Calangute is adversely affected by a series of implications resulting from mass tourism and unplanned tourism development. The most visible implications are summarized below: (Wilson, 1997)

1. Illegal constructions along the coast.

There is a regulation to leave a minimum of 200 meters from the high tide sea level without any constructions. This regulation is usually violated. Sand dunes, which act as a natural protection against sea erosion are removed for development of tourism facilities such as hotels, resorts etc. This has al-

ready affected the natural coast as well as the scenic beauty of the area. As the hotels/guest houses and other facilities are constructed very close to the sea, they discharge sewerage and other effluents to pits and septic tanks by which the underground water is contaminated. This again pollutes the seawater as it leaks out to the coast. Over-development of tourism establishments along the coast has also limited the access to the beach by the resident population. Attempts by property developers to buy up the remaining coastal strip have caused intimidation of villagers out of their homes.

2. *Danger of exhausting the underground water through over-use.*

The present public water supply is inadequate to meet the demand created by the large number of tourism establishments in the area. They have wells constructed on their premises and underground water is used and discharged back to the ground. Re-use of contaminated water creates a lot of health hazards and other implications to the tourists and to the residents of the area.

3. *Pollution by garbage and sewerage disposal.*

Tourism establishments are located in close proximity with the houses of villagers. There is no concern by tourism businessmen regarding the proper disposal of garbage and sewerage. In most of the cases, sewerage is diverted to the adjoining canals which flow along the village, polluting the entire area. The problem of mosquitoes has now become a serious threat to the health of the resident population (D'Souza, 1997). This practice is not acceptable at all and is a severe injustice from the villagers' point of view. There is no proper system of garbage disposal and items like plastic bottles and food discharges are found strewn every where.

4. *Inadequacy of public infrastructure due to overuse by tourism establishments.*

The infrastructure facilities such as water supply, electricity, and communication are not planned to cater to the large demand

created by the increasing number of tourism establishments. The use of such basic amenities by residents has been severely affected by this. Unavailability of power supply during most of the peak hours is a common phenomenon in Calangute. Tourism businessmen manage to obtain such services by various means. Ordinary citizens are helpless in this regard.

5. *Road traffic and congestion.*

This is a result of the large number of vehicles found particularly during the peak season. This creates congestion along the roads and has affected the peace and quiet of the environment.

6. *Increasing prices of food-stuff and other basic items due to heavy demand created by the tourism establishment.*

This is a frequent complaint of residents. Not only items such as fish, vegetable and fruits, but land prices and rents have also increased excessively due to the excess demand created by tourists and tourism establishments. There is no compensatory revenue generation for the benefit of local residents to increase their affordability. This has caused the standard of living of local residents to go down as their cost of living is going up with the development of tourism.

7. *Socio-cultural effects.*

This is a very crucial issue to be addressed as it has multiple impacts on the traditional socio-cultural life style of the resident population. From the survey carried out among the resident population, a significant number of the youth population turns to drug trade with foreign counterparts as a result they themselves become addicted to drug use and other evil habits. The school-going child population is affected as tourism establishments, and liquor shops are situated near the schools. Partial nudism is prevalent in the area which also has adverse social implications in a country like India.

Analysis of Tourism Carrying Capacity in Calangute

An attempt has been made to apply the above three carrying capacity concepts i.e, ecological, physical and environmental, to tourism in Calangute too. But unlike in Hikkaduwa, there are no ecological resources such as coral or coral fish populations in Calangute. Therefore, the carrying capacity analysis is limited to physical and environmental aspects in the case of tourism in Calangute.

Physical Carrying Capacity

There are various occasions when the Goa tourism authorities have been subject to severe criticism for adopting a lenient policy in granting permission for new hotel and resort constructions in the Calangute area (Ecoforum, 1993). There is no proper assessment of the requirement for new developments which has led to overuse of the existing infrastructure which are meant to cater to a small population. There is no need of any quantitative analysis to confirm that the physical carrying capacity of Calangute is exceeded.

Environmental Carrying Capacity

With reasonable assumptions regarding beach space per tourist, it has been estimated that the maximum allowable number of tourists at any given point of time in Calangute beach is approximately 9,600 tourists.

This leads to the conclusion that the total number of foreign tourist arrivals to be 38,400 and domestic tourists arrivals to be 460,800 per year. As the estimated number of current foreign tourists is approximately 21,340 and domestic tourists is 240,000 (1996), there is still a potential for increasing the number of both foreign and domestic tourists arrivals to Calangute.

Issues in Coastal Resource Management

It is evident that both Hikkaduwa and Calangute have potential for further expanding tourism activities provided that care is taken to make sure that resources are properly managed to minimize harmful effects. Although there are differences between the tourism activities in Hikkaduwa and Calangute, the following management issues are common in both sites.

1. *Adverse impacts caused by tourism.*

Because of the unplanned nature of tourism development, a series of adverse ecological, environmental, physical, economic and socio-cultural impacts are found in these sites. Physical carrying capacity limits have already been exceeded.

2. *Conflicts among different user groups.*

These coastal tourism sites are characterized by multiple resources and user groups. These resources are interconnected and the use of one will have an impact on the other. This has inevitably led to conflicts among different user groups. For example, the beach used by traditional fishers is now encroached upon by hoteliers. This occasionally leads to conflicting situations. Tourism has to be considered as only one activity among a variety of activities existing at these sites.

3. *Low level of revenue generation from villagers' point of view.*

The tourist business sector is owned by hotel groups and individuals originating from outside the area. A significant part of the inputs of tourism establishments are purchased from outside the area. A very minor percentage of employees are hired from the local community. Because of these reasons, the financial and other benefits emanating from among the tourism business to the local community are very low.

4. *Multiplicity of authorities and organizations.*

Because of the variety of overlapping functions and elements at these sites, there are numerous different organizations with responsibilities for managing and advising on these functions. For example, at Hikkaduwa, the marine habitat is under the purview of the Department of Wildlife Conservation while the adjoining beach is controlled by the Coast Conservation Department. Tourism establishments situated along the same beach are controlled by the Ceylon Tourist Board. It has been found to be difficult sometimes to reconcile different local, regional and national level organizations in an attempt to design and implement suitable management policies;

5. *Four types of stakeholders.*

There are four groups of stakeholders with important roles to play. Those are: (a) the local resident population, (b) Tourists, (c) Tourism business sector and (d) the government, non-governmental and community based organizations. In an attempt to design and implement strategies for proper management of resources one should not underestimate the important roles to played by each party.

As such, coastal resource management has become a complex issue particularly when resources are being used for tourism in addition to traditional economic activities existing in the coastal sites.

Proper Management of Coastal Resources

The key issue of proper management of coastal resources is to allow sustainable use of resources. Sustainable use is also referred to as "Sustainable Development" which has received much attention of development planners, policy makers, politicians, professionals, academics, and researchers in recent times. It provides a good conceptual framework for any kind of development activity. In the context of tourism, sustain-

able development involves management of all resources in such a way that economic, social and aesthetic needs are fulfilled while maintaining the cultural integrity, essential ecological processes, biological diversity and life support systems.

That coastal tourism should be based on the principle of sustainable development has recently been recognized in the Bagio Resolution on Coastal Resources Management (Wong, 1998). Efforts are being made world wide to apply the concept of "Integrated Coastal Management" (ICM) to achieve the sustainability of development activities undertaken in coastal zones. Although ICM can be defined in different perspectives, agreement exists among coastal management specialists that ICM efforts must fit within a comprehensive framework which integrates the range of activities and constitutes sustainable development in coastal areas (White et al., 1997).

The UN has prepared guidelines on environmentally sound development of coastal tourism for ESCAP countries (ESCAP, 1995). The report is based on case studies carried out in Fiji, Indonesia, Malaysia, Maldives, Philippines and Thailand. The guidelines are relating to EIA, technical guidelines for environmental management, managing social/cultural impact and policy recommendations. It gives general guidelines as well as specific actions to be undertaken with respect to certain aspects. But special care is necessary in the case of critical areas like Hikkaduwa and Calangute which have already been subject to various types of ecological, environmental, physical, economic and socio-cultural problems resulting from the existing nature of tourism development.

A Strategy for Sustainable Coastal Tourism

The lessons learned from the two case study sites selected from Sri Lanka and India leads us to think about the appropriate strategy for the development of tourism which takes

into consideration the specific nature of problems that different sites are faced with. Hikkaduwa was one of the sites for the implementation of Coastal Resources Management Projects (CRMP) of USAID. The concept of Special Area Management (SAM) approach was adopted and implemented as an integrative approach for coastal zone management. SAM approach provides a good conceptual framework for developing appropriate development strategies for specific geographical areas.

The basic premises for SAM process is that it is possible to organize local communities to manage their natural resources and they will continue to do so if they perceive that they derive tangible benefits from better management. The planner, the planning agency or the organization group play only a catalytic role in organizing the local community. They can provide technical and financial support for the management effort which is formulated and implemented as a local community and/or local government effort. (Wickramaratna and White, 1992). Community participation is incorporated in the planning stage of the SAM. This frequently is not possible in the case of macro level or broader area planning. However, the success of SAM is based on the extent to which implementation and monitoring becomes a local responsibility and gradual reduction of outside support in the long run. The basic steps of SAM approach are:

1. Agreement on need for SAM for a particular site and identify national and local level participants.
2. Compile Environmental Profile of the area and determine the priority management issues.
3. Enter the community with full-time professional facilitators and community organizers to liaise with community stakeholders, organize education programs and facilitate the planning process.
4. Conduct planning cum training workshops in the area.
5. Organize resource management core groups.
6. Draft management plan through community involvement, determine indicators for monitoring and conduct cost benefit analysis.
7. Implement pilot projects while planning continues.

The very specific nature of the SAM planning process is that it differs from the conventional planning process in which the order of planning, implementation, monitoring and feedback is important. Under SAM, the implementation does not necessarily follow a planning stage. The implementation can begin at the planning stage which allows planning to be continually revised.

The outcome of the SAM plan adopted in Hikkaduwa (CRMP, 1996) brought mixed results. This is a new planning concept applied in the Asian region. The success of the plan depends heavily on the active participation of all stakeholders who were involved in planning process at implementation stages. The Hikkaduwa SAM plan received much attention at the planning stages. Once the project was over and the coordinating office was removed, participation of relevant parties was lacking. Certain actions recommended in the plan such as construction of the fishing harbor are now under way. But the implementation of most of the recommended actions were not satisfactorily undertaken. The lesson to be learnt from the SAM project undertaken in Hikkaduwa is that planning as well as implementation should be institutionalized at the local authority level. Leaving it to be implemented voluntarily is not a good strategy to be adopted in a case of countries like Sri Lanka. The application of the SAM approach to Hikkaduwa tourism area provides indications for further refinement to be undertaken in the next stages.

There is no such micro level attempt to plan for tourism in Calangute. The Department of Town & Country Planning of Goa prepared a Master Plan for Tourism Development in 1987 covering the entire state of Goa (Department of Town & Country Planning, Goa, 1987). That Plan was also not imple-

mented as it did not receive the required public support because of the reason that public opinion had not been adequately sought at the planning stage. In the beginning of 1999, the Goa Department of Tourism started preparing the second Tourism Master Plan. Once the report is prepared it will be another macro plan for tourism in the state of Goa. Calangute is an area which has not been given any special focus in any kind of planning. But it is clearly evident that Calangute requires special attention which cannot be given in regional/national level planning.

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EMERGING COASTAL TOURISM POTENTIAL IN BRITISH COLUMBIA: THE FISHERIES TOURISM NETWORK AND THE GERMAN MARKET

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Abstract: *Coastal tourism is on the rise in Canada. The challenge is to develop products based on market research that utilize the existing infrastructure and knowledge in coastal communities. This paper therefore describes a new coastal fisheries tourism sector initiative designed to deliver specialized products that reflect the unique character of the fisheries industry. The need for this kind of tourism approach in fisheries has grown out of the decline of fishery stocks and the subsequent loss of fisheries-related employment in recent years. While the majority of initiatives associated with coastal fisheries tourism will incorporate some notion of fisheries in their product mix, others may concentrate on cultural awareness of unique peoples, ecological education or heritage tourism without references to fisheries. The vehicle for the sector is planned as land and water-based interpretive tours generally combined with accommodation facilities in communities along the coast. The paper presents the Fisheries Tourism Network, an ongoing initiative modeled on a cooperative approach to support the development of new tourism businesses that use the skills, experience and infrastructure of the fishing community. For the Network to establish credibility and expand effectively, it needs practical experience and valuable insights into the intricacies of coastal fisheries tourism planning and development. Four businesses in different stages of management have been incorporated as demonstration projects for this purpose.*

To facilitate the transition from fisheries to tourism, key components of training support and

development need to be identified. These components include the role of the Network in responding to training needs, the elements of training and the specific instructional modules required to deliver the necessary products. The underlying rationale for training is to coordinate existing industry and tourism knowledge and channel it towards the development of responsible and viable coastal fisheries tourism products. As with other sectors, coastal fisheries tourism should develop according to the ecological, social and economic dimensions of sustainability. But more often than not, even best practices in tourism fall short of reconciling all three of these imperatives. If the Network can stimulate a reduction of pressure on the fisheries resource while practicing ecological responsibility combined with successful economic and social transition of workers from one sector into another, sustainable tourism can become a reality in this sector. Eventually, an emblem similar to an eco-label will become associated with responsible coastal fisheries tourism in British Columbia. Standards will reflect the diversity within the Network and marketing efforts will result in the tourist seeking out those operations displaying the emblem.

This paper describes an approach for assessing international potential for coastal tourism and describes the latent demand from Germany using segmentation techniques catered to the long-haul pleasure travel market (Canadian Tourism Commission et al., 1996). It is based on the work by Williams et al. (1999), which analyzed the potential coastal market for long-haul travelers from the United Kingdom, Germany and Canada and identified their top travel characteristics.

Segmentation is a method of market analysis where data is compiled as independent characteristics or variables and synthesized as demographic, behavioral or attitudinal segments (Fitzgibbon, 1994). From the approach taken in this analysis, the findings indicate that a travel affinity for coastal tourism products exists for approximately 59% of the surveyed long-haul market in Germany. These potential coastal travelers felt that "visiting remote coastal attractions like fishing villages or lighthouses" were often or always important to them when choosing their long-haul destination. In general, potential coastal travelers tend to be married baby boomers with no children that believe in getting value for their holiday money. They prefer destinations with outstanding scenery where they can appreciate ecological features in a friendly local environment. An aggressive strategy which creates scenic images of small towns and villages along the coast set in areas of rich biodiversity is needed to position the province as having the environment and infrastructure necessary to support product development in this sector. With singular focuses that can be marketed separately or as a package, British Columbia would be perceived as a top coastal destination by having unique features for each stretch of the coastline. Efforts should be focused on highlighting activities preferred by the German coastal traveler such as bird watching and other wildlife viewing opportunities as part of a product mix of learning about people, places and things.

In conjunction with marketing information for coastal fisheries tourism, attention needs to be given to strategic actions in destination planning and product development, community involvement processes, and mechanisms of monitoring and assessment. While all coastal communities should have access to the eventual support services of the Network, decisions need to be made as to whether the immediate focus should be more on complementing existing tourism operations with displaced fishers or encouraging the start-up of new businesses. Both are required, but in different proportions for different places. The Network also needs to create an understanding with communities in which they operate that their commitment to sustainable tourism means community control over expansion. Starting with the demonstration projects, the Network should organize a program where regular status

reports are submitted by operators and random observations are taken of the operation. This sets the stage for a gradual and unobtrusive switch to checklists of operational standards and spot inspections after full membership has been awarded. With a focus on criteria such as these, standards for coastal fisheries tourism will develop with a systematic and practical approach.

Keywords: *fisheries tourism, community development, marketing research and management*

Introduction

Coastal tourism is on the rise in Canada. The west coast in particular is experiencing a surge in the demand for products which cater to the potential coastal traveler. As traditionally resource-based communities are confronted with the realities of a declining staple economy, the prospect of a transition into tourism is often touted as the solution to their economic woes. This is becoming a growing trend in fishing communities in British Columbia as more operators are attempting to position themselves for various types of ecotourism and adventure tourism opportunities. The challenge for coastal tourism is to develop products based on market research that utilize the existing infrastructure and knowledge in these communities. To meet this challenge, this paper describes a new coastal fisheries tourism sector initiative designed to deliver specialized products that reflect the unique character of the fisheries industry. More specifically, it presents the Fisheries Tourism Network, an ongoing initiative to develop support services for the responsible development of fisheries tourism. This Network will be working with industry operators on demonstration projects and coordinating the delivery of training programs.

While the market for coastal fisheries tourism needs further research, an analysis of international travel databases indicate a significant interest for the type of products this new sector is seeking to offer. The paper describes an approach for assessing the demand from Germany in regards to the char-

acteristics of the potential coastal traveler. In conjunction with marketing information for coastal fisheries tourism, attention needs to be given to strategic actions in destination planning and product development, community involvement processes, and mechanisms of monitoring and assessment. With a focus on criteria such as these, standards for coastal fisheries tourism will develop with a systematic and practical approach.

Coastal Fisheries Tourism

This sector is expected to provide tourism opportunities with a strong historical flavor of the fisheries industry in British Columbia. Although the central focus surrounds the commercial salmon fishery, coastal fisheries tourism encompasses all tourism products associated with the harvesting of species in tidal waters including the recreational and aboriginal food fisheries.

The need for this kind of tourism approach in fisheries has grown out of the decline of fishery stocks and the subsequent loss of fisheries-related employment in recent years. Fisheries resources are under considerable pressure to meet the needs of present and future generations of fishers and their communities. As a consequence, many communities are turning to tourism as an instrument of economic transition. The federal government has retired approximately 1,500 gillnet, seine and troll fishing licenses on the west coast since 1996, almost half of which took place in March 1999. The current commercial salmon fishing fleet holds 2,900 licenses, most of which remain eligible for the buyback program. Whether the resource decline is due to too many boats chasing too few fish, predation by other species or habitat degradation does not change the reality that an unprecedented number of people are affected by the downturn in the industry.

While the majority of initiatives associated with coastal fisheries tourism will incorporate some notion of fisheries in their product mix, others may concentrate on cultural

awareness of unique peoples, ecological education or heritage tourism without references to fisheries. Ideally, the mix would allow for some combination of experiences in these areas with a focus on fisheries. The retention of the fisheries terminology in the sector name identifies it as its own niche, similar in philosophy yet uniquely distinct from mainstream ecotourism and heritage tourism. The vehicle for the sector is planned as land and water-based interpretive tours generally combined with accommodation facilities in communities along the coast. Awareness of unique peoples is primarily directed at First Nations but may include exposure to other cultures. While an obvious topic for discussion is salmon, educational tours on coastal ecology can cover a variety of species and their habitats presented within an ecosystem approach. Heritage tourism products will include a diversity of historic vessels and attractions in coastal communities and urban centers. Newer vessels and working harbors are examples of modern heritage features that will be connected to this sector.

Fisheries Tourism Network

The Community Fisheries Development Centre is a society committed to assisting people from fisheries-related industries in obtaining alternate or supplementary employment. Through their corporate arm, Community Fisheries Development Enterprises, the Society has the ability to develop joint venture opportunities and manage small businesses. The Fisheries Tourism Network is a recent enterprise initiative modeled on a cooperative approach to support the development of new tourism businesses that use the skills, experience and infrastructure of the fishing community. Consistent with the Society's mandate, the Network makes every effort to create employment for fishers and others normally making a living off fisheries. Eligible participants are those individuals that have been negatively affected by the current state of the resource and the associated govern-

ment and industry restructuring programs. The Network itself is being managed by persons knowledgeable in both the tourism and fisheries industries. It is advised by a committee consisting of the Society and tourism professionals from industry and academia. While limited start-up funding for the initiative is being provided by Fisheries Renewal British Columbia and Human Resources Development Canada, it is expected that the Network and its associated businesses will eventually be self-sustaining through membership fees and direct tourism revenues.

The immediate objectives for the Fisheries Tourism Network are: to determine the capacity-building needs of fishers making a transition to tourism; establish mechanisms to support the development and growth of tourism in this new sector; and analyze the market potential for fisheries industry-based historical, cultural and interpretive tourism.

Demonstration Projects

For the Network to establish credibility and expand effectively, it needs practical experience and valuable insights into the intricacies of coastal fisheries tourism planning and development. Four businesses in different stages of management have been incorporated as demonstration projects for this purpose.

BC Fisherman's Unique Tours

This limited company was established in 1996 by seven independent gillnet fishers to provide day charters with their vessels on the Fraser River, Pitt Lake and in the Gulf Islands. Although they have achieved only limited success, the participants in this program have expanded their offering to include interpretive walking tours of New Westminster and its waterfront. Since most of the operators continue to fish in other areas of the province during part of the peak tourist season, there are additional challenges that need to be addressed in developing a successful tourism business that over-

comes this constraint to their tourism programming. This demonstration project contributes significant opportunities for the Network in learning about marketing initiatives, administrative management and regulatory requirements of chartering and vessel conversion.

Working Harbour Tours

Newly established under the Community Fisheries Development Enterprises program, this initiative will be used to develop a template for land and water-based interpretive tours in working harbors. It will use the Port of Vancouver as a pilot. The opportunity exists to develop several products of industrial tourism that can be uniquely packaged as part of the same tour. It will benefit from the experiences of existing operators providing various water-based tours while establishing opportunities for joint ventures with local attractions such as museums, fish canneries and processing plants, shipyards, restaurants and the Port Authority. Since many of these are *working* attractions, the project will provide information on a host of safety and scheduling challenges in addition to a variety of unique partnership arrangements. While the initial focus will be on inner harbor tours, longer cruises embarking from the harbor into adjacent areas would expand business opportunities and give insight into the differences between vessel certification requirements for operations inside and outside the Port.

Alert Bay Tribal Council

The Musgamagw Tsawataineuk First Nation is in the conceptual stages of developing a coastal fisheries tourism initiative which will be planned and approved by all of its members. The Northern Vancouver Island community of Alert Bay is an ideal location for a tourism product centered around awareness of aboriginal culture. The project will enable the Network to learn about proper protocol and authenticity issues that need to be considered when developing and delivering culturally-specific tourism products.

Fraser River Heritage Tours

While also recently established under Community Fisheries Development Enterprises, this business will be run as a cooperative in partnership with the Britannia Heritage Shipyard in Steveston and BC Fisherman's Unique Tours. Heritage tours on the Fraser River will be provided on small wooden gillnet skiffs which have been built to their original design of the 1880's. The four skiffs can carry up to seven passengers each and are powered by 4-stroke outboard motors. In addition, there are two slightly larger sail and oar-powered skiffs that have also been reconstructed. River tours will be offered as a speciality program under the Britannia operation with more extensive package tours combining the heritage skiffs with the larger gillnetters of BC Fisherman's Unique Tours. Since the Network is also planned as a cooperative it will benefit from learning about the structure of this demonstration project, in particular the differences in effective partnership development compared to the other projects.

As the demonstration projects gain experience, their particular Network support needs will become more apparent. This will provide useful information on which components of the training template should take priority.

Training Needs Assessment and Response

To facilitate the transition from fisheries to tourism, key components of training support and development need to be identified. These components include the role of the Network in responding to training needs, the elements of training and the specific instructional modules required to deliver the necessary products. The underlying rationale for training is to coordinate existing industry and tourism knowledge and channel it towards the development of responsible and viable coastal fisheries tourism products.

Role of Network in Training

The Fisheries Tourism Network will serve as a coordinating agency for the development of a training template. It will use existing and new training resources. Training may be provided directly by the Network or contracted out to others. In any case, the Network will provide advice on capacity issues and market itself as the lead authority on training for this new tourism sector.

Elements of Training

Central to the training support services of the Network is a "how to" Guide for Business Development designed for existing and potential operators. It will include best practices in coastal tourism, market research analyses and essential information on First Nations protocol, small business development and interpretation techniques. In addition, the Guide will outline regulations on passenger vessel operations including conversion and safety requirements. The plan calls for the creation of a guidebook document that will be regularly updated and improved as resources develop. Trainers will also need an instructional guide to assist in delivering introductory workshops in coastal communities as part of an orientation program. The provision of these support materials will be the first step towards a variety of advisory services that the Network will develop based on effective needs assessment. Packaged together, these elements will make up a training template designed as "performance support" as opposed to traditional training.

Instructional Modules

The instructional components of the template will be organized in four training modules offered through existing organizations and the Network. One module is **small business management** topics such as product and business plan development, including market research and marketing strategies. Another is **customer service** training in *SuperHost*, *First Host*, *Serving It Right* and *Food Safe*, recognized courses in the tourism industry fundamental to responsible hospitality. Specific to delivering coastal fisheries

tourism products is a particular historical knowledge of the fisheries industry within an overall understanding of coastal ecology and heritage including First Nations protocols. Therefore, a training module on specialty topics which teaches **interpretive techniques** for the coastal environment and leads to effective linkages with First Nations is integral to the training template. To emphasize the larger perspective, other specialty topics on **sustainable tourism** planning for resource-based communities will be provided. Finally, a module on **marine regulations** and safety will be developed to include Transport Canada approved courses, first aid and workplace safety training, environmental regulations and codes of practice and local bylaws. Such a module will also include insurance guidelines, back country recreation policy and vessel conversion guidelines for passenger transport specific to the sector.

The Community Fisheries Development Centre conducted workshops and a survey of fishers in ten coastal communities in British Columbia in the fall of 1998 to determine the level of interest and viability for coastal fisheries tourism. Although the focus was primarily to gather information from the fishing community, these visits included discussions with local tourism professionals and community leaders. One of the key findings of the survey was that the respondents consider training in market research, small business management, tourism hospitality and safety important to successful ventures in coastal fisheries tourism (Williams et al., 1999a). As with other aspects of the Network, much of the impetus for the planning of the training program was facilitated through the information compiled in this consultation process.

Accreditation

The vision for the Fisheries Tourism Network is to coordinate the development and operation of a sustainable tourism niche where coastal products are delivered by displaced workers associated with the fish-

eries industry. This is no easy task. As with other sectors, coastal fisheries tourism should develop according to the ecological, social and economic dimensions of sustainability. But more often than not, even best practices in tourism fall short of reconciling all three of these imperatives. If the Network can stimulate a reduction of pressure on the fisheries resource while practicing ecological responsibility combined with a successful economic and social transition of workers from one sector into another, sustainable tourism can become a reality in this sector. It is a unique opportunity to channel existing knowledge grounded in resource extraction into softer and more value-added consumption. Fishers thereby maintain a connection to their heritage and a sense of pride in relaying the important role of the industry in the historical development of British Columbia.

Since the product mix needs to be developed and the operators trained in its delivery, the Network will initially need to generate revenue and credibility through its demonstration projects without the benefit of proven standards in place. While it is very much a learning process, it may be some time before the sustainable vision is realized. The association of the projects with the Network does not guarantee them future membership. Similarly, the businesses coordinated through *Working Harbour Tours* would also have to meet certain requirements to be members of that project which in turn would apply to the Network. Granted, the early participants within each project and the projects themselves have the opportunity to significantly contribute to the development of standards, and are therefore likely to be accredited. Even so, they must be prepared from the onset to adapt and evolve in accordance with the vision. It is expected that the criteria will be primarily operational, reflective of a code of conduct or an appropriate sustainability assessment framework consisting of qualitative and quantitative indicators. As the Network establishes further industry recognition by demonstrating its ability to provide support services to its members, other businesses

and individuals will likely get involved and contribute to the development of a coast-wide standard.

Eventually, an emblem similar to an eco-label will become associated with responsible coastal fisheries tourism in British Columbia. The fisheries connection may be as explicit as coastal cruising on an old west coast seiner or as remote as a former fish processing plant employee interpreting Port of Vancouver operations from a modern yacht. Standards will reflect the diversity within the Network and marketing efforts will result in the tourist seeking out those operations displaying the emblem.

Market Research

This section discusses a method for identifying international potential for coastal tourism and describes the latent demand from Germany using segmentation techniques catered to the long-haul pleasure travel market (Canadian Tourism Commission et al., 1996). Long-haul travel from Europe includes trips of four nights or more taken by air to destinations outside of Europe, North Africa, the Mediterranean and the Middle East. Specifically, the work is based on a joint effort by the national tourism organizations of Canada, the United States and Mexico as part of a series of studies on international pleasure travel markets to North America.

Williams et al. (1999b) analyzed the potential coastal market for long-haul travelers from the United Kingdom, Germany and Canada and identified their top travel characteristics based on segmentation techniques. While this represents an important part of the market for coastal fisheries tourism, there is additional research to be carried out on travel from other countries as well as studies on the potential local market. This paper presents the German market information to illustrate the application of the methodology and to provide useful information for preliminary marketing initiatives. It is an example of one type of tourism market research that is being used by the Network as part of its strategy to assist fishers.

Methods

An in-home survey of 1,200 potential long-haul travelers was conducted in 1996 amongst adults who had either gone on a long-haul trip in the previous three years or were planning to take one in the next two years. The distribution of the survey respondents was initially weighted according to the incidence of long-haul travel to various destinations gathered through an omnibus survey in 1995. The allocation of travelers within the database was then further updated for actual responses to reflect where they stayed the longest. By weighting

Approximate Adult Population (18 years or over)	65,498,000 ¹
Incidence Of Adult Long-Haul Pleasure Travelers	27.6% ¹
Potential Adult Long-Haul Pleasure Travelers	18,077,000
Potential Coastal Tourism Travelers	59.1%
Estimated Coastal Tourism Traveler Volume	10,683,507
Incidence of Coastal Tourism Traveler (Interest) In Canada -Next 5 Years	30.9%
Estimated Coastal Tourism Traveler (Interest) Volume In Canada -Next 5 Years	3,301,204
Incidence of Coastal Tourism Traveler (Interest & Likelihood) Visiting Canada - Next 5 Years	80.6%
Estimated Coastal Tourism Traveler (Interest & Likelihood) Volume To Canada - Next 5 Years	2,660,770

¹ Canadian Tourism Commission et al. (1996)

Table 1. Potential German Coastal Travel Market

the sample in this way, the survey is considered to have targeted a representative proportion of the German travel market to produce findings which can be directly translated into a population estimate.

Segmentation is a method of market analysis where data is compiled as independent characteristics or variables and synthesized as demographic, behavioral or attitudinal segments (Fitzgibbon, 1994). While data on life cycle, income, product usage and frequency of use can combine to form a line of products each catering to the habits of different users, attitudinal segments describing philosophies, motivations and perceptions are required to understand the values and desires of consumers. For this analysis, data on the potential coastal traveler was carved out of the overall sample and sorted using *SPSS* to identify characteristics particular to this travel segment.

Findings

Market Potential

From the approach taken in this analysis, the findings indicate that a travel affinity for coastal tourism products exists for approximately 59% of the surveyed long-haul market in Germany. These potential coastal travelers felt that "visiting remote coastal attractions like fishing villages or lighthouses" were often or always important to them when choosing their long-haul destination. Within this sample, 31% were either somewhat or very interested in visiting Canada in the next five years. Of these, about 80% stated that they were somewhat or very likely to make that trip. This represents approximately 2.6 million German visitors to Canada in the next five years who consider it important to visit remote coastal attractions (Table 1).

Market Segments

Socio-Demographic Characteristics

Socio-demographic segmentation is often used in market research because of the ease of identifying and measuring characteristics and its association with a range of consumer products. In general, potential coastal travelers tend to be married baby boomers with no children and have few friends or relatives living in Canada. While the most frequent education level indicated was middle school, this market is made up of predominantly white-collar workers with a proficiency in English (Table 2).

Travel Philosophy

Travel philosophies describe how people prefer to travel. The German market of potential coastal travelers believe in getting value for their holiday money. Generally, each trip is to a new destination for typically up to a couple of weeks. Although they feel that travel arrangements should be made before departure, flexibility at the destination is important (Table 3).

General Travel Motivations

General travel motivations depict what causes people to travel and choose one destination or tourism product over another. Potential German coastal travelers like to have the opportunity to increase their knowledge about people, places and things in an environment of outstanding scenery. It is also important that there are a variety of things to see and do as long as personal safety is guaranteed (Table 4).

Perception of Specific Attribute in Canada

Traveler perceptions of specific attributes refers to the perceived competitive advantages of Canada over other destinations. Potential German coastal travelers consider Canada to have outstanding scenery such as lakes, rivers and mountains where there are opportunities for appreciating natural ecological features and experiencing wilderness adventures. National and provincial parks

Socio-Demographic Characteristic	% of Respondents	
	Potential Coastal Travelers	Total Sample
No friends/relatives living in Canada	93.8	93.5
No friends/relatives living in US	78.8	78.4
No household members < 18	76.9	77.4
Two household members 18+	57.4	55.8
Female	51.4	50.7
Married	49.2	46.3
35 - 44 years of age	20.0	17.4
Middle school education	29.7	28.4
White-collar worker	32.7	31.8
Living with spouse/partner with no children	29.6	27.1
Two household income contributors	50.7	49.4
Average monthly household income DM 4,501+	40.1	38.0
English proficiency -read	61.2	61.2
write	49.1	49.2
speak	61.2	59.9
French proficiency -read	17.0	16.3
write	12.2	12.0
speak	15.9	14.9
Eurocard credit card	72.2	73.6

Table 2. Socio-Demographic Characteristics

Travel Philosophy	Mean Response *	
	Potential Coastal Travelers	Total Sample
Getting value for holiday money is very important to me	3.41	3.43
When traveling long-haul I usually take holidays of 14 days or less	3.21	3.14
I like to go to a different place on each new holiday trip	3.21	3.06
I like to be flexible on my long-haul holiday going where and when it suits me	3.16	3.05
For me, money spent on long-haul travel is well spent	3.08	3.01
I like to have all my travel arrangements made before I start out on holiday	2.98	2.97
Inexpensive travel to the destination country is important to me	2.94	2.93
Once I get to my destination, I like to stay put	2.70	2.66
I enjoy making my own arrangements for my holidays	2.68	2.63
I prefer to take extended holidays in warm destinations to escape winter	2.35	2.30

Based on a scale where 1 = strongly disagree, 2 = somewhat disagree, 3 = somewhat agree and 4 = strongly agree.³

Table 3. Travel Philosophy

Motivation	Mean Response *	
	Potential Coastal Travelers	Total Sample
Outstanding scenery	3.65	3.50
Personal safety, even when traveling alone	3.56	3.54
Opportunity to increase knowledge about places, people and things	3.56	3.38
Variety of things to see and do	3.52	3.34
Nice weather	3.49	3.47
Destination that provides value for my holiday money	3.46	3.41
Environmental quality of area	3.45	3.37
Interesting and friendly local people	3.43	3.31
Visiting remote coastal attractions e.g., fishing villages/lighthouses	3.42	2.78
Chances to see wildlife, birds and flowers not normally seen	3.38	3.13

Based on a scale where 1 = never important, 2 = sometimes important, 3 = often important and 4 = always important

Table 4. General Travel Motivations

as well as remote coastal areas are perceived favorably by this market (Table 5).

Activity Participation During Most Recent Trip

German travelers engage in a variety of activities on their long-haul holidays. The top activities in which coastal travelers participated in during their most recent trip was photography or filming, trying local foods, shopping and getting to know local people. Although not as popular, appreciating natural ecological sites and enjoying ethnic culture and events was also undertaken significantly by this group (Table 6).

Recurring Characteristics

The data suggests that there are recurring characteristics of potential coastal travelers that are attribute perception and activity participation traits. Table 7 lists the characteristics that occur as two or more of these traits. For example, outstanding scenery ranked as the first general travel motivation in table 4 and as the third attribute perceived as a Canadian advantage in table 5. The sum of these ranks puts it at the top of the list of recurring characteristics compared with the others. Based on this approach, these travelers tend to favor destinations

with outstanding scenery where they can appreciate ecological features in a friendly local environment. There should be a variety of things to see and do, especially wildlife viewing in a coastal setting.

In the process of highlighting recurring characteristics, philosophies and some of the high ranking characteristics of the other traits discussed earlier are not restated. It should be noted that while an analysis of this kind has the ability to strengthen the significance of certain characteristics, it does not reduce the relevance of individual investigation. As an example, the fact that the second most popular travel motivation in table 4 is personal safety is a very important consideration even though it is not a recurring characteristic. Understandably, the survey could not consistently incorporate the same characteristics across its behavioral and attitudinal segments. Therefore, a completely relative comparison of recurring characteristics is not possible.

Marketing

The market research suggests that there is potential for increased coastal tourism in

Attribute	Mean Response *	
	Potential Coastal Travelers	Total Sample
Lakes, rivers and mountainous areas	3.79	3.74
Visits to appreciate natural ecological sites like forests, wetlands, or animal reserves	3.73	3.65
Outstanding scenery	3.69	3.68
Wilderness adventures (e.g., a 4 day canoe trip)	3.69	3.63
National, state or provincial parks and forests	3.65	3.62
Chances to see wildlife, birds and flowers not normally seen	3.54	3.48
Hunting/fishing	3.50	3.42
Opportunities to experience the country's unique identity	3.44	3.42
Visiting remote coastal attractions e.g., fishing villages/lighthouses	3.38	3.24
Variety of things to see and do	3.35	3.33
Overall rating of Canada	3.20	3.11

* Based on a scale where 1 = poor, 2 = fair, 3 = very good and 4 = excellent present as motivation.

Table 5. Perception of Specific Attribute in Canada

Activity	% of Respondents	
	Potential Coastal Travelers	Total Sample
Taking pictures or filming	88.3	80.3
Sampling local foods	87.4	85.9
Shopping	84.3	82.0
Getting to know local people	83.2	76.6
Informal or casual dining with table service	73.3	69.6
Visits to appreciate natural ecological sites like forests, wetlands or animal reserves	69.4	59.6
Swimming	67.0	66.3
Enjoying ethnic culture/events (e.g., festivals, music, neighborhoods, food)	66.4	61.4
Local crafts and handiwork	65.1	58.2
Visiting small towns and villages	61.2	50.6

Table 6. Activity Participation During Most Recent Trip

Characteristic	General Motivation	Attribute Perception	Activity Participation
Outstanding scenery	1st	3rd	
Visits to appreciate natural ecological sites		2nd	6th
Interesting and friendly local people/getting to know	8th		4th
Variety of things to see and do	4th	10th	
Chances to see wildlife, birds and flowers not normally seen	10th	6th	
Visiting remote coastal attractions e.g., fishing villages/lighthouses	9th	9th	

Table 7. Recurring Characteristics of Potential Coastal Travelers

Canada. While the German analysis did not include particular attention to specific products under coastal fisheries tourism, it was broad enough to encompass the diversity within this emerging tourism niche. German long-haul travelers are often considered an important international travel market because the population as a whole is relatively well-traveled. As such, it is a representative component for marketing research. Successful marketing for coastal fisheries tourism in British Columbia will incorporate positioning for the destination as well as the product. The sector needs to be marketed as providing the best opportunities for experiencing the coast through a variety of easily accessible venues and activities. The message should promote the unique ability of the sector to offer a diversity of authentic interpretive experiences fundamental to the identity of the province.

Destination Marketing

Destinations that have a history, nature and culture connected with the sea have the opportunity and the responsibility to link heritage tourism marketing efforts to coastal features. Such initiatives should portray images of seaside communities that convey the accessibility and comfort of accommodation while emphasizing its unique or remote character. An aggressive strategy which creates images of small towns and villages along the coast set in areas of outstanding scenery and rich biodiversity is needed to position the province as having the environment and infrastructure necessary to support product development in this sector.

Distinctions should be made between areas of the province which are more associated with particular natural wildlife features or specific fisheries traditionally tied to certain communities and cultures. With singular focuses that can be marketed separately or as a package, British Columbia would be perceived as a top coastal destination by having unique features for each stretch of the coastline. Since German travelers prefer to be flexible in their choice of destination,

this approach may also assist with repeat visitation.

Product Marketing

In marketing a product to the potential coastal traveler, its unique selling proposition must be clearly communicated. Whether the marketing medium is through brochures, video, specialty events or the internet, a concise description of the proposed activity or attribute and why it is uniquely tailored for the targeted audience is critical for product market match-up. Product marketing has to emphasize the safety of the particular operation and explain the meaning of any emblem that may be displayed on promotional materials. Even references to ongoing development of codes of conduct in such materials can be a positive marketing technique.

Efforts should be focused on highlighting activities preferred by the German coastal traveler such as bird watching and other wildlife viewing opportunities as part of a product mix of learning about people, places and things in the destinations described above. For example, the world class reputation for bird watching in the Strait of Georgia can be uniquely marketed as a First Nations experience on the traditional interpretation of the behavior of marine birds in managing fisheries.

Besides coordinating with the tourism marketing organizations in the province to access their distribution networks, arrangements with inbound tour operators catering to the European market should be established. Specifically, cruise ship passengers could represent a significant market for *Working Harbour Tours* if packages were to include or promote excursions around the Port of Vancouver prior to departure. Other possibilities exist for combined ventures with operators such as tour bus companies which already obtain a portion of their market share from German travelers.

Management Implications

With the emerging interest in coastal fisheries tourism in British Columbia, there is an opportunity to guide its development on sustainable tourism principles. While a detailed discussion on the sustainability implications of the Fisheries Tourism Network is warranted, the intent here is only to highlight the strategic actions which deserve particular attention as part of the formative stages of the Fisheries Tourism Network.

Destination Planning and Product Development

The Network needs to identify existing operators, their products and their ranges of operation beyond the initial environmental scan commissioned through the Community Fisheries Development Centre (Williams et al., 1999a). While all coastal communities should have access to the eventual support services of the Network, decisions need to be made whether the immediate focus should be more on complementing existing tourism operations with displaced fishers or encouraging the start-up of new businesses. Both are required, but in different proportions for different places. Although existing operators will refine their products over time as they are further involved with the Network, their initial offerings must exceed the status quo. If new businesses are designed for coastal fisheries tourism, they are likely to deliver interpretive products more quickly, albeit with less experience. For this process to establish credibility, the Network should adopt a policy of providing equal opportunity throughout the province for any operators beyond the current demonstration projects.

Community Involvement

While the heritage values associated with coastal fisheries tourism are designed to encourage community interaction with a low impact approach, the potential growth of the

sector may lead to some undesirable local effects. The Network needs to create an understanding with communities in which they operate that their commitment to sustainable tourism means community control over expansion. The forum for such an understanding is developed through continual contact with municipal councils and by providing targeted updates to a variety of community organizations.

Monitoring and Assessment

Since the Network will eventually have standards in place which operators will have to meet to obtain accreditation, an appropriate monitoring and assessment program will need to be established to ensure compliance. In order for monitoring to be favorably received by the accredited participants, its impact on their operations has to appear seamless. This will be significantly easier to accomplish if a less rigorous version was initiated at an early stage. Starting with the demonstration projects, the Network should organize a program where regular status reports are submitted by operators and random observations are taken of the operation. This sets the stage for a gradual and unobtrusive switch to checklists of operational standards and spot inspections after full membership has been awarded. In addition, the early monitoring and assessment is an effective means of cooperative standards development.

Conclusion

This paper has presented coastal fisheries tourism as an emerging sector of coastal tourism. It suggests that the newly formed Fisheries Tourism Network is a useful model for coordinating the development of this sector in British Columbia. A number of demonstration projects and training initiatives were outlined as part of a support structure designed to assist operators getting involved with the Network.

Segmentation analysis was used to assess the latent demand for coastal travel. This approach was presented along with details on prominent travel characteristics for the German segment of the potential coastal tourism market. The findings suggest that there is a market for coastal tourism products that provide opportunities for a variety of unique cultural and ecological experiences. Destinations and products should be considered together to reflect the most appropriate combination of experiences under a common theme of fisheries-related tourism. Continued research on more specific product-market matches in addition to strategic actions towards accreditation should enable the sector to develop sustainably. The Network, being the responsible coordinating body, is uniquely positioned in the industry to make this happen.

Data Set

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MARKET FEASIBILITY OF A WATER TRAIL

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Abstract: *This feasibility study examines the implications of the creation of a water trail in Bruce Peninsula National Park and Fathom Five National Marine Park. Modern water trails have been increasing in popularity since the middle of the 1980s. Water trail associations were surveyed to compile a database of their current status, and predicted trends including: association growth, volunteer and association responsibilities, proximity to population bases, land ownership, technology, maintenance and fees.*

In terms of Bruce Peninsula National Park and Fathom Five National Marine Park, developing a water trail is feasible, if several precautions are taken. Zoning and planning policies of the Parks are compatible with the current number of paddlers in the region. Numbers of paddlers, however, are increasing. Two important issues need to be addressed: activity classification and available campsites. Paddling on water trails is a recreational activity which is expected to have significant annual growth. Natural resource managers should be prepared with a management strategy which allows the greatest degree of resource protection, environmental education and enjoyment possible. This study was made possible by the provision of a research grant from Parks Canada.

Keywords: *recreation, ecotourism, conservation, land use planning*

Introduction

The purpose of this study was to examine the trends in North American water trails to

determine the feasibility of establishing a water trail in Bruce Peninsula National Park and Fathom Five National Marine Park, Tobermory, Ontario. To do this the water trail trends, and present and future needs of paddlers were compared with Park zoning and planning policies. Information was gathered on current North American water trails, through the use of a survey. Details about development (land, access, policies and facilities), user fees, maintenance and types of users and growth were compiled. From the information gathered, trends in the development and use of water trails in North America were established and applied to the Bruce Peninsula Parks.

Background

Water trails, like their counterpart hiking trails, have trail heads, points of interest and can vary in length. Ford (1998) states that water trails can help to promote stewardship of the environment because of the attachment which paddlers develop towards the land. A recreational water trail has a specific start and termination point, access roads, day and/or overnight sites, incorporates lakes, rivers, and/or oceans and is used by boaters (Getchell, 1992; 1998). The Washington Water Trails Association (1997) states that a water trail has:

“a network of access points, resting places and attractions for users of human-powered and beachable wind-powered water craft on marine and

inland waterways. Sites should be sufficient in numbers to allow you, the small boater with limited range, to travel safely from one site to another in a single day."

Several trails, such as those operated by the Washington Water Trails Association, are restricted to self-propelled boats, such as sea kayaks, canoes and sailboats (Getchell, 1998; Huser, 1988). The majority of water trails emphasize minimal impact practices; however, they differ in level of development and facilities offered (Getchell, 1998).

Modern water trails began to gain popularity in the middle of the 1980s (Miller, 1998). As a result of diminishing access to natural water resources, numerous recreational water trails have been established and several others are in the process of development (Getchell, 1998; McGee, 1994; 1995). One concern regarding water trails is the concentration and attraction of paddlers to the area and their resulting impacts. However, the impacts of paddlers are less severe from site to site than those of backpackers who use trail networks. Where there is human use, there will be impact. It is up to park and land managers to establish regulations and policies to help minimize the impact and encourage responsible practices. Water trails, at first glance, can appear to detract from the natural environment experience. Water trail creation, however, is fundamental in providing recreation opportunities for paddlers. Cunningham (1997: 3) states:

"Water trails, may on the surface, seem to limit the freedom to wander the wide open spaces, those wide open spaces have been closing in as coastal areas grow in population and the recreation areas get more heavily used. The trails will preserve access."

The Maine Island Trail Association (MITA) established the Maine Island Trail in 1989; one of the first coastal recreational water trails to be developed (Cunningham, 1997). MITA serves as a resource for new water trail organizations, through their past experience and current research. Currently,

the Maine Island Trail is facing growing conflict among stakeholders (i.e., members of MITA and local residents) (Cunningham, 1997). Increasing use of the trail has resulted in some negative effects on the user experience, the environment and wildlife (Cunningham, 1997). In some instances individuals hasten the erosion of banks by climbing via non-designated routes (Stimpson, 1998). Cunningham (1997: 3) further states that "fortunately MITA is already well established and in a position to cope with the rising number of boaters . . . [The MITA is] working to find creative solutions without restricting access to island and launching sites".

The creation of regulations and policies to mitigate overuse needs to be part of the trail development process. Many trails begin with the support of a few dedicated paddlers. As the trail building organization grows, so do user numbers. Managers should note, as the experience of the Maine Island Trail demonstrates, water trails should not be extensively promoted until there is a well-established trail authority which is responsible for making users aware of low impact policies. The Cascadia Marine Trail, situated on the coast of Washington, recently won the British Airways "Tourism for Tomorrow Award" (Cunningham, 1997: 3) because it is an "environmentally responsible tourism project". Role model projects are selected for this award based on several criteria: sustainable development, leadership, conservation, environmental impact, visitor management, community relations and education (British Airways, 1997). The free promotion resulting from the Tourism for Tomorrow Award has created concern about the potential of increased use of the Cascadia Marine Trail (Cunningham, 1997). The Washington Water Trails Association can only wait to see if there is a detrimental or beneficial effect to their marine trail.

In Canada, coastal areas are facing "environmental degradation, habitat loss and growing conflicts among resource users" (Environment Canada Officials, 1994: 1) prompting, in part, the construction of the

British Columbia Marine Trail and the consideration of several other water trails, such as one along the Newfoundland shore of the Bay of Fundy (McGee, 1994; 1995; Miller, 1998).

Methods

This study was completed in two phases: water trails history (Phase I) and kayaker needs/park policy review (Phase II). As a result different methods were used to collect data.

The water trail association survey was designed to compile information about the present status of water trails, to identify trends, and to provide information for the possible development of a water trail in Bruce Peninsula National Park and Fathom Five National Marine Park. North American water trail associations were the population of this survey. The sample investigated was the water trail associations documented in the first edition of the North American Water Trails, Inc. (NAWT) guidebook. In addition, two other organizations were added to the sample, one a Canadian National Park and the other a water trail association established post-publication of the NAWT guidebook. The total sample size was 30.

The questionnaire consisted of four thematic sections: background information, site construction, management practices and users. Surveys were distributed via the postal service. Participants were provided with a return-addressed stamped envelope, in order to reduce the cost and minimize the effort of the study participants. Ten returned questionnaires, plus the results from one phone administered survey, made a total of 11 completed questionnaires.

The research data was analyzed through descriptive methods. The responses were examined and general conclusions drawn about water trail organizations. In addition, unique features (e.g., composting toilets) were highlighted to provide examples of

effective practices. The most significant limitation which developed was a lack of accurate record keeping. Few water trail associations keep accurate records of user numbers or types. Some water trail associations sell seasonal passes and are unable to record actual user days.

Methods of data collection for kayaker needs included interviews with Park officials, local businesses and paddlers. A questionnaire was distributed to kayakers in the upper Bruce Peninsula region, to collect information on needs and previous paddling experience in the area. Cross tabulations were used to segment experience level by preferences and needs. Local businesses were canvassed to determine their interest and support of the emerging sea kayaking market. Input from management and staff of the Parks was solicited to determine the implications of the creation of a water trail within the Parks.

Results/Discussion

Status and Trend 1 - Association Growth

There has been an increased awareness of water trails throughout the continent. The environmental movement and the desire to protect recreation resources has contributed to the proliferation of the number of trails, from 30 in 1995 to over 150 in 1999 (Getchell, 1998; Uunila and Currie, 1998). Increased participation in outdoor recreation activities such as kayaking and canoeing has created a greater demand for recreation opportunities (The Recreation Roundtable, 1996). There has been a marked increase in the development of both water trails and corridors, such as the Heritage River System in Canada. Heritage Rivers are protected waterways, including a buffer zone of land alongside the protected river (Parks Canada, 1994). It is expected that the number of water trail associations will continue to increase well into the next millennium, creating a strong lobbying group for the protection of natural resources and outdoor recreation opportunities.

Status and Trend 2 - Volunteer and Association Responsibilities

One of the challenges facing natural resource agencies is static or decreasing funding. Those agencies that want to develop new facilities, such as water trails, will have to look for alternative funding sources or new management strategies. There will be an increase in the number of volunteer organizations which develop and operate water trails. In the future, due to the lack of federal and local funding, volunteer associations will be increasingly responsible for a variety of jobs from the production of brochures to trail maintenance, even on federally managed lands (Getchell, 1998). Water trail associations are responsible for either multiple trails or a single trail. Trail length ranges from a short 13 mile trail to 1566 miles spanning 26 individual trails in Indiana. The focus of the associations is almost equally divided between maintaining the current operating trails and the expansion and development of new trails. Nonetheless, those associations which offer multiple trails will develop a greater user base, and political force because they will have a greater numbers of users.

Status and Trend 3 - Proximity

The location and length of a water trail determine the user numbers. Water trails which offer two to three-day trips, either by paddling the entire length or a section of the route, are the most popular (Wiesner-Hanks, 1998). The rate of use of water trails increases when the trail is located near a large population base and has unique features. Wiesner-Hanks (1998), Director of the Trade Association of Paddlesports, further states trails located near urban areas will continue to see a greater increase in growth than those trails in remote locations. To a lesser degree, remote locations will also continue to grow.

Status and Trend 4 - Land Ownership

Multi-jurisdictional trails are the most common type of trail. It is a rare to have a water trail established using only public land. Many water trails have to incorporate a va-

riety of landowners, such as private, corporate and government. The multi-jurisdictional quality of water trails results in a variety of overnight opportunities ranging from wilderness campsites with minimal facilities to bed and breakfasts incorporated into a single trail. Because of the differing types of landowners the fees charged per night and the maximum number of users per site also varies. There will be an increased cooperation between natural resource, environmental, tourism and recreational agencies as water trail associations bring these organizations together.

Status and Trend 5 - New Technology and Growth of User Base

New scientific developments have made recreation activities more accessible to the general public. Developments such as GPS units and lightweight equipment have opened up recreation activities which were formerly dominated by a small portion of the population (Ewert, 1989; 1995; Ewert and Schreyer, 1990; Hollenhorst, 1995). There is both an increase in the number of recreationists and the diversity of user groups (Ewert, 1995; Ewert and Schreyer, 1990; Hall, 1992). This increase in numbers is expected to continue as long as scientific developments are applied to recreation equipment. An increase in the number of users has created an increased demand for facilities. As more of the general public becomes involved in water trails, there will be an increased demand for more levels of facilities, for example running water and flush toilets. Table 1 indicates the current levels of sanitation facilities on several water trails. These numbers will probably be skewed towards higher levels of facilities in the near future. "Hard-core" paddlers will seek less established sites, while the largest portion of the paddling community will welcome these upgrades. The multi-jurisdictional nature of water trails often means that different facilities are offered within a water trail. For example a water trail that incorporates pre-established sites on provincial, state, federal and private land could include a variety of facilities ranging from a private

Name of Trail Association	Flush Toilet	Outhouse	Open-air Toilet	Latrine	Carry-Out Policy	No Facilities	Other
Allagash Wilderness Waterway		•	•				
Lake Superior Water Trail Assoc.		•	•				
Maine Island Trail Assoc.		•			•		
Massachusetts Dept of Environmental Mang't						•	
Potomac Water Trail Assoc. Inc.		•			•		
Pukaskwa Nat'l Park		•					
Superior National Forest				•			
Washington Water Trails Assoc.	•	•		•			•

Table 1. Sanitation trends.

campground with showers to a national park wilderness tent site.

Status and Trend 6 - Overnight Accommodations

The types of groups who can access campsites vary on water trails. Many water trails have water and hiking, or water access only campsites. These sites see less use and are easier to maintain and regulate than a site also accessible by motorized land vehicles. Those associations that wish to provide a wilderness experience and reduce the variety of users, such as people who are not using the water trail and are merely car camping, will use more hiking and water access only sites. Water access only sites also reduce the possibility of conflict among groups, as the sites are restricted to boaters. Unfortunately, conflict will still arise between self-propelled and motorized users.

Status and Trend 7 - Maintenance Policies

The maintenance policy of water trails ranges from no determined maintenance schedule to well-established stewardship programs (see Table 2). There will be a definite increase in the number of stewardship programs, especially for those trails which are multi-jurisdictional. Over the next few years, associations need to expand the use of recruiting volunteers to adopt an island or a section of the trail so that monitoring can be done for the length of the water trail at a low cost.

The Maine Island Trail uses volunteer stewards to monitor island usage, clean shorelines, build erosion steps and bankings, and provide public education about sensitive environments (Stimpson, 1998). One notable

Name of Trail Association	Frequency of Trail Maintenance
Allagash Wilderness Waterway	weekly
Indiana Department of Natural Resources	weekly, weather permitting
Lake Superior Water Trail Association	ad-hoc
Maine Island Trail Association	weekly, volunteers act as monitor stewards, operate 3 18' outboard boats most of the time
Massachusetts Department of Environmental Management	weekly to ad-hoc
Pukaskwa National Park	hazard assessment and maintenance of established sites once each spring
Superior National Forest	varies by site
Washington Water Trails Association	varies

Table 2. Frequency of trail maintenance.

program is Adopt-An-Island (MITA, 1998a). Island stewards are responsible for an island that they adopt, in terms of monitoring use, maintenance and reporting of conditions (MITA, 1998b). Volunteers select an island which they can visit a minimum of two times a month in peak season (summer) and must provide their own transportation (MITA, 1998b). An island can have more than one adopter (MITA, 1998b). Ellis, an island adopter states, “[i]t’s not an obligation, it’s a responsibility to the environment and a way of thanking people for letting us visit their islands. Very few of us are fortunate enough to own an island in Maine. This gives us a way to enjoy them” (Stimpson, 1998).

Status and Trend 8 – Fees

The rate and type of fee charged for use vary by water trail (Table 3). Several water trails charge a nightly fee, all of which are below \$10USD per person. The nightly fee is either charged per person or per site. Pukaskwa National Park charges different rates depending if camping is done at an established or non-established site, while the Allagash Wilderness Waterway distinguishes between residents and non-

residents. Other water trails charge a membership fee as in the case of the Maine Island Trail. The Washington Water Trail Association has a seasonal fee which is separate from the membership fee. The benefits paddlers receive for their fees vary according to the trail system (Table 4). Benefits can range from camping permits to orientation sessions. Because of the needs of water trail associations regarding maintenance and publication costs, there will most likely be a continued gradual increase in the use of fees.

Application to Bruce Peninsula

Developing a water trail is feasible for Bruce Peninsula National Park and Fathom Five National Marine Park; however there are a number of issues that need to be addressed. Kayaking is a relatively new activity in the upper Bruce Peninsula region, and is expected to experience continued growth. If promoted properly and the necessary facilities are in place, paddling can be one of the alternatives to help reduce the economic loss from the decline in SCUBA diving. A water trail which provides two to three-day

Name of Trail Association	Night	Other
Allagash Wilderness Waterway	\$4 per resident \$5 per non-resident	N/A
Indiana Dept of Natural Resource	\$0	N/A
Lake Superior Water Trail Association	\$7 per site	no charge at some sites
Maine Island Trail Association	\$0	\$40 for yearly membership
Massachusetts Dept of Management	\$0	N/A
Pukaskwa National Park	CND\$5 per established site CND\$3 per non-established site	CND\$6 for group registration fee
Superior National Forest	\$0	\$10 per person; \$5 per youth
Washington Water Trails Association	\$7 per person	\$20 for unlimited use Jan to Dec \$25 separate fee for membership

Table 3. User fees.

Note: All Prices in U.S. dollars unless otherwise noted.

Name of Trail Association	Association Membership	Maps	Trail Guide	Camping Permit	Fire Permit	Pre-Trip Orientation	Other
Allagash Wilderness Waterway		•	•	•			
Lake Superior Water Trail Assoc.				•			
Maine Island Trail Association	•		•				•
Pukaskwa National Park			•			• ***	
Superior National Forest				•	•	•	
Washington Water Trails Assoc.	• ****		•	•			

Table 4. Benefits from user fees.

*privileged use of 40 islands; **trail guide costs an additional \$7; ***orientation lasts approximately 10 minutes; ****paddlers only received these benefits if they make a minimum donation of \$25

Note: The Indiana Dept. of Natural Resources and the Massachusetts Dept. of Environmental Management do not charge user fees.

paddles is the most attractive option for paddlers, in addition to day use opportunities. Currently, three sites in the Parks provide overnight accommodations to paddlers. For the most part, facilities provided at these sites are in accordance with the preferences of paddlers. Notwithstanding, paddlers are seeking more overnight sites. These sites could include new wilderness sites, bed and breakfasts, private and Ministry of Natural Resources campgrounds, and a hostel run by the Friends of the Bruce District Parks on Flowerpot Island. Guidebooks and maps are two educational products which many paddlers would like available.

Zoning and planning policies of Bruce Peninsula National Park and Fathom Five National Marine Park are compatible with the current number of paddlers in the region. Numbers of paddlers, however, are increasing. Two important issues need to be addressed: activity classification and campsites. The classification of kayaking as an independent activity, separate from backpackers and private boaters, would recognize the differing requirements and preferences of paddlers. The second issue is the small number of overnight campsites available to paddlers.

Conclusion

Paddling on water trails is a recreational activity which is expected to have significant annual growth. Natural resource managers should be prepared with a management strategy which allows the greatest degree of resource protection, environmental education and enjoyment possible; this can be achieved through an established and regulated water trail. If promoted properly and the necessary facilities are in place, water trail use can be one of the alternatives to help increase economic activity in an area.

Overall, water trails are here to stay and will continue to experience growth in a variety of interrelated aspects. The more water trails that are established, the greater the increase

in the profile of water trails as a viable means of protecting and enhancing recreation opportunities and resources. In turn as this profile increases, so will user numbers. These users will demand a higher level of service. In a time of fiscal constraint water trail associations will be given a greater burden by natural resource agencies, as trail associations attempt to bring together diverse land owners and managers to form multi-jurisdictional trails. But it is a process that is well rewarded, with the final outcome of established and protected recreational resources and opportunities.

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SHIPWRECK MANAGEMENT: DEVELOPING STRATEGIES FOR ASSESSMENT AND MONITORING OF NEWLY DISCOVERED SHIPWRECKS IN A LIMITED RESOURCE ENVIRONMENT

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Abstract: *Shipwrecks and other submerged cultural resources are receiving increasing popular and legal attention. Debates rage as to whether they are public or private property; which of the many values and uses should take priority; how wreck sites should be managed; and who should make the decisions. In the meantime, shipwrecks (even deep ones now accessible through use of improved technology) are being damaged or lost by a combination of natural and human causes, including storms and zebra mussel infestations, anchor and fishing net damage, legal salvage and illegal collecting of artifacts, and inadvertent damage by uncontrolled or inappropriate recreational diver behavior. Salvagers, historians, archaeologists, dive businesses, recreational divers, and tourists all have different opinions about how these resources should be used and managed . . . and whether they should be found at all. Governments have limited human and financial resources to research and manage them. This study, involving input from varied stakeholders, develops recommendations for managing Michigan shipwrecks using a variety of partnership strategies that recognize multiple values.*

Keywords: *integrated coastal management, stewardship, education, shipwrecks*

Introduction

"When deep-sea treasure is found, who owns it?"

-- Christian Science Monitor
(July 10, 1997).

"Shifting treasure? Investors hope ship rumors prove true"

-- Flint Journal (1998).

"Ocean explorer finds treasures thought lost in the deep forever"

-- Bay City Times (July 31, 1997).

"Pirates of the Whydah: Survivors swore the Whydah was packed with plunder . . ."

-- Webster (1999).

These are examples of recent news headlines that tantalize and keep alive the mystique of ships and shipwrecks, of plundering pirates and chests of treasure, of high seas adventure and piles of gold and silver ingots. The romance and sparkle of gold in the eyes of the public are piqued with blockbuster movies such as Paramount Pictures' *Titanic*, by best seller accounts of

shipwreck finds such as Gary Kinder's *Ship of Gold in the Deep Blue Sea* (1998), by Discovery Channel television specials and National Geographic articles such as *Pirates of the Whydah* (Webster, 1999), complete with full-color glossy photos. Many Americans were sucked in by media hype in the early 1980s when, glued to their television screens for a special hosted by Geraldo Rivera, they watched as *Andrea Doria's* safe (interpreted as "treasure chest") was opened for the first time during a live broadcast. Many expected the chest to spill a river of treasures. Even an occasional museum exhibit reinforces the "treasure" images of shipwrecks. The *faux* seaman's chest filled with *faux* jewels and coins, tucked in a corner of the "kids' exhibit area" at the Vancouver Maritime Museum, is one example. But the stories and fantasies and dreams, the glitter and adventure are not exclusive to the late 1900s. There is simply a resurgence of interest, perhaps more universal as popularized by the media. Stories of treasures lost at sea - whether in troves of pirate plunder or in lost shipments of the California Gold Rush - have always fascinated, and lured people to search for both real and imagined treasure.

Yet there are other "treasures" aboard those lost ships: clues to the wreck events for vessels lost at sea before marine radios provided verbal clues; cargo and personal objects that help tell the stories of people and ways of life long ago; a record of technological developments and innovative vessel modifications; remnants of strains of grain and other crops now lost in a world of mass produced, engineered crops. A caption in a 1987 National Geographic article expresses this viewpoint: "From this oldest known shipwreck may come secrets as precious as the pharaoh's" (Bass, 1987: 732). The motivations of those seeking to find the two different kinds of "treasure" are divergent, often contradictory; yet the image conjured by the "treasure" label for most spectators, vicariously joining the "hunt" from chairs in front of TVs or computer monitors, is one of gold coins, silver ingots, and jewels. Visions of *Atocha* and *Central America* and *Titanic* treasures float in their minds. The reality is

that, more often than not, the "treasures" are in the stories and history held in silent, watery storage. Nevertheless, the motives of those who search for vessels often affect the techniques used, the level of care taken in exploration and recovery, and opinions about what should be done with a vessel and contents once found. Therein lies a dilemma . . . a dilemma succinctly stated on the cover of a recent issue of *Preservation Magazine*: "take it, or leave it?" (Goodheart, 1999). Again, the dilemma is not new, it is simply in the spotlight again as technological advances enable searching into ever deeper and more remote areas. The endeavors are expensive. Long gone are the days when pipelines of government dollars flowed to support such exploration and research. Return on investment, at least at break-even and preferably at some profit, drives the efforts, motives, and outcomes to some extent. Is there a way to make the two "camps" compatible, or to devise win-win solutions and outcomes?

Context and Purpose of This Study

Many of the "treasure ships" alluded to in the introduction have been wrecked in salt water, either on the high seas or in coastal areas along major oceanic shipping lanes. In the Great Lakes basin, in the cold "sweet" (fresh) water where the lakes typically have been used to transport more mundane cargoes - lumber, iron ore, stone, agricultural products, fish, immigrants and vacationers - the "treasure" usually is not gold or silver. Yet the allure remains; the search for shipwrecks continues. An estimated 10,000 shipwrecks exist within the Great Lakes, with between 1,100 and 1,400 on or embedded in the bottomlands of Michigan waters. Michigan has legal responsibility for protecting and preserving, for the public interest, abandoned historic shipwrecks owned by the State. Other states/provinces bordering the Great Lakes have responsibilities for shipwrecks in their waters. In most cases, several state and federal agencies share responsibilities; these agencies traditionally "have functioned relatively independently

in developing law and management for [shipwrecks and other underwater cultural resources]" (Vrana and Mahoney, 1993: 5). In Michigan, several state and federal laws have implications for ownership and management of these resources. Federal legislation includes the Federal Submerged Lands Act of 1953, the National Historic Preservation Act of 1966, the Coastal Zone Management Act of 1972, and the Abandoned Shipwreck Act of 1987. State legislation includes Public Act No. 171 of 1899, Public Act No. 306 of 1969, Public Act No. 451 of 1994, and more specifically, Parts 325 (Great Lakes Submerged Lands) and 761 (Aboriginal Records and Antiquities and Abandoned Property). Additionally, in 1980, Public Act 184 (revised in 1988 by Public Act 452) first authorized designation of Michigan bottomlands preserves (Vrana, 1995; Halsey, 1996). Currently, nine underwater preserves have been officially designated and another two are under consideration.

As with most government entities these days, the State of Michigan has limited financial and human resources to meet the responsibility for managing underwater cultural resources. To date, the State's Legislature has not authorized any funding to manage the underwater preserves. Consequently, development and management activities for the preserves are minimal and uneven, and are conducted by volunteer preserve committees. Preserves located adjacent to other state or national parks (such as the Manitou Passage Underwater Preserve near Sleeping Bear Dunes National Lakeshore and Alger Underwater Preserve near Pictured Rocks National Lakeshore) may receive some assistance from those agencies. Some preserves receive support from nearby museums, often maritime museums (such as the Great Lakes Shipwreck Museum near the Whitefish Point Underwater Preserve and the Michigan Maritime Museum near the proposed Southwest Michigan Underwater Preserve). The other volunteers are a mix of avocational maritime historians, recreational SCUBA divers, and dive business operators.

Historic shipwrecks continue to be discovered in the Great Lakes by avocational historians and recreational divers. As in salt water environments, technological advances (e.g., remotely operated vehicles, side scan sonar, mixed gas breathing systems, mini-submarines) increase access to deeper and deeper wrecks, which likely are more intact than shallow wrecks exposed to storm waves, ice and dredging. No organized approach has been developed in the public or private sector to assess or monitor these wrecks, so questions abound. What rights do private individuals have to search for in public waters and find submerged cultural resources (e.g., shipwrecks) held in public trust? What happens to wrecks once they have been discovered? Do the discoverers bear any responsibility for their "finds", which are legally held in *public trust* by the State? What are their rights to intellectual property gained during the research and search? What are the State's responsibilities (and realistic abilities) to preserve, conserve or manage those resources when minimal or no State resources are available to do so? Do individuals have rights to recover costs incurred in the process of search and discovery? The questions and issues are numerous; the implications are complex. Thus, the purpose of this study is to provide recommendations to the State for the development of an assessment and monitoring program for newly discovered shipwrecks that considers these and other questions, and considers input from shipwreck discoverers, resource management agencies, and relevant research.

Methods

It was impossible to consider assessment and monitoring without the broader context of the search and discovery process engaged in by avocational divers and historians; thus, the project's scope was broadened to include discovery, documentation, assessment, monitoring and stewardship development. Definitions used throughout the study were as follows.

- *Shipwreck discovery process* included historical research, search and survey, discovery, exploration and identification, documentation, and assessment and monitoring.
- *Assessment* was defined as judgments about the condition and significance of historic shipwrecks.
- *Monitoring* was defined as activities used to determine the condition of a resource over time.

To gather input from as many stakeholders as possible, the study involved five major components:

1. A review of relevant federal and state/provincial law, policy, and practice associated with Great Lakes shipwrecks.
2. A mail survey of shipwreck discoverers.
3. Two modified nominal group workshops with shipwreck discoverers.
4. A workshop on assessment and monitoring, involving various stakeholder groups.
5. A telephone survey of Great Lakes shipwreck resource managers (U.S. and Ontario).

In addition, two recent shipwreck discovery-related situations were used as case studies to illustrate other study results and issues. Shipwreck managers (law enforcement, environmental quality, and archaeology) in the State of Michigan were involved throughout the process. The focus of this paper is on results obtained through the mail survey and the three workshops.

The first stakeholder group we asked for input about issues and procedures related to newly discovered shipwrecks was avocational shipwreck discoverers. To assure both depth and breadth in responses, three methods were used to gather input: a written survey, two full-day small group workshops, and one multi-stakeholder workshop. The survey was used to gather information from shipwreck discoverers active in Michigan waters about their discovery ac-

tivities, recommendations for what to do with newly discovered shipwrecks, and beliefs about the potential for state/avocationalist partnerships. The first two workshops were used to gather more in-depth information (values, recommendations and rationale) about the shipwreck discovery/documentation/assessment process and to allow for sharing of ideas and debate among discoverers. The third workshop, having a different purpose and structure, was designed to bring together representatives of various stakeholder groups interested in shipwrecks to learn from each other and to discuss results of the survey and first two workshops.

Survey

A four-page survey instrument was developed to solicit:

1. Descriptive information about shipwreck discovery activity (past and current activity levels and locations, procedures and equipment used, types of resources sought).
2. Opinions about shipwreck discovery activity (constraints; recommendations for search, assessment, monitoring and protection procedures; willingness to assist the State of Michigan in documenting, assessing and monitoring shipwrecks).

The questionnaire included both closed and open-ended questions.

The questionnaire was used to gather input from as many active avocational Michigan Great Lakes shipwreck discoverers as possible (this excluded those involved in discovery as part of job responsibilities as public resource managers). Because the tradition and culture of shipwreck discovery incorporate a code of secrecy, no "list" of such individuals existed. To develop a sampling frame, a snowball technique was used. The process began with a "seed list" of shipwreck discoverers known by the researchers, and *not* involved in discovery as part of a job in public resource management. Each was contacted by phone and asked a series

of screening questions to determine if individuals 1) were currently active in shipwreck discovery, and 2) were currently active in Michigan Great Lakes waters. Each was then asked to identify other Michigan-active shipwreck discoverers who they believed should be also contacted for input. The seed list contained names of 39 individuals, each of whom was called at least six times or until contact was made. Of these, 34 individuals were successfully contacted.

Fifty (50) primary referrals were identified from the 34 seed list individuals contacted. Fifteen were already on the seed list, resulting in identification of an additional 35 people. Of these, 13 were contacted by phone and asked the screening questions. The other 22 were either unreachable or determined ineligible. The 13 people contacted during the second wave were also asked to identify other discoverers (secondary referrals). Most were already on the seed or primary referral list. The additional 18 people were not contacted due to time and resource constraints. Of those on the seed and primary referral lists, six were determined ineligible. Therefore, questionnaires were distributed to the remaining 41 individuals, either during one of the first two workshops or via mail. Individuals contacted by mail received reminder postcards and follow-up phone calls as needed.

Workshops I and II

Two day-long workshops, conducted during the spring of 1998, were used to gather input from discoverers. This enabled participation by more individuals than those able to attend the first workshop. First, a list of individuals to receive invitations to participate was developed. For each name on the list of eligible shipwreck discoverers identified in the survey methods section, the total number of peer referrals (excluding initial listing by researchers) was tallied. All individuals who received at least three peer referrals were invited to participate in the first workshop. Those unable to attend that workshop, plus all others on the list of eligible discoverers, were invited to participate

in the second workshop. Eight individuals indicated willingness to participate in Workshop I; however, a snowstorm reduced participation to seven. Of seven planning to attend Workshop II, two had work conflicts that prohibited their participation. Thus, a total of 12 discoverers participated in the two workshops.

The workshops were originally planned to follow a modified nominal group process, using individual generation of responses to guiding questions, small group discussion of individual responses, individual prioritization of responses, then full group discussion of responses. However, due to the low number of participants at each workshop (less than 8), the format was modified so all participants interacted as one discussion group. Some of the "individual response" worksheets were used, but participants seemed more interested and willing to talk than write. So the majority of the input came from full-group discussion, using focus group procedures that assured input from each participant. Because confidentiality was promised for discoverer participation, no video or audio recorder was used. Only written notes, by participants and researchers, were used to record responses.

Each workshop was preceded with refreshments, informal discussion, and participant completion of the written survey and a *Gift Form*. Three research associates served as a workshop facilitator, assistant facilitator, and technical expert for the structured portion of the workshop. Individual participant response sheets, coordinated with a set of guiding questions, covered the following major topics:

- Benefits of use of shipwrecks to discoverers (multiple values).
- Descriptive information about their personal shipwreck discovery activity.
- Aids and hindrances to their shipwreck discovery activity.
- Recommendations about what they believe should happen when new shipwreck discoveries are made.

- Willingness to partner with the State of Michigan to conduct shipwreck documentation, assessment and monitoring, including conditions under which they might assist.
- Recommendations for policy and practice related to documentation, assessment and monitoring.

Individual response sheets were used to allow participants to generate their own ideas prior to discussion, during which they might be influenced by peers. Notes from discussions were taken on flip charts and a notepad; individual participants' written responses on worksheets enabled confirmation or clarification of discussion comments and facilitated inclusion of responses that might not have been discussed orally. However, because all individuals participated actively in discussion and seemed reluctant to write their responses, only three of the twelve prepared worksheets, with the following questions, were used:

- What are your recommendations for dealing with newly-discovered shipwrecks in ways that both meet your needs and the State mission to preserve and protect shipwrecks?
- With whom would you be willing to work in activities related to shipwreck identification, documentation, assessment and monitoring? (If there are specific conditions related to your willingness, please indicate those conditions to the right of the "category")
- In order for you to be willing to work as a "partner" in shipwreck identification and documentation, assessment and monitoring, what policies, procedures or resources do you recommend be in place related to each of the elements or actions identified below? (list followed)

No deliberate process (e.g., voting) was used to determine group consensus; however, there was general agreement on some issues, varied opinions on others, and special conditions or contexts presented as ca-

veats for other opinions and recommendations. Participants had difficulty expressing clear responses to the final section (recommendations for policy and practice to be applied to shipwreck documentation, assessment and monitoring). This was probably due to a combination of the following: the limited time available for discussion, participant fatigue, and participant discomfort with providing concrete recommendations without adequate time to think about them.

Near the end of each workshop, the technical expert orally presented a summary and synthesis of group responses, based on written notes taken during the workshop. Participants provided clarification or corrections as needed. After each workshop, comments were compiled. No attempt was made to summarize, synthesize or analyze comments; contradictory comments and opinions were all included. These results were sent to participants, with an invitation to review responses for accurate and complete representation of their comments. Also, they could add comments they felt had not been presented during the workshops. Only one set of written comments was received.

Workshop III

The third workshop was designed to bring together those involved with shipwreck discovery or management, both avocationally and professionally. The goals of this workshop were to:

- Exchange information and experiences on assessment and monitoring of historic shipwrecks in Michigan Great Lakes waters.
- Facilitate discussion on concepts and practices in assessment and monitoring of public resources.
- Identify issues and opportunities related to the development of programs and projects, including in partnership, in Michigan for shipwreck assessment and monitoring.

Workshop III participants included those invited to participate in the first two workshops, individuals known to have past and/or present involvement in shipwreck assessment and monitoring, and representatives of agencies having shipwreck management responsibilities. Among participants were maritime museum staff, avocational shipwreck discoverers, Michigan DNR Conservation Officers and State Archaeologist, and academics. The workshop consisted of a variety of presentations (including presentation of results from the survey and first two workshops), discussions, and field-based shipwreck documentation demonstrations. Presenters provided copies of presentation notes or handouts to project coordinators. Formal notes were taken during a final "campfire discussion" about ideas for developing public/private stewardship-based partnerships for dealing with newly discovered Michigan shipwrecks.

Results

As stated in the methods section, a four-page questionnaire, containing 14 questions grouped in two sections (*A*: descriptive information about their shipwreck discovery activity, and *B*: their opinions about what should happen with newly discovered shipwrecks), was developed. A total of 25 questionnaires were returned, 12 from workshop participants and 12 from other shipwreck discoverers. The 25th questionnaire was returned almost a year late, so was not included in the analysis. Thus, the overall usable response rate was 59%. For results presented below, unless otherwise indicated, all 24 respondents provided some response on the closed questions.

Section A of the questionnaire dealt with descriptive information about respondents' shipwreck discovery activities. Of 20 respondents who identified the number of years they had been involved in shipwreck discovery, six (30%) had been involved one to 10 years, seven (35%) for 11 to 20 years, and seven (35%) for 21 years or more. The

greatest number of years reported was 40. Results, reinforced during workshop discussion, indicated that most active discoverers had considerable experience, with few "young" people becoming involved.

Only three respondents indicated they were not actively involved in shipwreck discovery in Michigan Great Lakes waters. However, those three, plus nine others, were active in non-Michigan Great Lakes waters. All 24 planned to stay active within the Great Lakes. Only one did not conduct his own archival research. Of those who did conduct archival research, all but one used maps and charts, books and/or articles written by others. All but two used newspaper articles, Coast Guard/U.S. Life Saving Service/U.S. Lighthouse Service records, and leads from local fishermen. Less frequently used archival records were personal diaries ($n=12$; 50%) and insurance records ($n=10$; 42%). Other sources, identified by one or two respondents each, included personal interviews (unspecified), the Internet, historians and other researchers, sea fables, private collections, court records, ships' logs, customs records, enrollments, Army Corps of Engineers records, and other shipwreck hunters.

Twenty-three respondents (96%) were involved in the actual water-based shipwreck search process. Nineteen (79%) used their own boats as the primary search platform; the others used someone else's boat. None searched from shore or used aircraft. Of the 22 responding to the question about with whom they most often search, half ($n=11$) searched with an informal group of friends. Six (25%) searched most often with an organized group, five (21%) searched alone. Traditional scuba and sidescan sonar were the types of search equipment used most often. All those actively involved in the search process ($n=23$) used scuba. Just over half of these ($n=12$; 52%) used mixed gas; only two (87%) had used a rebreather system. A large majority ($n=20$; 87%) used sidescan or sector-scanning sonar. Other technologies were used by fewer discoverers: magnetometer ($n=6$; 26%), sub-bottom profiler ($n=5$; 22%), surface-supplied air ($n=3$;

13%), and remotely operated vehicles (ROVs) to ground truth (n=3; 13%) or search (n=2; 9%). Other equipment included bottom finders, depth recorders, SHARPs, and a remotely towed ROV (n=1 for each).

Just over half (13 of 24; 54%) of the discoverers searched for other cultural or natural resources, including: lake bottom features and other geologic formations (trenches, drop-offs, bottom profiles, cave systems, sink holes); old forests; remnants of light-houses, docks, and piers; prehistoric sites; bottles, tools, anchors, and other artifacts.

Section B dealt with respondents' opinions about the shipwreck discovery process and activities. When asked if they believed there are conditions that *unfairly* restrict their discovery activity, only three indicated "yes". Reasons given included natural and personal conditions (inclement weather, limited personal time to search, high cost of searching), a proposed federal marine sanctuary (assumed to bring with it a host of regulations and restrictions), and the belief that the Coast Guard does not allow use of airplanes for search activity. An additional response stated that the "public belief that the discoverer's knowledge is public property" negatively impacted their search activity. One respondent stated that, while weather/time/cost were constraints, they were not "unfair". The one specific recommendation for reducing constraints was: "Eliminate the 'all wreck hunters are wreck rappers' attitude".

Question 13 provided a list of 10 actions that could take place when a shipwreck is discovered or identified. Respondents were to indicate which, if any, they believed should occur; they could add other actions. Unanimously, respondents agreed that wrecks should NOT be promoted to and opened for access by the general public. All 24 respondents checked at least one of the options for what SHOULD occur. The most strongly supported actions (each supported by 21 of 24 respondents, or 88%) were: 1) determining accurate coordinates for shipwreck locations, 2) photo- and/or video-documenting the wreck, and 3) mapping the site. Five re-

spondents (21%) believed that the location should be reported to a managing authority or provided to a central database.

Respondents were most divided about how much to restrict or promote the discovery to the public, and what should occur before and after documentation has been completed. Seventy-one percent (n=17) supported restricting all public knowledge of wrecks until documentation is complete. The rest (29%; n=7) indicated that discovery of the wreck should be promoted, but the location should not be disclosed and public access should not be permitted. Five indicated that the discovery and location of wrecks should be restricted to the discoverers and their associates. When asked about what should be done with valuable artifacts, four supported removing them from the wreck site for protection; three supported securing such artifacts to the wreck.

Several respondents wrote additional comments on the questionnaire. Some provided circumstances under which they would agree to a certain action. One indicated that decisions about what to do when a shipwreck is discovered should be left entirely to those who had invested their time and resources for search and discovery. One believed that valuable items *could* be removed from the site, but it was important to first "work out [a] protection plan for valuable artifacts; even if they include legal, organized removal for public display - this is the Huge Grey Area". Another supported removal of artifacts, but only "IF [a] museum wants [the] items." One respondent supported restriction of public knowledge about a wreck until documentation is complete, but only "as long as documentation is done in a timely manner" ("timely manner" is undefined). Another stated that the choice of whether or not to promote *knowledge* of a shipwreck discovery before completing documentation "would depend upon the historical/archaeological value of the site, and the assessed risk of loss by state authorities of that value".

When asked about their willingness to contribute to State of Michigan efforts to docu-

ment, assess and/or monitor newly discovered Great Lakes shipwrecks, the majority (79%; n=19) said they would. Three did not respond to the question; two said "no". One added the caveat that "As a contractor (PAID), whatever is required. To volunteer my services without compensation, NOTHING". Nine respondents indicated specific activities they would be willing to do with or for the State, including archival research, identifying wrecks, documenting, mapping, assessing, inventorying portable artifacts, reporting missing artifacts (monitoring), providing equipment and the expertise to operate it, and monitoring diver/charter boat impacts on wrecks. Two respondents, respectively, said: "[I'd w]elcome participation and share imagery with the State of Michigan" and "[I'd g]ive any info that the state wants from us, do any work they would like us to do". Two indicated they already were or had been involved with the State. Others provided caveats to their participation.

Overall, respondents provided few comments to the questionnaire's open-ended questions. However, workshop discussions provided insight into the rationale behind survey responses, and provided insights into the factors, values, and varied opinions related issues about the shipwreck discovery process. Summary workshop results are presented below.

Motives for shipwreck discovery involvement (interest in history, shipping, machinery, technology developments; interest in "unlocking the mysteries of the sinking" and clarify the historical record; adventure and thrill of the "hunt"; joy of exploration and discovery; to educate others; for economic benefit) are varied and based on multiple values and benefits. All must be considered in shipwreck management decisions. Discovery activities, conducted primarily by people with many years of experience, include both historical research and physical searching. Most engage in shipwreck identification efforts, varying levels of documentation (e.g., still and video photography, taking measurements, re-

ording basic vessel and cargo characteristics). Some develop site plans, artist perspectives, or models. Some produce video or slide productions (for sale or diver showcase showings); others produce books, articles or CDs. Very little assessment (as to the site condition and values) or formal, regular monitoring (inspection of the site over time) occurs, though informal returns to a site, occasionally incorporating photography that could be used for condition comparisons, sometimes occur. Opinions about what should happen to loose, valuable artifacts varied, ranging from authorized or unauthorized removal, to vessel attachment, to hiding, to doing nothing.

Perceived constraints to private discovery activities included personal factors (distance, limited time and money), unpredictable lake and weather conditions, freighter traffic, lack of nearby support services and facilities, government restrictions and "bureaucratic attitudes", and the need for secrecy (difficult to maintain). Their activities are facilitated by access to a variety of historical resources and helpful individuals (e.g., fishermen), improving technology, relatively few legal restrictions and the ability to earn dollars for shipwreck products. Individuals' attitudes, reflected in their perceptions of barriers and aids to discovery, also influenced their opinions about what should and should not happen when shipwrecks are newly discovered. Thus, opinions varied about the most effective ways to manage shipwrecks, and who should be responsible.

Everyone agreed that the State has limited staff and resources to allocate to shipwreck management, with most activities being reactive rather than strategic or proactive. Consequently, recreational divers have assumed responsibility for most discovery activity in Michigan Great Lakes waters, and they conduct varying degrees of documentation and assessment. Discoverers, for the most part, were protective of intellectual property rights associated with their discovery activities. As a group, they recognized a variety of natural and human factors that

can damage wrecks, including intentional and unintentional damage by recreational divers and boaters, and occasional theft of artifacts by a small number of divers. Their discovery activities are perceived as *not* intrusive or destructive.

Typically, discoverers are passionate about their shipwreck activities; some were willing to share discoveries, benefits and responsibilities while others preferred to keep their activities and discoveries secret. Some were very willing to partner with state agencies and universities while others were not. Potential partners (stakeholders) identified included avocational historians, museum professionals, historical societies, government agencies, and recreational divers. Barriers to partnerships included misperceptions, misunderstanding and distrust between shipwreck discoverers and resource managers. Therefore, most believed strongly that discoverer participation in any type of shipwreck management partnership must be voluntary. A series of potential incentives (e.g., tax incentives, provision of support facilities, formal recognition, preservation of intellectual property rights) were identified as ways to encourage voluntary participation. Most discoverers believed that education and stewardship are important components of shipwreck management. Additionally, some indicate that certain areas of relevant law and policy need clarification, especially in light of recent court decisions about ownership and salvage rights. These and other recommendations are discussed in more detail in the final section.

Recommendations and Discussion

Discoverers voluntarily invest substantial amounts of personal resources and time in shipwreck discovery. However, some insist the government owes them something (reimbursement for investments) if it requests any information about the discoveries. Several questions arise. What are discoverers' rights to recover costs incurred during

search and discovery in which they voluntarily engage? Does the answer depend on the discoverer's motivation? If the venture is engaged in with the express purpose of earning a profit (as a business venture), is the expectation different than if engaged in out of personal passion during one's personal "leisure time"? When does that motivation change? Only when someone (e.g., government) wants a piece of it, regardless of the discoverer's initial motivation?

On the other hand, the constraints and frustrations expressed by the state archaeologist (Halsey 1996) -- the State's lack of sophisticated equipment, financial and human resources; by some divers' lack of a sense of responsibility for newly found wrecks; site disturbance or incomplete documentation by well-meaning divers; "demonization" of resource managers -- all still exist. But perhaps the most important result of this study is the diversity of opinion expressed by shipwreck discoverers. While the sample size was relatively small (by quantitative analysis standards), the representation of diverse divers and the qualitative study components exposed a range of opinions and values, often masked in the past by strong, sometimes inflammatory opinions, voiced by diver icons and opinion leaders. Many expressed deep concern about the multiple values of the shipwrecks, the need for their protection, the importance of education - and the economic realities of shipwreck discovery and management processes. Yes, relationships still must be built; respect must be earned and given. But the diversity of opinion and willingness of some to try public/private partnerships provides an opportunity to begin to build those relationships, to design win-win strategies. Avocational divers -- with their passion, skills, and sometimes access to equipment - can be invaluable partners. But volunteers, in shipwreck management activities as in anything else, are not a panacea (Flanagan, 1996); they have other responsibilities, paying jobs, and limited time. And they are more likely to choose, during their valuable leisure time, the most exciting activities (e.g., diving vs. tedious data entry) and the

most exciting wrecks. They cannot be “dumped on” or simply “used”. Government partners must also bring something to the partnership table, even if in non-traditional forms.

As this research project progressed, it became clear that assessment and monitoring could not be addressed without dealing with the broader discovery process (i.e., search, discovery, exploration, identification and documentation) and addressing non-divers. The first of these issues must be addressed because each phase of the process has implications for the others, the second because shipwrecks are held in the public trust. Thus, they belong also, in some way, to the non-diving public (albeit the often unaware public) and their future depends on the awareness, values attributed by, and actions of others. This includes non-diving Michigan residents and visitors (it's hard to care about, vote for protection of, or financially support something you don't even know about); law enforcement officers who have more serious criminals to apprehend than stealers of rotting wood planks; judges who have more serious crimes to prosecute; fishermen who view wrecks as net tangles. Therefore, the need for resource stewardship and education programs, targeted at many different groups, is fundamental to long term success of other recommended actions.

Two sets of recommendations were developed: one based on existing conditions and resource constraints; the other based on an assumed condition of unlimited financial and human resources. Recommendations based on existing conditions included: clarification of recent court decisions and definitions embedded in the wording of some laws; evaluation of the State's current management activities; enhancement of law enforcement efforts for priority shipwreck management areas; and development (in cooperation with shipwreck discoverers) of voluntary procedures and incentives for discoverers to cooperate with the State in shipwreck discovery process and information exchange.

Recommendations under the “unlimited resources” condition included: development of a framework for integrated resource management; development of a statewide management plan; completion of a professional inventory of shipwrecks; development of partnerships among recreational divers, avocational historians, state officials, professionals, and other stakeholders for documenting, assessing and monitoring shipwrecks; and development of stewardship and education programs involving multiple stakeholder groups. Specific ideas include:

- Developing avocational archaeology and historic assessment training workshops.
- Instituting various incentives (e.g., financial incentives such as launch and dockage fee waivers and tax deductions; formal recognition [e.g., attribution, publicity]; development of a central database indicating areas previously searched; archival and database access, confidentiality of discoveries for a certain period of time; and access to surplus and obsolete government equipment) for discoverer cooperation with State activities.
- Clarifying discoverer responsibilities which accompany their citizen rights and privileges.
- Developing educational programs for discoverers, tourists, judges, local businesses, and other key stakeholders - about the history and values of such resources, their role in Michigan's development and culture, their potential for economic contributions through use as tourism attractions (for divers and non-divers).
- Discoverer development of a self-policing system, to be supplemented by official enforcement as needed.

While the recommendations presented above may sound straight forward, the challenges of implementation are great - due to

the entrenched culture of private discovery activities, mistrust between groups, government apprehension about having to manage vast resources with limited funds, and previous verbal and legal battles. But the allure of shipwrecks will remain; the dream of sunken treasure will not die easily. The challenge is to develop appropriate, equitable management approaches that consider the diverse values of shipwrecks. This will be accomplished only through participation of varied stakeholders. Development of partnerships leading to win-win solutions will require sincere desire (or at least openness) on the part of all groups, and a slow building of trust reinforced by behavior compatible with the decisions.

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MARINE ECOTOURISM: AN UPDATE ON PRIVATE SECTOR BEST PRACTICE AND GUIDELINE IMPLEMENTATION

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Abstract: *In 1998 The International Ecotourism Society (TIES) received a grant from the foundation Ocean Fund to develop a set of marine ecotourism guidelines for small-scale marine-based tourism businesses.*

This paper focuses on examples of best practice that small-scale, coast-based tourism entrepreneurs can implement in their own businesses and how we can support these efforts.

These efforts include increased stakeholder involvement on coral reef monitoring and business purchasing policies. Four areas of priority for supporting the efforts of marine tourism entrepreneurs are 1) networking, 2) education, 3) finance policy, and 4) documentation.

Keywords: *best practices, tourism sustainability, ecotourism guidelines*

Introduction to the Marine Eco-tourism Guidelines Project

In 1998 The International Ecotourism Society (TIES) received a grant from Ocean Fund, a foundation established by Royal Caribbean Cruises and Celebrity Cruise Lines, to develop a set of marine ecotourism guidelines for small-scale marine-based tourism businesses. In soliciting feedback for this project and its usefulness at a WTO/UNEP conference on Sustainable Tourism for Small Island States in Lanzarote last October, one main suggestion was that a focus on best practice, rather than just guidelines or codes of practice be included in the document. Best practice can be defined as using the best available tools and technologies known to the tourism and coastal management sectors. Based on that feedback, this paper is focused on examples

of best practice that small-scale, coast-based tourism entrepreneurs can implement in their own businesses and how we can support these efforts.

Best Practice Examples for Marine Tourism Companies

Two examples of how marine-based tourism businesses have attempted to address issues of sustainability in daily operations and business development are now discussed. The first area where much excitement has been generated during the last three years or so has been the increased involvement of citizens and businesses in the monitoring or coral reef health. The dive centers and many coastal hotels have been part of the increased efforts to 1) evaluate local reefs, and 2) monitor their health on an ongoing basis. An example of this is TIES' member hotel Kosrea Village Resort - which spearheaded efforts to develop a monitoring program for the reefs of the small Pacific island of Kosrea. In the project's initial stages the lodge owners had a great deal of difficulty finding experts willing to guide them in their efforts, however through perseverance they have received expert advice from Australian Authorities and now monitor 14 sites on an ongoing basis with aid from visiting scientists and resort guests. Similar efforts now go on throughout the Caribbean as well, and the data being collected and tabulated and is available via the internet on sites run by organizations such as Reef Relief and ICLARM.

A second marine tourism industry best practice example can be illustrated the purchasing policies of tourism businesses. The

small and medium-sized tourism businesses can play an important role in fish harvesting practices locally through their policies on purchasing locally harvested fish products. Menus should be developed to deemphasize scarce marine products such as Queen Conch and various species of turtle. Kitchens should be vigilant for undersized, immature catch brought to them by local harvesters, and support the establishment of partnerships with local fisher communities that generate mutual benefits through two-way communication about the status of local marine food commodities and how pricing affects the well-being of local people. Within the world of fisheries, the Marine Stewardship Council is leading the way to develop a certification program for fishery products worldwide. However, much concern has been expressed over the ability of developing country fishing communities to adhere to the stringent measures suggested as certification criteria. In an effort to help developing country communities work towards this objective a pilot program has been initiated by the Marine Stewardship Council (MSC) and WWF - more details are readily available through personal communication for the interested. In one proposed program case study, the Galapagos tour operator company and long time TIES member Lindblad Special Expeditions has agreed to support the MSC certification of local fishery products through its purchasing policies in the Galapagos region. Lindblad Special Expeditions will include as part of this campaign detailed interpretation of this issue on all the boat menus as part of a tourist education program.

There are many other examples of best practice that marine tourism businesses can implement ranging from marketing policies, to staff training, to community interaction. The importance of best practice in tourism deserves much emphasis.

There is no other more impacting activity created by tourism than the establishment of marinas, hotels and other related infrastructure along coastlines. This is the most important challenge facing us here as propo-

nents of more sustainable tourism in coastal zones. The themes of planning, design, and construction best practices for coast-based tourism infrastructure are further elaborated on in the *Marine Ecotourism Guidelines: Impacts Guidelines and Best Practices* publication that TIES is producing (available January 2001).

Supporting Sustainable Practices among Marine-Based Tourism Entrepreneurs

There are at least four areas which are priority areas for supporting the efforts of marine tourism entrepreneurs. These are 1) networking, 2) education, 3) finance policy, and 4) documentation.

Networking is made possible through various avenues including important events such as CMT - thanks to the organizers. Other networking tools include the Internet and printed newsletters. At The International Ecotourism Society we have tried to facilitate networking opportunities between multi-stakeholder groups through such tools as a Business Forum on our website where members can talk to each other about ecotourism related issues, and through our quarterly newsletter. The International Ecotourism Society, as a multi-stakeholder networking organization, welcomes feedback and comments on what direction it should take with its marine program via email or direct communication.

Education is another obvious tool to achieving greater sustainability in tourism operations based in coastal areas. Aside from the marine ecotourism workshop that TIES has offered, there are several very innovative marine tourism college and university based programs available in Canada and Australia to train tourism professionals.

Financial policies, particularly in developing countries, is another area which should be focused on to promote greater sustainability in small and medium-sized coastal tourism

businesses. TIES is currently conducting an international survey on eco- and nature-based lodge financing (completed in 2000 and published in the book *The Business of Ecolodges*). Data from the project reinforces the belief that funding for small-scale lodges, like other ecotourism business, come mostly from family and friends and other non-traditional sources. This needs to change. One hopeful sign is the development of a micro-credit category within the GEF (Global Environment Facility) and small loans being available from IFC (International Finance Corporation). Not a perfect system, but it seems that global financial institutions are now moving in the right direction to support the development of small-scale businesses with sufficient capital to implement best practices such as sufficient waste management programs for their properties.

Finally, documentation is a fourth essentially activity that we must undertake as advocates of sustainable tourism practices by marine tourism businesses. Through books, magazines and the Internet this is possible. Internet sites such as that pro-

duced by the Island Resource Foundation, and magazines such as International Hotel Environment Initiative (IHEI) *Green Hotelier* magazine, and many of the Australian government's efforts such as this publication *Coastal Tourism: A Manual for Sustainable Development* offer invaluable guidance to tourism entrepreneurs.

Thank you again to the organizers of CMT '99 for this opportunity for all of us to get together to discuss these important matters.

Notes:

Elizabeth Halpenny is the former Project Director of the Ecotourism Society.

The book *The Business of Ecolodges* has since been published, and the publication *Marine Ecotourism Guidelines: Impacts Guidelines and Best Practices* will be available from TIES in October, 2002.

LOW POWER RADIO: AN ANTIDOTE FOR COASTAL VISITORS LOOKING BUT NOT SEEING!

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Abstract: State parks in Oregon provide important sites for visitor recreation and natural resource education. With the increasing number of visitors to Oregon coastal parks, tide pools and beach areas, there is growing need for site-specific marine education to enhance stewardship, interpretation and safety knowledge. The Oregon Sea Grant Program and the Oregon Parks and Recreation Department collaborated in a demonstration project of low power radio (LPR) technology in 1998. An evaluative research project of this technology was conducted at Boiler Bay State Park, Oregon during July through August 1998. This project evaluated the effectiveness of a 100 milliwatt low power radio broadcast in providing coastal resource interpretation to visitors parked at a scenic overlook. LPR is a limited broadcast range AM radio station that park visitors can tune-in on their car radio to hear pre-recorded messages.

Several research parameters were investigated during the evaluative portion of the project: (1) do signage numbers influence LPR listenership, and (2) does a relationship exist between specific demographic characteristics of visitors and listenership? Visitor surveys were conducted three days a week from July 1, 1998 to August 2, 1998 during 10:30 A.M. to 2:30 P.M. Occupants from 822 vehicles (i.e., cars, trucks, RV's or motorcycles) were interviewed.

Research results indicate that significantly more visitors tuned-in when more signs were displayed. Demographics do not appear to be a significant factor in listenership. Ninety-seven percent of LPR listeners recommended that LPR stations be placed in additional parks. Results

from this study indicate that LPR broadcasts are a promising communication technology for providing park visitors with helpful information.

Keywords: low power radio, coastal tourism, Boiler Bay State Park

Introduction

Warm sea salt mists, crashing ocean waves and driftwood laden sandy beaches sound alluring to many people. As visitation to coastal parks, tide pools and beach areas increases each year, park managers, business owners and communities face new challenges in educating and informing coastal tourists of the natural resource experiences available in coastal areas. Visitors are often looking for, but not necessarily seeing, the resources that coastal areas offer. Additionally, sustainable use and safety practices must be communicated to guests to protect themselves and these unique coastal ecosystems.

The coast is a powerful attractant that yields fun while generating large revenues. "The nation's coasts are both rich in their promise for tomorrow and bountiful in their delivery of today's ecological, recreational, aesthetic, and commercial rewards. The vastness of the coasts and their resources is matched only by the dimensions of the challenges society faces in preserving and nurturing those resources" (Coastal Challenges: A Guide to Coastal and Marine Issues, 1998).

The travel and tourism industry is estimated to generate USD\$502 billion annually, generating over 7 million jobs, with tax revenues of \$71 billion and a trade surplus of over \$24 billion (EPA Sustainable Industry webpage). Recreation and tourism also cause immense environmental impacts. "The scope of these impacts creates the potential for significant benefits to the environment and the economy through improved performance by participants" (EPA Sustainable Industry webpage). Visitor expenditures generated an estimated \$4.5 billion in 1996 in Oregon (Official Tourism Website for the State of Oregon). Oregon's coastal state parks provide important sites for resident and visitor recreation and marine education.

The Oregon Parks and Recreation Department (OPRD) administer many coastal parks overlooking the Pacific Ocean that are used for camping, whale watching, and picnics. These upland areas are also located adjacent to many valuable rocky intertidal areas, thereby providing visitor access to these resources. Additionally, this state agency manages dry and wet beach areas owned by the State of Oregon. Park managers must balance the need to educate and provide interpretative information to visitors with the financial and other resources available to them. Few state parks have full or even part-time staff members present to answer visitor questions. Therefore, the need for affordable, accessible visitor information with limited staff numbers must be met in new ways. Oregon State Parks are just one agency along the coast that must manage coastal lands.

Oregon's coastal zone has several different agencies responsible for managing coastal lands and waters. Oregon's coastal zone encompasses a wide variety of lands that are managed by many different cities, counties and state agencies. Oregon has a federally approved Coastal Management Program, which combines state laws with future land use goals for managing the coastal lands and waters. Coastal areas accessible to tourists and residents often fall under

several state agency jurisdictions. Inevitably gaps in coastal protection and sustainable use practices exist due to the multi-agency management of coastal areas. Teaching visitors to be better stewards of the coastal environment could narrow this gap.

With the degradation of many coastal resources, it would be advantageous to educate visitors to be good stewards of these resources. By the year 2010, it is estimated that nearly 127 million Americans will live within the coastal zone (<http://www.nos.noaa.gov/News/estuarieday.html>). In light of this predicted increase in coastal tourists and residential populations, coastal managers are worried about the continual availability of limited coastal resources for future generations. To help secure these resources, wise use and stewardship principles must be effectively communicated to coastal tourists.

Public parks provide an important doorway for people to access coastal resources. In 1996, over 40 million day visits were made to Oregon's state parks ("About OPRD"). But state parks must have enough money to maintain the park areas they manage and keep these sites open to the public. One affordable and promising communication technology for oceanshore visitor education is low power AM radio (LPR).

LPR is a limited broadcast range radio station that listeners can tune in on their vehicle radio to hear prerecorded messages. There is a 100 milliwatt LPR system that broadcasts within a radius of 0.5 square miles from the station, or a 10 Watt system, which broadcasts in a radius of approximately 15 square miles (DeYoung, 1992). The Federal Communications Commission (FCC) does not require licensing for the 100 milliwatt station and commercial advertisement messages are allowed. Sponsorship by a governmental organization and FCC licensing is required for a 10 Watt system. While the 100 milliwatt system can have commercial messages, music, or other sound enhancements, the 10 Watt system

cannot. New messages can be uploaded manually, or from a remote location, and the broadcast runs continuously.

Background

LPR is most widely known for its applications in roadside travel information and airport updates using 10 Watt broadcast systems. It is, however, finding increasing use as a communication strategy for enhancing stewardship, interpretation and safety knowledge in recreation areas. The National Park Service (NPS) has used LPR broadcasts since the 1970's for interpretive and educational information. The NPS has installed over 100 LPR units in national parks across the country (Weed, 1999). Within Oregon there are several agencies utilizing this technology to enhance recreation opportunities. Beverly Beach State Park in Oregon used a "Talking House" LPR system from 1995 to 1998 to accelerate park registration and notify visitors of park amenities. Additionally, the Extension Forestry Service at Oregon State University uses 10 Watt LPR stations along state highways traversing forests. This project, called "Forest Talk" directs its broadcast to the traveling visitor.

The goal of the Forest Talk project is to educate the motoring public about Oregon's forests as motorists are driving past points of interest (Lamb, OSU Graduate Student, 1994). In 1993, Lamb evaluated the listenership and sign effectiveness of the Santiam Pass Forest Talk LPR site. Lamb recorded license plate numbers from vehicles driving over the Santiam Pass during July to August 1993. She then contacted the registered owners of those vehicles for a telephone survey. The telephone survey sought to ascertain whether the vehicles had seen a sign advertising the broadcast and whether they tuned into Forest Talk. The telephone

survey also obtained demographic information to see if any relationships between age, gender or residence and tune in rates existed. With an additional focus group survey of selected populations, additional information regarding message recall, broadcast enjoyment and value was collected and analyzed. Through the telephone survey Lamb found a total tune-in rate to the broadcast of 8% (out of 278 surveys). Thirty percent of the sample saw the broadcast signs, with 28% of those people subsequently tuning into the broadcast. Lamb found no significant relationships between age, gender or urban versus rural residence and vehicles tuning into the broadcast. However, the focus group survey found that "urban respondents considered the program useful more consistently than rural dwellers" (Lamb, 1994).

The Forest Talk program has expanded broadcast sites since Lamb's 1994 evaluation. An additional roadside evaluation at three western Oregon broadcast sites showed that 1.3% of passing vehicles tuned into the Forest Talk station (Reed and Bondi, 1995). Respondents indicated their listenership by flashing their headlights when they saw survey personnel after hearing a special radio message asking them to do so. Results from this survey also showed that 46% of those asked did not see highway department signs alerting them to the radio broadcast (Reed and Bondi, 1995).

Project Rationale and Objectives

While the 10 Watt system has a larger broadcast range, its use has several disadvantages. This size system costs about \$10,000, requires government sponsorship and a FCC license to operate. Additionally, the 10 Watt LPR

LPR Attributes	100 milliwatt LPR	10 watt LPR
Purchase and installation	about \$3,500	about \$10,000
Approximate broadcast range	0.5 square mile radius	10 square miles
Government sponsorship	Not required	Required
FCC licensing	Not required	Required
Music and sound effects	Can include	Cannot include
Ground plane antennae	Optional	Needed
Commercial ads/messages	Allowed by FCC	Not allowed by FCC
Signage	Typically in parking areas	Along public roadways with ODOT permission
NOAA weather rebroadcast	Optional	Optional
Printed promotion materials	Can be helpful	Can be helpful
Equipment maintenance	Typically minimal	Typically minimal
Message updating	Occasional	Occasional
Message memory unit	Same equipment	Same equipment

Table 1. A comparison table of LPR 100 milliwatt and 10 watts station attributes

system is often used in mobile vehicle settings, where a driver or passenger must see instructional signs and locate the broadcast frequency while traveling at high speeds. Conversely, a 100 milliwatt LPR system costs about \$3,500, has few restrictions and can broadcast messages in localized areas to more stationary visitors (see Table 1). Due to the affordability of this "parking lot" size system, it seems especially well suited and promising for outreach projects, especially in Oregon's state parks.

To determine the efficacy of utilizing this technology to meet the need of affordable, accessible visitor information despite limited staff numbers, Oregon Parks and Recreation Department and Oregon Sea Grant (OSG) collaborated in a demonstration and applied research project at Boiler Bay State Park near Depoe Bay, Oregon. This project evaluated the effectiveness of a 100 milliwatt low power radio broadcast in providing coastal resource interpretation to visitors parked at a scenic overlook. Though LPR has been used in many public outreach ap-

plications on high-speed roadways, this project is the first known evaluation of static listenership.

Demonstration and Evaluative Research Project Methodology

This project was split into two sections: an equipment test and initial demonstration of the radio technology in late March 1998 and the survey segment of the project, which occurred from July 1 to August 2, 1998. A 100 milliwatt radio unit with ten minutes of memory, remote telephone access and a National Oceanic and Atmospheric Administration (NOAA) National Weather Service radio was used for this project.

Demonstration and Equipment Test

The LPR technology equipment test occurred during OPRD's "Whale Watching

Week", March 21-28, 1998. Six radio messages were created by OSG and OPRD and uploaded for whale watching week. Throughout this week, Boiler Bay State Park visitors were asked for suggestions and feedback regarding message content and length. Many visitor suggestions were incorporated into the message scripts, which were subsequently modified or created for the summer survey period. Additionally, we were interested in visitor receptiveness to the technology and interpretive opportunity it provided. Four signs were displayed during this time period: two at the park turn-ins and one on each of the external bathroom walls. The signs used for this period were 18 by 24 inches with blue vinyl lettering on white corex board. The signs read "Whale Talk, Tune to 1610 AM." Most visitors informally questioned during this period did not see any of the entrance or bathroom signs advertising the station. The "Whale Watching Spoken Here" volunteers had a radio playing the broadcast for visitors. When informally questioning visitors, most had positive reactions to the use of a radio broadcast to provide interpretive information.

Evaluative Research Methodology

This collaborative research project between OSG and OPRD assessed visitor reactions to LPR technology and 100 milliwatt broadcasts heard while parked in their vehicles. Additionally, this project sought to determine if there is a relationship between the number of signs presented and the number of park visitors tuning into the radio broadcast. We also wanted to investigate whether a relationship exists between specific demographic characteristics (such as city or country residence, age, or gender) of park visitors and their tuning into the radio broadcast. The project's hypotheses were:

Hypothesis 1: There is no relationship between the number of signs and park visitors tuning into the low power radio broadcast.

Hypothesis 2: There is no relationship between specific demographic characteristics (i.e., city versus country residence, age, or gender) of park visitors and their tuning into the low power radio broadcast.

Eight radio messages were broadcast during the summer survey period. These included modified versions of the demonstration period messages and new scripts created for the evaluation period.

There was a message alerting visitors to the survey being conducted and to the possibility of being asked to participate. Total message length was approximately seven minutes. In addition, the station broadcast two and one-half minutes of National Weather Service (NWS) information after the completion of each message cycle.

Visitor surveys were conducted from July 1 to August 2, 1998 on Wednesdays, Saturdays and Sundays. The survey instrument included questions about whether the visitor tuned into the broadcast, message retention, sign observation, and demographic information. Surveys were collected from 10:30 A.M. to 2:30 P.M., the high visitation period, with some variation due to weather conditions or visitor numbers. The signs advertising the broadcast were sky blue colored, reverse-printed with the phrase "Coast Talk, Tune your radio to 1610 AM." Oregon State Parks and Oregon Sea Grant logos were printed on the bottom of the signs. The parking lot signs were temporarily staked in the ground and removed each day. The entrance and bathroom signs were permanently installed. Each of the five survey weeks (a Wednesday, Saturday, and Sunday) had a different number of signs displayed to test the effect of sign numbers on visitor tune-ins (see Table 2).

Week 1 was considered "normal" signage. "Normal" is the number of signs that OPRD would display permanently without this evaluation and consisted of displaying one sign at each entrance and one sign on each bathroom wall for a total of four signs. During the second week, maximum sign num-

bers (48 total) were displayed to ensure that all park visitors would see at least one sign. The following two weeks reduced this maximum number by approximately one-half each week. Week 5 was considered the "optimal" signage week and utilized the previous four weeks research experience for strategically placing signs throughout the park in the most highly noticed areas.

Signs displayed during Week 5 were installed on signposts (instead of placed in the ground like previous weeks) and the two large entrance turn-in signs were replaced with smaller size signs just inside the entrance. Visitors may be more likely to retain the frequency number when placed just inside the park entrance. Since motorists are turning into Boiler Bay from a high-speed roadway, they may not have time to process the sign text and memorize the frequency number if signs are located at the entrances.

Survey respondents were approached when visitors were observed preparing to depart the park (i.e., packing up picnic items or moving towards their vehicle). Surveyors

were assigned to a survey zone, with five zones created, and zones were rotated after two hours. At the completion of the survey period, visitors were thanked for their participation and given a brochure informing them of a low power radio broadcast located at Seal Rock State Park at that time and general information about LPR technology.

Results and Discussion

During the five-week survey period, 822 valid surveys were obtained from cars, trucks, recreational vehicles (RV's) and motorcycles. Analysis of the data shows that there was a relationship between the number of signs and the number of visitors tuning into the LPR broadcast. One sign located at each park entrance alerting visitors to the broadcast was not as effective as additional signs placed throughout the park. There was a significant difference in tune-ins between week 1 with four signs displayed ($p < 0.01$, X^2), and weeks 2, 3, 4, and 5 (additional signs

	Sign Locations	Total number displayed
Week 1	Park Entrances and bathrooms	4 (1 at each entrance + 1 on each exterior bathroom wall)
Week 2	Park Entrances, bathrooms, and parking areas	48 (4 Entrance & Bathroom signs + 44 park signs)
Week 3	Park Entrances, bathrooms, and parking areas	21 (4 Entrance & Bathroom signs + 17 park signs)
Week 4	Park Entrances, bathrooms, and parking areas	12 (4 Entrance & Bathroom signs + 8 park signs)
Week 5	Bathrooms and on sign posts	9 (2 Bathroom signs + 7 signs on posts and inside the entrances)

Table 2. General signage locations and numbers for the five week survey period at Boiler Bay State Park, July to August 1998

Table 3. Tune-in numbers for each survey week as well as the percentage of survey respondents that saw signs at the entrance, bathrooms, or by parking space. (raw numbers are in parentheses).

	Week 1 n=190	Week 2 n=173	Week 3 n=163	Week 4 n=149	Week 5 n=147	Totals N=822
Tune-in numbers	10% (19)	36% (63)	23% (38)	16% (24)	16% (24)	20% (168)
% that saw sign total	42% (79)	97% (168)	93% (152)	78% (116)	78% (114)	77% (629)
% that saw entrance sign	33% (63)	59% (102)	53% (87)	53% (79)	59% (87)	51% (418)
% that saw bathroom sign	11% (20)	20% (34)	17% (27)	15% (23)	14% (20)	15% (124)
% that saw sign by parking space	N/A	91% (157)	83% (136)	62% (92)	42% (62)	81% (447) n=551

displayed). Week 2 tune-ins were also significantly greater than weeks 3, 4, and 5 ($p < 0.05$, χ^2). There were no significant differences in the tune-ins between weeks 3, 4, and 5 (see Table 3).

Different numbers of signs were displayed each week in order to determine the optimal sign number which could most effectively and efficiently advertise the broadcast. We conclude that week 1 signage was not effective with four signs posted and only 42% of the visitors seeing a sign. Week 2 had the largest volume of signs but this is not an appropriate number to display long-term, even though this week had the highest visibility and tune-in rate by visitors. Weeks 4 and 5 had about the same tune in rates, with three fewer signs displayed during week 5. There was a significant tune-in difference between weeks 1 and 5 with only five additional signs displayed during week 5. Therefore, the nine signs displayed during week 5 are considered the "optimal" sign number for visitor detection at this Boiler Bay State Park.

Only one significant correlation was observed between a demographic characteristic and broadcast listenership. During week 2, significantly more women than men tuned into the broadcast ($p < 0.001$, χ^2). It is possible that more women were in a position, possibly the passenger seat, to see the signs and turn on the broadcast. The Forest Talk evaluation showed no significant relationships between age, gender, residence, and tune-ins.

Nearly 97% of listening park visitors interviewed during this study recommend that OPRD provide LPR broadcasts in more state parks. Respondents found the broadcast contained useful and interesting information and felt it enhanced their state park visit. Funding concerns were the main reason given by the four visitors who did not support the addition of these broadcasts in parks. These respondents were apprehensive that tax dollars would be used to support this type of outreach while parks themselves fall into disrepair due to funding

problems. If park fees or other funds were used to implement LPR systems, then most of these people supported the installation of broadcasts in additional parks.

The 100 milliwatt LPR system can have commercial or sponsor messages, so there are several avenues available to fund the purchase of additional LPR stations. One option is to have a business, or several businesses, purchase the radio unit in exchange for broadcasting a sponsorship message recognizing their contribution toward the broadcast. Another option would be to place sponsor logos on signs or brochures promoting the broadcast and/or provide recognition in the audio message itself.

Twenty-three percent of respondents did not see any signs prior to the interview. During week 1, 58% did not see any signs advertising the broadcast. Throughout the five weeks, an average of 51% of visitors recalled seeing a sign at a park entrance and 15% saw a bathroom sign. This lower bathroom number is largely because many visitors indicated they did not utilize the bathroom facilities. Many visitors volunteered that they were pleased there were additional signs in the park because they could not process the broadcast frequency quickly enough as they were turning into the park.

Twenty percent of park visitors interviewed during the five week period tuned into the broadcast that day or in a prior visit to the park (no repeat surveys were allowed). If the broadcast continued throughout the year, this would translate into approximately 20,000 vehicles tuning in for interpretative and informational messages (based on 100,000+ day visits, OPRD car counter data). Week 1 had the lowest number of visitors tuning in that day or a previous day (10% total) and Week 2 had the highest total number of visitors tuning in (36%). By comparison, Forest Talk had an 8% total tune-in rate during one evaluation period (Lamb, 1994) and a 1.3% tune-in rate during another (Reed and Bondi, 1995). It is unknown how many signs were displayed during their evaluation.

Ninety-seven percent of vehicles had a functioning AM radio and 74% of people surveyed listened to their radio "most of the time" or "some of the time" when traveling. More than 40% of interviewed park visitors not initially tuning into the Coast Talk broadcast said they intended to listen to the messages before leaving the park. Most of these people indicated that they noticed Coast Talk signs while walking around the park, but were interviewed prior to reentering their vehicles and turning on the radio broadcast.

Place of residence did not predict listenership. There was no significant difference in Oregon residents tuning into the broadcast compared to out-of-state or international visitors. Forty-eight percent of respondents had an Oregon zip code, 45% lived out of state and six percent lived in foreign countries (one percent refused to give their zip code). Almost 70% of park visitors interviewed on-site during this study indicated having an urban or metropolitan domicile. The Portland area was the most common residence of respondents from urban areas.

Many park visitors interviewed during this study found the broadcasts were a great tool for enhancing their state park visit. Most listening visitors could recall the major theme(s) of the message(s) they heard and found the message length appropriate. Additionally, many visitors who had not tuned into the broadcast prior to the survey expressed positive opinions about the unique opportunities offered by this technology and indicated they would tune into the broadcast at the completion of the survey.

Increased listenership may have been obtained by putting a sign on the highway (i.e., which the Oregon Department of Transportation would not have allowed for this project). While the short range of the 100 milliwatt station would not extend out along the highway, a highway sign could inform motorists of the broadcast opportunity available in the park and motorists could choose to visit the park to listen to the broadcast. Many visitors suggested place-

ment of signs along the highway. In addition, several respondents indicated they thought the signs and "Coast Talk" referred to a commercial broadcast or "talk radio show" and did not tune in for this reason. Increasing the size of the OPRD and OSG logos on the signs or an alternate name for the broadcast may have decreased the confusion. Many respondents suggested using the phrase "Park Info, Tune to 1610 AM" to notify visitors of the legitimacy of the broadcast.

Several visitors tried to tune into the broadcast but did have trouble receiving the signal. While many of these problems were attributed to faulty radio or antenna equipment, some reception difficulties remained. Often one visitor would have trouble hearing the broadcast while an adjacent visitor was listening to the broadcast. This problem may be attributed to differences in radios or antenna strengths.

Conclusions and Implications for the Future

Fazio and Gilbert (1982) discuss some drawbacks of utilizing conventional commercial radio technology to communicate interpretive or educational information. Radio is an immediate medium where the message effectiveness depends on a "one-shot" effort at visitor contact and understanding and it is a more passive form of communication. Contact through the radio message does not necessarily mean communication. However there are several advantages from utilizing radio to communicate to visitors. Radio is a timely medium; it can be easily updated and it is relatively accessible. And it is relatively low in cost considering the large number of people who can be reached. LPR differs from conventional commercial stations in that messages are rebroadcast automatically every 10-15 minutes, 24 hours a day, seven days a week. Messages can be listened as many times as desired by visitors leading to increased retention of information.

Most survey respondents, regardless of whether they heard the broadcast, were enthusiastic about this communication tool. But funds for purchasing the radio equipment for Boiler Bay State Park have not yet been procured. It is hoped that as OPRD managers learn of the outreach potential of LPR broadcasts, funds will be secured for purchasing this equipment. Visitor education is vital to conservation of marine and coastal resources.

Low power radio broadcasts are a viable option for state park coastal managers to “do more with less.” LPR broadcasts could become a trademark of Oregon’s coastal parks. The state park system is already highly valued by residents and visitors. As we look ahead to increasing coastal residents and visitors, this outreach tool could help stimulate and renew interest in our marine environment and natural resources. One future study could investigate whether a Coast Talk broadcast encourages visitors to be more responsible stewards in the coastal environment.

There are several advantages of using 100 milliwatt LPR units in coastal parks instead of a 10 Watt transmitter placed along the highway. Signs notifying visitors of a 10 Watt system must be viewed while motorists are traveling at high speeds along roadways. Attention to the message content of these size stations may be minimal while motorists are navigating through traffic, perhaps studying maps, or distracted in other ways inside the moving vehicle. Use of 100 milliwatt broadcasts in parking areas provides greater opportunity for visitors seeing signs, attention to message content, and likely leads to greater retention of the broadcast information. Tune-in rates during the 10 Watt Forest Talk evaluations ranged from 1.3% to 8%. While the Boiler Bay project had a tune-in rate of 10% during the first week with only four signs visible, it jumped to 16% during Weeks 4 and 5, a rate which is double the highest Forest Talk listenership. The 100 milliwatt LPR stations must have an adequate number of signs dis-

played so visitors have the opportunity to tune in to the broadcast.

Whether the OPRD interest level increases enough to widen the LPR broadcast application in coastal parks remains to be seen. The Boiler Bay project results intrigued the Port of Newport and Hatfield Marine Science Visitor Center. Both locations now have a 100 milliwatt LPR station. Results from this study indicate that LPR broadcasts are a promising communication technology for providing park visitors with helpful information. State parks in Oregon offer important opportunities for visitor recreation and natural resource education. With increasing visitation to the nation's coastal parks, there is growing need for marine education to enhance stewardship, interpretation, and safety knowledge. This research indicates that parks should consider LPR technology as an affordable communication strategy for reaching these visitors.

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THEMATIC ITINERARIES: AN APPROACH TO TOURISM PRODUCT DEVELOPMENT

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Abstract: *Throughout the U.S., scenic byways, heritage corridors, and similar concepts are being developed to: (1) preserve and interpret natural and cultural resources unique to an area; (2) coordinate the efforts of private, public, and non-profit organizations; and (3) market the new product to targeted audiences. Growing interest in nature and culture travel provides an opportunity to integrate interpretation with tourism product development and marketing. Examples will be discussed, including: Scenic Byways in the Great Lakes Region, the Western North Carolina Heritage Craft Trail, California's thematic itinerary program for San Francisco, Los Angeles, and San Diego; and in Hawaii, the Hilo Hamakua Heritage Coast and South Maui Heritage Corridor. This paper discusses how interpretive planning can contribute to visitor itinerary and destination area development.*

Keywords: *interpretation, tourism development, destination areas, visitor itineraries, visitor information systems*

Introduction

In the world of real estate, it is well established that the three most important factors that determine property value are, "location, location, and location." Similarly, in the world of travel, location - or knowing where to find points of interest - is critical. Depending on a traveler's particular interests, he will seek information on local attractions and activities that meet his needs. The word "itinerary," means, "the route of a journey or tour, or the proposed outline of one." Anyone who has planned a trip would appreciate the importance of having some idea of what they plan to see and do at their destination. In fact, that kind of knowledge

could determine the selection of the destination itself. Also, suggested itineraries can be very helpful for independent travelers once they arrive at their destination. Traditionally, self-guiding pamphlets and guides serve this purpose. Itinerary development can be a powerful tool in organizing information about an area's attractions and presenting that information to visitors in an appealing manner. In tourism, this could be called "tourism product development." In our profession, we could call this "interpretation," perhaps at a regional level, as opposed to at the site level. How do we marry these two worlds having such common interests?

Recent Trends in Travel and Destination Area Development

There are increasing numbers of travelers seeking high-quality, authentic experiences relating to nature, history, and culture. Ecotourism and heritage tourism are considered among the fastest growing segments of travel throughout the world. Another trend is that more travelers are on their own -- FITs or free and independent travelers. They generally seek out their own activities and develop their own customized itineraries, largely determined by special interests. From birding to spelunking, and archeological digs to scuba diving, travelers are motivated more than ever in finding opportunities to learn while on vacation, to seek new experiences, and to find inspiration.

In many communities throughout the U.S., scenic byways, heritage corridors, and similar concepts are being planned to meet several community goals: (1) identify natural and cultural resources unique to an area; (2) integrate and coordinate efforts of private,

public, and NGO sectors in preserving and enhancing identified resources; and (3) developing and marketing new products. While such approaches are not entirely novel, the growing interest in nature and culture travel provides an excellent opportunity to integrate community based tourism development with enhanced interpretation and visitor information services. These types of product development approaches are valuable in organizing visitor experiences, enhancing interpretive services, and organizing the communities themselves.

Interpretation and Itinerary Development

Interpretive planning is perfectly suited for developing visitor itineraries. Interpretation contributes to itinerary development in several important ways: (1) focuses attention on the “whole” destination area, however defined, rather than the individual sites and attractions; (2) develops themes that appeal to potential visitors; (3) provides a “way-finding” function for visitors; (4) increases the holding power an area by provoking the interest of visitors and providing memorable visitor experiences; (5) and supports other local industries and businesses such as unique souvenirs and foods.

Focus on the Whole

At the most basic level, interpretation focuses attention on the whole, and not the pieces. One of Freeman Tilden’s principles was, “Interpretation should aim to present a whole rather than a part, and must address itself to the whole man rather than any phase.” John Burnet is similarly quoted by Tilden: “Wisdom is not a knowledge of many things, but the perception of the underlying unity of seemingly unrelated facts. Most destination areas fail to present a “whole” message. Instead, they tend to overwhelm visitors with information on “pieces” – individual activities and attractions – but no over-arching sense of what’s unique about their area. Of course, mega-destinations such as Las Vegas or Disney

World don’t have this problem. We’re, however, more concerned about rural communities and small towns without million dollar budgets and marketing departments who need help with creating more attractive destination areas based on the natural and cultural resources. Interpretive planning can be a powerful tool in helping such communities identify what’s truly unique about their area and would distinguish them from a thousand other similar communities.

Theme Development

As in interpretation, theme development is often viewed as identifying subjects or topics. As such, topics such as birds or geology are not particularly appealing to visitors. However, if communities worked at theme development, as good interpretation should, they might come up with themes such as, “Glaciers transformed raw mountains into today’s scenic landscapes.” In an area such as Anchorage, the works of glaciers are plainly evident. Interpretation, applied to tourism development and marketing, would capitalize on this kind of grand theme that ties together visitor experiences such as driving along Turnagain Arm, touring the Matanuska-Sitna Valley, or visiting the Portage Glacier Visitor Center.

Wayfinding

David Bucy, a consultant from Oregon and fellow NAI member, is a proponent of visitor communication systems that systematically provides information and interpretation to visitors. This system would be useful in helping visitors find their way through a destination area when they are planning a trip, when they arrive, and as they tour the area. What distinguishes this system from the typical printed guides available in most destination areas is that visitors would gain a sense of the area’s unique natural and cultural history – as opposed to pages and pages of running text with bold-faced points of interest which have paid advertisements in a commercial pamphlet.

Holding Power

Interpretation in various forms – from way-

side exhibits and self-guiding trails to brochures and personal guides – provides the visitor with a reason to stay longer and stop at more places in the destination area. Scenic byways, for example, can provide more opportunities for periodic stops to appreciate interesting views, historic sites, or natural areas. Interpretation at key points can enhance the entire experience and encourage visitors to make more stops along the way on side roads and in little towns -- rather than zip through the region on the Interstate highway.

Support Other Industries and Businesses

Interpretation can also be used to tie in local industries and businesses. For example, coffee in Hawaii is a major segment of diversified agriculture. Creating a coffee country tour guide was an attempt to educate visitors about the industry and where to find coffee farms in one district of the Big Island of Hawaii. The guide and the promotion encourages visitors to get off the “beaten track” and roam through coffee country, tasting and buying different brands. The tour covers a large enough area that a stay of one extra would be warranted. This effort also supports the sale of a locally produced souvenir – something to take back for friends, family, or the office. The economic benefits to the local community would be much greater than if the visitor had purchased a trinket manufactured in some foreign country with a “Hawaii” label stuck on it.

Examples of Thematic Approaches

While there are many examples of thematic approaches to itinerary development for various destination areas, a few notable examples may illustrate the value of the approach. The Western North Carolina Heritage Craft Trail project of Hand Made in America is one example of community and economic development tied in with visitor information and marketing. The overall project was designed to empower small rural

communities and their residents to revitalize their local economies by capitalizing on their unique heritage arts and crafts – everything from glassmaking to basketry. One of their tangible products was the publication of a four-color printed guide to the region which beautifully illustrates its diversity and provides ample information on way-finding, food, lodging, and history.

In 1998, San Francisco, Los Angeles, and San Diego initiated a thematic itinerary program in California that coordinates culture and arts experiences in these three metropolitan areas. “California: Culture’s Edge”, at <http://www.californiasedge.com/> promotes the following themes with their own suggested itineraries: On the Edge, East is West, Art to Architecture, Jazz and Blues, African American Heritage, Pride, Fiesta, Jewish Heritage, Performs, Gold Rush to Statehood, and Mission Trail. According to the Web site,

“The California Cultural Tourism Coalition was formed by arts and tourism organizations to promote the rich cultural diversity of the Golden State. California’s cultural leaders joined the coalition members to identify destinations and organize itineraries that reflect attractions, events, restaurants and night life that they would share with friends visiting their cities. The result: California, Culture’s Edge. This guidebook consists of 13 culturally themed itineraries that suggest 9 to 15 day adventures in California’s three urban cultural centers - Los Angeles, San Diego and San Francisco.”

New York State has a similar thematic itinerary approach. Its Web site at <http://iloveny.state.ny.us/> has suggested “Themed Vacation Ideas and Suggestions” for: Family Vacations, Historic New York, New York City Weekends, I Love the Outdoors, Road Trips, Romantic Getaways, and Water Vacations. On the Historic New York theme, one of the suggested itineraries reads as follows,

"Eleanor Roosevelt's Heritage

Experience women's history in New York's Hudson Valley, at Val_Kill (914/229-9115) in Hyde Park, the home of Eleanor Roosevelt, "First Lady of the World". Visit the cottage where John F. Kennedy, Winston Churchill, and other world leaders discussed humanitarian issues and United Nation's business.

Eleanor Roosevelt was appointed a delegate in 1945 to the United Nations (212/963-7713) in New York City, where she lobbied for the Universal Declaration of Human Rights. This year, the United Nations will celebrate its 50th anniversary with commemorative sessions in New York City on October 22 and other events throughout the year.

For information about the area, contact Dutchess County Tourism 800/445-3131 or 914/463-4000."

These examples of visitor itineraries from California and New York illustrate that tourism offices are actively developing thematic itineraries that appeal to particular audiences. Interpretation adds to the overall marketing message by effectively enhancing the product.

In Hawaii, local efforts include the Hilo-Hamakua Heritage Coast and South Maui Heritage Corridor projects. The Hilo-Hamakua Heritage Coast began as a regional community effort to revitalize the northeast windward coast of the Big Island of Hawaii, an area that lost its traditional sugar cane industry. Throughout the region that stretches for about 30 miles, tourists zip by on a coastal highway, bypassing remnants of small plantation towns which are struggling to survive in modern times. The Heritage Coast project involved community groups from the entire region in identifying their heritage and what they would like to highlight for visitors. An initial pilot project partly funded by the state's Cultural Tour-

ism grant program resulted in directional signs and a self-guiding brochure. Other community projects include the restoration of the Laupahoehoe railroad station master's home and murals in Honokaa, a former cowboy town.

Elsewhere, many examples abound of how various destination areas are using thematic itineraries to develop new tourism products and enhance the visitor experience. National scenic byways, such as the North Shore National Scenic Byway on the shores of Lake Superior in Minnesota, offer visitors outstanding landscapes for driving itineraries. The Columbia River Gorge National Scenic Area offers two excellent visitor centers, tours of hydroelectric plants, sturgeon hatchery, salmon ladders, and splendid waterfalls, as well as a historic driving route that parallels the Lewis & Clark expedition. A system of National Heritage Areas, such as the Silos and Smokestacks NHA in Iowa, provide new opportunities for travelers who want to experience the rich natural and cultural heritage of the United States. More recently, new programs such as National Heritage Rivers (<http://www.epa.gov/rivers>), Millennium Trails (see <http://www.millenniumtrails.org>), and Lewis & Clark Bicentennial (project of the National Council of the Lewis & Clark Bicentennial, see <http://www.lewisandclark200.org>) bring focus to efforts to identify unifying itinerary themes for targeted groups of travelers. Interpreters can play a key role in helping to identify such themes and develop interpretive products and services that will help visitors better appreciate the natural, historic and cultural resources in these newly defined destination areas.

Conclusion

Interpreters offer special approach and insights that would be invaluable in tourism product development - particularly with regard to developing opportunities for independent nature and culture travel. With the growing interest in ecotourism and heri-

tage/culture tourism, the professional interpreter can provide a unique sensitivity to focusing on the “whole” or unifying themes that will create a “brand image” for a destination to distinguish it from a thousand other competing destinations. The interpreter will also use interpretation as a management tool in protecting natural and cultural resources from inappropriate visitor use. The interpreter can also enhance the visitor experience throughout the destination area by developing effective interpretation programs at major points of interest. Professional interpreters need to be active partners in community tourism development efforts because they are as important as traditional participants – hotels, restaurants, transportation, and attractions. The interpreters in resource agencies, parks, and museums – as well as the private sector – can all play a key role in producing high-quality tourism destination areas.

MARKETING CULTURAL HERITAGE ON WATER TRAILS

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Abstract: *Water trails are recreational routes that connect people and places through links to both the natural environment and cultural aspects of places. Marketing the cultural heritage is desirable to help achieve the economic benefits, conservation goals, and recreational accessibility that is possible with water trails.*

Keywords: *water trails, cultural heritage, tourism marketing*

Introduction

Water Trails are recreational routes that join places and people along rivers, lakes and seashores. They provide opportunities for protecting natural environments, increasing economic benefits to communities and businesses, and allowing healthy and accessible recreation.

“But water trails are more than a geographical phenomenon; they are alive. They are animated by the pursuits of their builders and their users. Water trails connect people with places and simultaneously enrich and protect both. By identifying and interpreting places, both natural and constructed, the water trail brings the user into contact with the whole ecology of the corridor. The interpretation and preservation of our cultural heritage is no less important than the protection and conservation of the earth, the sky, and the plants and animals with which they are intertwined. In the process, the user learns and grows physically, mentally and emotionally, while the community grows in spirit, in economic health and in vitality.” (From North American Water Trails - Vision Statement)

With a long history of water based transportation and settlement in North America, and a continent connected by a myriad of natural waterways, cultural links are bound to be important parts of water trails, and often are the seed of water trail development. Where tourism and economic development are seen as a product of the water trail, then, marketing the cultural heritage attributes of the water trail is a natural desire.

The following outline summarizes a few thoughts, learned “in the field”, which might help in considering the marketing of cultural heritage on water trails.

The Challenge

- A. Demonstrating respect - avoiding the tendency to market only the more “desirable” aspects of the story or resource.
- B. Telling a whole story - remembering that while your water trail has may seem to have one clear story (e.g., “the fur trade”), it is likely only a part of a much longer and richer history, which began with the formation of the waterway, and which continues to present day.
- C. Making a link to action - marketing is for selling, whether it is an experience or a product, so the marketing message must make a clear appeal to users, based on their desires and experience.

Restraints for Most Watertrail Organizations

- A. Too much information - too much of a good thing can be hazardous, es-

- pecially when the core group is volunteer based with limited resources (see restraint “b”)
- B. Too little time, money and volunteers - enough said...
 - C. Lack of coordinated planning - often there is too much to do on a day-to-day basis, so the important long-term vision and planning is lost in the shuffle. When it finally comes time to get down to marketing, it is tempting to promote the easy stuff, and in the process the really interesting details are often missed.
 - D. “It’s a Big World” - i.e., what is monumentally important and unbelievably fascinating to you may mean very little to “the masses”.
 - E. The “world view” dilemma - no matter what you do, and how well you do it, sometimes people will adhere to their own version of the past so all the marketing in the world will make little difference.

The Need

In spite of the above, marketing cultural heritage is still worth doing because;

- A. It works - understanding, appreciating and participating in cultural experiences is a growing motivation for travel
- B. It is important - often, cultural marketing is the message about the past that is remembered, so we better do it right or the true heart and soul of regions and water trails may be lost or confused.

Some Keys to Success

Build on a “Real” Theme, and Keep it Real

Understand your water trail from a variety of points of view, but don’t try to sell the whole thing at once. Select a unifying theme that is truthful and meets your needs - then build on it.

Tell the Whole Story (or at least make room for it to be understood)

Even though your theme is the thread that binds your marketing message, leave room for other aspects of the story, and be prepared to integrate them in appropriate regional or cultural contexts.

Encourage Imagination and Participation

Water trails are “hands-on” resources, so get people involved. Boating regattas, paddle days, expeditions, and community celebrations are all great marketing tools which often self-perpetuate and carry your message forward.

Work Together

Find and develop creative partnerships between communities, organizations, government departments and citizens. Meet people where they live and work, and be flexible enough to integrate other thoughts into your plans.

Use “The System”

Take advantage of existing institutions and resources, such as various media outlets, schools, events, festivals, and tailor them, or your message to meet your vision.

Monitor the Results (and be prepared to change course)

Marketing cultural heritage can be a tricky thing, given the strong ties that people have to their past. Water trails can make this process particularly difficult, as their linear nature often means that they cross many cultural, social and political boundaries. Keep an ear to the ground, listen to locals and be prepared to steer your marketing message in such a way that it is well received by water trails residents, and attractive to water trail users.

For more information on water trails, contact North American Water Trail by going to www.watertrails.org.

DEBT-FOR-NATURE SWAPS AND PROTECTED AREA TOURISM IN COASTAL AND MARINE ENVIRONMENTS: A SYMBIOTIC RELATIONSHIP FOR DEVELOPING COUNTRIES

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Abstract: *Debt-for-nature swap involves a mechanism of exchange in which a certain amount of the debtor's foreign debt is cancelled or forgiven, in return for local currency from the debtor government to be invested in domestic environmental projects, notably designation and management of protected areas. Swaps' objectives are to reduce the debt burden, protect the environment, and aid in sustainable development programs to generate local jobs and income, which in turn can be facilitated by protected area tourism in coastal and marine environments. However, each swap should have site-specific agreements, monitoring/enforcement programs, and most importantly, should involve locals/community in decision-making.*

Keywords: *Debt-for-nature swap, environmental protection, sustainable development programs*

Introduction

Developing countries that are coastal and insular in nature largely depend on marine environments for food and income (fisheries resources), as well as generation of foreign exchange (coastal and marine tourism) to supplement and/or assist with the balance of trade payments and foreign debt. Although the consumptive dependency is evident, however, the resources are not managed in an efficient manner to allow for sustainability. The coastal zones have been

subjugated to major environmental impacts (degradation), as an overwhelming majority of the population inhabits the region. Some of the known direct impacts attributed to humans are overfishing, ocean dumping, poisoning of marine organisms, wetlands removal, coastal deforestation, dynamiting of coral reefs, harvesting of endangered species, and habitat alteration through the construction of breakwaters, seal walls, dykes, etc. (Agardy, 1990). Based upon these impacts, and also due to the dire need to sustain the present resources, developing countries (coastal and insular) have adopted the western model of resource protection via the creation of parks, protected areas and marine sanctuaries. The protected area concept has gained widespread acceptance and participation within the last 25 years (Mitchell and Barborak, 1991), and with the growing public consensus on environmentalism, creation of more protected areas can be expected. However, creation of protected areas is an expensive ordeal for developing countries as they lack the financial resources to effectively monitor and enforce regulations of the protected areas. Also, creation of sanctuaries and protected areas come at a price as the extractive properties of coastal and marine environments are heavily utilized for export commodities to generate foreign currency to assist with the payments of insurmountable foreign debts which is estimated to be USD\$ 2.2 trillion (Human Development Report, 1999). Additionally, two

critical elements (key ingredients to achieve success in meeting the objectives of the protected area), community-based decision-making and permitting multiple uses are usually lacking (Gilman, 1997).

Concomitantly, in an effort to combat the debt and environmental crisis in developing countries, Lovejoy introduced the debt-for-nature swap concept (Lovejoy, 1984). This stepwise process involves a mechanism of exchange in which a certain amount of the debtor's foreign debt is cancelled or forgiven, in return for local currency from the debtor government to be invested in domestic environmental projects. The projects may include conservation and natural resource management, designation and management of protected areas, increase in funds for National Parks, park personnel training, and environmental education programs and activities (Thapa, 1998). Swaps can be bilateral (between two governments), or in most cases trilateral (aided by an INGO-International Non-Governmental Organization). Also, the INGO must have a local contact with a domestic non-governmental environmental organization in the debtor country to be responsible for the administration and operational facilitation of the project (Environment Bulletin, 1996).

The first swap (1987) between Conservation International (US-INGO) and Bolivia involved cancellation of \$650,000 Bolivian foreign debt in exchange for \$100,000 worth of local currency that was to be marshaled towards protection of the Beni Biosphere. Since then, it is reported that in excess of \$1.5 billion in transactions has been involved among 19+ countries and is expected to increase. The participants have been Costa Rica, Philippines, Madagascar and Poland, however countries in Central and South America have benefited the most (Deacon and Murphy, 1997). Although, nature swaps do not provide a major dent in developing countries' foreign debt, however, various achievements have been accomplished. For example, debt-for-nature swaps have aided in the creation of pro-

tected areas, national parks and biospheres; financially assisted (over USD\$100 million) in strengthening the capacities of underfunded local environmental conservation organizations in promoting sustainable management of natural resources; and a sense of awareness about environmental protection has been instilled (Thapa, 1998). The purpose of this paper is to outline the debt-for-nature swap process and its positive relationship with protected area tourism in developing nations. Additionally, the applicability to marine and coastal environments will be discussed.

Debt-for-Nature Swap: An Overview of the Process

Certain procedures are to be followed during a debt-for-nature swap process. The initial step is for the sponsoring INGO (*most active in swaps* - Conservation International, The World Wildlife Fund for Nature & Conservation, and the Nature Conservancy) is to establish a dialogue with the debtor country, and eventually gain approval from the principal players of the debtor country (government, central bank and a domestic NGO). Once approval is met, negotiations occur and eventually mutual agreements are reached in terms of funding potential projects and the mechanism of funding. In such situations, the debtor country usually indicates what areas for swap intentions should be considered, and can also regulate the amount of the swap investments. The sponsoring agency (INGO) normally locates a potential donor, which may include governments, banks, organizations and private foundations (Greener, 1991; Sadler, 1990). The international secondary debt markets for second-hand debts are also investigated for discount levels. The secondary market for bad debt originated in 1982 as a resort for lending agencies to salvage or minimize their losses. Debt could be bought for deep discounts; for example, a USD\$10 million debt could be bought for USD\$5 million (Mahony, 1992). However, when a match is

met, the sponsoring agency will buy the discounted debt, or receive it as a donation from banks and governments, or receive money from foundations to buy the discounted debt in exchange for investment of local currency by the debtor country in the stated environmental project. Local funding can also be issued by the debtor country in the form of issuing currency or bonds, in which the interests from the bonds is used for daily operations. As indicated earlier, the coordination and daily operations of the project are normally undertaken by a domestic NGO and/or institutions mutually agreed to by both parties (Dogse and von Droste, 1990; Greener, 1991; Sadler, 1990).

Swaps and Protected Area Tourism

Debt-for-nature swaps have been responsible for the creation and/or addition of protected areas in countries where swaps have been undertaken. For example, Costa Rica has been actively involved in swap practices to protect its natural environment. It is a leading country, in terms of conservation, and 12% of its total land mass is designated as national parks or protected biological reserves. The country has been proactive and has been able to get US & European INGOs, and private foundations to aid in reforestation and/or park projects via swap practices. Between 1988 and 1990, USD\$ 10 million was generated in donations to help retire the face value of USD\$ 69 million of the country's foreign debt (Page, 1990). Simultaneously, this has enabled Costa Rica to raise USD\$ 33 million in local currency bonds, which support projects such as parks and protected areas, reforestation, etc. Although this represented a retirement of about 5% or more to the overall debt burden, it was still a positive experience in terms of both debt reduction and environmental protection (Page, 1990).

Along with the promotion of sustainable use of natural resources, swaps have the inherent possibility of creating jobs and income in

remote regions via protected area tourism (Moran, 1992; Wagner, 1990). The majority of the protected areas created through swaps have incorporated nature-based tourism/ecotourism and other forms of environmental and culturally based tourism. Nature based tourism has experienced a 10% to 30% increase per year, which is about two to five times faster than the growth rate for tourism in general (Wight, 1996). Also, "environmental awareness" is becoming the collective consensus among the general populace in developed countries; so, protected areas in developing countries can anticipate an influx of nature-based tourists or ecotourists. Costa Rica has benefited environmentally and economically, as it is one of the world's most coveted ecotourism destinations with the majority of their visitors visiting protected areas.

Debt-for-nature swaps is a potential plausible strategy for developing countries who are proactive in environmental issues, and can achieve some degree of success, like Costa Rica's tourism earnings from National Parks and Reserves. Brown (1998: 76) remarks that swaps are likely to activate investment in international tourism via "park restoration, sustainable wildlife preservation and forest protection". Moreover, in the context of the African continent, Brown (1998) further states that swaps that help create protected areas/parks would increase the influx of tourists, thereby simultaneously increasing foreign exchange earnings. However, involvement and creation of local jobs should be major components of each swap as local commitments and trust is mandatory to ensure success in meeting the objectives of the swaps. For example, in the Ghana swap, Conservation International is looking at alternative income producing opportunities such as local guides and locally operated camping lodges for village residents who reside within the vicinity of the park as a way to prevent poaching (Brown, 1998). These positive economic measures can lead to increased support for the protected areas with which they are associated.

Swaps and Protected Area Tourism in Coastal and Marine Environments

The position of marine and coastal regions at the interface of land and sea increases the susceptibility and vulnerability of the natural resources to development activities, especially tourism development activities in islands and coastal destinations. It should be understood that environmental impacts in islands and coastal regions are not limited to tourism development (including water-based recreational activities) alone, but extends to overall economic development (development of coastal cities and harbors, agriculture, fishing, coastal 'protection'). Since economic development has been dependent on the tourism sector, the roots of environmental problems faced by marine and coastal regions can often be traced to their respective expanding tourism industries. Considering the fact that the natural environment of the marine and coastal zones is the principal attraction, policies, enactments and administrative fabric related to tourism planning in these regions often prioritize the amelioration of tourism's direct negative (environmental) impacts on the islands' natural resource base.

In some islands of the Caribbean, Pacific and Mediterranean regions (for example, Fiji and the Lesser Antilles), natural resource managers, planners, and policymakers advocate the integration of tourism within the framework of macro-scale comprehensive and pro-active multiple use planning (and zoning) for accommodating all resource users and, thereby avoiding resource conflicts in areas where coastal populations are on the rise (Agardy, 1990; Thorsell and Wells, 1990). Furthermore, the national governments of some islands destinations, for example, Jamaica (Pattullo, 1996) and Mykonos (Stott, 1993), have attempted to integrate traditional and community-based coastal and marine resource management methods into contemporary multi-agency tourism management pro-

grams while identifying sustainable ways of utilizing their marine and coastal resources.

Despite stringent controls, trained guides and reef etiquette postings, marine parks particularly suffering from heavy traffic (and escalating demand levels) in the Caribbean are experiencing cumulative degradation through mounting damage to coral from divers, snorkelers and careless anchor dragging (Albuquerque and McElroy, 1995: 27). In the case of the Molokini Marine Life Conservation District in the Pacific, a combination of nearly a complete lack of management, over-zealous marketing of the destination, and increased tourist activity in general, has contributed to the desecration of the pristine marine environment and ecosystem despite the establishment of regulations to conserve and protect the unique marine resource at Molokini Shoals (Gaffney, 1990: 180). Although unsatisfactory experiences from alternative tourism projects are widespread, some regions (e.g., the Galapagos Islands and the Lesser Antilles) have successfully integrated tourism into their marine and coastal protection, preservation and conservation strategies (Agardy, 1990).

Marine Protected Areas (MPAs) are emerging and have been established all over the world, notably in the Caribbean (Pendleton, 1993; Widfeldt, 1993) and the Pacific (Holthus and Thomas, 1990; Pearsall, 1993) with the objective of promoting alternative nature tourism and demonstrating co-existence between conservation and development, and to avoid the dangers of mainstream tourism. During the last twenty years, governments of the Pacific Islands have attempted to establish protected areas, in response to the dwindling natural resources from overuse and misuse of coastal systems and in recognition of the limits of growth on islands, and the negative impacts to the coastal zones from anthropogenic (including tourism) activities (Gilman, 1997: 59). Similarly, in 1987, the Turks and Caicos government identified 32 marine and terrestrial sites for future designation as national parks, nature reserves, sanctuaries, and his-

torical sites for the protection of habitats (pristine reef complexes, large tidal flats, and nesting seabird colonies) and endangered species (green turtle, humpback whale, and Kirtland's warbler) from the threats of tourism boom and land development (Mitchell and Barborak, 1991: 113). However, the challenges faced by government officials in their attempts to develop a new National Park system, included "dependence of economy on foreign aids and funds, lack of trained personnel, inadequate infrastructure, relative locational inaccessibility and remoteness of many sites, accumulating stress on specific sites (especially popular coral reef dive sites), small-scale supply of public utilities, and a lack of environmental awareness in the islands" (Mitchell and Barborak, 1991: 113).

Overall, integrated approaches to tourism resource planning and policy-making incorporate elements of environment-oriented coastal management and conservation strategies, zoning schemes (including marine protected area/sanctuary/park designation), carrying capacity (limits of acceptable change) determination, multiple use planning, multi-agency (including community) involvement and tourist-oriented environmentally-compatible marina planning. These approaches echo the growing awareness regarding the need for multi-level coastal and marine resource management and tourism development strategies among planners, developers and policy makers of countries that are coastal and insular. Also, local involvement via community based planning is vital for the success of potential Marine Protected Areas. Moreover, site specific standard monitoring and enforcement programs are essential to meet the objectives of the Marine Protected Areas.

However, the complex mixture of approaches needed to effectively plan and manage the marine and coastal resources requires human and financial resources, which is inherently lacking in almost every developing country that are coastal and insular. Most debt-for-nature swaps tend to target funding environmental projects that

pertain to conservation and natural resources management with emphasis on designation, enforcement and management of protected areas. In addition, programs that promote environmental awareness are also supported. The funds generated by debt for nature swaps usually do not substitute government funding for environmental projects but are utilized for environmental projects that have been identified by the debtor government as requiring addressing but is unable to provide the respective funding (Greener, 1991; Thapa, 1998). Since debt-for-nature swaps have largely been employed for terrestrial projects, it is imperative that marine and coastal regions should subscribe to this process. For example, a debt-for-nature swap program funded by the WWF helped to organize a community based marine resource management plan in San Salvador Island, Philippines (Christie, White and Buhat, 1994).

Conclusion

Swaps are beneficial tools for developing countries that want to protect their coastal and marine environments, as well as provide a source of income and employment (protected area tourism) to locals living in the interior or within the vicinity of the proposed protected area. Protected area tourism is a viable route to rejuvenate or jump-start a local economy. However, each swap should have site-specific agreements, monitoring/enforcement programs, and most importantly, should involve locals/community in decision-making. Also, depending upon the coastal and marine resource being protected, multiple uses should be encouraged (system of zones and buffer zones), as locals need to have alternatives if their livelihoods are at stake. There is a positive relationship between debt-for-nature swaps and protected area tourism, in which swaps are employed as a sustainable development tool facilitated by protected area tourism. Swaps' objectives are to reduce the debt burden, protect the environment, and aid in sustainable development

programs to generate local jobs and income, which in turn can be facilitated by protected area tourism. Tourism and Marine Protected Areas have a beneficial symbiosis, in which a Marine Protected Area provides experiences for tourists, while the revenue generated (for example, through entrance fees) aids in the daily operation and maintenance of the protected area. Additionally locals are employed, and the local economy is positively impacted in remote regions. Most importantly, swaps should be employed as a sustainable development tool facilitated by protected area tourism in coastal and marine environments.

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OPTIMISING THE OUTCOMES OF TOURISM IN CO-MANAGED PROTECTED HERITAGE AREAS: THE CASES OF AULAVIK NATIONAL PARK AND GWAAI HAANAS NATIONAL PARK RESERVE/HAIDA HERITAGE SITE

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Abstract: *Traditional tourism planning approaches tend to reflect the perspective of the author or plan sponsor, but the long-term utility of these plans may be limited if they are inconsistent with the perspectives of key partners. Such plans fail to address the complete tourism system and so cannot help tourism make its full contribution to the quality of life, the economy, and the environment of the host area. Instead, plans need to be sensitive to the full range of potential tourism impacts, positive and negative, and to the components of the system that influences the tourism phenomenon. In addition, the legislative and policy environment has a profound effect on the success or failure of tourism plans, yet receives meagre coverage in traditional tourism planning.*

This paper discusses the need for an integrated planning perspective and presents a model that may satisfy that need. Two examples of the early stages of integrated planning are presented from Aulavik National Park on Banks Island, NWT, and Gwaii Haanas National Park Reserve/Haida Heritage Site off the coast of British Columbia. They have helped a government agency and cooperative management partners work together to secure tourism benefits in ways that support the quality of life in host communities and the integrity of their natural and cultural resources.

An integrated approach in both areas has proven useful in bringing stakeholders with different perspectives together and enabled all to develop a clearer understanding of the tourism system and

to focus on managing that system to achieve a shared set of desired outcomes.

Carried to its next level – as in Kangaroo Island, South Australia – the integrated approach uses performance indicators to guide management actions. The parks here have yet to do this, but discussions have begun to incorporate visitor outcomes into their ecological monitoring programmes.

Keywords: *integration, parks and protected areas, ecotourism, community coordination, marketing concepts*

Introduction

Traditional tourism planning approaches tend to reflect the perspective of the author or plan sponsor, but the long-term utility of these plans may be limited if they are inconsistent with the perspectives of key partners. Such plans fail to address the complete tourism system and so cannot help tourism make its full contribution to the quality of life, the economy, and the environment of the host area. Instead, plans need to be sensitive to the *full range* of potential tourism impacts, positive and negative, and to the components of the system that influences the tourism phenomenon.

Nearly twenty years ago, Mathieson and Wall (1982) pointed out the need “to inte-

Table 1: Traditions and Planning Issues for Tourism		
Tradition	Perspective	Strategic Planning Issues and Questions
Boosterism	Tourism is good and should be developed.	How can more tourists be attracted? What obstacles to development need to be overcome? How can service standards be improved?
Commercial	Tourism is a business that should provide a financial return to its investors.	How can profits and shareholder value be maximised?
Tourism as an Industry (Economic)	Tourism creates employment and attracts foreign revenue.	How can tourism spur growth in the economy? How can employment and income be maximised?
Physical / Spatial (Environmental)	Tourism has an impact on resources, so should have an ecological basis. Tourism is a spatial phenomenon.	What is the physical carrying capacity of an area? How can travel patterns be manipulated to reduce environmental impacts? Should use be concentrated or dispersed?
Community-based (Social)	Tourism is neither good nor bad. Its development should be guided by local wishes.	How can the community take control of tourism development? What are the impacts of tourism on the community?
Integrated	Tourism is part of a complete system that includes the environment, community, industry, and economy. Its planning should be democratic and integrated with related planning processes. Its planning should help tourism to contribute to a community's well-being.	How does the tourism system work in this area? What are the reasons for tourism in this area? How can the system be changed to optimise tourism's contribution, relative to shared goals?

grate the analyses of social, economic and environmental effects of tourist development to derive an overall assessment of the desirability" of tourism development. A few years later Getz (1987) called for a "process, based on research and evaluation, which seeks to optimise the potential contribution of tourism to human welfare and environmental quality." He called that process integrated planning, an idea without a model, but one that could respond to the need for a broader perspective.

This paper discusses the need for an integrated planning perspective and presents a model that may satisfy that need. It then presents two examples of the early stages of integrated planning that have helped a government agency and co-operative management partners work together to secure tourism benefits in ways that support the quality of life in host communities and the integrity of their natural and cultural resources.

Both cases are in their initial stages: Aulavik National Park on Banks Island, NWT, and Gwaii Haanas National Park Reserve/Haida Heritage Site off the coast of British Columbia. The methodology was adapted in each case, but both had the goal of developing a clearer understanding of the tourism system in the area so that stakeholders with different perspectives could focus on managing that system to achieve a shared set of desired outcomes.

The Need for an Integrated Tourism Planning Model

Traditional planning perspectives developed as different disciplines addressed the issue (see Table 1). With the exception of "Boosterism," which Getz calls "irrational and unplanned," these traditions represent single-perspective tourism planning (1987).

Unless all parties in the system share the same perspective, it is difficult to determine

the priorities for tourism or to agree upon how its success or failure will be measured.

The Tourism Optimisation Management Model (TOMM)

In Australia, dissatisfaction with existing tourism planning perspectives led to the creation of an integrated approach called the Tourism Optimisation Management Model (TOMM) (McArthur, 1997). TOMM evolved from the Limits of Acceptable Change model (an environmental perspective) when parties to the tourism planning for Kangaroo Island, South Australia, felt that their different perspectives, while valid, were not being accommodated. LAC, developed by resource managers to minimise visitor impacts, could not accommodate the perspective of those who sought an overall quality of life in the community.

TOMM is a management tool to help maintain a sustainable tourism industry that delivers optimal returns to its stakeholders, not only prevent tourism damage, nor to blindly seek its benefits. It addresses the broad set of tourism impacts based on community values, tourism assets, and realistic market opportunities in ways that are consistent with the principles of integrated planning.

TOMM begins with realistic tourism scenarios, based on a shared understanding of the components and interrelationships of the local tourism system. Using this as a base, the community develops a vision, or set of benefits that it seeks from tourism and visitor use, and the dis-benefits they are willing to accept in that pursuit.

A set of indicators is monitored to measure progress toward the shared outcomes. Indicators that deviate from progress toward the desired conditions trigger a management response. When unforeseen issues or events arise, the model revisits its monitoring system and management actions.

The integrated planning perspective, and its operationalisation in the TOMM model,

holds considerable promise for the planning and management of Canada's protected heritage areas.

An Integrated Planning Process for Aulavik National Park

Aulavik National Park was established on Banks Island in 1992 after negotiations between the Government of Canada, the Government of the Northwest Territories, and the island's Inuvialuit residents. As part of Canada's system of national parks, it was established to:

“protect for all time a representative natural area of Canadian significance in the Western Arctic Lowlands Natural Region, and to encourage public understanding, appreciation, and enjoyment of the area so as to leave it unimpaired for future generations while permitting subsistence usage and trapping by Inuvialuit”

Banks Island's 140 residents are principally Western Arctic Inuvialuit, whose forebears moved to the island early this century to hunt white fox. Today, they reside in Sachs Harbour, about 250 km from the southern park boundary (two hours by plane and two or more days by land or water – see Figure 1). The Inuvialuit were key players in the establishment of Aulavik National Park. They retain their rights to traditional subsistence activities within park boundaries so that the park's establishment will not interfere with their traditional way of life.

The park's establishment agreement directed that services and facilities would be developed in response to market demand. During the management planning process, Parks Canada recognised that demand for Aulavik was dynamic. The park's establishment affected demand, as would the character of any facilities or services developed, the nature and level of marketing and packaging for those facilities and services, and the manner in which the entire destination is brought to market.

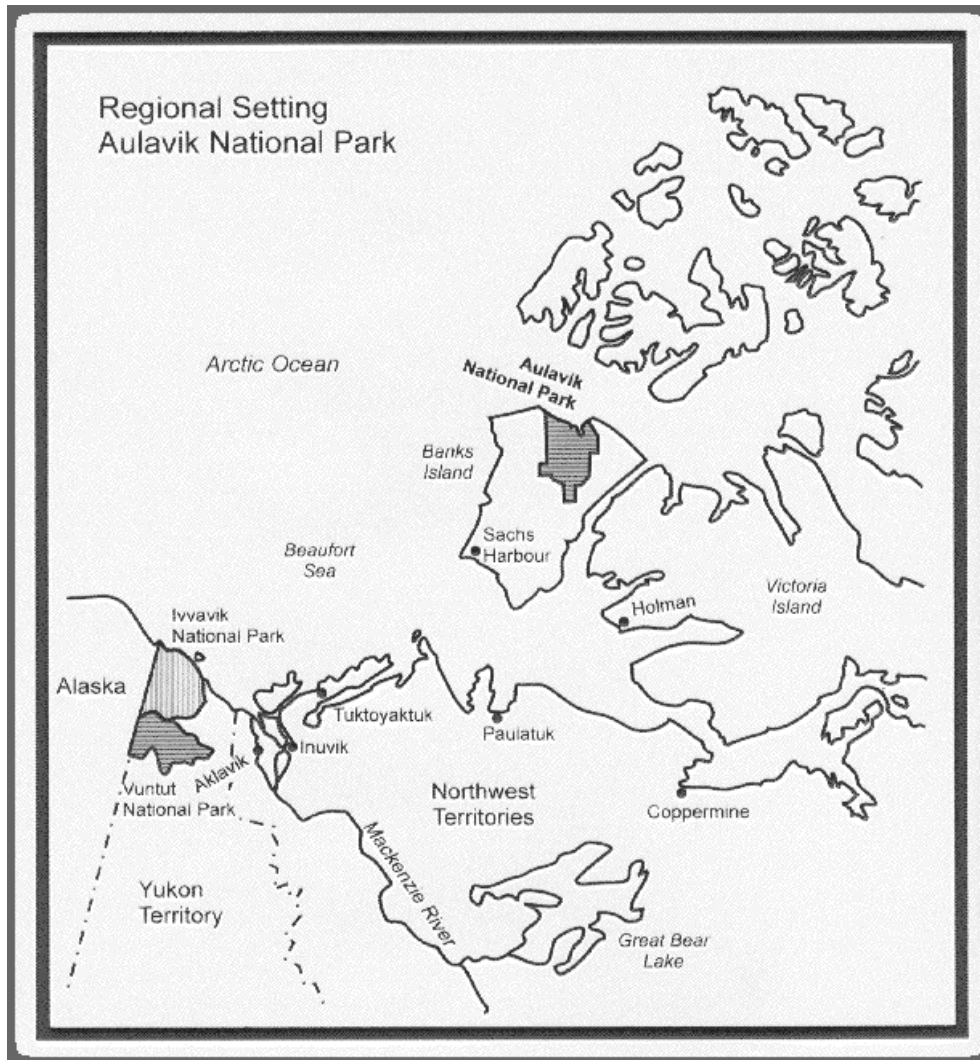


Figure 1. Regional Setting, Aulavik National Park

Parks Canada could not determine the potential demand for Aulavik services and facilities with these variables undefined. Recognising this conundrum, Parks Canada commissioned a Visitor Market Analysis, using an integrated tourism planning approach, to help managers and stakeholders understand the influences and impacts of park-related tourism – in all its dimensions – and to develop a system to achieve those objectives.

Summary of the Approach

The first phase of the analysis was a situation analysis that included:

- A review of available information.

- Community and stakeholder consultations.
- Interviews with Parks Canada staff to clarify the agency's requirements.
- A review of relevant commercial trends (including a survey of the travel trade).
- A review of the legislative and policy environment.

It then proposed a shared vision (or set of desired outcomes) for tourism and visitor use that could be supported by the community, stakeholders, tourism industry, and Parks Canada.

The final phase was to develop alternative visitor use scenarios based on the area's commercial realities and regulatory environment.

The analysis found significant park-related tourism potential for the Aulavik and Banks Island area, but the network of legislation, agreements and administrative bodies was, in some cases, creating barriers to the very outcomes they were put in place to support.

Current Situation

Fewer than 100 visitors per year travel to Banks Island. There are equal numbers of sports hunters and ecotourists, but a more relevant way to segment visitors may be by those who *visit* the park and those who *don't*.

The park currently attracts about 65 canoeists, hikers and wilderness seekers per year who fly from Inuvik and spend their time in the park. They may stop briefly to refuel at Sachs Harbour, but use no local outfitting or guiding services and spend little or no money. The visitors have some strategic value to Parks Canada but little or none to the community. Likewise, cruise ships stop at the park in years when conditions allow (with 100 visitors per ship).

Hamlet visitors, primarily sports hunters, don't go to the park but spend money on accommodation, guiding and souvenirs in Sachs Harbour. They use local guides to travel to nearby hunting grounds. Residents are aware that sports hunters spend more in the local community than ecotourists, and feel that park-related tourism offers little benefits.

Travel Trade Survey

Personal interview with eleven key operators yielded the fact that the trade is interested in Banks Island as a destination, but has concerns about ground operations support: the quality of guides and services; the reliability of local operators; and their ability to serve customers in a fashion appropriate to the company. They reported a percep-

tion that "outside" operators would take opportunities to develop packages and outfitting from locals. They also expressed concern about Parks Canada's policies and the associated difficulties in getting permits. Without access to Parks Canada staff, they felt that Aulavik's National Park designation added little value to an area tour.

They felt there was a market for Banks Island/Aulavik packages that offer: access to wildlife; knowledgeable, entertaining, reliable guides; natural/ecological interpretation; historical/cultural interpretation; low-medium impact activity; and feature clean, comfortable couples accommodation.

The Legislative Environment

The licensing process is a significant roadblock for prospective outfitters. For example, the Park Establishment Agreement states that half of the park's business quotas (if and when developed) will be awarded to Inuvialuit businesses. But if no Inuvialuit businesses apply, then the likelihood of outfitted park packages is remote. Local Inuvialuit have not been interested in outfitting to the park because of the cost and time of getting to there, relative to serving the sports hunting market.

There is also wide agreement that the NWT's Travel and Tourism Act, and its approval process for Outfitters and Tourist Establishments, prevents operators from developing new products. The length of the process (often over a year) – and the perception of partisan decisions – makes it difficult for applicants both within local communities and from outside.

The trade is willing to hire local residents, or to work with the community, but there is little opportunity to proceed. The requirement for 50% Inuvialuit licenses means that all non-Inuvialuit applications are rejected. The status of applications from partnerships between Inuvialuit and non-Inuvialuit partners is not clear. Thus, there are no outfitters presently licensed to operate in the park, so the local community is denied guid-

ing opportunities and the other possible benefits of park-based tourism.

From the market perspective, the intent of the legislation and policies is attractive: a visit to Banks Island and/or to Aulavik National Park would likely be enhanced by the presence of a local guide or outfitter. And unguided visitors have the greatest potential to damage resources (perhaps unknowingly). But the intent matters little if the net outcome of policies is no outfitting licenses issued for the park. Potential visitors must plan an independent trip into the park, with little interaction with Inuvialuit, or, more likely, will not come at all. This undermines the goal of the park management plan to facilitate tourism, increase community benefits, and to increase public use of the park.

Desired Outcomes for Park-related Tourism

The set of desired outcomes shared by community residents, regional stakeholders, and Parks Canada was remarkably similar. Generally, they favored tourism growth that would generate employment and income, and, to a lesser degree, cultural sharing and local promotion.

There was a common desire to attract culturally and ecologically sensitive, non-consumptive ecotourists and researchers. There was a shared concern over irresponsible operators and visitors who do not respect the land, local history or culture, or those who are critical of the local way of life. All stakeholders contributed suggestions toward enhancing tourism on the island and increasing benefits from park-related tourism. Some of the key suggestions were to:

- develop partnerships with outside operators to facilitate local employment, develop opportunities to increase the duration of plane stopovers, training, and other business opportunities.
- re-examine park outfitting policies, develop a memorandum of understanding on outfitting with the Inuvialuit Regional Corporation (that

oversees treaty administration), including response times for all co-management parties.

- develop the hamlet's visitor information centre further to tell more of the community story, display and sell arts and crafts, and document the oral history of the area.
- work toward community participation and consultation (terms that are not synonymous).

Overall, the shared vision for tourism was summarised as a:

"sustainable tourism industry based on renewable resources and on cultural experiences, which is compatible with traditional values and activities, and where the community is enabled to participate optimally."

Scenarios for Optimising Tourism Outcomes

The study concluded by forecasting demand for park experiences by visit type, using three scenarios:

1. **No substantial change** – the status quo.
2. **Enable outside operators** – which would see new outfitters bring visitors to the area with clear guidelines for approvals, local employment, and partnerships with Inuvialuit partners.
3. **Partnership to optimise tourism outcomes** – where outside operators are licensed as above, but under the terms of a pragmatic partnership and clear strategy, endorsed by Parks Canada, the community councils and private sector.

Each scenario forecasted a modest growth of park-related tourism. The first scenario predicts slow growth, and only for private charter parties using the river. The second predicts growth from other market segments with outside outfitters marketing the opportunities. The third predicts a slightly higher increase to park tourism.

In each case, growth would take a few years to develop, and then to plateau, due to the small potential market and the price.

Results could be achieved with a careful review of policies and a programme to monitor the outcomes.

Conclusion

A main obstacle preventing Banks Island from realising its optimal tourism outcomes is that key stakeholders failed to recognise that the separate initiatives to promote growth and mitigate damage had produced minimal visitor use with few negative impacts but even fewer benefits.

The early stages of integrated planning have helped Parks Canada and its stakeholders to address this quandary. It has identified the situation and proposed realistic scenarios to change the area's tourism system in ways that support the shared objectives of the park and its stakeholders.

In this case, an effective strategy for tourism and visitor use must be based on a sound and shared understanding of:

- a realistic vision for the outcomes of tourism.
- the present state of tourism in the area, including its impacts and influences.
- the practical steps needed to integrate tourism plans and policies – and the expertise of a number of fields – in ways that support the established vision.

In Aulavik National Park, as across its system, Parks Canada wishes to support its mandate (to protect the park's resources and present their significance to the public) in ways that contribute to the economic, environmental, and social well being of the area. The visitor facilities and services offered (or sanctioned) by Aulavik National Park will have a profound impact on the effects of Banks Island tourism. While early in the process, integrated tourism planning shows potential to bring Parks Canada and its local stakeholders together to manage their activities in ways that will support a well-

researched, realistic, and shared set of desired outcomes.

Park managers have started planning the next phase in the integrated planning process – the development of an integrated suite of indicators for its monitoring and management programme that bring together the expertise of several disciplines.

Further effort and commitment from all parties will determine whether mutual benefits can be realised from park tourism. Without this integration into existing plans and policies, the efficacy of a single partner's efforts will be limited.

The Gwaii Haanas Application: A Testimonial

Gwaii Haanas National Park Reserve/Haida Heritage Site is a rugged and remote wilderness area located on the Queen Charlotte Islands/Haida Gwaii off the northern coast of British Columbia. It is 640 km from Vancouver and 130 km from the mainland (see Figure 2). There are no roads to or in the protected area, and few services or facilities. Access is by boat or chartered aircraft only.

Gwaii Haanas is cooperatively managed by Parks Canada and the Council of the Haida Nation. As was indicated earlier, co-management can add to the complexities of managing a protected area. In Gwaii Haanas co-management is described as:

Setting aside the question of land ownership in order to pursue the common goals of protecting the natural and cultural feature for future generations.

- Maintaining the continuity of Haida culture.
- Decision-making by a consensus board. This board consists of representatives from both Parks Canada and the Council of the Haida Nation. Consensus must be reached on all aspects of planning, management and operations.

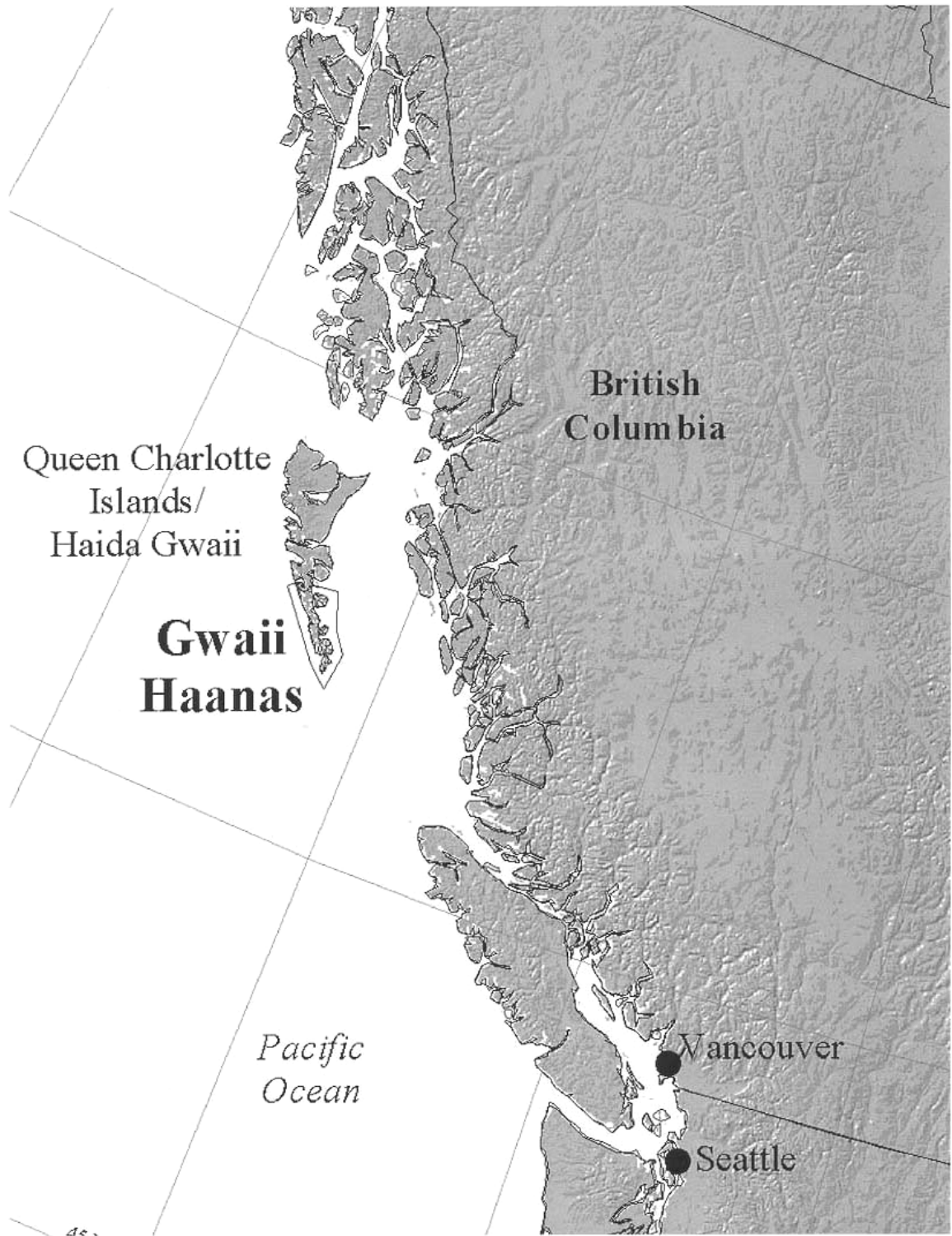


Figure 2. Regional Setting, Gwaii Haanas National Park

The National Park Reserve/Haida Heritage Site offers a marine-based experience, with a complementary land-based experience. It is much more than the "hotspots" that have been created by media exposure. These hotspots include:

- SGAang Gwaii – formerly known as Ninstints – the World Heritage Site
- Windy Bay, the scene of the stand-off between loggers and the Haida and their supporters, which led to the creation of Gwaii Haanas. It is also the location of a large spruce, or "mother tree".
- Hotspring Island – natural hot springs.
- Burnaby Narrows – incredible intertidal life.
- Tanu and Skedans – both Haida village sites, each with their own appeal.

Gwaii Haanas is a cultural landscape. The experience of Gwaii Haanas is of a "whole", a blend of nature and culture at many levels. It is a place where Haida culture is not interpreted but rather witnessed and felt. It is a place where one is very aware that the Haida people have been there for more than 10,000 years and will be there for an additional 10,000 as a living and dynamic culture.

The Gwaii Haanas Approach

At Gwaii Haanas, we have been working for several years with the tourism industry, trying to develop new approaches to tourism marketing and promotion in order to protect the experience of Gwaii Haanas, protect the Islands lifestyle, and yet have a sustainable tourism industry.

It was this work that led us to work with David McVetty to modify the integrated tourism planning approach to conduct our latest exit survey. This survey has resulted in information that will be useful to Gwaii Haanas, but also to local people wanting to understand more about their tourism industry. Rather than the more traditional ap-

proach of evaluating one priority item per survey, this integrated approach has the potential to move us years ahead with one survey report.

In this case the cooperative management team preferred to conduct more research before embarking on a consultation programme. The research included:

- A review of existing information about resident attitudes and visitor surveys.
- A survey of summer visitors to the Queen Charlotte Islands/Haida Gwaii.
- A series of follow-up focus groups with respondents from Vancouver and Calgary (two prime geographic markets for the area).
- A review of the regional and global context, looking especially at aboriginal and cultural tourism.

Outcomes

For an Islands community such as that on Haida Gwaii the integrated approach was useful to gather and present much needed information in a manner that addressed many of the local issues. Ten years ago a tourism planning effort was unsuccessful due to many reasons. Some of these were division among communities, a strong resource extraction industry paying very high wages, and little overall interest in the potentials and opportunities of a sustainable tourism industry. Also there was a strong, positive drive to pull the future of the Islands together as Islanders and not have direction set by off-islanders.

The integrated approach collected information in a manner that addressed many of these issues and others.

The objectivity of the methodology was valuable. Though funded by Gwaii Haanas and its management board, the project managers and consultant were very aware that this market analysis could not be perceived as propaganda. The different sources of

information are so varied that when it is put together in a broad context it is impossible to predict the outcomes. Much of the report does look at Gwaii Haanas, but the protected area is set within its Island community context and the regional and global tourism context. The Islands experience is reviewed from the visitors' point of view. The result is a clear message that we all have work to do, and we all have to work together.

The integrated approach provides solutions. With the loss of the logging and fishing industry, the economy of the Islands is deteriorating. We need solutions to build on what we have now, with little cost of infrastructure, and yet keep what's authentic and unique. Some Islanders still have a stereotypical view of ecotourists, and some can't see the relationship of national and provincial studies to the islands. This market analysis was clearly about the Islands. It clearly lays out potential markets and potential product development, relates it all to our current reality, and views of those currently in the industry. It is clear in the report - we all have work to do and we all have to work together, and it's not as simple as promoting ourselves and hoping the rest will take care of itself.

The approach is integrated enough however, that the message becomes more detailed. We are provided with the "so what". We are provided with reasons we need to work together on what areas, and some goals and objectives the Islands community may wish to pursue.

The report identifies for the Islands communities shared values, shared concerns, opportunities and gaps in service. It identifies patterns of visitor spending of both time and dollars.

We now have four mini-business plans to discuss the implementation of. One of these, for example, describes how to market to a niche based on the current lifestyles of Islanders. Another completely changes the view of the sea kayaking market and clearly

shows that it is a market with potential, and little need for Islanders to change what we have. The report also indicates who is spending more and where, and indicates some ways to increase the economic benefits of people currently coming.

Gwaii Haanas Challenges Addressed

As a world-renowned protected area, inseparable from a culture known and studied around the globe, we have to manage our demand in order to protect the ecological integrity of the area, but also the very experience the visitor is coming for. As area managers we can develop and put in place many visitor management systems such as reservation and registration systems, zoning, etc.

One area however that is a challenge for all protected areas, and especially for one such as Gwaii Haanas, is the impacts on demand created by the marketing or promotion of the area by others. These promoters could be any kind of media, or the usual players in the tourism industry - DMOs, provincial tourism agencies, the Canadian Tourism Commission, travel articles in magazines and newspapers, etc.

With limited budgets and staff time, we were very interested in trying to quantify impacts of images used by others on creating demands for Gwaii Haanas. We wanted to know what images created a demand in our visitors, if they were creating unrealistic demands, perhaps attracting the wrong markets, etc. We wanted to understand the dynamics of images and demand so that we could provide the media and tourism industry better information to help shape their activities to something more in keeping with the management goals of the archipelago.

In the focus group portion of the study, we confirmed staff hunches that demand for Gwaii Haanas is often created by non-traditional sources of information - sources like coffee table books, research articles, museum exhibits, documentaries and news broadcasts. Tourism information goes to-

wards trip planning, rather than creating demand.

We have also found over the years that the industry prefers to focus on “hotspots”. This practice of focusing on a few specific sites is contrary to the management goals and the visitor experience of Gwaii Haanas. Gwaii Haanas is meant to be experienced as a random wilderness experience - no route, no agenda, other than what nature, weather, and tides will allow.

Focusing on the hotspots creates a demand and set of expectations that are quite rigid, expectations that can change the visitor experience. Even some of the licensed guiding and transport companies are also impacted. They are tied to the hotspots even though they don't want to be. These companies tell us that they could provide a higher quality of the type of experience that people are coming for elsewhere in Gwaii Haanas. The clients however are so tied to the images they've seen they must get to the hotspots, even though the knowledgeable guide offers them better options.

So, IMAGE creates PERCEPTION, which affects DEMAND.

National Parks are often created because they contain some of the world's best examples of natural and cultural features. Gwaii Haanas is no exception, containing incredible intertidal areas, rainforest, a variety of species of marine mammals, plants and birds unique to the archipelago, and of course, the Haida past, present and future.

These unique sights create demands by their images alone. At Gwaii Haanas we've found that working with the global trademark of World Heritage Site compounds these issues. The images of SGaang Gwaii - those powerful shots of mortuary poles lining the beach - evoke high expectations in visitors. Visitors literally arrive to the Islands expecting to see totem poles everywhere. The integrated study quantified this for us. Many people are disappointed to find that these images so accessible in the media are so in-

accessible in reality. They feel they have seen nothing of the Islands if they have not seen this image. These images essentially drive the Islands tourism industry.

And what will we do when they are gone? The poles are returning to the earth and in approximately 10 years the experience will change. We will be faced with the challenge of altering the world's idea of SGaang Gwaii. We will literally have to create a new image of the place and why it is significant. We have started working closely with the media and our tourism partners to change this focus - to create the shift away from the hotspots and especially away from the World Heritage Site. We are trying to create an awareness of the impacts of image selection, and encourage alternate image use, more in keeping with the realities of the experience, and also those images of interest to the markets we are pursuing.

The information from this survey has already had impacts in how we deal with provincial and regional media relations people, and the types of media that we, and they, are willing to support. This survey will continue to be a useful tool in creating this awareness in others about the impacts of the images they choose.

And what are the images attractive to the markets we wish to pursue? The focus groups indicated that perhaps the visitor to Gwaii Haanas doesn't respond to the typical promotional images (i.e., those showing people doing things). Perhaps the ecotourists who don't want to see others in their experience, and also don't want to see them in promotional material. This is an area worth pursuing with further research to quantify properly, and perhaps change how we promote to certain niches within the ecotourism market.

For a protected area such as Gwaii Haanas, the quantity of visitor is not as important to us as the type or quality of visitor. This makes it awkward when communicating with the local/regional tourism industry. Often the provincial people are supportive

of this approach, but the local and regional industry people are a very hard sell on this. The integrated approach has given us information to let us share a vision of the visitors who are coming now and who could come - a shared place to start from. Here again, it is important that all players were examined and recommendations made about all of our performances including those of Gwaii Haanas management, in order to maintain this shared place concept.

As a tourism manager, I have found it challenging to work with various partners attending travel trade shows. The challenge has been how to describe our market readiness and in what category we should be placed or promoted. The product or experience in Gwaii Haanas is not typical aboriginal tourism, or natural, or cultural tourism products: we are an amalgamation of these and more. Cultural Landscape was a term coined in planning years ago to try and capture this concept.

The idea of the cultural landscape as a marketing concept is a key place for us to start to create appropriate demand for a new product: to create a new category and celebrate it and sell it to the world. Cultural landscape has been confirmed in this study as a possible brand for Gwaii Haanas. A brand that would help us meet the needs of many players due to its uniqueness - the Management Board, the local community, the natural and cultural features of the archipelago, the Council of the Haida Nation, the tourism partners whose mandate requires they show that they are promoting the region.

In keeping with our partnership in all aspects of managing Gwaii Haanas, we will be working first with the Management Board to define what this means on Haida Gwaii, and especially in Gwaii Haanas. We will also be working with Parks Canada to develop the concept to be used at international travel trade shows and in other promotional efforts as a marketing idea.

Conclusion

In an era of limited budgets and staff to accomplish management goals, partnership has become the word of the day. In such a work environment, socio-economic studies must also change to provide results that reflect the integrated approaches now occurring regularly throughout the tourism industry.

New studies need to highlight new issues and put them into an integrated framework for the managers to see and understand quickly. Park managers are now faced with balancing all their longstanding management objectives but also understanding and managing for economic viability of communities and businesses. Tourism marketing professionals are now faced with understanding the same issues that park managers face daily - balancing use with maintaining the integrity of natural and cultural values, to ensure a sustainable tourism industry; balancing demand with supply and the needs or limits of both.

The integrated approach is a good place to start to understand our visitors and the dynamic of their visit. We can look at the demand side, the supply side, and the potentials for the future in an integrated and proactive approach. Integration lets us put the big picture all together in a relatively painless and affordable manner.

Conclusion

The integrated approach aims to develop effective, sustainable tourism plans that reflect the shared perspectives of the stakeholders in the tourism system, the full range of potential tourism impacts, and the realities of the marketplace. It has proven useful in bringing these views together in ways that can help tourism to make its full contribution to the quality of life, the economy, and the environment of the host area.

This paper discussed the early stages of integrated planning in two cooperatively

managed heritage areas. Each adapted the approach to their own situation, but both were able to develop a clearer understanding of the tourism system and its outcomes.

Carried to its next level – as in Kangaroo Island, South Australia – the integrated approach uses performance indicators to guide management actions. Few other models include a feedback mechanism to monitor plan effectiveness or can be modified to suit a changing environment. The parks here have yet to incorporate visitor outcomes into their ecological monitoring programmes, but those discussions have begun.

The costs of these planning exercises were consistent with those for plans using traditional approaches. With any plan, time and financial costs are minimised with a clear and shared understanding of the task and relevant information prepared in advance.

Finally, the legislative and policy environment has a profound effect on the success or failure of tourism plans, yet receives meagre coverage in traditional tourism planning models. If for no other reason, an integrated planning model may warrant consideration in any planning situation.

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ECOLOGICAL AND ECONOMIC SUSTAINABILITY OF TROPICAL REEF SYSTEMS: ESTABLISHING SUSTAINABLE TOURISM IN THE EXUMA CAYS, BAHAMAS

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Abstract: *The Bahamas is a physically unique country quite unlike any other in the Caribbean; the archipelago is made up of hundreds of islands stretching over 1000 kilometers, with over 30 inhabited islands. The country is subdivided into island groups, but the most populated island and location of the capital, Nassau, is in New Providence. The Bahamas represents one of the most popular tourist destination in the wider Caribbean and entertains two tourism markets: 1) cruise ship and resort (overnight) tourism focused on the cities of Nassau and Freeport, and 2) out-island tourism that focuses on yachting, beach-going or fishing on the more remote islands. The Exuma Cays are located southeast of Nassau in the central Bahamas and are advertised as the "Sailing Capital of The Bahamas". Cruising yachts can pass through the Exumas en route to the wider Caribbean. This archipelago of low-lying islands is one of the most pristine and beautiful areas in the Bahamian island chain. The region offers numerous protected harbors and anchorages as well as one of the first marine fisheries reserves, the Exuma Cays Land and Sea Park. The very success of the Park as a "no-take" zone has attracted an increasing number of visiting yachtsmen to the Exumas. This yearly increase in visitor numbers has stimulated local businesses to provide services and build infrastructure according to expediency rather than a concern for long-term environmental impacts. Now that symptoms of ecological degradation and tourism impacts are becoming visible within the developed areas of The Bahamas, there is a tremendous need to direct Exuma tourism to that which will sustain rather than destroy the environment, the very product marketed and sought.*

In order to gain accurate data on visitation patterns in the Exuma Cays and formulate recommendations for regional tourism monitoring and management, a visitor survey was conducted in Nassau, New Providence and throughout the Exuma island chain. Two methods were utilized to conduct the survey: 1) in-person interviews and 2) mail-out questionnaires. A total of 124 in-person and 560 mail-out questionnaires were completed over a one year period.

The survey questionnaire was divided into three sections in order to 1) characterize who visits the Exumas, 2) understand why they come, and 3) define what they are seeking. The data collected was then used to determine the impacts of tourism on the Park. For example, it was found that over half of Exuma tourists are first time visitors. Park management is faced with the task of educating these visitors as to the fishing restrictions and other regulations such as anchoring and garbage disposal. This requires time and staff support from a marine park that lacks specific plans and adequate financial backing. It is now important for the Park to create a clear management plan, a strategy for financing park activities in the future and new regulations to preserve the natural resources upon which both fishing stocks and visitation are dependent.

Keywords: *parks and protected areas, recreation, ecotourism, conservation, environmental impacts, management planning*

Introduction

The prominence of tourism as the world's largest industry constitutes both a challenge and an opportunity, as it can either destroy

precious ecosystems and natural resources or contribute to their conservation and economic growth. Tourism facilities and services consume large quantities of land, water and energy as well as produce significant volumes of waste and effluent. The environmental impacts of tourism, especially mass tourism, are no longer local, but also directly contribute to global marine pollution, climate change, ozone depletion, and loss of biodiversity.

In tropical island systems such as the Caribbean, tourism is essentially a coastal industry. The majority of tourism facilities are sited within 800 meters of the high-water mark, in a zone that can be both unstable and vulnerable to geological and oceanographic phenomena. As a result, very little disturbance is required to destabilize such environments and lead to significant ecological degradation both above and below the water. Unmanaged tourism growth can destroy pristine terrestrial and marine resources, contaminate water supplies, place stress on waste treatment and disposal systems, and render areas unprotected from storms and ocean surges, thereby disrupting the unique features of islands that appeal to tourists.

At the same time the threats and poor status of tropical marine resources are being documented, there is a call for integrated coastal zone management from island nations and environmental organizations. Integrated coastal zone management aims to develop plans for sustainable use of coastal resources. The concepts of "sustainable development" and "sustainable resource use" embrace the notion that one *can* develop a way to use resources in ways that do not restrict the options of future generations to use the same resources.

Developing sustainable tourism in the tropics is especially difficult due to the fragile nature of island systems. Tourist numbers have increased faster than the infrastructure and technology have been put in place to treat pollutants, maintain energy supplies and provide adequate transportation. The

geology of tropical island systems also poses a problem for proper solid waste management and fresh water supplies. The Bahamian archipelago, for instance, is made up of a relatively young carbonate bank system dominated by lithogenic and biogenic production of calcium carbonate sediments. Because limestone dissolves in rainwater and leaves very little residue, the soils throughout The Bahamas are extremely thin and patchy (Sealey, 1990). The inability of the thin soil to hold water and the highly porous nature of the underlying limestone bedrock result in a lack of surface fresh water and a limited amount of ground water.

Sustainable Tourism: The Bahamas' Position

The Bahamas is ahead of many countries in the wider Caribbean in its planning for sustainable development. The Ministry of Tourism has taken a leadership role and established a Sustainable Tourism/ Eco-tourism unit which has been given the mandate to drive the sustainable tourism effort for the industry. The Ministry of Tourism has also commissioned a comprehensive Sustainable Tourism Policy and Guidelines for the Out Islands of The Bahamas, the first of its kind in the region.

These policies have been initiated out of a recognition that the natural resources of The Bahamas are facing severe threats. Because of the archipelagic nature of the islands, development and the environment are both inter-related and interdependent; coastlines are fragile, and enforcement is extremely difficult. Over the past two decades, the tourism market of The Bahamas has undergone a dramatic period of expansion and change. Traditionally a destination that attracted a selected visitor base seeking serenity, the country was ill-prepared for the changing markets of the 1980's. This boom was spurred by a tremendous expansion in mass tourism vehicles, especially the cruise industry and the all-inclusive resort phenomenon.

Today, The Bahamas leads the Caribbean region in both number of tourists and tourism revenues. In 1995, The Bahamas received 3,238,255 visitors, and visitor expenditure accounted for a total of USD\$1.346 billion (Bahamas Ministry of Tourism, 1995). Visitor nights totaled 9,031,455. Tourism provides approximately 50% of The Bahamas GDP and employs directly or indirectly 40% of the work force (50,000 persons). Because of the island geography of the country, The Bahamas can protect and promote two tourism markets: the mass tourism market for resorts and cruise ships such as has been developed in Nassau, and the ecotourism market in the Out Islands (Sullivan Sealey, 1999). The “two market” phenomena in The Bahamas requires two types of infrastructure planning and development. Protecting the out-island experience and high environmental quality of the more remote island groups has been a priority for the Ministry of Tourism as well as local communities.

Coastal degradation in a relatively small area, such as New Providence, can provide “lessons learned” for the rest of the country, and particularly the Exumas Cays. To provide better planning and management for the fragile tourism markets of the Out Islands, the following questions were addressed via a socio-economic survey of visitors to the Central Bahamas:

- What is the nature of tourism in the Exumas?
- How is tourism influenced by the presence of a marine protected area such as the Exuma Cays Land and Sea Park?
- What issues need to be considered for sustainable tourism development?

The History of Bahamian Tourism

Although the birth of tourism to The Bahamas occurred as early as 1851 when the Ba-

hamian government first planted the seeds of an ambitious program of promoting island visitation, it did not truly flourish until the end of World War II. Before the 1900’s, less than 500 tourists visited Nassau each winter. In 1914, the Bahamian government created a Development Board to increase tourism to the islands, but the outbreak of World War I and the prohibition era that followed greatly slowed the growth of the Bahamian tourism industry.

Following the Second World War, Bahamian tourism began to increase tremendously. This was primarily due to the improvement in air service, as a growing number of daily flights into Nassau brought waves of visitors from both Florida and Cuba. The Bahamas’ old world charm, cheap goods, warm waters and comfortable climate were no less important when it came to attracting tourists to the islands. By the mid-1960’s, Nassau was receiving 7,500 visitors a day and the Out Islands up to 4,000 (Pavlidis, 1997). The motivation for this new tourism movement came from the promotional advertising undertaken by the Development Board, which was to become The Bahamas Ministry of Tourism in January of 1964.

As The Bahamas became known as a year-round tourist destination, money poured into the country only to be invested as fast as it arrived. Both wealthy Bahamians and foreigners alike purchased property throughout the Out Islands to build permanent residences or vacation retreats. Even the Exumas began to receive a trickle of tourists, as a few scant yachts arrived in the cays. Then on July 10, 1973, The Bahamas became independent after 300 years as a British colony. Independence furthered The Bahamas growing connection to the outside world, and tourism continued to rapidly expand in Nassau as well as in the Out Islands.

Today, visitation to the Out Islands makes up approximately 16 percent of all Bahamian tourism (Bahamas Ministry of Tourism, 1997). Although the Exumas are currently one of the least visited Out Islands in The Bahamas (4.5% of Out Island stop-overs), this may soon change (Bahamas Ministry of Tourism, 1995). The Exumas' natural beauty and proximity to Nassau makes these islands an increasingly attractive tourist destination, especially for cruising U.S. yachtsmen. With the Cays' crystal clear waters, isolated anchorages, land-locked harbors, and 365 cays to navigate and explore, it is no surprise that the Exumas have recently become known by yachtsmen as the "Sailing Capital of The Bahamas".

The Exuma Cays Land and Sea Park

The most pristine and possibly the most beautiful area in the Exumas is located within the Exuma Cays Land and Sea Park (ECLSP). The Park, a designated fisheries reserve, is located in the northern extent of the Exuma island chain, 80 km south-east of Nassau. Although the Park covers a 56,410 ha area, only 1,460 ha (2.5%) is land (Sluka et al., 1996). When the Government of The Bahamas established the Park in 1958, the by-laws allowed for a daily catch quota per boat. In the 1970's, commercial fishing by Bahamians began to escalate within the Exuma region and the Park. Many of these fishermen utilized chlorine bleach when spearfishing for spiny lobster, *Panulirus argus* (Campbell, 1977). By the 1980's, fishing pressure within the ECLSP had increased so dramatically that in 1986, The Bahamas National Trust enacted new by-laws making the entire area a "no-take zone". The new designation made the Exuma Cays Land and Sea Park one of the first and largest marine fisheries reserves in the wider Caribbean. The very success of the Park as a "no-take" zone has attracted an increased number of visiting yachtsmen to the Exumas, coupled with heightened development of

privately owned islands. Visitation to the Exuma Cays Land and Sea Park has increased tremendously since the early 1960's, when less than 25 yachts passed through the Park in a single winter season. By the late 1970's, the number of boats within the Park had increased to 50 a day. The local Bahamians also began using the Park more, particularly during the summer months. Articles in yachting magazines and cruising guides helped to increase the awareness of the Park, and by 1994, an estimated three thousand foreign yachts cruised to the Park annually. Records show that the number of boats and the length of stay continue to increase each year (Figure 1).

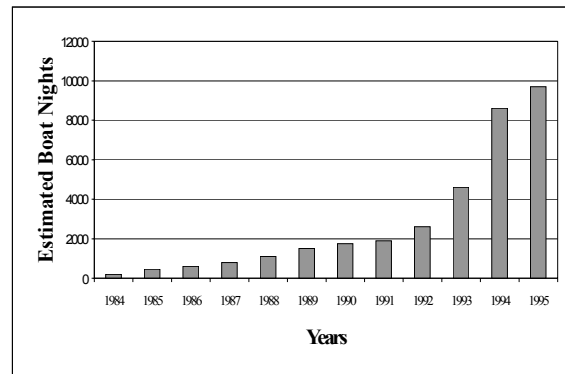


Figure 1. Yearly anchorage in the Exuma Cays Land and Sea Park (estimated totals based on available Park records)

Visitors provide a significant source of income to the Park through user fees and donations. This revenue is important as the Park strives to become financially self-sufficient and continue to fund enforcement, education, and conservation program development. Although Park management would like tourism to generate revenue and support, the Park does not want to sacrifice its protection of critical habitats and preservation of replenishment areas for commercially important species (Lowe et al., in review). The long-term sustainability of the Park and of its natural resources will depend not only on the Park management but also on a regional plan for sustainable tourism in the Exumas.

	Nassau	Sampson/ Staniel Cay	Warderick Wells	George Town	Mail-out Survey	Total
Total Days	6	8	6	3	-	23
Weekdays	4	3	5	3	-	15
Weekend days	2	1	1	0	-	4
Holidays	0	4	0	0	-	4
Total #	34	21	36	33	560	684

Questionnaires

Table 1. Summary of tourism survey sampling effort

Materials and Methods

The survey methods were developed as a pilot project to outline basic information that can be used to develop management strategies for sustainable tourism within the Exuma Cays region. The survey can be used in the future to make temporal comparisons as to the impact of management actions or lack thereof.

In order to match tourism marketing to the product and at the same time protect the Exuma Cays experience, specific information was needed from the consumers (the visitors). A formal questionnaire was designed that targeted visitors to the Exuma Cays and to the Park. The questionnaire consisted of 33 questions that were divided into four sections; each section was organized to gather a specific type of information:

- The first section characterized the type of tourist who visits the Exuma Cays.
- The second section focused on the reasons why tourists choose to visit the Exumas.
- The third section contained questions about their visit to the Park.

The final section requested the visitors to provide any additional comments and recommendations they might have for improving the Park and the Exuma Cays experience.

The questions developed were primarily closed-ended with unordered responses except for four open-ended questions that required the respondent to provide lists or additional comments.

Two methods were utilized to conduct the visitor survey: 1) in-person interviews, and 2) mail-out questionnaires. The in-person interviews were conducted over a one-year period

(July 1997 to May 1998) using the formal questionnaire in Nassau, New Providence and three locations within the Exuma Island Chain (Table 1). Surveys were conducted on weekdays, weekends and holidays throughout the year. For implementation of the mail-out surveys, mailing lists were obtained from the ECLSP Support Fleet as well as from several charter boats that visit the Exuma Cays. One questionnaire was sent to every individual/ household on the lists, totaling 1,852 questionnaires.

In addition to the tourism survey, a summary of the Exuma Cays Land and Sea Park Visitors' Log was compiled that included visitors' date of entry to the Park, country of origin, number of persons on board, length of stay, number of prior visits, and activities of interest. Log entries were taken from January 1, 1996 to February 2, 1998.

Results

Summary of Survey Effort

- Total number of in-person interviews completed was 124.
- Total number of mail-out questionnaires returned was 560.
- There was a 30% rate of return for mail-out questionnaires.
- Total number of questionnaires completed was 684.

Characteristics	% of Sample
SEX	
Male	54.7
Female	26.3
Couple	7.8
No Response	11.2
AGE	
under 20	0.5
20-29	2.0
30-39	6.8
40-49	19.3
50-59	39.2
60 +	32.2
HOUSEHOLD INCOME	
< 20	5.4
20-40	18.9
40-80	32.4
80 +	43.3

Table 2. Demographic profiles of total visitor sample

- Total number of Visitor Log entries taken was 871.

The survey results established several key issues that need to be addressed within the Exuma Cays. Each of these issues will be addressed and presented in the form of specific recommendations for regional tourism monitoring and management.

- **Exuma visitors tend to fit into a narrow demographic profile, indicating that the Exumas currently attracts a very specific visitor type.**

It is only possible to enter the Park by boat, and there are very few charter operations in the area. Thus, it is not surprising that the majority of visitors surveyed were yachtsmen with privately owned boats (96%). Over 80% of these visitors were from the United States, primarily from the state of Florida. Most visitors were in their fifties or above (Table 2). Only 9.3% of the study population was under forty years old. Re-

ported annual household income of the visitors surveyed was primarily greater than \$80,000 (43.3%) or between \$40,000 and \$80,000 (32.2%). In order for the Park to retain support and build stakeholder value, management must consider the expectations of this group of visitors. Recommendations for tourism management within the Park can be developed based on this visitor profile.

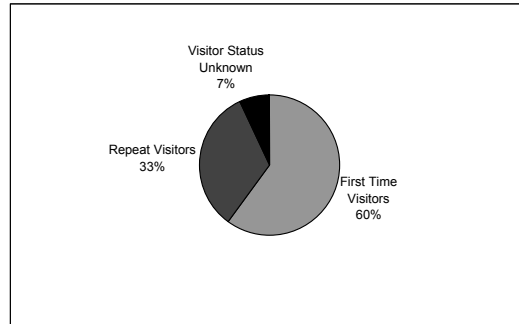


Figure 2. Comparison of first time versus repeat visitors to the Exuma Cays Land and Sea Park in 1997

- **There are more first time visitors than repeat visitors to the Exuma Cays Land and Sea Park.**

According to the ECLSP Visitor's Log, over half of Park tourists are first time visitors (Figure 2). Park management is faced with the task of educating these visitors as to the fishing restrictions and other regulations such as anchoring and garbage disposal. This requires time and staff support from a marine park that lacks specific management plans and adequate financial backing. In addition, many repeat Exuma visitors do not stop in the Park. There is also less incentive for repeat Exuma visitors to re-visit the Park, as much of the Exumas is perceived to be of similar environmental quality, and no fees are charged for mooring or resource use outside of the protected area. This should be a critical management issue for both visitor education and appropriate assessment of resource use by visitors throughout the region.

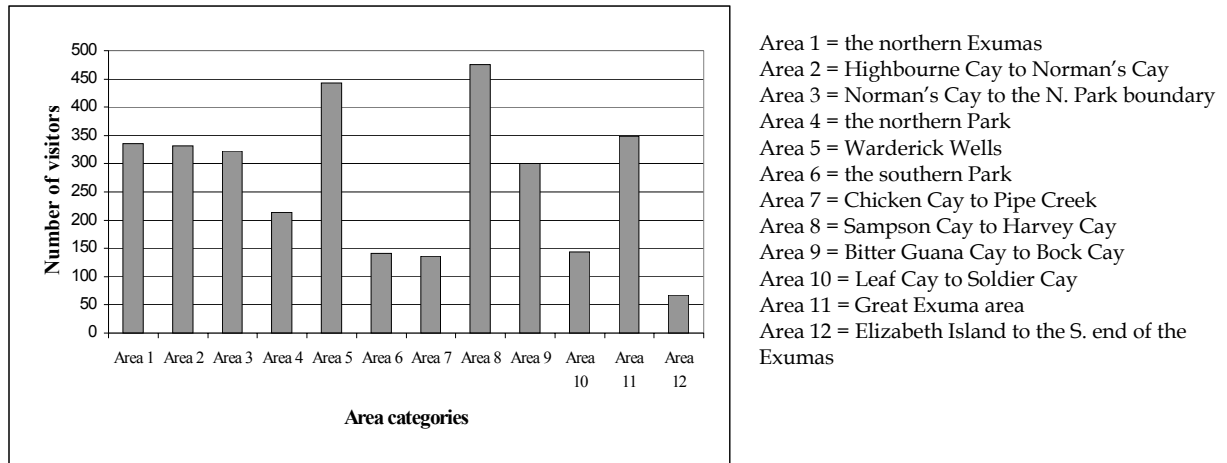


Figure 3. Distribution of areas visited by yachtsmen in the Exumas (from north to south)

- **Most yachtsmen do not target the Exuma Cays Land and Sea Park as a single tourist destination or motivation for visiting the Exumas.**

Although the Park, Staniel Cay and George Town are tourist “hot spots”, most visitors do not have one particular destination. Instead, the yachtsmen “cruise” the Exuma island chain while over-nighting in many areas throughout the region (Figure 3). Although yachtsmen briefly visit many Exuma islands, the visitors surveyed spent the majority of their time in Nassau (38%) and the George Town, Exuma area (36%). The average length of stay of the respondents was as high as 28 nights in George Town and 23 nights in Nassau. The visitors averaged 7 nights in the Exuma Park. This again provides insight to the visitors’ perception of “wilderness” environments and their lack of appreciation for any differences in environmental quality inside versus outside the Park.

- **The Exumas islands represent a natural or “wilderness” experience for most visitors, and they do not want tourism infrastructure or services located within the Park.**

Most visitors ranked the “natural beauty” of the area as their primary reason for visiting the Exuma Cays region as well as the Park. Low priority is given to services or activities as motivations for tourism (Figure 4). Visi-

tors do not want tourism infrastructure such as hotels, bars, restaurants and water craft rentals in the Park. Instead, Exuma visitors want to experience nature through SCUBA diving, snorkeling, boating or hiking (Figure 5).

- **The new user fees initiated in November, 1997 and the recent development within the Park is weakening stakeholder support.**

Ninety-eight percent of the visitors surveyed knew about the Exuma Cays Land and Sea Park, and most of these visitors were aware of the fishing restrictions and other regulations. Thus, the Park seems to be highly publicized within the Exumas. Most visitors reported that they knew about the Park from publications such as *The Exuma Guide* (40%) and from “word of mouth” by previous visitors, teachers or friends (33%). There is an extremely high level of communication among yachtsmen in the Exumas, but there is limited communication and outreach from Park management itself. This has led to conflicting perceptions of the mission of the Park among visitors, Exuma residents and The Bahamas National Trust. Visitors feel that the new user fees are being used for private gain, and residents see the Park being cleared for the development of private homes for foreign investors. At this point, it is important that a management plan is developed that clearly outlines the Park’s mission as well as

goals and strategies that provide support and rationale for the vision.

Discussion

Tourism development in tropical island systems produces five measurable and avoidable threats to the environment (Pattullo, 1996):

- Water quality threats include contamination of ground water, land-based sources of pollution to near-shore marine environments and depletion of fresh water resources. Many water quality threats are associated with water use patterns (e.g., sustaining a golf course) and wastewater treatment.
- Solid waste threats are particularly difficult on a carbonate island as solid wastes dumped in landfills accumulate and create a more difficult problem with time.
- Transportation threats include the physical impacts on land and sea to create airports, roads, marinas, and navigation channels as well as associated problems with fuel storage.
- Energy threats include the infrastructure needed to meet the energy needs of tourism, including power generation, tank farms, communications infrastructure and power delivery.

Harvesting threats include the removal or depletion of species such as reef fishes for sport or consumption by tourists.

The provision of tourism services on remote islands is expensive and problematic. Often, practices used in a low-density setting have only a minimal impact on the environment (the solution to pollution is dilution). Sustainable tourism planning requires a vision as to the density or level of visitation that can be tolerated by the available infrastructure and the local environment. This planning requires a partnership of managers,

local stakeholders and scientists to build an understanding of the expectations and condition of ecological systems.

The Exumas Cays provide an excellent study site for the issues and strategies for sustainable tourism development. There is already a highly valued and desired product, a high-income tourist market, and sufficient ecological data on the area to assess degradation and potential recovery. Several key recommendations can be made from the survey of Exuma visitors:

1. *Understand the market.*

As in many tourism markets, the history of Exuma tourism is dynamic and marked with boom and bust cycles. Once a haven for pirates and drug runners, the Exumas Cays evolved into a prime destination for active charter boat operations and island resorts. Poor marketing strategies, the continued presence of drug trafficking activities, and the revocation of the charter boats' duty free status eventually lead to the collapse of what was once a prosperous industry. Today, there are very few charter operations remaining in the Exumas, and many of the larger hotels have been deserted, leaving unsightly remains and no economic benefits.

Yachtsmen with privately owned boats now dominate the Exuma tourism market; this market continues to be highly volatile and linked to global economic conditions. Exuma tourists are concerned about the user fees and development within the Land and Sea Park, the future of Elizabeth Harbour in George Town, and the increased development throughout the island chain. Yachtsmen visit the Exumas to enjoy the undeveloped state of the environment, not for the presence of resorts, shopping malls, or jet skis. It is important that the Ministry of Tourism, as well as foreign and domestic businesses, understand the current tourism market to both conserve the product and value it appropriately.

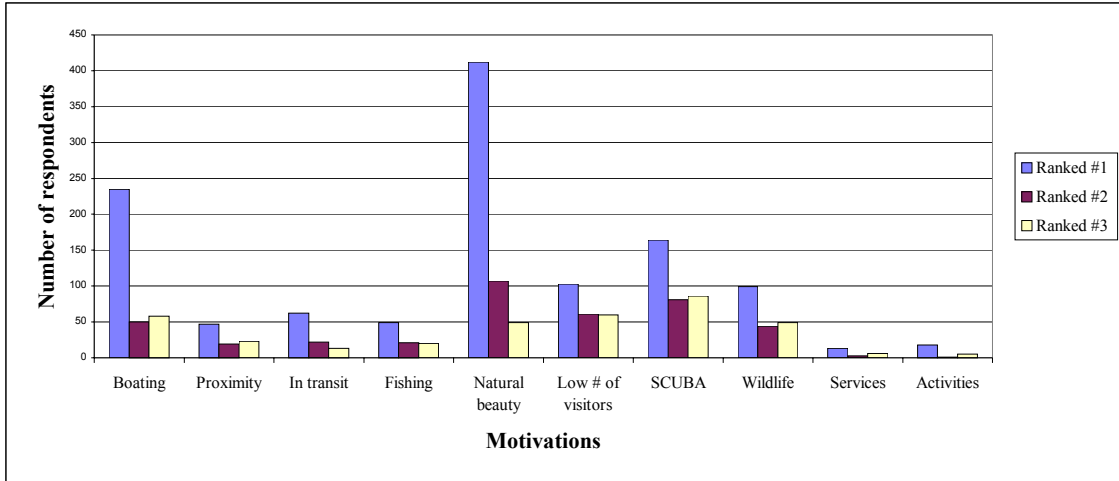


Figure 4. Tourist motivations for visiting the Exuma Cays

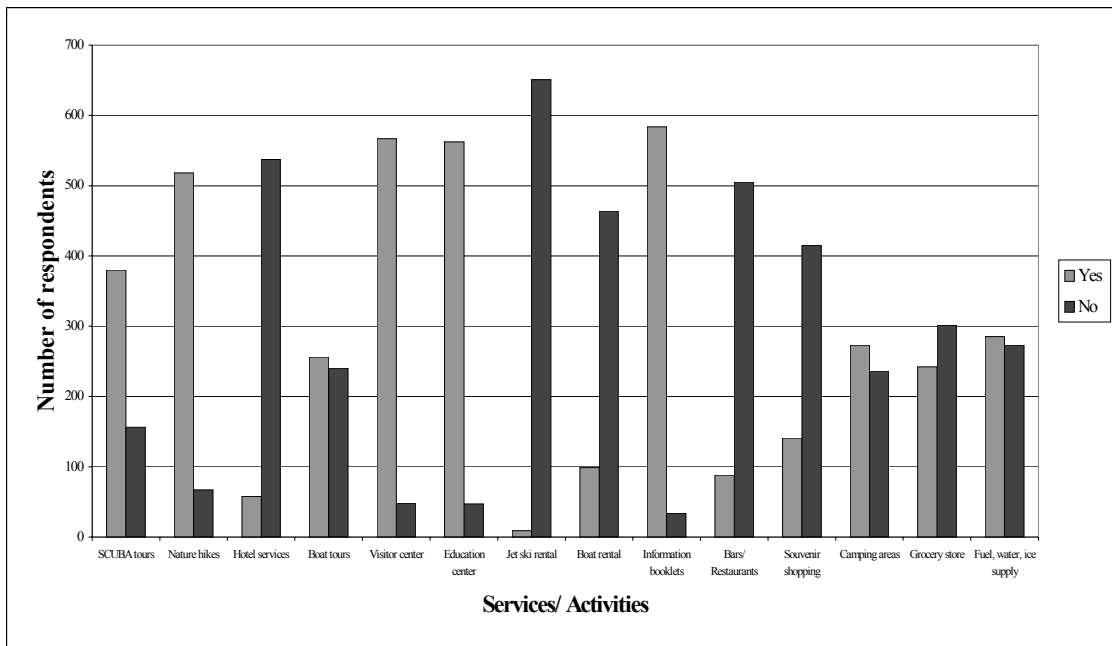


Figure 5. Services and activities visitors would allow in the Exuma Cays Land and Sea Park

2. *Promote inter-agency and region-wide cooperation for planning infrastructure development and marketing on a regional level.*

The Ministry of Tourism, The Bahamas National Trust, the Exuma Cays Land and Sea Park management, the local government of George Town, foreign and domestic tourism operators, and local residents maintain a vested interest in the Exuma Cays tourism industry. Unfortunately, no one agency is responsible for coordinating a common tourism message. Visitors to the region do not distinguish between jurisdictional boundaries, and the success of any one entity, whether it be the Park or particular settlement, depends on regional cooperation for collective visitor management. Presently, the Park has initiated programs to protect the seabed (e.g., installing mooring buoys in sensitive or heavily used areas); however, programs such as these are needed in other areas of the island chain. A regional planning, management and regulatory structure needs to be developed for the Exumas that includes the Park as one component for the protection of the larger ecological system.

3. *Increase stakeholder value by providing an outreach and education program for both visitors and residents.*

Residents and tourists alike place a high value on the Exuma Cays experience and feel that they have a "stake", or investment, in the region. These stakeholders should be provided with information and insight into the decision-making process. It is vital to implement an outreach and education program that emphasizes the unique environmental quality of the Exumas and the associated costs of maintaining this coastal system. Stakeholders, particularly visitors, need to be informed on how the Park, the local government and the central government are meeting their needs (limiting visitors, addressing the threats from tourism development, practicing responsible resource management) in order to maintain support for the region and the industry.

4. *Implement and integrate resource management planning on a region-wide basis.*

The Park is one protected area within a larger ecological and economically linked region. Within this region, the goals and objectives of resource management need to be clearly articulated. Management programs within areas such as the Park or Elizabeth Harbour need to address specific ecological measures of success. For instance, a strategy to designate anchorages or provide mooring buoys would include specific objectives to protect corals, seagrass beds or other seabed communities. The cost of management for specific ecological goals needs to be addressed through a financial plan - how much money is required to protect the ecology of the area and provide a unique tourism experience?

Final Note

This pilot study served as an effective tool for gathering initial information to develop tourism management strategies, however, because the tourism market is dynamic, information on the current visitor structure is reliable for only a specific amount of time. A procedure for monitoring visitors should be developed to keep tourism information updated. In-person questionnaires are relatively inexpensive for local agencies or businesses to conduct, and a simple database can be used to store and analyze survey data.

In the Exumas, the Exumas Education Resource Center or the Ministry of Tourism should be responsible for monitoring tourism trends. The agency should develop a questionnaire that can be distributed every 2 to 3 years to survey visitors to the region. Currently, at least 200 questionnaires should be completed; however, this number should change respective to visitor levels. Surveys should be conducted in areas such as Staniel Cay, the Park and George Town. Once the information is collected, the agency in charge should be responsible for analyzing

the data, disseminating the results, and updating sustainable tourism strategies.

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PLANNING AND MANAGEMENT OF MARINE PROTECTED AREAS IN CUBA

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Abstract: *The status of planning and management of marine protected areas in Cuba is less developed when compared with terrestrial protected areas. Moreover, when we talk about works on marine ecosystems we are referring mainly to the case of marine segments of protected areas that are mostly terrestrial.*

Among the main planning works carried out up to the level of management guidelines, we have those relating to the Sabana-Camagüey Archipelago -- the largest insular group in Cuba. Those works have been supported through a GEF and UNDP project. Another outstanding action is the beginning of the implementation of Punta Francés Marine National Park, the first of its kind in Cuba, which already has administration offices, a visitor center, management guidelines for public uses and a monitoring system.

Keywords: *Land planning, Parks and Protected Areas, Referred*

Introduction

Only recently has the design of marine protected areas in Cuba been addressed thoroughly and comprehensively in our country. This situation results from different reasons such as poor knowledge of marine zones, and existence of a more rooted tradition in carrying out works on the above-sea part of the territory, either as studies or management of areas. The latter has been influenced by the fact that it is costly to address management of marine territories requiring at least boats and safe communications, not to say specialized personnel.

Therefore, the main works that have been accomplished can be grouped into management (basically protection) of marine segments of protected areas, mainly terrestrial ones. This is the case of Desembarco del Granma National Park, a pioneer in works of this kind, where two shallow-water areas with formations of reef crests and seagrasses (*Thalassia testudinum*) were included within the park in order to protect colonies of queen conch (*Strombus gigas*), manatees (*Trichechus manatus manatus*) and reef crests.

Another approach to the sea environment has been the protection of species such as the flamingo and the manatee, two threatened species that stand out for the size of their populations in certain sites. Examples of these areas are the Fauna Refuges at Máximo River and Lanzasillo Pajonal Key.

In 1996, Punta Francés was proposed as a National Park, and its implementation started that year too through basic protection and the creation of a visitor center. That was the first time an area was chosen on the basis of classic criteria on marine coastal protected areas because this zone has high development of coral formations and other related ecosystems, with traditional public use of diving. The beginning of tourist cruises to that area for sun-and-beach enjoyment contributed to the establishment of the area because, in order to allow this intensification in the use of the area, a previous requisite was established: the need to protect the area through its declaration as such, the establishment of permanent per-

sonnel, monitoring and mounting of infrastructure for environmental interpretation.

Planning of Marine Coastal Subsystems within the National System of Protected Areas

Two complementary levels are carried out nowadays. The former level is referred to as the national level, where an analysis is made about coverage and representativeness of marine ecosystems and main values and potentialities of the sea shelf regarded both from the fishing viewpoint and from the specialized public use (mainly diving) standpoint. The latter level is supported by specialized tour operators (diving, life aboard) interested in protecting their sites of operation, which in many cases coincide with the proposed protected areas. Such approaches are regarded a positive step towards the conservation of these territories, given the "softness" of these modalities of public use and lack of resources to protect and implement them effectively.

Concerning fisheries, the steering ministry for this activity intends to set a program of protection of zones through Fishery Reserves, a conception very similar to protected area categories such as Fauna Refuges.

In order to accomplish the process aimed at refining this subsystem and its implementation, a compatibility process (valid for both sea and land) has been designed through the Decree-Law on Protected Areas that has already been approved, is under implementation by the national bodies and is in the process of being officially issued by the Council of Ministers.

A second level bearing links with the former one is that carried out in a very important region for our country both from the conservation and the economic standpoints, the Sabana-Camagüey Archipelago, our largest system of keys and our second relevant economic zone in the Cuban sea shelf. In this

area, in addition to traditional fishery values, a wide plan for tourism development (mainly sun and sand tourism) is envisaged. This plan is intended to assimilate natural territories (keys) with rich biodiversity and naturalness that must be preserved. In order to do so, Cuba, with the collaboration of the Global Environmental Fund (GEF) and the United Nations Development Program (UNDP), is implementing a project on sustainable development and conservation. The first phase of this project included aspects dealing with planning and design of protected areas as one of the most important measures to be undertaken. The first phase has provided the main experiences and guidelines that drive the current actions on planning of protected areas in Cuba. They are also the foundation of the second phase of this project.

Experiences on Planning and Management in the Sabana-Camagüey Archipelago

The first definition in the strategic approach for that region is conceiving the Sabana-Camagüey area (keys and sea shelf) and the swampy areas in the main island as a special unit ranking first in the Cuban National System of Protected Areas, the Sabana-Camagüey Special Region for Sustainable Development. This unit represents a new Multiple-Use Protected Area that would be added to the 5 existing ones set up by the Decree-Law 197/95. The remaining Sabana-Camagüey Ecosystem is conceived as the buffer zone of this Special Region for Sustainable Development due to the high degree of functional connection between the SRSD and the other units (main island and deep waters) as well as the difference both in natural and socioeconomic characteristics (very high degree of anthropicity, predominance of agrarian and livestock activity, etc.) and in knowledge (deep waters are practically unknown) existing among these units, which implies different approaches to conservation, administration and manage-

ment of the region both as a whole and within its constituent parts.

Corresponding to Category VI of the International Union for the Conservation of Nature (IUCN), this Multiple-Use Protected Area or Special Region for Sustainable Development (SRSD) has been proposed as the framework of a protected area system with categories including National Parks, Ecological Reserves, Outstanding Natural Elements, Managed Flora Reserves, Fauna Refuges, Protected Natural Landscapes and Protected Areas of Managed Resources, all of them totaling 29 protected areas included in the SRSD.

The management approach implied in the aforementioned conception prioritizes the conservation goals in close connection with and as factors to increase and diversify both the tourist activity and fundamental and applied scientific-technical research carried out by natural sciences within the framework of the concepts on sustainable and diversified economic development. In other words, this is the way protection highly integrated to the process of sustainable economic development in the SCA is conceived.

Previous to the beginning of the GEF project, in 1993, 8% of the territory of the SRSD was covered by proposed protected areas. As a result of this project, over 11% of the territory has been covered by proposed protected areas. This figure stands for nearly twice the national average and a substantial improvement in quantity and quality resulting mainly from the integration of the marine area and more development in the categories of National Park and Ecological Reserve (Category II of IUCN).

Proposed Protected Areas

To establish the new proposed system of protected areas in the SCA, the previous studies (Muñiz Gutiérrez, 1974; Local Government, 1984; Martínez Hernández, 1989; ICGC, 1991; CNAP, 1995) and results (in-

cluding partial results) obtained from this project that sets up ecologically sensitive areas were taken into account. On the grounds of the definition stating that the whole region of the SCA and the swamps build up an ecologically sensitive area, they are proposed as a singlewide unit (SRSD). The criterion of ecological sensitivity was also used to ratify, create and/or re-delimit units of protected areas of stricter categories (higher ecological sensitivities) and to zone the remaining territory of the SRSD up to the level of zones of intensive infrastructure development (minor ecological sensitivities), on the basis of the magnitude and degree of clustering of the areas.

Besides the previous elements that were used as a starting point, others were also taken into account to redefine the system: criteria on management, administration and system design, and limits of protected areas (representativeness, repeatability, unity, relative feasible minimal sizes, border effects, flyways, active management, land-sea links, etc.) that could provide an answer to conservation elements.

Such an approach allows us to set up an action gradation for the whole area of keys. As a standard, the focuses of conservation values become protected areas of strict categories (21.7% of the keys); mangrove forests and littoral zones (sand dunes, beaches, lagoons, etc.) not included in previous protected areas as well as remaining terrestrial or submarine sites of high or very high ecological sensitivity which are regarded as different conservation zones (over 70% of the keys); coastal sites are protected by other mechanisms (law on coast, environmental impact assessments). The zones of minor ecological sensitivities are then proposed in another gamut of areas ranging from buffer zones, natural sites and recreational sites in nature, different development degrees of activities and infrastructure to zones of intensive infrastructure development (less than 8% of the keys).

The main changes the new proposal introduces are the following:

- Conception of the Sabana-Camagüey Archipelago and the swamps in the main island as a whole in a Special Region of Sustainable Development where actions are coordinately and comprehensively planned and implemented to achieve sustainable development and conservation.
 - Consideration of the remaining Sabana-Camagüey Ecosystem as the buffer zone of this SRSD.
 - Inclusion of the marine part in the system of protected areas of the region (from 1.56% to 8.34%). This complements and enriches this system, mainly if we take into account that the areas included here are, for the most part, the most important and best preserved coral ecosystems.
 - Increase of the degree of significance, extension and management category of several areas, in many cases due to the inclusion of marine elements.
 - Creation of two new protected areas of managed resources that comprise two sectors of the group of keys that are most important to biodiversity. One of these sectors has a great potentiality to be declared Biosphere Reserve while the other is the largest of all Cuban keys and has high potentialities for international declarations, too. Likewise, we consider that at least three of the areas can be assessed in order to propose them later as RAMSAR sites (Caguanes National Park, Río Máximo-Laguna Sabinal Flora Reserve and Cayo Romano Protected Area of Managed Resources).
 - Creation of two national parks and two ecological reserves that together integrate the most important ecosystems in the SCA.
 - Creation of six new protected areas (Cruz del Padre-Galindo Fauna Refuge, Bahía de Cádiz Outstanding Natural Element, Northern Esquivel-Cayo del Cristo Fauna Refuge, Eastern Cayo Cruz Fauna Refuge, Punta Maternillo-Estero Tortuguilla Ecological Reserve and Laguna Larga de Sabinal Managed Flora Reserve).
 - Regrouping of pre-existing protected areas and redefinition of their management category, with a trend towards higher categories and more ecotourism use.
 - Decrease of the extension of protected areas in the keys (from 27.4% to 21.77%) due to the trend, in some cases (Cayo Frigoso, Cayo Sabinal), to concentrate the more restricted areas towards the zones where the most important resources to be protected were located.
 - More consideration of the conservation criteria when delimiting protected areas, mostly in those keys with high pressure for the development of tourism infrastructure (Santa María, Guillermo, Cruz, Coco).
 - Slight diminution of the number of areas (as a result of the trend to group them), but considerable increase of their total extension due to the inclusion of marine areas.
 - Few changes (enlargement in Caguanes National Park) in protected areas located in the main island, and non-inclusion of deep waters as they are the goals of later phases.
 - Reaffirmation and precision (re-delimitation in some cases) of pre-existing protected areas.
- Other characteristics of the currently proposed system are the following:
- Since the SCA is an SRSD, the representativeness analyses indicate percentages of coverage and indexes of repeatability higher than the average in the National System of Protected Areas (Box 5-2 and Table 5-3), with over three repetitions of individual strict protected areas per ecosystem (ideal theoretical percentage of coverage in main ecosystems and species, WWF, 19954). In the coverage analyses for the SRSD, strict protected areas occupy a total percentage of 11.50%, which is slightly higher than the one recommended by international bodies (10%) and more than twice the national average (6.6%). In other words, strict protected areas in the SRSD cover 21.77% of the keys (which is logical, as

the keys are basically natural areas and part of the SRSD) and 8.34% of the sea shelf, a figure that we consider relatively low and whose area percentage (the sea shelf is almost three times larger than the extension of keys) considerably reduces the percentage of total coverage of protected areas in the SRSD (11.50%).

- Predominance in extension (but not in number) of National Parks and Ecological Reserves (Category II - IUCN) as an example of their importance and selectivity. They are followed by Fauna Refuges and Managed Flora Reserves (Category IV - IUCN), whose numbers predominate in the SCA and the main island as an example of the differentiation in values existing between both ecosystems.
- No use of the Category Natural Reserve due to its inclusion in zoning (intangible zones) within areas of the remaining categories.
- Coverage of the main and best preserved coral ecosystems through the categories of National Parks and Ecological Reserves.

Guidelines for the Management of Strict Protected Areas

The guidelines presented below will be valid until the Management Plan for each protected area is made. The guidelines refer specifically to National Parks, Ecological Reserves, Fauna Refuges and Managed Flora Reserve of the keys concerned.

- The Management Plan and the establishment of administration infrastructure and personnel are the two priority actions to be undertaken concerning these areas. To substitute for management plans, operational plans can be made.
- Buffer zones will be established outside protected areas, with sizes ranging from 100 and 500 meters wide in their perimeter, according to the case, depending on the intensity of impacts.

- Exceptionally, ecotourist lodging sites will be created only in protected areas with the category of National Park and Ecological Reserve, and these lodging facilities will be located in the buffer zones, the administration area or the public use area.
- The primary indicators that will be used to establish the capacity and modality of ecotourist lodging and infrastructure within those protected areas admitting this type of facilities are:
 - Only one lodging site per area and/or sector (the case of Santa María-Guillermo National Park) in public-use zones and sites already selected.
 - An indicator of 4 beds x km² of the public-use area.
 - An estimate of 10% of the terrestrial and marine protected area may be of public use.
- The establishment of the ecotourist facility will be made according to at least the following requirements:
 - Detailed location and construction license.
 - Environmental license.
 - Minimal space to be occupied, only one-story-building integrated to the landscape and minimally affecting the species of the site. No heavy equipment, such as bulldozers or excavators, will be used for land-clearing or land dragging.
 - Services (gastronomic, information services, etc.) will be established only in the proper tourist facility.
 - Road systems in protected areas will average 3.50 m wide, without pavement or, in exceptional cases, with permeable pavements.
 - When necessary, paths will be 1.50 m wide at most while electricity networks and plumbing will be under them.
 - The systems of electricity, water and waste treatment will be specialized, particularly:

- Electricity: Regional electricity network will be underground or solar cell systems, eolian energy or another form of alternative energy will be used. Artificial illumination should be subtle and minimal at night.
 - Water: Regional piping network or systems that make use of rain, condensation or desalination. Water reuse, recycling and saving by different ways.
 - Wastes: Appropriate and efficient sewage treatment. Systems to treat and extract excrement. In no case will superficial dumping take place with or without treatment.
 - Litter: Litter will be collected in special recipients and taken out of protected areas into the areas so established by the sanitary authorities.
- Trails, routes or other natural options will be made by personnel specialized in coordination with the administration of the area and will require an Environmental License. They will have direct link with the administration area - visitor center. Provisionally, two interpretive trails and/or routes per area and/or sector (case of Guillermo-Santa María National Park) will be considered as maximum for National Parks and Ecological Reserves, and only one for Fauna Refuges and Managed Flora Reserves. No options consisting of exhibitions of captive and/or desiccated animals will be created.
 - Beaches will be kept in their natural state (without facilities), and litter and other wastes will be collected through manual means.
 - Access to beaches in the sectors of public use will be limited to the carrying capacity of the beach and the neighboring ecosystems. The carrying capacity for daily visits will be provisionally calculated in a minimum of 100 m² per bather, according to recent experiences with cruisers traveling to similar ecosystems.
 - The carrying capacity of visitors per day for the remaining territory will be established only according to the trails and natural options prepared by the administration of the area. Provisionally, a maximum of two groups of 10 visitors a day per trail or natural option will be considered, without the figure exceeding 80 visitors a day per protected area and/or sector (case of Guillermo Santa María National Park). In all cases, the maximum group size will be 10 people.
 - The total daily carrying capacity of the protected area will be provisionally established as the relative sum of the lodging facilities, the beach, and the trails and other natural options prepared by the administration, the parts of this sum will be negative when the activities co-exist in time and space (natural resource to be used).
 - The envisaged disturbances caused by pressures of public use will be mitigated by the administration of the area and reviewed, and the indicators used will be made adequate.
 - No infrastructure or action type alien to the interest of protecting nature will be allowed in the areas, especially facilities for support, wastes, etc. in the tourist areas.
 - The signaling and information system will be established according to common criteria that will be issued by the National Center of Protected Areas.
 - As a standard, ecological stations and other research centers will have links with the administrations of areas and vice versa.
 - Rehabilitation and reforestation actions will be implemented with species proper of the site, so the creation of nurseries must be taken into account.
 - Fees on use of the protected area will be established according to the infrastructures, services, and tourists' access.
 - Technical measures allowing gradual recovery of deforested areas and fragile ecosystems such as beaches, sand dunes, mangrove forests, etc. will be established.

Conclusion

- The quest of economic support through different ways (international projects, economic entities using the resources) is vital for the establishment of marine coastal protected areas.
- Fishery Reserves can be an adequate starting point or argument for the creation of protected areas of such categories as Fauna Refuges, National Parks and Ecological Reserves.
- Use bioregional approaches to turn strict protected areas into more flexible categories such as Biosphere Reserves, Protected Areas of Managed Resources, and Special Regions for Sustainable Development.
- One of the main issues to be dealt with when implementing marine coastal areas is tourist use in them, especially the correct determination of carrying capacities that the areas can endure.
- The main guidelines to set up strict areas, as far as the marine part is concerned, have been the existence of well-preserved coral formations, followed by the presence of significant populations of important species from the conservation viewpoint.
- The inclusion of pre-existing marine sectors or terrestrial areas can lead to an increase of the degree of significance of the area and its management category, thus generating better possibilities for conservation. Sometimes, this can even imply a reduction in the number of areas to be protected.
- Use of guidelines in emergent and provisional phases as general rules for planning and management actions to address high-pressure situations on the use of resources.

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MARINA OPERATORS' PERSPECTIVES ON THE COASTAL ZONE IN BRITISH COLUMBIA

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Abstract: *Marina owner/operators in British Columbia can be considered key stakeholders in both the tourism industry specifically and the management of the coastal zone generally. They provide important services to thousands of boaters in the region, and must balance financial viability with maintaining environmental quality. Successful management relies on pertinent legislation and policy implementation, cooperation and coordination between stakeholders and appropriate articulation of all viewpoints.*

Some of the main findings of a recent survey of marina operators reveal the importance of economic issues and an almost equal importance attributed to the need to maintain the quality of the marine environment. A majority favor regulations that maintain the quality of the resource base, though there is also concern about potentially inhibiting and complicated policies. This complex situation required an effective consultation process and coordination, both of which are currently lacking. Funding poses a similar situation at the moment, and formulating an effective working relationship remains a challenge for the tourism industry.

Keywords: *marinas, British Columbia, coastal zone management, coastal tourism, tourism*

Introduction

Marinas play an important role in the coastal marine tourism industry in British Columbia. Their owners/operators can be considered as one of the key stakeholders in

both the tourism industry specifically and the management of the coastal zone generally. They provide an important service to the thousands of boaters who enjoy the spectacular resources of the region.

By the nature of what they provide, where they offer it and how they manage it, operators have to balance the needs of financial viability with the requirements of maintaining the quality of the surrounding environment. If the latter requirement is not met, there is the possibility of eventual deterioration of the main attraction of the region - as the resource base is depleted, so financial problems may eventually ensue from the reduced quality of recreation and tourism experience.

There are, of course, several other groups and many individuals who have both commercial and non-commercial interests in the coastal zone. The successful management of the multifaceted, natural and ambient resources on the region, especially for tourism, relies on pertinent legislation and policy implementation, cooperation and coordination between stakeholders and appropriate articulation of their viewpoints. This paper briefly reviews the context of management decision making for marina operators in British Columbia (BC) and then focuses on marina operators' attitudes to various management issues of the coastal zone. It is based on a survey of marina operators conducted during the summer of 1997. It is hoped that it will provide some useful input

into the evolving marine tourism industry and effective coordinated management of the coastal zone.

Marinas

Marinas are places that provide secure mooring for yachts and smaller boats and a range of other facilities and services. The Italian origin of the word denotes its association with the growth of pleasure boating in its modern form in the Mediterranean region and its emergence in other coastal regions of the developed world. In BC, marinas evolved rapidly from the 1940's onwards as the general population of the region grew, together with the general expansion of recreation and coastal tourism associated with both pleasure boating and sport-fishing. As an important component of the service sector and the tourism industry, perhaps surprisingly, marinas generally have not received significant study other than where - in certain localized situations, there has been a degree of controversy. Certain aspects of user or customer satisfaction have been identified by some authors. Naranjo (1988) for example, identifies a useful checklist of criteria for customer/user satisfaction that clearly would be important for a marina's economic success:

- Cost
- Aesthetic issues
- Security concerns
- Shoreside facilities
- Social atmosphere
- Appropriateness of moorings
- Protection from elements
- Quality of infrastructure
- Privacy and other issues

In order to manage their resources effectively and provide a quality experience in a competitive environment, marina operators ought to be familiar with these criteria. However, there is little information on what marina operators in BC think about the general problems that face them as entrepreneurs and their industry. Indeed, there are no relevant studies of marina operators as a

stakeholder group in the tourism industry or the coastal zone management process. Before we describe and discuss the findings of the survey, a brief overview of the manager's decision-making context in BC is necessary.

The BC Coastal Zone: Tourism and Management

The coastline of BC is approximately 850 kilometers from north to south or 41,000 kilometers in length, if the shore of every inlet and island is included. The rich, coastal fauna and flora together with the diverse and attractive physical environment provide an important set of natural and ambient resources (Wood and Sadler, 1992). There is also a diverse and attractive human environment from traditional native cultures to the Old World charm of Victoria, the provincial capital, and the energy and international *chic* of Vancouver, the major city. The attractions of the region have resulted in a multitude of activities - from large cruise ships to kayaking, from sportfishing to photography, diving and whale watching.

In response, a multi-faceted coastal tourism industry has emerged that continues to evolve as customer and operating environments change. Its growth in BC reflects both private and public sector initiatives. The former is a response by entrepreneurs to the perceived opportunities - the latter a recognition that coordination, effective management through quality control and sophisticated marketing are necessary in today's competitive world. The initiative to accomplish this in the Canadian context shows clearly a greater influence of government than in other jurisdictions which represents perhaps an industry that is still in an evolving state of development and the sheer size and competitive ability of our neighbors.

The governments of Canada and British Columbia are instrumental forces for economic development both through specific policies and indirect activities directed at the

tourism sector. Individual local jurisdictions, such as Vancouver, are also actively involved. For example, the (federal) signing of the Canada-U.S. Bilateral Agreement (1995) -Open Skies- added 1.4 million new airline seats to Vancouver from U.S. cities having significant implications for the cruise industry. The provincial government's tourism strategy includes host training, marketing, regional and sector coordination, and attracting capital investment for infrastructure development. This interest reflects the revenues generated by the industry (close to \$9 billion) with an average growth rate of 7% per year that in turn, has strong employment and multiplier benefits.

However, brief reference must also be made to some of the issues that need attention if growth and quality of tourist experience are to be maintained. In particular, what are the main issues that confront the marina sector of the tourism industry in the coastal region of BC and where are they positioned in relation to coastal zone management generally?

The coasts of the "inland sea" between Vancouver Island and the Lower Mainland are experiencing considerable growth pressures as migrants continue to move to the region so that existing towns and cities expand as new subdivisions are built. Indeed, this phenomenon is characteristic of the Vancouver-Victoria-Seattle triangle as a whole. Industrial growth also requires operating space, especially flat areas. Consequently, development pressures and controversial proposals are particularly apparent in the estuaries; zones which also have prime ecological significance. While the marinas may benefit from the general population growth, there are the disadvantages of crowding, increased costs of shoreline properties and a gradual increase in background pollution which may detract from a marina's appeal.

A major feature of the coastal tourism industry is the sportfishing component - but it is one where there is stiff competition between commercial, recreational and traditional (native) fishing. Unfortunately, the prime sportfish, the salmon, for a variety of

reasons, is facing severe stock problems requiring strict conservation policies. Even though the dollar value to the economy of sportfishing is substantially higher than the commercial fisheries *per fish*, sportfishers and hence marinas are significantly affected by the conservation regulations. This set of problems is complex and is far from resolution; although the Canadian and U.S. governments are, currently at least, engaged in negotiations. At the same time, the provincial government is undertaking fish habitat restoration measures.

There are also unresolved territorial and resource access issues between the First Nations and the two senior levels of government. These relate to both the terrestrial and marine environments.

Recent agreements suggest that these outstanding disputes may at last be on the road to resolution. Although successive governments of BC have gradually formulated a viable set of regulations and procedures for land use planning, the coastal zone still lacks comprehensive regulations and a management strategy. This hiatus partly stems from the jurisdictional disputes between the different levels of government. For example, there is no legislation comparable to the U.S. Coastal Zone Management Act. There has been some recent progress as the Federal Government develops its National Oceans Strategy (Canada Oceans Act, 1996). Similarly, the government of BC recently issued a well reasoned position paper on the coastal zone, recognizing the inherent dangers of the existing form of resource depletion and the need for strategies for long term sustainability (Government of BC, 1998). Furthermore, the impetus to identify and designate Marine Protected Areas, a form of ecological reserve, is well under way. At the regional level, significant progress has been made in the coordination of management of the Lower Fraser River. Also on the positive side, environmental impact analysis is mandatory for any large project involving the publicly managed domain. While the abatement of pulp mill pollution, one of the most contentious coastal

environmental issues, continues, the problem of old growth logging and its impact on the coastal zone remains problematic.

While the issues which impinge on the coastal tourism industry generally and the marina sector specifically are undoubtedly complex, there is clearly an intention to do something about them. However, there is still no agency that deals exclusively with the coastal zone in a comprehensive and coordinated manner (Day and Gamble, 1990).

Given this set of issues that relate to the coastal zone and the potential effects on the tourism industry and the emerging responses by different governments to develop comprehensive strategies, what then are the general attitudes held by marina operators?

Survey of Marina Operators and Owners: Coastal BC

There have been several studies of the leisure and recreation/tourism activities and facilities in the region (Pfister, 1979; Benton, 1984). Understandably, they focus almost exclusively on the demand or customer side of the equation and pay little attention to the tourism/recreation service providers such as marina facilities. In order to remedy this vacuum of information about one of the key stakeholders of the coastal tourism industry, we undertook a mail-out survey of owners/operators of marinas located along the coast of BC. Accompanying the questionnaire was an explanatory letter outlining our interest in the marina operators' concerns about certain management issues known to be facing the industry and encouraging them to respond - partly in the light of statements by both levels of government that some form of comprehensive strategy was forthcoming. The survey was subdivided into six sections:

- background information on the type of marina

- response to recent trends in the operating environment
- response to environmental quality
- specific issues (e.g., cost of fishing licenses)
- preferences for management alternatives
- comments

In the formative stage of the study, visits to marinas and informal discussions conducted with operators, as a form of informal pilot survey, helped frame the suitability of the kinds of issues and questions raised in the actual survey. Government-owned docks, which perform some marina functions were excluded from the study because of their substantially different economic basis to the private sector marinas. While having a strongly applied focus, the intention was also to throw some light on the geographic nature and hence theory of service providers in leisure sector location.

The number of marinas along the BC coast grew rapidly in the last 30 years and now totals about 200, providing close to 30,000 berths. This growth came partly as a response by the business sector to the expansion of recreation and tourism demand and also due to the Federal Government providing financial assistance (mid 1960's) to expand private sector moorage because government docks were seriously overcrowded (Eby, 1979). Indeed, in some inlets, the shortage was so acute, that boating tourists (transients) had to moor on to log rafts. Marinas vary considerably in size, from the large operations in and adjacent to Vancouver and Victoria which individually may provide 300-500 berths and a range of facilities mainly for local residents' use to the smaller, more remote destination, resort marinas with less than 100 berths and more limited facilities. "Marinas" that are simply a dock or could not be clearly identified as a marina operation in the normal sense, were not contacted. This resulted in a mail-out of 145 questionnaires, with a representative subgrouping by major geographic region. The response rate of usable returns was very

close to 40%, which is high compared with most surveys, considering no telephone prepping or follow-up were undertaken. It also probably reflects the level of concern that marina operators have, not only in their own operation but for the industry as a whole.

Results

The detailed responses provided a range of interesting information on the marina sector. In this section, given the limitations of space, the focus here is on some of the more important findings.

The majority operate on a year-round basis (81%); are primarily oriented to boating and boat storage (75%) but provide transient moorage for tourists. The remote marinas - away from the Victoria/Vancouver region tend to be open seasonally, smaller (less than 100 berths) and cater almost exclusively for tourists and sportfishing. Most have experienced an increase in both the numbers of boats requiring moorage (57%) and size of vessel (64%) in the last five years.

For the most part, while acknowledging that user volumes are increasing and more competition for space is occurring, half the respondents feel that the quality of the recreation experience is not as yet deteriorating. There is general agreement that as user rates have increased, it is becoming increasingly necessary to have some seasonal quota arrangements, to avoid overcrowding in prime tourist areas and also to have some policing of boater behavior to protect user safety.

Major General Concerns

The survey attempted to elicit the direction and strength of response to major concerns. The overwhelming and consistent response is that economic viability is the key issue (85%), for all types of marina. Operating costs have increased substantially, while more government regulations and taxes appear to require time, attention and money.

The remote sportfishing marinas have the problem of declining access to fish while the older marinas in the Vancouver/Victoria area need to rebuild docks to accommodate larger vessels. To stay in business, some resort to providing moorage for floating homes. The problem is that the remedy is not simply one of passing on the increased costs to the marina users, since increased license fees, holding tank requirements and general operating costs are squeezing the boat owners.

The second most important general issue, 70% rated it very highly, concerns the environment, that is, the protection of the ecology of the coastal zone. The majority (83%) would support legislation that protects the environment: that is, fisheries management, water pollution control, shoreline protection, wildlife protection (e.g., seabirds and whales). On the specific issue of sewage control, the majority (85%) supported the requirement for (sewage) holding tanks in pleasure craft. Interestingly, the operators in the remote areas were significantly (statistically) more in favor of this measure than those in the Vancouver/Victoria region.

Detailed Concerns

While the operators' management decisions are clearly dominated by the imperative of economic survival, for the majority, the particular issues of note, aside from satisfying customers, are the impacts of marine and tourism traffic growth - with implications for matters such as boater safety; managing the associated crowding problems and the environmental consequences. These features are all part of the dynamics which have increased overall management complexity and operating costs.

Coastal Zone Management

While a significant majority of operators are strongly in favor of legislation that protects the quality of the coastal environment, it is clearly difficult and probably pointless to query respondents on detailed hypothetical arrangements for managing the coastal zone or whether they are very familiar with, for

example, the coastal zone legislation in the U.S.A. as a suitable model. Consequently, the question of coastal zone management was posed in more general and hopefully understandable terms.

The key responses are:

- 61% are in favor of some form government regulation of the coastal zone to protect the resource base and environmental quality
- the same percentage support a coastal zone agency, with stakeholder representation and input on managerial decisions
- 91% are opposed to an agency that simply regulates with no stakeholder input
- the majority prefer an agency that is representative of all the main stakeholder groups in the coastal zone

Organization of the Marina Subsector

Tourism is successful where the resource base is sustained so that the quality of the tourist experience continues - together with a manageable volume of customer demand without significant adverse impacts, that provides viable levels of profit for service providers. To achieve these basic objectives, it is clear that in a regional and sector context, greater coordination between stakeholder groups is necessary. This in turn requires the various groups to be organized and able to articulate an agreed strategy, whether on the tourism industry, coastal zone management or any form of government intervention. Unfortunately, the marina industry appears to be deficient in these characteristics. The majority of respondents *do not* belong to a marina association (68%), clearly a major obstacle in developing a coordinated viewpoint, thereby likely unable to influence the government or the tourism industry as a whole. This perspective is reinforced by the significant difference between association members and non-members over the importance of the political process in

influencing marina operations - 77% versus 53%.

Overview

This paper reviews some of the main findings of a recent survey of marina operators with businesses located along the coast of British Columbia, a group who provides an important contribution to the tourism industry of the province as a whole and the coastal region in particular. The dominance of economic issues and staying in business is not a surprising finding. What is revealing is the almost equal importance that operators attribute to the need to maintain the quality of the environment. Understandably, they are perplexed at facing a range of regulations from all levels of government that appear to them to inhibit their business viability. At the same time, a majority also favor regulations that maintain the quality of the resource base and the management of the coastal zone. Clearly, a complicated situation of this type, a veritable conundrum, requires an effective consultation process and a coordination of views. These are both lacking at the current time. A second and related issue is the dilemma of funding. Any comprehensive regulation, management *and enforcement* concerning the coastal zone and the resource base on which the industry depends - requires funding; yet there is a strong antipathy to increasing user fees in any form. Again, a significant majority are strongly opposed to an unregulated free-for-all but are concerned about any license or fee increase.

The challenge facing the tourism industry of the coastal zone is formulating an effective working arrangement between stakeholder groups and governments in developing initiatives that address these fundamental issues.

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CHARTING A NEW COURSE?: SPORTFISHING LODGES AND TOURISM IN COASTAL BRITISH COLUMBIA

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Abstract: *At the dawn of the twenty-first century, the future of the sportfishing industry in the coastal Pacific Northwest seems as unpredictable as the return of the salmon stocks on which it primarily depends. Fish stocks are in decline, and the various levels of governments have responded with increasingly strict regulatory actions (e.g., specific fishery closures, endangered/threatened species status). As a result of this regulatory uncertainty, sportfishing operators have become increasingly nervous about their ability to survive in this fluctuating market. Many operators and government officials look towards the diversification of the sportfishing industry as a means of adapting to changing biological and social conditions. The utility of resource-based tourism (e.g., ecotourism, adventure tourism and indigenous tourism) activities is receiving particular attention. This paper discusses the rise of this so-called "alternative" form of tourism and the characteristics of the industry and participants, and identifies the changes required in traditional sportfishing operations in order to adapt to this new market. It is critical that sportfishing operators "walk the walk" as well as "talk the talk" that is, both a philosophical and an operational refit to the traditional sportfishing operation is required for their diversification into resource-based tourism activities. While many challenges exist, diversification may prove to be a useful tool for sportfishing operations to chart a new course in these difficult times.*

Keywords: *recreational fisheries, commercial recreation, ecotourism*

Introduction

Like the sea on which it depends, the sportfishing industry is in constant flux. One of

the most critical factors affecting the sportfishing industry - which includes lodges/resorts, charters and recreational anglers - has been the use of technology in the fishing industry. A seemingly ever-increasing burst of technological innovations continue to reverberate through the commercial and sport sectors of the fishing industry (Cone and Ridlington, 1996). The use of synthetic fabrics such as plastic, nylon and polypropylene, composite materials including fiberglass, aluminum, and graphite, and advances in fish-finding technology such as radar, global positioning systems (GPS) and "fishfinders" has forever changed the fishing industry.

It is becoming increasingly evident that modern technology has provided a double-edged sword. For example, there is no doubt that technological innovations have made fishing safer (e.g., survival suits and cell-phones), easier (e.g., fishfinders and downriggers) and more efficient (trawlers and cannery ships) for sport and commercial anglers. But they have also given fishers an increasing ability to significantly affect fish populations and distribution and even alter the natural ecological rhythms of the oceans themselves (MacLeod, 1997; Berrill, 1997). As a result, at the dawn of the twenty-first century, the future of fishing in the Pacific Northwest seems as unpredictable as the annual return of the salmon stocks.

By now, most Pacific Northwest residents are well aware of the dire impacts of such factors as habitat destruction, overfishing, aquaculture, pollution and global warming on fish stocks, particularly salmon. Acknowledgement of the critical impact of climatic patterns on salmon numbers is also

becoming increasingly widespread (Beamish, Neville and Cass 1997; Beamish, 1999). Indeed, the list of dangers to the Pacific salmon fishery is so extensive, it sometimes seems that the salmon have saved us from our own greed and ignorance through their extraordinary will to live and spawn.

Where then does this leave the owners and operators of approximately 125 sportfishing lodges and 1,000 charter operators along the coast of British Columbia (B.C.) (Hume, 1998; GSGislason and Associates, 1998)? Fish stocks are obviously declining, and restrictions on fishing are just as obviously increasing. For example, a partial ban was placed on the chinook salmon fishery in 1996, and on the coho fishery in 1998. According to a report commissioned by the Provincial Job Commissioner of B.C., the 1996 cutbacks to the chinook salmon fishery caused a net loss of \$190 million in revenues and approximately 2000 jobs in the recreational fishing sector (ARA Consulting Groups, 1996); the economic and social costs of the 1998 coho ban may exceed these figures. It appears likely that even more restrictive regulations may be introduced throughout the Pacific Northwest in the not too distant future. For example, in early 1999, nine species of salmon were placed on the endangered or threatened species list in the United States. Not surprisingly, many fishing lodge and charter operators are extremely worried about their ability to continue in the sportfishing industry, largely due to this regulatory uncertainty (ARA Consulting Group, 1996; Peckford, 1998).

One of a number of possible answers for sportfishing lodges can be gleaned from taking a closer look at the contemporary tourist industry. A new breed of traveler has recently emerged, and fishing lodges may be well positioned to respond to this new, rapidly expanding tourism market. The purpose of this article is to identify this 'new' form of tourism and describe its principles and characteristics. Next, three case studies of recently established or announced ecolodges/resorts are provided to illustrate the range of options available to sports fish-

ing operators in coastal BC. A tourism model is proposed to elucidate the range of options and the blurring of the "old" and "new" tourism markets. Finally, this paper identifies changes that must be made to existing fishing lodges to adapt to declining fish stocks, increasing regulations and changing tourism patterns.

Tourism: The "Old" and the "New" Wave

In 1841, at the height of the temperance movement, a young wood turner named Thomas Cook organized a railway excursion for 2000 children in Leicester, England, to attend a nearby anti-drinking demonstration. Emboldened by his early success, Thomas Cook went on to arrange a growing number of "tours" for an ever-increasing number of middle class families (Cross, 1990).

Ever since the railroad opened up previously inaccessible tourist attractions to the middle classes, traditional mass tourism has allowed middle and, eventually, working class families (after the development of the automobile and jet travel) to travel at a relatively low cost to resorts created specifically for them. Mass tourism is primarily designed to entertain people trying to escape from the stresses of everyday, "normal" life. It has developed into a critical sector of the global tourist industry, which in the 1990s has become the largest industry and employer in the world: approximately 10% of the global GNP is now derived from tourism, and 204 million workers (approximately 10% of the world's workforce) are directly and indirectly employed in tourism-related jobs (World Travel and Tourism Council, 1996).

However, beginning in the late 1970s, a growing number of tourists began to search for a new type of holiday. Instead of being shielded from the natural environment and local people by the vast amount of built attractions and infrastructure required in tra-

ditional tourist areas, some people began to look for places where the spirit of the land had not yet been commercialized and where contact with local residents would still be possible. This "new" tourist was not looking so much for entertainment but for a chance to learn about the natural and cultural history of the area they chose to visit. Moreover, they were familiar with and supportive of the environmental movement that had begun in the 1960s. As a result, they were critical of the environmental and social impacts of mass tourism, desiring more natural, undisturbed settings for their holidays. The new tourist tended to be from the middle and upper classes, well educated, professional, with higher than average income levels (Ballantine and Eagles, 1994; Eagles and Cascagnette, 1995; Fennell and Molloy, 1995; Weiler and Richins, 1995; Salah and Karwak, 1996; Wight, 1996a). More recently, consumer demand for resource-based tourism is spreading throughout most segments of the population, from students to retired persons, from professionals to unskilled workers (Wight, 1996b; O'Leary and Weis, 1999).

This widening and escalating demand for resource-based tourism is exemplified by the results of a recent survey of middle to upper income residents in seven major cities in North America. Approximately 77% of this sample had previously participated in a trip that involved nature, outdoor adventure or cultural tourism in a natural setting. In addition, the remaining 23% indicated that they were interested in taking such a trip in the near future (HLA Consultants and ARA Consulting Group, 1995).

Recent growth rates for global tourism average 2-3 percent annually (World Tourism Organization, 1997), while the specialized resource-based tourism sector may have an annual growth rate of 15-25% (Wild, 1994). As activities associated with resource-based tourism (e.g., outdoor recreation, wildlife viewing) are increasingly incorporated into mainstream tourism packages (Wight,

1996a; 1996b), resource-based tourism may now account for between 10-20% of the contemporary global tourism market.

As demand for this form of tourism increased, terms for these "new" types of tourists were created. So-called "alter-native", "nature", "green", "sustainable" or "resource-based" tourism (hereafter termed resource-based tourism, as these forms of tourism are based largely on the aesthetic and educational appeal of natural and cultural resources) can be categorized into three distinct types of tourism. Each may be found separately in the marketplace or, increasingly, in a combined package. *Ecotourism* usually refers to environmentally sustainable forms of tourism that specifically rely upon natural features in a relatively undisturbed natural environment (e.g., hiking or wildlife viewing). *Adventure tourism* is comprised of recreational activities based in the natural environment which involve risk or danger (e.g., rafting or mountain climbing). Finally, in *cultural* or *indigenous tourism*, learning about and interacting with indigenous peoples is the essence of the tourism experience (Ewert and Shultis, 1997).

Although the use of these terms (particularly ecotourism) is now so widespread that they may have become meaningless "buzzwords" (Wheeller, 1994), each of these three forms of tourism should share several characteristics if they remain true to their foundational principles (see Table 1). First, resource-based tourism is dependent upon a relatively undisturbed natural environment, while traditional tourism is largely based upon built attractions like theme parks and hotels normally located in urban areas. Most importantly, resource-based tourism stresses environmental and social sustainability; its primary guiding principle is that these forms of tourism should not degrade the environment or the local communities that host tourists. Indeed, some champion a form of resource-based tourism that actively seeks to improve the environmental and

Attribute	Resource-Based Tourism	Mass Tourism
Dependency on the Natural Environment	high	low
Level of Development	low to medium	medium to high
Standard of Development	basic to standard facilities	standard to deluxe facilities
Local Population	involvement in planning, management and operations	no involvement in planning, management or operations
Tourist Operators	usually local or regional	usually national or international
Tourist Experience	emphasis on learning about the natural and cultural environment	emphasis on entertainment
Rationale	conservation, community development, education	profit maximization
Economic Impact	minimal leakage, small profits to local communities	high leakage, large profits to non-local communities
Social Impact	low to medium	medium to extreme
Environmental Impact	low to medium	medium to extreme

Table 1. Global Attributes of Resource-Based Tourism and Mass Tourism

Source: Ewert and Shultis (1997)

social quality of the surrounding region (Orams, 1995).

In mass tourism, environmental degradation and social disturbance are the norm. Similarly, the secondary rationale for resource-based tourism is significantly different from that of traditional tourism. The former emphasizes learning about and conserving natural and cultural regions with the active, meaningful involvement of local communities, while mass tourism has always focused on entertainment and, ultimately, maximizing profit. Mass tourism is also normally directed by non-local mega-corporations that typically exclude local communities from involvement in the decision-making process (Ryal and Grasse, 1991).

How Do Fishing Lodges and Resorts in Coastal British Columbia Fit In?

Long considered the “poor cousin” of the commercial fishing industry, the sportfishing sector has recently drawn an increasing amount of attention by bureaucrats and politicians (e.g., May, 1996; Fisheries and Oceans Canada, 1998a). This increased interest has largely been due to the increased recognition of the economic impact of sportfishing. While recreational and sporting anglers take between 2-4% of the total salmon catch - including approximately 18-20% of coho and chinook salmon, the most important sport fishing species - their economic impact exceeds that of the commercial fleet (Fisheries and Oceans Canada, 1998b; GSGislason and Associates, 1998). Revenues from sport-fishing licenses average 7 million per year compared to 11 million per year

from commercial licenses; however, the sport salmon industry was estimated to bring in \$600 million in 1994, while the commercial fishing fleet brought in \$400 million (Steele, 1997). As of 1997, approximately 7,050 British Columbians were employed in the sportfishing industry compared to 10,940 in the commercial sector (GSGislason and Associates, 1998).

Despite the documented problems with dwindling fish stocks and increasing regulations in the region, many existing fishing lodges will successfully continue to cater to a relatively small, select group of fishing enthusiasts. It is also likely, however, that a significant number of fishing lodges will be so affected by the downturn in fishing activity that they will be forced to close or reconfigure their operations. The Canadian government supports the diversification of the BC sportfishing industry: in 1998, a fund of \$400,000 CAN was established to help sportfishing companies respond to the downturn in sportfishing opportunities (see also GSGislason and Associates, 1998). The Sports Fishing Institute of B.C. also seems to agree that diversification is likely; their advertisements emphasize the ecotourism and cultural tourism opportunities available to fishers in B.C. (Sports Fishing Institute, 1999).

A number of options are available in the sports fishing industry and emerging trends are already evident in coastal B.C. These options span the whole range of possibilities on a tourism model (Figure 1). The three variables on both axes are cumulative. Thus, while the upper left and bottom right sector of this model are exemplified by mass tourism and resource-based tourism respectively, it acknowledges that some forms of traditional mass tourism operations (e.g. hotels) can move within and between sectors if they follow the guiding principles of resource-based tourism (i.e., the three variables located along bottom axis). Similarly, resource-based tourism operations may move towards the mass tourism endpoint if they do not uphold the principles inherent in resource-based tourism. The circled area

suggests that the aim of both mass and resource-based tourism should be sustainability; it is hypothesized that the principles and operating policies of both forms of tourism will converge in the future (Clarke, 1997).

One option in coastal B.C. - located toward the middle of the model - is to combine the lure of the relatively undisturbed natural environment of the Pacific coast with an exclusive, wealthy clientele in a small resort atmosphere. An excellent example of this approach is provided by a recently constructed property located near Tofino on the west coast of Vancouver Island. This small hotel, perched on a rocky headland beside a long, nearly deserted beach, has quickly established itself as a world class resort. Established in 1996, its almost immediate acceptance into the highly prestigious Relais & Château hotel association helped create an immediate presence in the global tourism market. While fishing charters are available to guests, they do not form the central purpose of this property. As opposed to the vast majority of other lodges and resorts in the area, the many sightseeing and scenic viewing opportunities, coupled with the hotel's natural setting, luxurious accommodations, high quality service, and haute cuisine are the primary draws.

After undertaking a market survey, the Coast Hotel chain (based in Western Canada) has also identified opportunities that exist to integrate the traditional hotel with the growing resource-based tourism market. Their market research suggested that, while the average tourist trip length has decreased, tourists are increasingly looking for educational, "soft" adventure (i.e., relatively low risk) activities in a natural setting and are interested in environmentally sustainable tourist experiences while experiencing high quality accommodation and food service (Graham Ben, VP Business Development, Coast Hotels, personal communication, Dec 4, 1998). Responding to these trends, Coast Hotels has recently announced plans to create, in association with the Roots® clothing company, a large resort/ecolodge on the west coast of Vancou-

ver Island in B.C. Similar to the first example, this proposed facility falls primarily in the mass tourism sector of the tourism model, but also edges towards the right hand (i.e., resource-based tourism) sector. This facility again demonstrates the blurring boundaries between the mass tourism and resource-based tourism market found in coastal B.C.

The third potential direction for existing fishing lodges is located in the resource-based tourism sector (i.e., bottom right hand sector) of the tourism model. This option, which normally takes far less capital to accomplish, attempts to match the spectacular scenery of the Pacific Northwest - a primary draw for both fishers and resource-based tourists - with the growing demand for resource-based tourism. One recently established "Wilderness Resort" (as opposed to fishing lodge), located in Clayoquot Sound on the northwest coast of Vancouver Island, is an example of a new operation (est. 1998) that has taken this direction. The very name of the resort suggests that its owners were familiar with the new resource-based tourism market: while sportfishing is an important part of their operations, for many guests the magnificent wilderness of the Clayoquot Sound area is the primary attraction. "Soft" adventure activities such as whale watching, hiking, visits to nearby hot springs, kayaking and horseback riding are proving to be extremely popular at this resort, even more popular than recreational fishing.

This strategy allows fishing lodges to not only diversify the activities provided to guests, but also to expand their market as well. Traditionally, fishing lodge clients have been relatively small groups (normally from 2-6 people) of middle aged males hoping to catch some fish (primarily salmon) while socializing with a group of friends in an attractive natural environment setting (DPA Group Inc. and McLaren Plansearch Corp., 1988). Marketing re-source-based tourists allows lodges to accommodate families or even groups of families, some of whom will fish, but many of whom will be

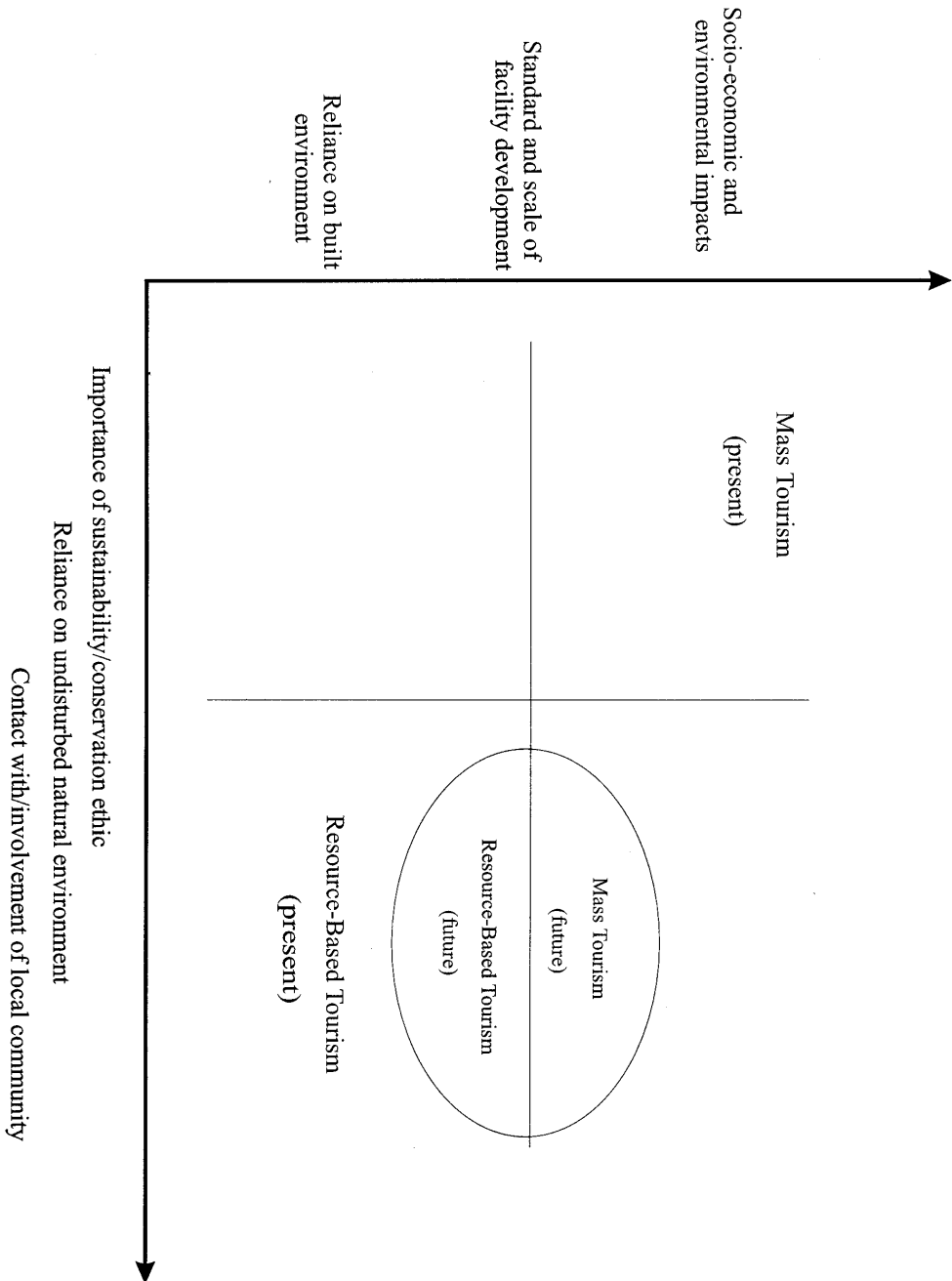
happier hiking, kayaking or whale watching. In this way, the fishing lodge of the past becomes the wilderness or adventure lodge of the future. Providing a wider range of activities may also extend the guests' length of stay, thereby increasing profits to the often cash-strapped lodges. Further, many of these resource-based activities are often not as seasonal in nature as fishing: hiking, kayaking, sightseeing, and wildlife viewing can be scheduled year round in many regions of coastal B.C. For example, one resort on the west coast of Vancouver Island has successfully promoted a winter "storm-watching" package to create an extremely popular off-season attraction.

While all forms of tourism have environmental, social and economic impacts, both positive and negative (McKercher, 1993; Andereck, 1995), these 'new' activities desired by resource-based tourists can be far more sustainable than sport fishing. Moreover, with the probable exception of whale watching, these activities are far less likely to have restrictive regulations placed upon them than sport fishing. Also, as the traditional resource sector (i.e., forestry and fishing) continues to downsize its workforce throughout the Pacific Northwest, some of these displaced workers may choose to become employed in the new resource-based tourism field (ARA Consulting Group, 1996), although the attraction of the resource-based tourism industry for downsized extractive workers is extremely variable and remains unclear.

The Sticking Point: What is Required For the Transition From Fishing to Ecotourism Lodge?

It is critical to note that the simple addition of a few non-extractive activities at a traditional fishing lodge will not meet the requirements of this new breed of tourist. As previously noted, the primary component of resource-based tourism is the concept of environmentally and socially responsible tourism: a conservation ethic must pervade

Figure 1: A Tourism Model



therefore, that lodge operators who wish to target resource-based tourists “walk the walk” as well as “talk the talk”. This involves embracing management practices and philosophies that truly demonstrate sustainability. While many existing resource-based tourism operations in B.C. tend to believe they are operating in an environmentally sensitive manner, the reality is often very different. One study found that only five of 22 nature-based tourism ventures in B.C. could be classified as being responsible ecotourism operations (Bottrill and Pearce, 1995).

A number of actions must be taken to ensure a sustainable lodge/resort operation. Basically, all potential environmental, economic or social impacts should be identified and all mitigating actions clearly communicated to the visitor. For example, hiking parties should be kept small to minimize their impact; local materials and residents should be used whenever possible, even if it involves specialized training; local communities - First Nations and otherwise - should be involved in the planning and management of tourism activities; self-imposed guidelines for wildlife viewing (including whale watching) should be developed and monitored; water conservation and sewage treatment plans should be implemented; and strict pollution controls activated. If recreational fishing is allowed, it may be necessary to establish and enforce a catch and release policy or at the very least a reduced fish limit. Blangy and Wood (1993) provide an extended list of potential issues and ethical guidelines to consider before the creation of an ecotourism lodge/resort (see also Beeton, 1998).

It should be reiterated that resource-based tourists do not simply want to be entertained: they are well educated, well traveled people who want to learn about the area, preferably by undertaking adventurous (though comfortable, safe, and not overly strenuous) recreational activities. Hiring naturalists/interpreters who can communicate the *genius loci* of the area and the natural and cultural history of the region allow

guests to take back a deep appreciation for the area as well as an understanding of the need for sustainable tourism development. Again, hiring members of the local community is often the best way to accomplish this: they often have a great knowledge of the natural and cultural history of their homelands.

The “sticking point” of ecotourism has always been ensuring that these establishments are truly different (i.e., more sustainable) than traditional mass tourism attractions. That is, while it is easy to market an operation as embodying ecotourism principles and practices, there is as yet no organization that monitors or regulates these claims. There are several ways to deal with this problem. Many different organizations have developed codes of ethics which helps the operator implement the underlying principles of ecotourism (Hawkes and Williams, 1993). For example, the National Audubon Society has created an influential “travel ethic for environmentally responsible tourism” for their independent tour operators (Table 2). This travel ethic, like the many others that have been created, focuses on minimizing the environmental and social impacts of resource-based tourism. The creation of a specific code of ethics for ecolodges in coastal BC may assuage consumer concerns over the sustainability of their operations, resulting in a larger client base and a recognizable and marketable set of practices.

For ethical codes to be effective, however, practical methods to rigorously enforce these criteria, report compliant and non-compliant operators and discipline non-compliant operators must be created (Ding and Pigram, 1995; United Nations Environment Programme, 1995). Such a system has proven difficult to establish or maintain.

Environmental audits may prove to be one method of ensuring environmentally responsible operations. Environmental auditing provides interested tourism firms with a potentially powerful tool to assess their environmental performance, and to mitigate

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| 1. | Wildlife and their habitats must not be disturbed. |
| 2. | Audubon tourism to natural areas will be sustainable. |
| 3. | Waste disposal must have neither environmental nor aesthetic impacts. |
| 4. | The experience a tourist gains in travelling with Audubon must enrich his or her appreciation of nature, conservation, and the environment. |
| 5. | Audubon tours must strengthen the conservation effort and enhance the natural integrity of places visited. |
| 6. | Traffic in products that threaten wildlife and plant populations must not occur. |
| 7. | The sensibilities of other cultures must be respected. |

Table 2 : National Audubon Society's Code of Ethics

any environmental or social damage caused by their organizations (Goddall, 1995). The environmental auditing process involves three main steps: 1) assessment, the determination of existing natural and social conditions; 2) testing, a comparison of the actual impacts with predetermined criteria or limits of acceptable change; and 3) attesting, or certification of the results of the above comparison (Buckley, 1991). Enforcing periodic reviews of resource-based tourism operations and their impact on the natural and social environment would provide a number of benefits to environmentally responsible organizations. Audits could be used to identify the limits of acceptable change for tourism operations, assess the effectiveness of regulations and the techniques used to mitigate impacts to meet these requirements, and achieve a "best practice" certification in the resource-based tourism industry (Ding and Pigram, 1995). It will also allow operators to market their companies to environmentally aware clients, improve their corporate image, and even decrease costs through a more efficient use of resources. Again, the creation of a standardized, effective and efficient system of assessment and enforcement of environmental audits is required for this concept to be useful.

It has also been suggested that efforts to increase the professionalization and accreditation of operators would also serve to decrease the environmental and social impacts of resource-based tourism operations (Wearing, 1995). The extremely rapid growth of

resource-based tourism has not yet been matched by a parallel growth in the creation of educational programs dealing with the specific needs and challenges of resource-based tourism. Improving the educational training and creating accredited educational programs in resource-based tourism will help ensure that graduates will be prepared to identify and react to the idiosyncratic impacts of resource-based tourism operations.

The creation of the Bachelor of Arts degree in Resource-Based Tourism in the Resource Recreation and Tourism (RRT) Program at the University of Northern British Columbia is one of the few examples of a tourism curriculum focusing on resource-based tourism. This interdisciplinary degree, established in 1995, contains courses in both the natural and social sciences, and emphasizes the identification and mitigation of environmental, socio-economic and cultural impacts of resource-based tourism and the necessity of socially and environmentally sustainable tourism operations. While the vast majority of existing tourism programs are housed within business schools, the RRT Program is located in the Faculty of Natural Resources and Environmental Studies; this relationship helps emphasize the critical link between the natural environment and resource-based tourism. Moreover, it typifies the need for tourism operators based in and dependant on the natural environment to have an understanding of the abiotic, biotic and cultural components of the tourism realm in addition to the traditional business skills required in this competitive market.

Conclusion

As the fishing industry undergoes dramatic changes, the sportfishing industry must adapt to those changes or fall by the wayside. One possible method of adapting to changes in the fishing industry is to incorporate parallel changes occurring in the tourism industry to create a completely new market. The three facilities outlined in this paper suggest that the merging of the traditional and resource-based tourism operations may help facilitate the diversification of the sportfishing industry in B.C.

Indeed, as outfits such as the new "Wilderness Resort" on the west coast of Vancouver Island demonstrate, this change is already taking place: owners and operators of sportfishing lodges are making the change from fishing lodge to wilderness or "eco-lodge". This change involves not only an operational refit, but a philosophical reorientation as well, to that of environmentally sensitive resort based on a solid environmental ethic. Once methods are set in place to assure the sustainability of these operations - for example through the use of codes of ethics, environmental audits and specialized tertiary education programs - diversification may prove to be a useful tool in charting a new course through the increasingly turbulent waters of the sportfishing industry.

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POWER AND COASTAL TOURISM: THE SEATTLE WATERFRONT

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Abstract: *Tourism on the Seattle Waterfront is discussed through two frameworks, that of Foucauldian power and the Broker-Local-Tourist (BLT) model of tourism dynamics. Power according to Foucault is omnipresent, and is not tied to a particular individual or group. It is inextricably tied to knowledge, so that one cannot be analytically considered without the other.*

In the application of both concepts to tourism in Seattle, Cheong and Miller (2000) argue that tourists are placed in an insecure position in tourism networks. Brokers wield power as they produce knowledge with respect to travel, and control the tourist operation. Unlike the popular perception of locals as the victimized group in this network, they are seldom completely powerless and brokers, especially developers, take heed of local reactions to tourism development because of the need for local goodwill.

The case of tourism in the central waterfront of Seattle can be seen in light of these concepts, and they are applied to the diverse business and tourism zone of today.

Keywords: *tourism networks, Foucault, BLT model, marine and coastal tourism, power*

Introduction

This paper discusses power relationships amongst brokers, locals, and tourists applying the concept of Foucault's power to the Seattle Waterfront. The first part of the paper briefly defines power in Foucauldian sense. The second section identifies major

actors and their power relationships using the BLT (Broker-Local-Tourist) model of the tourism system. The third section describes three sets of relationships: 1) tourist – broker, 2) broker – local, and 3) tourist – local.

Power according to Foucault is omnipresent, which means that all situations contain power relations. In addition, power does not tie to a particular individual or group. Instead it exists in a set of specific relationships, and individuals and groups are positioned within this network of power relations (Foucault, 1978). In this web of power relationships, Foucault focuses on the exercise of power. The exercise of power perpetually creates knowledge, and conversely, knowledge induces effects of power. This is based on his claim that power is inextricably wedded to knowledge, that one cannot be analytically considered without the other. Thus, power does not merely constrain the target, but expands through the establishment of new discourse, rules, and disciplines (Foucault, 1980).

The BLT (Broker-Local-Tourist) model is advanced by Miller and Auyong (1991). In this model, brokers make a living by participating in tourism production. Hotel owners and employees, vendors, and guides who provide tourists with goods and services exemplify private-sector brokers. Public-sector brokers include city planners and politicians, those who work in government-operated visitor information centers, and police and guards at tourist sites. Other broker variants include social movement bro-

kers, academic brokers, travel media brokers, and consulting brokers (Miller and Auyong, 1998). Locals are those who live in or near the tourist attraction but do not obtain income from tourism activities. Tourists are non-locals that make a visit to a tourist attraction for recreational purposes.

In the application of the Foucauldian notion of power to tourism, Cheong and Miller (2000) argue that tourists are placed in an insecure position in tourism networks. Though tourists make the decision to travel, brokers and locals oftentimes exert more power in the tourism system (refer to the table in Cheong and Miller 2000). Brokers wield power as they produce knowledge with respect to travel and control the tourist operation. They oftentimes dictate the way travel should take place, educate, instruct, advice, supervise, and interpret for tourists. Thus, brokers are not mere intermediaries and providers of tourism-related services. Instead, they participate in tourism services with an incentive to profit or maintain public services.

Unlike the popular understanding of locals as the victimized group in the tourism system, locals are seldom completely powerless. As locals by definition do not derive their income from tourism businesses, their interest level is low. This means that locals are hardly motivated to get actively involved in tourism unless they perceive it as negative (Cheong and Miller, 2000). In cases where a negative perception of tourism prevails, locals tend to place blame and show their dissatisfaction on the tourist who is far more visible than the brokers working behind the scene. Because tourism needs the good will of the local community for their hospitality and a distinct sense of place, brokers, especially developers, take heed of local reactions to tourism development.

Tourists exert relatively less control than brokers. Placed in unfamiliar political and cultural places, the position of the tourist is insecure. While traveling, they leave behind familial ties, protective institutions, and norms and expectations from home. There-

fore, brokers such as travel agents and tour guides step in to guide the tourist. Even independent tourists are also limited by what the guidebook or the recognizable signpost directs.

Because of these travel constraints, tourists adapt to new behaviors and gestures generated by a body of knowledge and instruction from brokers. The responsibility falls in the hands of brokers as they imagine and reconstruct the place, and furthermore, determine the values and norms that are suitable for, for example, sustainable tourism practices.

The Seattle Waterfront

Seattle, Washington is situated on a narrow strip of land separating two substantial water bodies - Lake Washington to the east and Puget Sound to the west - that are linked by a waterway. In 1998, the population of the City of Seattle was estimated to be 539,700 persons, representing a growth of 4.5% over the 1990 figure. The population of Greater Seattle (composed of King, Snohomish and Island Counties) was estimated in 1990 to be 2.33 million persons. The population density for Seattle - ranked as the 21st largest city in the U.S. - is 6,039 persons per square mile (Greater Seattle Chamber of Commerce, 1999.)

Founded in 1872 on Elliott Bay, the settlement that was to become Seattle was first called Duwamps after the river (the Duwamish) and the Indians of the vicinity. According to Sale (1976: 8), the name was soon changed:

"During the summer the name was changed to Seattle at the suggestion of Dr. David Maynard, who arrived during the spring and made friends with the Indian leader, Sealth. Maynard realized that it was too hard for whites to pronounce Sealth's name as the Indians did and felt that 'Seattle', being more euphonious than 'Sealth' or 'Duwamps', would be more likely to attract other settlers."

Over the last 125 years, the economy of Seattle has evolved from one dependent on natural resources (e.g., salmon, halibut and other fish; timber) and shipping to one that has diversified to house leaders in the aerospace and computer industries (e.g., The Boeing Company, Microsoft). Today, Seattle is also known as an international tourism node and destination.

The central waterfront district of Seattle faces the Olympic Peninsula to the west across Puget Sound. In the last century, the waterfront was the hub of marine transportation and other marine industry activities. Today and with the advent of containerized intermodal shipping technologies, terminals are found in the Harbor Island region of Elliott Bay, south of the Kingdome, the train station, and a new major league baseball stadium under construction.

The waterfront stretches in a Northwest direction from historic Pioneer Square near the Kingdome to the Space Needle in Seattle Center. Shops, restaurants, and a wide range of tourism amenities and services are located along Alaskan Way.

In the late 1960s, waterfront commerce along with other businesses in Seattle suffered economically. From that period forward, however, revitalization efforts have dramatically succeeded. In reference to the harbor front, the observations of Robert Goodwin, a coastal resources specialist with the Washington Sea Grant Program and an adjunct professor in the School of Marine Affairs at the University of Washington, have been summarized as follows:

"Today, [the central waterfront] is enjoying a renaissance. From the bustling ferry terminal at Colman Dock (Pier 52) to 20 blocks north at the upscale Bell Street Pier project (Pier 66) almost every square foot of Seattle's waterfront promenade has been renovated, rebuilt, or reinvented..." (Gordon, 1999: 41).

This rehabilitation has occurred as planners and development entrepreneurs have abided by the state's 1971 Shoreline Man-

agement Act and the city's Shoreline Master Program which was approved by the state in 1977 and refined in 1982. As Gordon (1999: 42) reports:

"Seattle's people-friendly Shoreline Master Program specifies that each pier must offer some form of perimeter moorage, even in cases where piers have lost their original industrial character.... The SMP includes provisions for balancing tourism with the needs of marine transportation and trade. As a result, there's a healthy diversity of activities."

This assessment and that of Goodwin, has been echoed by former Port of Seattle Commissioner and present Seattle Mayor Paul Schell:

"Those early efforts have allowed us to maintain an essentially honest waterfront--a place that's interesting to visit and live next to, and that has kept its integrity" (quoted in Gordon, 1999: 43)

Power Relationships Linking Tourists to Brokers

The relationship between the tourist and the broker can be described as buyer and supplier, the serviced and the server, and the pupil and the teacher. As suppliers, brokers contribute to shaping the decisions of tourists in purchasing commodities and services. They even go as far as teaching tourists how to appreciate amenities and other features of the touristic destination. They also serve tourists by facilitating the movement of the tourist and the communication of language, cultural manners, and mores. In this process, they tell what tourists can and cannot do, where tourists can and cannot go, and what tourists should select and reject.

Brokers in the Seattle Waterfront include Argosy, Spirit of Puget Sound, Victoria Clipper, Tillicum Village, Port of Seattle, and Seattle and King County Convention

Bureau. They contribute in the following areas:

- Through promotion and marketing, brokers, especially public brokers like the Seattle Convention Bureau and the Port of Seattle attract tourists, and make them adhere to certain tourist routes.
- Brokers also construct knowledge of the Seattle Waterfront. For example, Tillicum Village tour of Salmon and Native Americans introduce the tradition by building a house on the island with Native American artifacts, carving, and food. In this interaction, tourists gain knowledge offered by the broker and interpret the historic sites and traditions accordingly.

Power Relationships Linking Brokers to Locals

Power linking brokers and locals in the BLT model flows in both directions depending on the situation at hand. At times, brokers influence the activities and thinking of locals. At other times, the reverse is the case. The Foucauldian interpretation, however, emphasizes the ways in which brokers and locals shape the behavior of tourists. In this joint use of power, the broker-local relationship is put at some risk. In particular, the local strives not to be treated as a tourist.

Several examples illustrate these power dynamics at Seattle waterfront:

Public Sector Brokers (Ferry Service Employees) and Locals:

- Ferry workers direct tourists and locals (including commuters) where to park and how to proceed onto the ferry.
- Locals develop the role of “regulars” *via* the maintenance of social ties with ferry workers.
- Regulars are practiced in ferry routines and signal their competence to workers who acknowledge this in

interpersonal exchange involving nonverbal communication and deliberately friendly conversation.

- Locals distinguish themselves from tourists by dress, territorial behavior (selection of seating), an overtly confident use of time (for example, knowing when to move to cars and when to start engines), and by *not* exuding over touristic sights as tourists might.

Private Sector Brokers (Waterfront Restaurant Employees) and Locals:

- Restaurant employees provide services to both tourists and locals (of course, some “tourist restaurants” are avoided by locals).
- Locals who are regulars develop social ties with employees.
- Employees sustain their relationship with regulars by providing personalized service.
- Regulars sustain their relationship with employees *via* conversation and also by tipping.

Unless common themes/issues surface involving both the broker and the local, no explicit relationship exists. When they conflict or cooperate, a relationship blossoms. Soaring housing price, construction noise, tax dollars going to tourism development, and so forth are issues locals can take with brokers. In the case of the Seattle Waterfront, the problem of public access creates a relationship. In an interview with a manager of the Waterfront, Port of Seattle, the manager says that waterfront development is “a public outreach. The public was negative at first. The port wanted to make the highest and best use with hotels, offices, and condominiums. The public wanted more traditional working waterfront type. So now we have mixed use – cruise ships, factory trawler, navy, aircraft base, fish plant, etc.”

Though the public access to the Seattle Waterfront has increased in recent years, there is a concern that it is being increasingly

regulated (Frenkel and Walton, 1999). For example, when the pier is rented out for private events, such as wedding, they are closed off to the public. The marina is only accessible with a key from the shipmaster (Frenkel and Walton, 1999). In addition, homeless have been relocated to the fringes of the Central Waterfront.

Power Relationships Linking Tourists to Locals

As discussed, the Foucauldian interpretation of power in tourism emphasizes the influence of locals over tourists rather than the reverse. On the Seattle waterfront, locals - especially those who are regulars (that is, who are known as individuals by brokers on the scene) - control tourists in many ways.

- Locals provide (or refrain from providing) directions, explanations of sights:
"What are those mountains?" (the Olympic Peninsula)
"How are those salmon caught?" (trolling, seining, etc.)
- Locals assist (or refrain from assisting) tourists by becoming ambassadors or "hosts":
"What should we see on Bainbridge Island?"
"Where can we purchase Northwest Indian art?"
- Locals stay away from crowded tourist destinations or are pushed away from their favorite places because of tourism development.

Conclusion

In this paper, we have employed a Foucauldian framework to consider a case of marine tourism. Although our illustrations have concerned the Seattle central waterfront, we would expect similar power dynamics elsewhere where coastal and marine tourism is found.

In conclusion, we reiterate several points:

- Power is everywhere evident in coastal and marine tourism.
- Power connects people in the broker-local-tourist system at the individual or face-to-face level.
- While power flows in all directions, the power of brokers (and to a lesser degree, that of locals) over tourists is substantial.
- Power can be - depending on the situation - productive (for example, educational) or constraining.

Touristic outcomes such as infrastructure developed on the Seattle waterfront as well as the memories people have of BLT interactions there can be in large part attributed to the professional work of private and public sector brokers. When people (whether these are tourists, locals, or other brokers) find fault with tourism outcomes, brokers must admit responsibility. When people endorse tourism outcomes, brokers can take credit

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CONTESTED AND REGULATED SEASIDE SPACE AT DURBAN

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Abstract: *Seaside leisure space is defined here as a production of the material environment that is used and recognized for leisure activities via cultural and symbolic images of that environment. However the definition fails to address an important aspect of leisure space, namely the extent to which it is contested and/or regulated. Leisure spaces become contested when users are excluded because of group domination arising out of scarcity, economic access or political policy. The resulting tension is either exacerbated or moderated by the extent to which the regulation of the leisure spaces by the appropriate authorities succeeds in allocating space amongst competing users, ensures their safety and, where possible, facilitates access to all users. Using Durban as a case study, 13 spaces are subjectively defined on the basis of their leisure activities. The nature of the contested and regulated features of the spaces is summarized. It appears that contest over leisure space is related to the cultural or economic group domination of scarce leisure spaces. Sensitivity towards the requirements of social transformation, awareness of the economic benefits that derive from this major tourist destination and the provision of order and safety characterize the regulation of contested spaces by various authorities. The study shows that the concept of contested and regulated space reinforces conceptions of how leisure space is represented and contributes to the overall notion of leisure spatiality.*

Keywords: *Leisure space, spatial partitioning, contested space, regulated space*

Introduction

Socially, culturally and politically the contemporary seaside at Durban is a very different place than that which existed only a decade ago. The visitors are multicultural and multiracial, international and national, rich and poor, educated and illiterate. They

take advantage of a year-round tourist season to recreate in spaces created for specific leisure activities. These are the spaces used for boating, board surfing, bathing, fishing, promenading, sunbathing, picnicking, shopping/eating, flying, under-water diving and living. Boundaries between the spaces sometimes overlap. Spaces are also formed intermittently by special interest groups. International surfing competitions temporally transform a section of the seaside into a theme park. Religious groups temporally utilize bathing spaces to perform cleansing and baptizing ceremonies. Given the dominance of sun, sand and surf, the leisure industry and local government planning and development institutions tend to regard the material seaside environment as the causal background to the leisure activities in these spaces. Leisure space is seen as a *production* of the material environment that is *used* for the purpose of leisure activities and *recognized* by the users through the cultural images of a material space that has symbolic meaning.

The concept of leisure space as material environment contributes towards the identification of these spaces, but fails to contribute insights into the social and political dimensions of the seaside and what this means for the leisure industry and regulating institutions. The implications of this for Durban are addressed in three parts. The first part links notions of space as material environment and space as social spatiality. This deepens our understanding of how seaside leisure spaces are continually re-invented by new groups on one hand or by the visions of planners and developers on the other. It also allows the process of the socialization of space to be interpreted using the concepts of contested and regulated space. *Contested*

space is the product of domination and appropriation that emerge from social practices. Spatial domination inevitably is challenged in a continually evolving social domain. When this takes place the boundaries between public and private space becomes porous and ill-defined, conceptions of material and metaphorical space become fluid while changes occur in spaces that are constructed, ordered and controlled. *Regulated* space on the other hand is the result of the continuing dialectic between the daily experience and practices of seaside users, the material environment and social, institutional and political systems. Regulation can be through personal, social or institutional intervention with the objective of imposing order on the spaces. The effect is to reinforce conceptions of how these spaces are represented.

The interpretation of contemporary leisure spaces at Durban cannot be undertaken without an appreciation of the changing social processes that give shape and form to the material and social spaces. The second part of the paper outlines the nature of leisure spaces as they have developed since the racial desegregation of beaches in 1989. Leisure spaces are identified, the social and cultural processes that identify and sustain them are discussed and it is suggested that the conceptualization of these spaces is enforced by the extent to which they are contested and regulated. While recognizing the conceptual dangers inherent in over-reliance on typologies, attention is directed towards why each of the spaces is different and how and by whom they are conceived, symbolized and used. The evolving spectacle of leisure spaces is thus conceptualized in the context of social transformation.

The Concept of Seaside Leisure Space

The seaside is attractive to leisure-seekers because of the number and variety of overlapping spaces that are a production of the material environment and which are used

for leisure activities such as boating, surfing, diving, bathing, walking, fishing, shopping and living. These leisure spaces are also recognized through the social and cultural images of a material space that has symbolic meaning for the users. Many of the leisure spaces are inherently different as evidenced by the different activities that occur on the sand beach, breaker and deep water zones. The activities reflect different recreational objectives, they require different skills and levels of environmental knowledge, they recognize boundaries that are both material and metaphysical and the scale of these bounded spaces may operate at levels that range from the local to the global. They also focus attention on the symbolic and existential in giving meaning to subjective notions of a sense of place.

The perception of leisure spaces raises the question of how these spaces are understood and partitioned. The epistemological question of how knowledge about space is obtained has been approached from a variety of philosophical positions. The position favored here is constructivism, which is outlined by Moore (1979), and Gale and Gollidge (1982). Building on the work of Kant (1966), Gale and Gollidge (1982) divide knowledge into two main elements. The first is matter that is derived from knowledge obtained by the senses. The second is form which gives order to the content thus obtained. By synthesizing the extremes of empiricism and rationalism, this epistemological position holds that "the matter of knowledge is given experientially while the form of knowledge is given a priori. Thus knowledge is built or constructed through the integration of sensory experiences and the intuitive forms of space and time" (Gale and Gollidge 1982).

By this reasoning, individuals capable of sensory perception each form their own constructions of space. While these constructions are likely to differ between individuals it is assumed that there is sufficient congruence to provide a structure for the subjective partitioning of spaces (Gollidge, 1978; 1981). In the case of the seaside,

place-specific characteristics of the environment help to define leisure spaces. At a crude level, the land-sea divide would be identified. Thereafter, spaces are subdivided on the basis of the activities that characterize the land use (Lynch, 1960; Appleyard, 1970). Spaces assume a hierarchy of importance governed by the desire and/or opportunity to use them. Thus sunbathers, board surfers, bathers, fishermen, promenaders and yachtsmen are likely to use constructivist principles to partition spaces subjectively on the basis of their level of familiarity and interaction with the environment. Thus decisions relating to the choice of space, periods of use, and necessary preparations would employ constructivist thought that draws on knowledge of weather and wave conditions, sunburn avoidance and suitable clothing as well as the idealist and romanticized a priori knowledge that informs the subjective perceptions of space. This conceptualization of space incorporates the space of leisure activities in the material environment, provides measures of difference between leisure spaces and integrates the symbolic values socially and culturally attached to these spaces.

The notion that space as social process and social practice determines social spatiality is relevant here. Many writers (for example, Giddens, 1984; Harvey, 1989; Soja, 1989; Lefebvre, 1991; Shields, 1991; Gregory, 1994; Massey, 1994) have discussed the presentation of space as a dimension of social life. This raises issues that are pertinent to seaside leisure spaces. They include issues of management, planning, governance and wider notions of sustainability. For these to be resolved the concept of space must include the space of politics in the wider public space of the seaside. It is also relevant to question how such spaces may contribute towards the construction of a public sphere (Mitchell, 1996). Inherent in such questions is the nature and existence of boundaries between public and private spaces and between those that are socially and culturally identified, constructed, controlled and contested. Within these parameters the seaside is continually being re-invented "as a place,

an idea, an ideal, a contested concept" (Mitchell, 1996: 128) through its discovery by new groups on one hand and the visions of planners and developers on the other.

In societies where groups cluster on the basis of culture, class or race, and where the process of social change is accelerated, contests over space provide important insights into the nature of social change and the manner in which this is accommodated by the leisure industry. This is pertinent when groups that previously were excluded because of poverty, prejudice or perverted legislation discover leisure spaces.

Seaside leisure space may be *contested* for a number of reasons. Scarcity of leisure space is an important motive. This property of space may be due to an absolute scarcity, such as sheltered bathing or a remnant coral reef, or a relative scarcity caused, for example, by distance from the space and accompanying transport costs. When such spaces are perceived to have value, efforts to secure control over them take a number of forms. Legislation that excludes groups from specific leisure spaces is an extreme example of social control. The apartheid legislation in South Africa designed to segregate space on the basis of race is a typical example. Other forms of seaside space domination occur through the acquisition of territorial occupation of spaces that require specific skills. Surfboarding, yachting and scuba diving fall into this category. Individuals and groups may be excluded from such spaces through lack of incentive or the means to participate. In addition leisure space may be contested when the boundaries between different spaces overlap. Thus board surfers may be in conflict with pier fishermen, jet ski riders with bathers or promenaders with motor vehicles. Within bounded spaces territorial occupation by groups entrenches perceptions of spatial possession.

The production of space implies its conquest (Harvey, 1989). Leisure spaces are perceived, legitimized and *regulated* by institutions and organizations thereby guaranteeing access to those members of society who wish to par-

ticipate in the defined activities. This sets in motion a process that either may exacerbate or moderate the tensions produced over contested leisure space. This is apparent when the politics of space is ideologically inspired, as was the case with apartheid legislation that restricted access to leisure space by race. More commonly regulation is sanctioned through the discretion granted to democratically appointed authorities. The function of these authorities is to establish appropriate rules to order and direct leisure spaces. For example, locations for safe surf bathing are authorized, spaces are allocated for board surfers, fishermen are permitted the use of specific piers, crime is controlled by adequate policing, lifeguards are accredited and informal pavement vendors are restricted to allocated spaces. The effect is to define and tacitly to recognize the legitimacy of those recreating in these territorially bounded spaces. Within these spaces, individuals and organizations tend to practice levels of self-regulation commensurate with their skills and authority. Thus bathers tend remain inshore if they cannot swim and clubs emphasis safety regulations for their members.

The Contested/Regulated Nature of Seaside Leisure Space

A wide selection of leisure spaces is available to the Durban seaside visitor. A sandy beach extends northwards from the harbor entrance (Figure 1). The offshore environment allows fishing, surfskiing, boardsailing and yachting. Near the harbor entrance the surf is moderated by the headland in the southeast, known as the Bluff. This provides ideal conditions for the launching of small fishing boats and yachts and facilitates boardsailing and surfskiing. An abandoned, now submarine pier called Vetch's Pier, north of the harbor entrance moderates the surf in this space and provides a safe environment for snorkel and scuba divers intent on collecting tropical fish. North of this sheltered marine environment the surf increases in size to produce conditions desired

by board surfers and bathers. A number of piers constructed along the central beaches enable visitors to view the beachfront from a vantage beyond the surf and for fishermen to cast into deep water. Adjacent and parallel to the beach a 3-km long paved promenade accommodates those who wish to walk, run, cycle or rollerblade. The promenade is backed by a recreation space that is landscaped with lawns, paddling pools, garden playgrounds, fast food outlets and restaurants and beach clothing shops. High-rise apartment blocks and hotels are lined parallel to these spaces. These buildings back onto the nearby central business district and provide an outlet for the cultural and shopping desires of visitors and residents.

Leisure spaces are perceived and partitioned on the basis of the principal activities that occur therein. Their boundaries vary in degrees of rigidity and porosity and may overlap. The leisure spaces defined in Figure 1 and Table 1 should, therefore, be regarded as schematic and subjective.

The nature of contested and regulated features of the seaside leisure spaces can be summarized as follows:

Space 1: Uncontested - the leisure value occurs in the form of spectator interest provided by the wide variety of moored ships and the constant traffic in and out of the harbor.

Regulated by safety considerations relating to the depth of water for safe anchoring and the safe distance between ships

Space 2: Largely uncontested given adequate space. Regulated by harbor authorities in case of fishing boats and by club and self-regulation in case of paddle and surfski users.

Space 3: Occasional contests over space with those engaged in fishing. Regulation occurs through "insider" knowledge and vocabulary and by space restrictions preventing overlap with bathers.

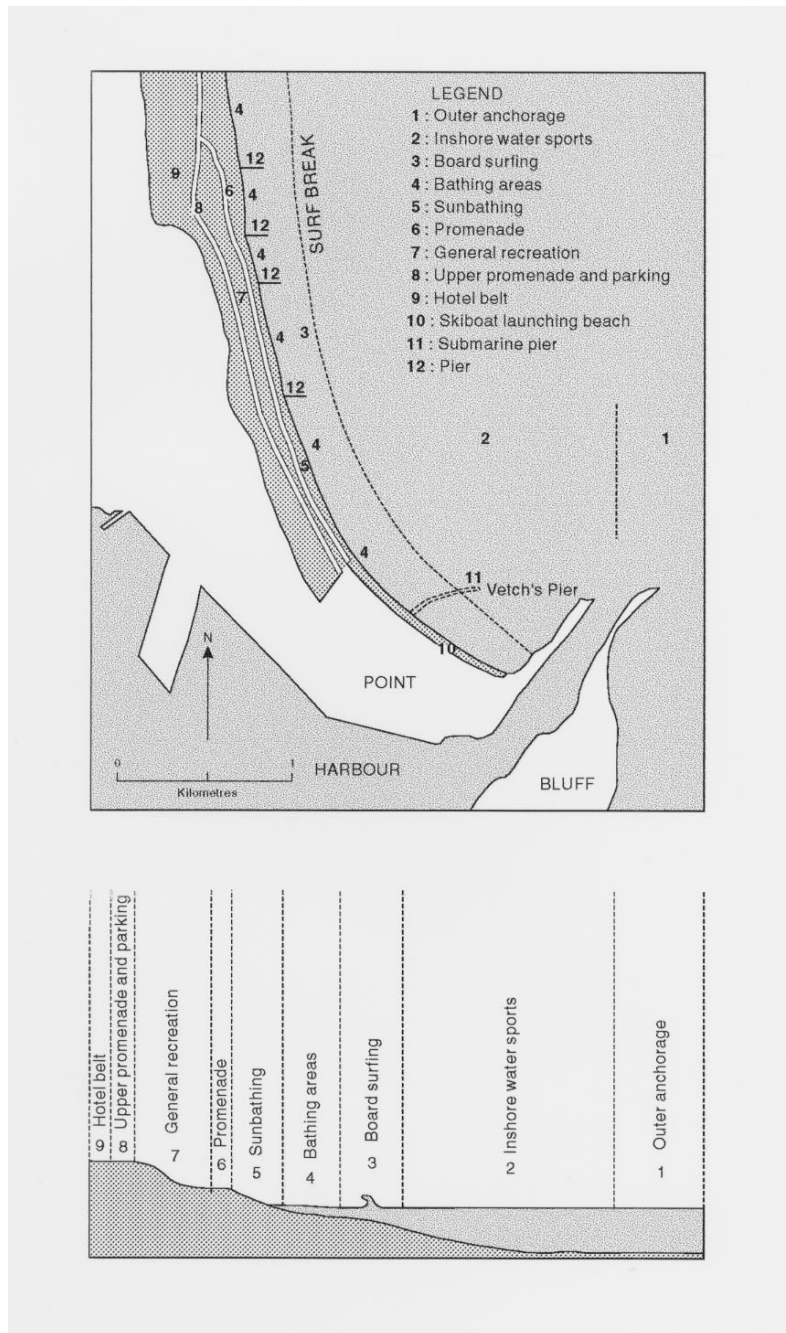


Figure 1. Seaside activity spaces at Durban

Space	Location	Activity
1	Outer anchorage	Ship mooring prior to harbor entrance
2.	Between outer anchorage and surf break line	Fishing, yachting, surfskiing, diving, jetskiing
3	Between surf break line and near inshore	Board surfing
4	Between waterline and standing depth	Bathing, religious ceremonies
5	Sand beach	Sunbathing, volley ball, running
6	Promenade	Walking, running, biking, rollerblading
7	General recreation	Sunbathing, picnicking, paddle pools, fast foods, swimming pool
8	Upper promenade and road	Craft markets, walking, parking
9	Hotels and apartments	Temporary, second home and permanent accommodation
10	Between north harbour pier and submerged Vetch's Pier	Yacht and skiboat launching area
11	Vetch's Pier	Snorkling and scuba diving
12	Piers	Promenading, fishing
13	Air space	Viewing flights, helicopter patrols

Table 1. Activity spaces associated with the Durban seaside

Space 4: Contested in the form of cultural dominance of bathing areas. Strictly regulated by lifeguards who enforce bathing between spaced beacons at designated beaches along the shoreline.

Space 5: Contested in the form of cultural dominance adjacent to bathing areas but not elsewhere. Regulated by lifeguards and police who restrict the consumption of alcohol and antisocial behavior.

Space 6: Relatively uncontested despite wide range of users. Regulated by law enforcement officers.

Space 7: Differential contests depending on nature of the activity space. For example, paddling pools are contested in the form of cultural dominance; restaurants in the form of expendable income. Regulation is by institutional controls such as law enforcement and health services.

Space 8: Contested between pedestrians and motor traffic. Regulated by licensing laws

that impact on curio traders and law enforcement services.

Space 9: Contested on economic and cultural grounds through access to expendable income. Regulated by hotel industry and apartment boards of control.

Space 10: Uncontested given adequate space. Regulated by fishing, yachting and diving clubs.

Space 11: Uncontested given small population of divers who are regulated by safety requirements set by the diving club.

Space 12: Contests occur between users. Fishermen are accused of leaving malodorous litter and threatening the safety of onlookers and surfers with their hooks and sinkers. For this reason they are strictly controlled and may fish from only a single pier.

Space 13: Relatively uncontested. The air traffic, mainly in the form of helicopter patrols, does not appear to invade other spaces.

However, air traffic authorities strictly regulate the space.

Conclusion

The notion of leisure space carries with it the assumptions that people differentiate and categorize this space in their mind. As knowledge derived empirically from the senses is combined with a priori conceptualizations of space and time, a leisure space becomes a bounded entity. The subjective partitioning of such space gains credibility when sufficient people agree on the principle activities that define the space. Once they are defined in this way leisure spaces become part of the social domain in which spatial domination may play a part. Questions of why, when and who dominates leisure spaces exposes issues that can help explain the nature of contested space. For reasons that range from ideological control to public safety, these spaces are also subject to regulation by institutions, organizations and local groups. The effect is to reinforce conceptions of how these spaces are represented.

Spatial domination is subject to ongoing change as the social domain evolves. The racial desegregation of the Durban seaside removed the politically imposed boundaries on leisure spaces. However, the sudden influx of groups that previously had been excluded exposed new contests over space and produced new forms of regulations. Levels of contest and regulation describe thirteen subjectively partitioned activity spaces. The domination of these spaces is culturally and economically determined. This in turn informs the manner in which these spaces are perceived, accessed, used and regulated.

Contests over leisure space are directly related to levels of space scarcity and the cultural or economic domination of scarce space resources. Thus spaces 1-3 and 10-13 are relatively uncontested. They are partitioned by activities that take place on, under and above the sea environment. The spaces are

generally expansive and the participants few. As part of the globalization of leisure, participants in these activity spaces are part of a communion with similar activities and spaces elsewhere. Their level of expendable income or first world experience also defines them. By contrast the land-based activity spaces 4-9 are heavily used and the spaces accordingly become contested in the form of cultural domination or economic influence.

While conceptions of activity spaces may be strengthened by the extent to which they are contested, they are further reinforced by the regulation of these spaces. Regulation is about the politics of order and control. All the defined activity spaces are subject to some level of regulation but vary markedly by the nature of the space. The spaces at sea are regulated by the harbor authorities but also by recreation organizations concerned with the safety of their members. On land and in the surf regulation arises out of the need to control large crowds and from perceptions of crime. Lifeguards regulate the beaches while contingents of police on foot, horse, bicycle and car provide a visible disincentive to the criminal element.

Conceptions of how leisure spaces are represented, contested and controlled assist visitors in choosing between seaside resorts. A wide range of leisure activities provides an additional attraction. The combination of these facilities has made Durban the most popular tourist destination in the province of KwaZulu-Natal (Tourism Durban, 1989a; 1989b) and one of the largest in southern Africa.

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OTTER SKINS, CLEARCUTS, AND ECOTOURISTS: RE-RESOURCING HAIDA GWAI

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Abstract: *This essay traces a history of resource extraction on Haida Gwaii, the archipelago that is sometimes called the Queen Charlotte Islands and is situated off of British Columbia's northwest coast. I argue that, beginning with the maritime fur trade in the 1780s, visitors have viewed the archipelago as a source of raw materials that could be advantageously extracted and processed in various colonial and neocolonial centers. I then argue that, since the 1970s, the discourse of ecotourism has contributed to an alternative way of viewing the islands. It has provided the Haida nation with a means to question the rhetoric of progress through resource extraction and to regain control of some of their lands.*

Keywords: Haida, Haida Gwaii, natural resources, resource extraction, ecotourism, land claims, cultural resources

Introduction

Haida Gwaii, an archipelago of one hundred fifty islands, lies between the parallels of 54° 50' and 51° 50' North, thirty to ninety miles off the northwestern coast of mainland British Columbia. The tip of the Alaska panhandle reaches to within thirty-five miles of the archipelago, while Vancouver Island is one hundred fifty miles southeast and Vancouver is four hundred miles southeast. There are two large islands in the archipelago: Graham Island to the north, and Moresby Island to the south. Spanish sailors on board the frigate *Santiago* recorded the first visit to the islands by Euro-Americans in 1774 (Beals, 1989; W. Cook, 1973). Soon thereafter, the maritime fur trade brought the first in a series of

colonizing discourses that have positioned Haida Gwaii as a source of primary resources that could be extracted and transported to centers where they would be processed. Various manifestations of these discourses of resource extraction have dominated social and economic relations on Haida Gwaii (and much of the Northwest Coast) ever since. However, during the last quarter of the twentieth century, the discourse of ecotourism has offered Haida and non-Haida residents of the islands a means to challenge long-standing colonial and neocolonial discourses. I believe that the discourse of ecotourism is helping local residents, especially Haida, regain control of their lands.

A History of Resource Extraction on Haida Gwaii

James Cook's third expedition (1776-1780) set out from England with instructions to sail north through the Pacific, locate the Northwest Passage that led into the polar sea, and then sail eastward through that sea and out into the Atlantic. The objectives were exploratory and scientific. However, while careening the ships at King George's Sound (later named Nootka Sound) in March and April 1778, officers and crew traded for many sea otter skins. Following unsuccessful searches for a Northwest Passage in the summers of 1778 and 1779 that bracketed Cook's untimely death in February 1779, the expedition turned homeward with stops at Petropavlovsk and Macao. There the pelts acquired at Nootka, and some additional skins acquired in Sandwich Sound (later named Prince William Sound),

fetched such high prices that the crew threatened mutiny, hoping to force an immediate return to the Northwest Coast for more furs. However, the officers prevailed and the ships returned to England, arriving in October 1780.

When reports of Cook's voyage began circulating in Europe, they ignited the maritime fur trade to the Northwest Coast (Cook and King, 1784; Scofield, 1993). Given the high demand for sea otter furs in Canton, traders from England and New England hoped to parlay this "soft gold" from the first leg of their voyages into silks, teas, spices and porcelain in China and finally return to their home ports bearing Oriental treasures (Gibson 1992). By the 1790s, British and American fur traders had identified Haida Gwaii, which they respectively named Queen Charlotte's Isles and Washington's Isles, as a prime source of sea otter skins. Information about Cook's voyage and the possibilities for a lucrative fur trade on the Northwest Coast spread rapidly, with accounts marveling at the ease with which furs had been obtained on the Northwest Coast and the desire they had elicited in Asian markets. James King, who had assumed command of the expedition during its final stages, outlined a comprehensive plan for commerce. His proposal detailed the types of ships that should be used, the various trade commodities they should carry, the seasons during which they should sail, the arrangements that should be made with the East India Company, and ways to procure victuals for the voyage (Cook and King, 1784, III: 437-40). The British expedition that would bring Haida Gwaii into this web of exploration, capital and trade responded to King's proposal. A consortium of financiers hired George Dixon and Nathaniel Portlock, officers on Cook's third voyage, to command the expedition, which departed England in September 1785 and returned in September 1788. Dixon pinpoints the motives of the expedition in the introduction to his account of the voyage: Cook's final voyage had "laid open to future Navigators . . . a new and inexhaustible mine of wealth" available "by trading for furs of the most valuable kind,

on the North West Coast of America" (1789, p. ix). The financiers assumed that their captain-traders would implement trade relations modeled on British understandings of law, property, and commerce. Specifically, to "secure the trade of the continent and the islands," Portlock and Dixon were "to establish such factories" as they deemed necessary, purchasing from the natives such tracts of land as the captains thought best suited for the purpose of trading while paying the natives "in the most friendly and liberal manner for the same" (Howay, 1929: 61-62). According to this line of thinking, the natives were the same as Europeans (owning and trading tracts of land and welcoming commercial expansion) yet different from Europeans (unable to determine and obtain the value of their lands). The consortium's instructions to Portlock and Dixon were consistent with imperial perspectives, but at odds with the situations the commanders encountered en route to and upon arrival on the distant coast (for example, concern about scurvy, challenges in acquiring provisions, fear of native attacks).

Portlock and Dixon acquired few furs in 1786, their first season on the Northwest Coast. After wintering at the Sandwich Islands (later named the Hawaiian Islands), they experienced further disappointments at Prince William Sound in May 1787. Dixon struck out in a southerly direction and arrived at Haida Gwaii on July 2, where, he writes, "A scene now commenced, which absolutely beggars all description." Haida paddled out to the *Queen Charlotte* in canoes bringing "most beautiful beaver [otter] cloaks," and "fairly quarrelled with each other about which should sell his cloak first; and some actually threw their furs on board, if nobody was at hand to receive them." The Haida yielded their furs so avidly that the British had to "take particular care to let none go from the vessel unpaid" (1789: 201). These events so impressed Dixon that two days later he "distinguished" the bay with the name "Cloak Bay" and then similarly honored the islands with the name of his vessel. The questions Dixon and other merchant explorers raised in their imaginings

and representations of Haida Gwaii were primarily those of capital – opportunity, risk, return – rather than those of theology, philosophy, or science. Dixon’s account, published in 1789, furthered the premise advanced in King’s 1784 account: Euro-Americans should approach the Northwest Coast as a resource-based economy that could be best understood in terms of resource extraction. The resources would be brought from the frontier to various economic, political, and cultural centers where their value could be realized. In short, King and Dixon appropriated the area into an imperial discourse, aspects of which endure to this day.

By the end of the 1790s, traders from New England came to dominate the sea otter trade on the Northwest Coast (Gibson, 1992; Busch and Gough, 1997). The American traders redirected capital that the War of Independence had displaced from its pre-Revolution applications. Their efforts to develop trade were crucial to the economy of the newfound nation, which was suddenly isolated from England, the main source of its pre-Independence exchanges. Alas, the sea otter population on the Northwest Coast could not withstand the pressures brought to bear by the maritime fur trade. As the number of otters decreased and trade dwindled, foreign interest in Haida Gwaii abated, to be revived only sporadically by prospects for base metals (Poole 1972) and a short-lived gold rush in 1851. The reports of gold on Haida Gwaii led the British government to fear excessive American presence in the area. In a preemptive strike, Governor James Douglas annexed the Queen Charlotte Islands to the colony of Vancouver Island in September 1852. When the amount of gold proved inconsequential, interest in the archipelago again dwindled and remained quiescent until the 1870s, when the first missionaries arrived on the islands. The intentions of Reverend William Collison, who arrived in 1876, differed from those of previous visitors in that the resources Collison sought were human rather than natural; unlike his predecessors, he was overtly concerned

with transforming the social environment that he encountered. He saw the Haida as heathens who needed to be saved, yet his goal exceeded converting subjects through baptism: he sought to implement British forms of law and order, British dress codes, and European rules of economic regulation. His project was to transform the Haida into ideal imperial subjects (Collison, 1981).

Such colonizing schemes accelerated as British Columbia was drawn into the new Canadian confederation. Geologist George M. Dawson was one of the first representatives of the federal government to visit Haida Gwaii. In 1878, the Geological Survey of Canada assigned Dawson to explore the archipelago and to assess its potential for resource exploitation. His report cartographically erased Haida presence and reterritorialized the islands into a national (and by extension, international) geological scheme (Dawson 1993; Braun 2000). In essence, his survey cataloged the islands as a fount of resources waiting to be incorporated into the new nation and its progressive economy. In addition to his professional duties, Dawson used his visit to the islands to pursue his avocations of ethnology and photography. Following the 1878 excursion, he published a lengthy article about Haida culture and history, entitled “On the Haida Indians of the Queen Charlotte Islands,” in the Geological Society’s *Report of Progress for 1878-79* and an excerpted version in *Harper’s Magazine* in 1882. Dawson assumes that the most advantageous use of resources is commercial, and recognizes that Haida participation in the new resource-extractive economy has been and will be limited. He believes that Haida should take up agriculture, a means of procuring food that is consistent with English ideals, but “the task of clearing the ground is quite beyond the energy of the Indian” (1993: 107). In Dawson’s view, the Haida are vanishing while the land is not. He assumes that the Natives will disappear and thus free up the resources of the land, the resources (such as coal deposits) that he hires Haida guides to reveal. He sees aboriginal people not as full citizens, but as

vanishing natives who hinder the extraction of important resources.

An attitude common to most modern visitors to the northwest coast is evident in Dawson's ethnography. It pivots on the belief, however vaguely articulated, that modernization will first degenerate then ultimately annihilate the aboriginal population. This line of thinking reasons that modernization is so antithetical to aboriginal ways that it will erase them. Dawson recognizes that the imposition of the culture that he is importing is responsible for the degeneration of aboriginal cultures. However, he fails to question whether the invading culture has the right to extinguish (as he assumed it would) previous cultures. He realizes that the modern and aboriginal cultures are founded on different ways of viewing the world, but assumes the superiority of his culture's cosmology. "The forest of carved posts in front of the village," he writes at one point, "doubtless presents to the native eye a grand and awe-inspiring appearance and brings to the mind a sense of probably mysterious import, which possibly does not in reality exist" (1993: 110). In other words, the aboriginal thought world is already a thing of the past, while the less mysterious, more rational way of knowing the world that has replaced it is the present and the future reality. The rational way is properly progressive.

In the final paragraph of "On the Haida Indians," Dawson summarizes his 1878 visit and the social restructuring he sought to initiate. He concludes that despite "the alarmingly rapid decrease of the Haida people" during the nineteenth century, they are unlikely to disappear as a nation. Their tenacity can be turned to the advantage of the new powers, as Haida "show a special aptitude in construction, carving, and other forms of handiwork." Therefore, "those interested in their welfare" should "promote their education in the simpler mechanical arts, by the practice of which they may be able to earn an honest livelihood" (1993: 165). First, however, Haida title to the islands' resources "must be disposed of. This,

in the case of these people, will be a matter of considerable difficulty, for . . . they hold their lands not in any loose general way, but have the whole of the islands divided and apportioned off as the property of certain families, with customs fully developed as to the inheritance and transfer of lands" (1993: 166). Dawson's vision is specific: to dispossess Haida of their lands and to establish a resource-extractive economy in which Haida are trained as dutiful workers. He believes that the new and proper culture will overwrite Haida culture and absorb the most fortunate individuals.

The depopulation of native villages that Dawson witnessed on Haida Gwaii (and in other nations on the coast) in 1878 was arguably the deepest reflection of the shock that aboriginal cultures experienced from contact with Europeans; it contributed to the invaders' conviction that natives would disappear. In his thorough review of the historical literature, Robert Boyd notes that, beginning with Dixon's visit, smallpox and venereal diseases ravaged Haida populations. He estimates the Haida population prior to 1836 as more than nine thousand; following the 1836 smallpox epidemic as probably one-third less; and by 1882 as about one thousand six hundred. The number of major inhabited villages declined from approximately thirteen in the mid-nineteenth century, to eight in 1883, and to three in 1890. By the turn of the century, only the modern settlements of Skidegate and Masset remained (1999: 217). Historical geographer Cole Harris estimates that the number of Haida reached a nadir of some eight hundred (1999: 146), while Haida artist Robert Davidson cites a figure of five hundred (Kittredge 1987: 146). Depending upon which numbers one uses, the depopulation during the nineteenth century was approximately ninety to ninety-seven per cent. The replacement of Haida economies with voracious colonial economies that coincided with this cataclysmic depopulation was most flagrantly manifested in the twentieth century by the clearcutting of Haida Gwaii's forests.

Slowing the Onslaught

An article entitled "Queen Charlotte Wilderness: Unique and Threatened" and authored "by the Islands Protection Committee" appeared in the February 1976 edition of *Nature Canada*, the magazine published by the Canadian Nature Federation. A note at the bottom of the first page explains: "Islands Protection Committee is an association of residents of the Queen Charlotte Islands dedicated to preserving the unique quality of life on the Islands. They oppose plans by the forest industry to log the southern part of Moresby Island. You can support the Committee by writing to Islands Protection, P.O. Box 302, Masset, B.C." (1976: 39). The article describes the southern third of the archipelago as "the living fabric of a Pacific wilderness," unique and special. The islands are home to peregrine falcons, sea otters, trumpeter swans, whales, eagles and other endangered species; they host endemic plant species and contain the world's largest red cedar, yellow cypress and sitka spruce trees; and they are rich in Haida history and legend. However, the article warns that the traditional harmony that existed during some 8,000 years of aboriginal inhabitation has been disrupted by the ethic of the colonists to such an extent that, for instance, a whaling station helped "to convert the world's largest and least understood mammal into lamp oil, corsets and shoe polish." The article appears "at a critical moment" in the archipelago's history, when "the balance may be cast either way — towards preservation or towards increased exploitation." The area "now faces a threat of unprecedented magnitude," as Rayonier Canada, "a subsidiary of the world's largest multinational corporation, I.T.T.," plans to clearcut many of the "virgin forests" (1976: 41). Having outlined its concerns, the Committee provides details supported by striking photographs. We read that the subsidiary of the multinational corporation has already clearcut extensive areas further north on the archipelago, with devastating results. It has logged slopes steeper than forestry regulations permit,

leading to extensive soil erosion and slides; its methods have destroyed spawning rivers and coastal marine areas; and the Forest Service has, "in direct contravention" of its own guidelines, "quickly approved" Rayonier's logging plans for the southern areas. Three color photographs are arranged on one page to mark the contrast between further exploitation and preservation. A low camera angle shows a tangle of roots and stumps in a washed-out streambed, with a clearcut receding up the slopes. The caption beneath the large image reads, "A cut over area on the northern part of Moresby Island." Arranged beside the scene of wreckage are two smaller photos. One zooms in on a nesting raptor and is captioned, "Peale's falcon, a distinct race of the peregrine falcon, is limited to the Charlottes." The other sweeps a panorama of coastline and is accompanied by the information that "One of the greatest single resources in the Charlottes is the rich life of coastal marine areas" (1976: 40).

The article then explains that in "the autumn of 1974 a group of Queen Charlotte residents formed the Islands Protection Committee to voice concerns over Rayonier's scheduled logging of the South Moresby area." It describes how the Skidegate Band Council expressed similar concerns and how Islands Protection supported the Haida, then "went a step further" by outlining a "wilderness proposal" for southern Moresby. Islands Protection submitted what was essentially a resource management plan to the Premier of BC, to the Minister of Lands, Forests and Water Resources, and to the Minister of Recreation and Conservation. "Reaction on the Charlottes, where logging is the principal industry, was surprisingly favorable" (1976: 42). The submission resulted in a moratorium on logging in the area. However, the text concludes with a warning that Rayonier could quickly move its operations into the contested area: "Reportedly the Environment and Land Use Commission will take a look at the area in the summer of 1976, but with the new change of government in B.C. — who knows" (1976: 43).

The campaign to preserve South Moresby from the exploitative fate that has befallen more northerly portions of Haida Gwaii lasted from the fall of 1974 to July 1987. "Queen Charlotte Wilderness: Unique and Threatened" is but one article (albeit the first major article on this topic to appear in a national periodical) in a long and complex conflict. Yet, it introduces the key organization of preservationists; it recognizes the primacy of Haida responsibility in the dispute and defers to Haida initiatives; it delineates two thirds of the exploitation axis as the forces threatening the environment (the forest companies and the government forest bureaucracy insist on business as usual, while workers are generally willing to reconsider forestry practices); and it introduces several of the tactics that the preservationists will use during the conflict.

For the Islands Protection Committee, the battle lines were drawn between, on one side, the corporations and provincial government obliged by its own legislation to allow rapid, large-scale clearcut logging and, on the other side, the preservationists who advocated the wisdom of keeping coastal temperate rainforests intact. The issue was the same at the outset as it would be thirteen years later. As IPC spokesperson John Broadhead wrote, would the industrialists process the area's unique ecological features into two-by-fours or would the wilderness campaigners' dream of "a better world, of respectful relations and mutual benefits among two-leggeds, four-leggeds, no-leggeds, beaks, no beaks — the works," prevail? Islands Protection sought to change the number who shared that dream. Broadhead writes,

"Such a dream had a remarkable effect upon those who became its advocates. The Haida, having lived in the place for 10,000 years, had been the first to awaken to it. It was conveyed to a handful, and then to hundreds, then to thousands of visitors who came to see for themselves, only to fall under its spell. It inspired the unshakable conviction that it was only a matter of time before the logging would end. Every

time another tree fell, the dream and the conviction to achieve it only grew stronger." (Broadhead 1989: 53)

Broadhead argues that significant social change can occur only with a broadly shared experiential base: "In the case of a wilderness proposal, a sufficient number of people must know the place and share a gut feeling for the values at stake, before the 'critical mass' of opinion capable of precipitating political change can be attained." Islands Protection therefore enacted "a simple, two-pronged strategy: start talking and start bringing people to the place" (1989: 54).

Islands Protection's determination to "start talking and start bringing people to the place" as a means to rupture the usual ways of doing business in the islands' forests involved three tactics.¹ The first focused on the rhetoric of science. When industry responded to criticism of its practices by suggesting that matters were best left to its professionals with their scientific expertise and that little would be gained by consulting the poorly informed public, Islands Protection identified scientific analysis as an important weapon (Pinkerton, 1983: 76). The Committee lobbied various agencies to conduct field studies in South Moresby and funded scientists to research such topics as eagle-nesting densities, intertidal communities and the effects of logging on salmon habitat (Broadhead, 1984: 130-33; 1989: 54). As it collected information, Islands Protection gained sufficient material to argue for the preservation of South Moresby on scientific merit alone. As Bristol Foster had written years before, Haida Gwaii hosted so many endemic species that it should be recognized as the "Canadian Galápagos" (May 1990: 30). Thus, as early 1976, in the *Nature Canada* article, Islands Protection was arguing that the uniqueness of South Moresby as an intact ecosystem was of greater value than the timber that could be extracted. The preservationists also gained expertise in the discourse of forestry management itself. Through their preparation of court affidavits and their participation in the Public Advisory Committee, Island Protection

members gained knowledge of cutting rates, logging waste, soil erosion and related matters. By 1980, the Islands Protection Society, aided by a growing network of sympathizers, was able to counter the claims of the forest industry with an elaborate critique of forestry practices and policies phrased in the industry's own language (Pinkerton, 1983: 79-80; Wilson, 1998: 190).²

The second tactic involved the use of images. Photographers contributed thousands of "photographs of wildlife and ancient ecosystems," as well as "devastating shots of landslides and debris-choked salmon streams," which Island Protection members "then winnowed down into ever-improving slide shows for public presentation." The slide shows and their accompanying narratives were then "taken on the road at every opportunity, presented to small-town naturalists' groups; to politicians, singly and in groups, from the municipal to the federal level; to assemblies of thousands in conference halls; and to impromptu audiences in railway cars" (Broadhead 1989: 54). To disseminate the images and narrative further, Islands Protection Society produced *Islands at the Edge – Preserving the Queen Charlotte Islands Wilderness*, an abundantly illustrated collection of seven essays written from aboriginal, ecological and environmentalist perspectives. Released in time for Christmas 1984, the book became a national bestseller, resulting in nation-wide publicity for the wilderness proposal.

The third tactic involved bringing people to South Moresby to experience the area directly. Islands Protection sought writers, photographers, artists, scientists, industrialists and politicians who, it was hoped, would network the message, exponentially spreading it to a national and then international audience (Broadhead, 1989: 55). The case of David Suzuki, host of the widely watched television show *The Nature of Things*, affords an example of how brilliantly this tactic would succeed. In 1982, when Islands Protection supporter Jim Fulton, who was Member of Parliament for Skeena (and Haida Gwaii), implored Suzuki

to "do a show on South Moresby," Suzuki visited Haida Gwaii. As Elizabeth May recounts, Suzuki "had no intention of getting involved in the campaign to save South Moresby. He had never been a champion of Indian rights and he was leery of environmental activists who seemed constantly to demand his help" (1990: 62). However, back in Toronto, reviewing footage of interviews conducted during his visit, he realized that his thinking had been profoundly changed. He had asked IPC founder Guujaaw why the Haida cared about the area. Guujaaw responded, "Our people have determined that Windy Bay and other areas must be left in their natural condition so that we can keep our identity and pass it on to following generations. The forests, those oceans are what keep us as Haida people today."

"So if they're logged off?"
 "If they're logged off, we'll probably end up the same as everyone else." (May 1990: 63)

In other words, wilderness is more than an environmental matter, it is identity — a message that would resonate with many Canadians when Suzuki devoted three *The Nature of Things* shows to the wilderness proposal. By bringing the "war of the woods" to television, these interventions in the conflict extended the debate to a national audience and brought the discussion to a more popular level than had representations in newspapers and courts. The concern that initially had been mobilized locally through petitions, letters to the editor and affidavits, was thus disseminated through the electronic media. A movement that had started at the grass roots level as a wilderness proposal to prevent the plundering of resources in the southern portion of Haida Gwaii was asking Canadians to reconsider the role wilderness plays in contemporary constructions of national identity.

The tactic of inviting visitors who would experience the natural wonders of the area and then share their enthusiasm reached a zenith early in 1987, with word of a forthcoming article in *National Geographic*. Moira

Johnston's "Canada's Queen Charlotte Islands: Homeland of the Haida," appeared in the July 1987 issue. It features the dramatic tropes and lambent photography for which *National Geographic* has become renowned (see Lutz and Collins 1993). Johnston begins by sharing the awe with which she views the islands. They "are among the globe's rare jewels," a wilderness "abounding in treasures." Their "brooding rain forests" contain "some of the finest surviving stands of ancient cedar, spruce, and hemlock," while their millennia of isolation have resulted in "an evolutionary crucible that forged dozens of unique endemic (*sic*) varieties of both plants and animals" (1987: 104). Whatever the natural wonders of the archipelago, these islands are, above all, "Haida Gwaii, 'homeland' of the Haida, the sea-roving lords of the coast" and creators of a culture that became "the apogee of the Northwest Coast; unequivocally the most advanced of any hunter-gatherer's." After documenting the threat that resource extraction has brought to the islands and to Haida culture, Johnston outlines a logging contractor's concerns that jobs will be lost if South Moresby is protected. She then quotes the response of Miles Richardson, president of the Council of the Haida Nation: "We're not talking about 70 jobs. . . . We're talking about forever. The issue is not logging versus 'eco-nuts.' It's our ability to sustain our culture. And that lies in our relationship — as a people with a 10,000-year history — to the land and the sea and their resources" (1987: 126). Immediately after juxtaposing the different temporal horizons of those indigenous to the islands and those who merely seek its resources, Johnston presents the current hope for alternatives: "Jobs would be more than compensated by establishment of a national park and increased tourism," said [Minister of the Environment] Tom McMillan, expressing the commitment of the federal government in Ottawa to preserving South Moresby "for Canadians yet unborn and for the international community" (1987: 126).

Johnston's article appeared in July, just as the three levels of government (federal, pro-

vincial and Haida) negotiated a resolution to the South Moresby conflict. Yet the tactical leverage the article afforded the preservationists preceded its publication. The specter of what would surely be yet another exposé of government-industry collusion and insensitivity to the increasingly linked concerns of environmentalism and cultural preservation hastened politicians to respond. May reveals that as the federal government became eager to resolve the conflict by creating a park, Islands Protection spokespeople could mention the impending article and inform McMillan that *National Geographic* "has a direct circulation of fourteen million people. Any story on a possible tourism destination results in an average of a hundred thousand immediate inquiries. Tourism for the park is an increasingly attractive proposition" (1990: 200). The notion of a park gained an economic aura. Politicians could take up the cause of saving the environment and a threatened culture even as they committed to economic progress. Federal negotiators also introduced green tourism as a vaguely defined but persuasive concept at a crucial point late in their negotiations with British Columbia premier Bill Van der Zalm (May 1990: 221). The novelty of the concept allowed federal negotiators to appeal to Van der Zalm's grandiose dreams without having to provide hard data.

As the political changes initiated on Haida Gwaii brought negotiations to save South Moresby to a climax, the Brundtland Commission advocated sustainable development strategies in its report, *Our Common Future*, published in April 1987. The report defines sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Bandy, 1996: 543). Economic development ministries and tourism marketers began referring to ecotourism as a promising manifestation of sustainable development. However, "ecotourism" is a neologism that has yet to settle into a firm definition. I define ecotourism as nature-based tourism that involves education and interpretation of the natural environment and that aspires to ecological and economic

sustainability. It does not necessarily include a cross-cultural component.³

Concepts of sustainable development were central to the new economic approaches advocated by the Islands Protection Society and the Council for the Haida Nation (CHN) throughout the South Moresby conflict. The preservationists attempted to re-define growth and development qualitatively by emphasizing equitable and sustainable forms of political ecology, and thus mitigate the traditional quantitative emphasis on economic modernization.⁴ In 1984, pressed to provide specific alternatives to logging, IPS founder Thom Henley advanced ecotourism as a relatively benign and sustainable alternative to the traditional resource-extractive economies of Haida Gwaii, while warning that, "From 1978 to 1982 the number of visitors to South Moresby on organized commercial tours increased eleven-fold. . . . In addition the numbers of private individuals who visit the area . . . has also increased dramatically. At present, with no legislation to curtail logging and mining development and no official park status to safeguard against visitor abuse, South Moresby is suffering the impact of both" (1984: 145-46). In other words, the impact of ecotourism would have to be monitored, since it seemed to be generating too much new industry. Proponents suggested that ecotourism would provide immediate employment that would compensate for the loss of logging jobs. Taking a longer-term view, they also hoped that ecotourism would promise ecological preservation and economic sustainability. The drastic depletion of mature forests and the rapidly dwindling fish stocks signaled that the logging and fishing industries were failing on both counts.

On July 11, 1987, the three governments announced an agreement in principle to save the southern portion of Haida Gwaii as South Moresby / Gwaii Haanas National Park Reserve, to be jointly managed by Parks Canada and the Council for the Haida Nation (Doern and Conway, 1994: 186).

Ecotourists and Cultural Strategies

Ecotouring has become the most frequently imagined and imaged way to visit Haida Gwaii, so that contemporary representations of traveling to Haida Gwaii tend to incorporate images and descriptions of ecotours. When a popular magazine such as *Westworld* targets consumers likely to travel to the islands in recreational vehicles, it includes color photographs of kayaking and carefully avoids images of recreational vehicles (see, for example, Scott 2001). This linkage between Haida Gwaii and ecotourism began during the campaign to slow clearcut logging on the islands and became more apparent with the creation in 1987 of Gwaii Haanas National Park Reserve, with the declaration of Ninstints as a UNESCO World Heritage site, and with the increasing media portrayal of the archipelago and Gwaii Haanas as tourist destinations outstanding for their aboriginal culture and natural settings.

The Council for the Haida Nation has used this discourse of ecotourism, the appeal of the national park, and the leverage afforded by their joint-management understanding with Parks Canada, to assert its rights to administer traditional Haida lands, rights the Haida never relinquished in treaties. The quota system that was established during the 1990s to regulate admission to Gwaii Haanas is one example of a CHN strategy that targets ecotourists yet has ramifications for intergovernmental relations, especially land claims. By controlling and or restricting access to the park, Haida reestablish their sovereign right to the area. By July 1997, visitors wishing to ecotour South Moresby had to comply with the terms laid out in an information circular entitled "Planning to Visit Gwaii Haanas?" The circular, distributed by the Skidegate band and Queen Charlotte Tourist Information, states that ecotourists "traveling" to Gwaii Haanas must take "the mandatory orientation" at one of the times and locations specified, or phone a toll-free number and make "an advance reservation" for "a small fee," or

“grab” one of the six daily “walk in spaces.”⁵ The orientation sessions are not difficult and the fees are reasonable. The importance of the strategy is that to meet the requirement, ecotourists must implicitly acknowledge Haida control of the region.

The mandatory orientation sessions are an adjunct to the long-dormant Haida Watchmen program, which the CHN has revived. In the earliest photographs of the islands, small, crouched human figures, wearing hats with high crowns, sit atop all frontal poles. As Hilary Stewart explains, they are known as “Watchmen,” with supernatural powers: “from their lofty position atop the pole, they look out in several directions to keep watch over the village and out to sea. They protect those within the dwelling by warning the chief of the house of any approaching danger, alerting him to canoes arriving or anything else he should know. The high-crowned hats worn by the Watchmen symbolize the status of the chief whose house they guard” (1996: 36). Three Watchmen sit atop most house frontal poles – one peering up the shoreline, one gazing directly out to sea, and the third watching down the shoreline. Haida artist Robert Davidson stresses that the three Watchmen “represent the different tenses: past, present and future.” As “interlinked figures” they “suggest communication and a presence in the world while regarding the future” (Thom, 1993: 92). That tradition has been revived as part of the joint management of Gwaii Haanas. Funded by Parks Canada, the Watchmen Program staffs vital Haida heritage sites in the park and at other sensitive locations on the archipelago with Watchmen, many of whom are female, despite the gendered appellation. The Watchmen welcome ecotourists to these important sites, typically by recounting Haida histories of the locations. When ecotourists represent their travels to Haida Gwaii and relate their meetings with Haida Watchmen, they act as ambassadors for the CHN strategies that seek to reestablish Haida sovereignty.

In “The Queen Charlotte Islands: Life and death (hee-hee) tales from the place of won-

der,” the American travel writer Tim Cahill recounts an ecotour in which he and nine fellow kayakers visit Sgan Gwaii, the UNESCO World Heritage site that is also known as Ninstints. There the Watchman Wanagun articulates a history of the site that passionately and learnedly contests orthodox Euro-American histories (Cahill, 1997). In *Haida Gwaii: Journeys through the Queen Charlotte Islands*, ecotourist Ian Gill arrives at Sgan Gwaii, having “spent the past few days in a high state of anticipation of this moment, coming at last to this Pantheon of Haida culture” (Gill, 1997: 113-14). Gill first recounts much of the lore of the encounters between Haida from Sgan Gwaii and early traders, then turns to the present by quoting at length Wanagun, “a patient and solicitous storyteller and guide,” who gathers the ecotourists “in a sort of Socratic semicircle” and brings to life the history of Ninstints (: 116). Gill cites several Euro-American histories of Sgan Gwaii – as recorded by copper-miner Francis Poole, census-taker John Work, ethnologist John Swanton, and anthropologists Newton Chitendon, C.F. Newcombe, and especially Wilson Duff – while allowing the knowledgeable Haida Watchman to comment on those histories (: 116-22). The passage illustrates the potential of ecotourism to immerse travelers in past and present cultural features of a significant destination. Gill’s research, lively writing and access to Wanagun’s wisdom result in an ecologically informed narrative that offers insights into the rehistoricizing of that locality, the possibilities of developing alternatives to primary resource extraction, and matters of native rights and cultural continuation. In *The Laughing One: A Journey to Emily Carr*, biographer Susan Crean tells of participating in an ecotour that visited Hlkenul (Cumshewa) and K’una (Skedans). She weaves reflections about the stories that the great Canadian painter and writer Emily Carr wrote of her 1912 visits to the respective villages with self-reflection about Crean’s own experiences there in 1994. She then recounts the lesson in Haida history and the cultural politics of Haida Gwaii that the venerable Watchman Charley Wesley delivers to her group (Crean, 2001:

332-34). The representations by Cahill, Gill and Crean partake in a project in which Haida, in often-uneasy coalitions with preservationists and more recently with Parks Canada, have successfully overthrown long-standing perceptions of the islands' resources as primary materials that should be harvested and processed elsewhere. Ecotourists such as Cahill, Gill and Crean now disseminate Haida cultural resources to international audiences. In doing so, they respect Haida forests, lands and especially people in ways that may well allow Haida to keep their identity and pass it on to following generations, to recall Guujaaw's words (May 1990: 63).

Notes:

¹ In this essay, I use "tactic" and "strategy" more or less interchangeably. In Martineau (2001), I observe Michel de Certeau's careful distinction between the terms as I analyze the conflict on Haida Gwaii.

² Islands Protection Committee changed its name to Islands Protection Society in 1979.

³ Hector Caballos-Lascuria is often credited with coining the term "ecotourism." By 1990, his definition had evolved to: "that segment of tourism that involves traveling to relatively undisturbed or uncontaminated areas with the specific object of admiring, studying, and enjoying the scenery and its wild plants and animals, as well as any existing cultural features (both past and present) found in these areas. Ecotourism implies a scientific, esthetic, or philosophical approach, although the ecotourist is not required to be a professional scientist, artist or philosopher. The main point here is that the person that practices ecotourism has the opportunity of immersing himself or herself in Nature in a way that most people cannot enjoy in their routine, urban existences. This person will eventually acquire an awareness and knowledge of the natural environment, together with its cultural aspects, that will convert him or her into somebody keenly involved in conservation issues" (quoted by Zurrick 1995: 8).

Caballos-Lascuria's definition foregrounds two important aspects of ecotourism: ecotourists travel to locations anticipating to gaze upon scenery, flora, and or fauna in ways or in amounts that mark the destinations as special;

and second, they are interested in and concerned for the cultural aspects of those destinations. Ecotourism by definition requires responsibility toward the physical and cultural features encountered. The idea that an ecotour will transform the ecotourist "into somebody keenly involved in conservation issues" is idealistic. Ecotourists can and sometimes do fulfill the requirement of respecting the physical and cultural qualities of the destination without becoming "keenly" involved in conserving those qualities. To be fair, Caballos-Lascuria proffered that definition early in the 1990s, and the discursive formations that have evolved around ecotourism in the intervening years have been polymorphous in ways that no fixed definition could have anticipated.

Goodwin discusses "competing definitions of ecotourism" (1996: 277-80). See Bandy for other definitions (1996: 544).

⁴ Bandy writes that this shift from the quantitative to the qualitative often proposed "strategies of common property resources, incorporation of indigenous local knowledge, and of course, ecotourism" (1996: 543).

⁵ "Planning to Visit Gwaii Haanas?" is reproduced in Martineau (1999).

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TRAVEL WRITERS AS POWER BROKERS: TESTIMONIES FROM THE FRONT LINES OF MARINE TOURISM

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Abstract: *Travel writers, like all of us, benefit from being tourists. However, unlike tourists, travel writers – by virtue of their job – have cause to circulate their point of view, in turn creating a power dynamic with their audience. Interviews with coastal and marine travel writers indicated that many of them recognized this power dynamic and manipulated it, particularly for the purpose of fulfilling certain ethical responsibilities – such as environmental protection – they felt toward the places and locals they covered. In view of this role, the paper argues that travel writers serve as important policymakers, of sorts, wielding significant influence over the decisions and behavior of their readers.*

Keywords: *travel writer, travel account, guidebook, marine tourism, power*

Introduction

We woke in the morning to find that chance had brought us to one of the more beautiful shores of the Mediterranean.

– Eric Newby, *On the Shores of the Mediterranean* (1984: 145)

The ascent to the Corycian cave is easier for a man on foot than for mules and horses. This cave got its name from a nymph Corycia; and of all the grottoes I have seen it appeared to me the most worth seeing. The total number of caves that open upon the beach or on the deep sea is past finding out; but the

most famous caverns in Greece and in foreign lands are these.

— Pausanias, *Description of Greece*, written in the second century AD (transl. J. G. Frazer, 1898: 547)

The epigrams above are from travel writers. Centuries apart but speaking of the same country, the quotes suggest the authors as regular people on vacation, out to have an enjoyable time in a new place, encountering contrasting cultures and environments. In a sense, the authors represent *us*, the readers. Documenting sights, experiences or feelings that ring true for the modern traveler (despite one writer's having lived long ago), the writers bring the reader along on their travels. The writings suggest a certain equivalence between writer and reader – a common humanity or common vision, an egalitarianism. They are tourists as we are tourists.

Nonetheless, there are significant differences between the travel writer and his audience. A closer inspection of the travel writing industry reveals that the writer possesses substantial power: power to influence the way his readers think and behave toward a particular destination, or toward particular locals or travel brokers or tourists. Academic literature bears out that a writer's article about a particular site can demonstrate a direct effect on the level of touristic interest shown toward a destination (Gladwell and Wolff, 1989). In contrast to the

egalitarian relationship described above, the writer's power is ensconced in an *asymmetric* relationship he holds with his readers. The writer is the authority and the reader is the student. With presumed knowledge, the writer instructs us — guides us — in our understanding. The travel writing industry is set up to harness this power for any number of purposes: for simple information dissemination, for marketing, and for entertainment. Holland and Huggan (1998: 3) suggest that:

... the inducement to read travel narratives should by no means be thought of as replacing the urge to travel; rather, travel writing sells while also helping to sell holidays.

The oscillatory (at times, ambiguous) relationship between travel writers and readers — alternately offering egalitarianism and asymmetry — is essential for explaining the influence these writers hold. The egalitarianism's presumed consensus, suggesting a similar view of the world, fosters trust between reader and writer. This trust, in turn, fosters adherence or even obedience, allowing the writer to assume an authoritarian stance. The reader opens himself to the writer's influence, absorbing and applying the writer's transferred knowledge.

By extension, as the travel writer's power influences the way the reader plans or behaves on his trip, it conversely affects how destinations and locals experience the reader's travel. Travel writers have the ability to influence travel patterns and beliefs on a relatively large scale, and, arguably, this brings significant responsibility to the profession — responsibility to avoid causing unfair, unintended impacts to the destinations or locals about which or whom the authors write. Sometimes this responsibility can conflict with the writer's duty of disseminating information. As described in this paper, coastal and marine travel writers choose to navigate this conflict in various ways, with varying effects.

This paper explores the power role of travel writers through which they influence the

decisions and behavior of their readers in coastal and marine tourism. In the first two sections, we define travel writing and remark on the influence of the *flâneur* on the genre. The third section provides a Foucauldian analysis of the power role held by travel writers. The fourth section illustrates how several marine-oriented travel writers have chosen to wield their power role, based on interviews with writers and excerpts from travel works. In conclusion, we remark on the implications of our findings for the setting of coastal and marine tourism policy.

Travel Writing Terminology

"Travel writing" is a tricky genre to define. Academic literature has generally treated it as if its bounds and component works were self-evident and unrequiring of any explication (Mulvey, 1983; Snepenger, et al., 1990; Pratt, 1992). But ask publishers and sellers who describe their materials as "travel writing" for a definition, and you will receive a wide range of answers. In interviews for this paper, one bookseller described the genre namely by what it offered: "a strong sense of place" that "empowers and impacts readers" (Andrus, 1998). Another bookseller described it as offering perspectives on a "foreign" place — potentially within the writer's own country — as well as on the people who live there (Mouser, 1998). The editorial staff at *Publisher's Weekly*, an industry magazine that covers all genres of books, responded that in terms of defining travel writing, they "know it when they see it", but otherwise do not have a strict definition (Zaleski, 1998). We believe that this last description is probably closest to what most publishers, sellers, and readers think on this subject.

The difficulty with which travel writing is defined is caused by several factors. For one, travel writing can take the form of a diverse array of *products*, all of which have been considered at one time or another to reside in the travel writing genre: travel ac-

counts, guidebooks, nature writing, gonzo journalism, *National Geographic* - style country reports, memoirs, diaries, some fiction, and even marketing materials, such as glossy magazines produced by tourism agencies. Adding to the confusion is the fact that many of these works have been marketed across categories, based on relatively arbitrary marketing decisions by publishers, authors, and booksellers. That is, a book on travel by a female scientist to a remote natural location might be marketed variously as nature writing, as a travel account, as a memoir, or as a gender study. The categorization of travel writing is also determined by the point of view of the reader: for example, an account of an American writer's trip to London, England, would readily be viewed as travel writing in the U.S., while in London it might well not.

The confusion over definition is not helped by the fact that the term "travel writing" is composed of two words which, by themselves, do not submit to easy defining: *travel* and *writing*. *Travel* has been defined variously in the academic literature. The definition we will use is from Miller and Ditton (1986: 11), who characterized travel as trips that hold appeal for the three-dimensional "contrasts" they offer. That is, the authors suggested that the fundamental payoff of travel or tourism has always been found in its potential to generate contrast of any one of three or more kinds: instrumental (e.g., business), educational (e.g., sightseeing), or recreational (e.g., sport).¹ For this paper, we use *travel* interchangeably with *tourism*, although narrow differences between the terms have been demonstrated (Leed, 1995); for example, it has become conventional to regard tourism as an activity that is not "work", while "business travel" is an accepted phenomenon (Miller and Auyong, 1996).

Writing can vary from high literature (fiction); to non-fiction disciplinary writing (e.g., historical or botanical writing); to non-fiction reporting (e.g., journalism and personal observation); to marketing. It can take the form of a book, article, column, brochure, or any

number of other treatments. Together, *travel* and *writing* form a genre in which the travel of the writer is viewed as lending him expertise on the destinations about which he writes.

For the purposes of our research, we have excluded from our purview works that are generally fictionalized. For example, we do not examine L.M. Montgomery's children's classic *Anne of Green Gables*, a fictional work that has long generated a small yet consistent tourism industry on Canada's Prince Edward Island where the book is based (Squire, 1996). Nor do we include in our study James A. Michener's novels, which trace the paleontological and modern histories of such places as the Hawaiian Islands, and which have undeniably found a place in the tote bags of travelers headed to those destinations. We recognize that several researchers have remarked on the centuries-old influence of fictional works – including books and other media – on touristic patterns and behavior (Butler, 1986; Wood, 1990; Riley and Van Doren, 1992; Hovinen, 1994; Herbert, 1996). For this paper, however, we chose to limit our consideration of travel writing to primarily non-fiction works, as opening it to fictional material would arguably lead us to include most any work that named and described a particular place. Admittedly, this does restrict us from considering books with touristic followings like *Anne of Green Gables* that may in fact have more of a direct influence on tourist behavior than some of the non-fictional works that we have chosen to study here. Nonetheless, we are restricting them in the interest of narrowing our focus.

We have also restricted our study of the travel writing genre to works by professional writers, despite the fact that unmarketed diaries and travelogues have served an important role for travelers throughout the ages as a form of personal reflection, and have proven invaluable to historians and other researchers (Adams, 1983). Black wrote in his history of the Grand Tour that for research purposes, "published travel literature should be sharply differentiated from letters and journals never intended for

publication", (1992: xii) with the reasoning that the latter could all too easily suffer from artifice for lack of the pressure that comes with writing for a large, anonymous, and critical audience. For the purposes of this paper, we are most interested in the power role that travel writers wield with regard to their readers, and we believe that amateur writers who do not expect to have their materials published — e.g., seamen whose shipboard diaries are later excerpted or reprinted in books or academic studies — do not wield the same role. That is, they expect to have few, if any, readers of their works.

We choose to define *travel writing* as a professional activity in which a writer communicates to an audience of potential or actual tourists. As such, we posit that it comprises two sub-genres of writing (among others) — *guidebooks* and *travel accounts* — on which we will focus most of our attention. We define these sub-genres below.

Guidebooks, in the form of instructions, maps or profiles of countries, are written specifically for the tourist and pertain to a destination, its locals, and/or its tourism brokers. The author's point of view/ personality is generally downplayed in contrast to travel accounts, although there are exceptions (e.g., the *Rick Steves' Europe Through the Back Door* guidebook series is replete with first-person accounts by Steves.) Guidebooks can range from having been written by direct brokers of tourism (e.g., brochures from chambers of commerce) to having been written by a third party. In today's bookstores, guidebooks on regions, countries, or cities share space with works catering to the characteristics of travelers (e.g., female travel, gay travel, group travel, adolescent travel, elderly travel, disabled travel, vegetarian travel, travel with pets), their motives (e.g., adventure travel, spiritual travel, sex travel), and favorite technologies (e.g., kayaking, trains, motorcycling). They vary in style from relatively anonymous booklets to institutionalized works along the lines of the *Let's Go* travel series or Fielding's *Guide to the World's Most Dangerous Places*.

Travel accounts provide a generally non-fictional, first-hand account of a tourist, in which the author describes the locals, brokers, and/or other tourists associated with a destination, mainly in light of the author's interaction with each.² There is some overlap between this sub-genre and what is often referred to as *nature writing* — the main difference being that in the latter, there is less attention paid to descriptions of humans in the destination, and more placed on the place's physical and biological characteristics.³ More often than not, travel accounts are personality-driven, due to their first-person style, and feature the author as hero: the aura of the author shines through the text. The travel accounts in today's bookstores are as diverse as the above-described guidebooks, with narratives of adventures that feature just as many characteristics, motives and favorite technologies. Both guidebooks and travel accounts have diversified to cater to most any type of traveler and reader (Mouser, 1998).

The Travel Writer as Flaneur

The issue of "gaze" — a concept central to power theory, implying that the *gazer* watches the *gazed* and can observe and/or control the latter's behavior — is also central to travel writing. As such, we argue that modern travel writing owes as much to the *flaneur* of Victorian French and English literary society as to any other influence. As described by Brand (1991: i), the flaneur was a "detached, casual, yet powerful urban spectator who regarded the metropolis as an entertaining spectacle and text." The development of the flaneur is generally recognized to have been intimately associated with the progress of historical forces that produced *modernity*, including urbanization and the development of consumer society. Popularized by Charles Baudelaire in his essay "The Painter of Modern Life", the flaneur character rejoiced in being amongst the crowd, observing and reporting on it. As described by Benjamin (1982: 962):

The crowd is his element, as the air is that of birds and water of fishes.... For the perfect flaneur, for the passionate spectator, it is an immense joy to set up house in the heart of the multitude, amid the ebb and flow of movement, in the midst of the fugitive and infinite. To be away from home and yet to feel oneself everywhere at home; to see the world, to be at the centre of the world, and yet to remain hidden from the world – such are a few of the slightest pleasures of those independent, passionate, impartial natures which the tongue can but clumsily define.

Interestingly, one element that distinguished the flaneur was his asserted ability to profile passersby – their profession, character, background, lifestyle, etc. – while unencumbered by any factual knowledge of the person (Benjamin, 1985: 39). In essence, he drew impressions of society as it walked past:⁴

Delvau, Baudelaire's friend[,] claimed that he could divide the Parisian public according to its various strata as easily as a geologist distinguishes the layers in rocks. If that sort of thing could be done, then, to be sure, life in the big city was not nearly so disquieting as it probably seemed to people.

In Baudelaire's time, the word *flaneur* was used to describe some journalists, who were viewed as "botanists on asphalt."⁵ Brand states (1991: 6):

The flaneur, through the medium of journalism, could impose order upon the potentially disorienting diversity of the city, by reducing it to accessible images that could be collected and consumed.... According to Benjamin, these flaneurs existed to assure a literate bourgeois audience that urban crowds were not as incoherent as they appeared to be.

Flaneurs had become authorities in interpreting society for their readers; in fact, newspapers in Paris regularly devoted their lower front page to flaneurial descriptions

of city life. Brand (1991: 191) goes on to suggest that the flaneur still survives "in the happy weekend window-shopper's tune of certain travel books and in the parts of newspapers and magazines devoted to facilitating the consumption of the city." However, we agree with Buck-Morss that the flaneur's influence is felt more widely than this, including outside of urban areas. She suggests that television news programs "approach the distracted, impressionistic, physiognomic viewing of the flaneur, as the sights take one around the world". (1986: 105) In connection with world travel, she adds, "the mass tourist industry now sells flanerie in two and four week packets."

The nature and role of many travel writers – as passionate spectators and assumed experts on people – fits the flaneur's profile well, whether they are writing about a city- or sea-scape.⁶ In the arena of coastal and marine tourism, the traditional flaneurial role is perhaps best played by profilers of beach and shorefront culture, as these areas' populations most exemplify the crowd that the flaneur is traditionally identified with observing. Lencek and Bosker (1998: 270) would likely agree, as they note that the "desire to see and be seen has always brought people to the beach."

Many of today's travel accounts – first-hand reporting, flaneurial in tone – have been influenced by the above historical development. In contrast to the guidebook, travel accounts focus less on instruction than on interpretation and, as such, often incorporate the author as hero. In comparison, however, both sub-genres of travel writing are authoritarian in voice: the travel done by the writer imbues him with *expertise* on the subject, as described earlier. With this expertise, the writer carries a message that – whether done through a guidebook or travel account – serves as an instrument of power.

Travel Writers and Power

Buck-Morss, in her examination of Benjamin's work, suggests that a salaried flaneur – a journalist, for example – profits by following the ideological fashion (1986: 115). While citing the example of a prominent, proto-Fascist editorialist in 1930s-era Germany who influenced the national political scene, Buck-Morss notes Benjamin's assertion that journalists in general advertise the *state*, rather than a commodity. Pratt (1992) would likely agree: she suggests in *Imperial Eyes* that the great significance of travel writing is its standing as an ideological apparatus of empire. Her book's primary theme is how travel accounts by Europeans about non-European parts of the world have gone about creating the "domestic subject" of Euroimperialism, and how they have engaged metropolitan reading publics with expansionist enterprises (Pratt, 1992: 4). Propaganda (controlled by the power elite) and domination (exerted by the power elite) are key elements of her thesis. She writes of two prominent western travel writers, Paul Theroux and Alberto Moravia (1992: 219):

[They] exemplify a discourse of negation, domination, devaluation, and fear that remains in the late twentieth century a powerful ideological constituent of the west's consciousness of the people and places it strives to hold in subjugation.

Nonetheless, postmodernist theories of power, as exemplified by the writings of Michel Foucault, suggest that it should be viewed more broadly than in terms of domination and submission. Foucault (1995: 26) insists that power is exercised rather than possessed, and that it is constantly negotiated as a relationship:

[T]he study of this micro-physics presupposes that the power exercised on the body is conceived not as a property, but a strategy, that its effects of domination are attributed not to "appropriation", but to dispositions, maneuvers, tactics, techniques, functionings; that one should decipher in it a network of relations, constantly in tension, in ac-

tivity, rather than a privilege that one might possess; that one should take as its model a perpetual battle rather than a contract relating to transaction of the conquest of a territory.

Cheong and Miller (in publication), in their examination of Foucauldian theory and its application to the tourism system, suggest that power should be conceptualized as ubiquitous in sets of dynamic relationships linking the elements of a tripartite system – a system illustrated by the "BLT model" (Miller and Auyong, 1991). The BLT model defines tourism socio-politically as consisting of three interacting components – *brokers*, *locals*, and *tourists*. In this model, brokers consist of persons who in one way or another pay professional attention to tourism, through such activities as the selling of touristic services and products. These activities – serving to inform readers on where to go, what to do, or what to think – influence the tourist. As suggested in a later paper by Miller and Auyong [1996], travel writers clearly reside in this "broker" category: they manage the experiences that tourists will have with locals, with other brokers, and with other tourists.

Cheong and Miller assert that at the level of the institution, productive power generates touristic knowledge. We extend that argument here to suggest that travel writers – whether producing guidebooks or travel accounts – create touristic knowledge and, hence, control the flow of power between themselves (as brokers) and tourists.

Foucault (1995: 27) insists that power is so inextricably linked to knowledge that power and knowledge directly imply one another:

[T]here is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relation.

Foucault generally equates *knowledge* with *truth*, and suggests that each society has its own "regime of truth", encompassing such things as the types of discourse that it accepts and makes function and the status of

those charged with saying what counts as true. Note that Foucault uses *truth* in the sense of its being a societal mythology, without suggesting that a society's truths are, in objective fact, true. He states that truth is produced and transmitted under the control of a few great political and economic apparatuses, including the media (1980: 132).

The travel writer's role — as well as, arguably, the role of other brokers — is to define and disseminate truth. Through this, the writer and fellow brokers influence the reader/tourist. Such influence can be productive (encouraging an action) or obstructive (discouraging an action). The guidebook's role in influencing behavior is indisputable: the majority of consumers who obtain these materials do so in order to learn the best route, the closest/cheapest/most-comfortable hotel, etc. Travel accounts — while obtained more often for their interpretative, rather than instructional, qualities — execute the same truth-disseminating power.

Academic literature provides excellent examinations of brokers' power role in travel writing and other fields, although the perspective has largely come from the market research realm rather than from sociology or political science, and the authors did not examine Foucauldian power. Etzel and Wahlers (1985) point out that destination-specific travel writing requested by consumers — namely brochures and other marketing-oriented materials — is an important promotion medium for the tourism industry, used by nearly half of their study's respondents to plan and execute trips. Riley and Van Doren (1992) present a case for the “pulling potential” of other media — i.e., films shot on beautiful locations, offering motivations of escape and “quests for untainted environments” — with regard to increasing tourism to specific destinations. Klenosky and Gitelson (1998) examine the power role of travel agents' recommendations — similar to the recommendations of a guidebook — in influencing their clientele's behavior.

The following section, in which we discuss our interviews with travel writers and excerpts from their works, will examine the ways in which these writers conceive of their truth-dissemination role, and how they manipulate their power relationship with readers to produce, or obstruct, specific touristic behavior.

Truth and Responsibility in Travel Writing

Truth, as disseminated by the travel writer, is often formed by what we choose to refer to as the author's identity. The content of travel accounts and guidebooks is significantly influenced by the background of the product's creator — in essence, by the training grounds on which he learned his skill. In this sense, we view travel writers as possessing any one of three identities, or *dimensions*, through which they relate events, characters, and places — and determine truth — in their writing. An understanding of these dimensions provides a foundation for our later discussion of the writers' power-related actions. The dimensions are described below:

The Novelist

Often possessing a background in teaching or studying literature, the Novelist enjoys a comfort with fiction writing, and is not averse to altering details or whole portions of actual trips in the interest of exploring an underlying or related truth on paper — or simply spinning a better yarn. Herman Melville's tale of shipwreck on a cannibal-filled island (*Typee*) and Hunter S. Thompson's gonzo trips (e.g., *Marlin*) are two of the more likely examples of how travel writers have sweetened the actual events of their trips for their stories' re-telling. Editors of travel accounts have widely remarked on, and embraced, the genre's fictional element. *Granta*, the British literary journal, once wrote (1984: 7) of a collection of travel writing works:

These pieces succeed not by virtue of the details they report — exotic as they are —

but by the contrivance of their reporting. They are all informed by the sheer glee of story-telling, a narrative sequence that situates them, with wonderful ambiguity, somewhere between fiction and fact.

It is noteworthy that several of the most popular 20th-century western travel writers have written what are considered to be “fiction” works in addition to their travel writing. The majority of Paul Theroux's opus, for example, is generally considered to be fiction (e.g., *The Mosquito Coast*), and John Steinbeck's fictional writings outnumber his non-fictional works. The distinction between categories, however, may be more in the eye of the beholder than in the mind of the writer. Steinbeck writes in the introduction to his travel account *The Log from the Sea of Cortez*, widely regarded to be one of his finest non-fiction works (1986: 1):

The design of a book is the pattern of a reality controlled and shaped by the mind of the writer. This is completely understood about poetry or fiction, but it is too seldom realized about books of fact.

Travel writer Jonathan Raban (author of *Coasting* and the upcoming *Passage to Jun-eau*) suggests there is little difference between writing “fiction” and writing what might be considered “travel literature”: in essence, the writer writes as he always would. There is no swapping of hats, no change in philosophy. In fact, Raban hates being referred to as a “travel writer” and would rather be called, simply, a writer (1999).⁷ Notably, Raban normally waits two to three years after making a trip before he starts to write his account of it, relying almost entirely on memory. He acknowledges this technique may affect the retelling. His goal, he says, is to get at the essence of the experience, not at the minutiae of what actually happened. Two of his works — written well after their described events happened, and based on few notes — have won the Thomas Cook Award for best travel writing.

Bruce Chatwin, also a celebrated travel writer, was once asked in *Granta* about the division between fact and fiction in his book *Storylines*, about his experiences with Aborigines in Australia. “I don't think there is one”, he said. “There definitely should be, but I don't know where it is. I've always written very close to the line.”

The Journalist

Often possessing a background in journalism, the Journalist enjoys greater comfort with non-fiction than fiction, and sees his role as that of reporting or documenting events rather than dramatizing them. The emphasis is on telling “the facts”. Pico Iyer (*Video Night in Kathmandu*), a former reporter for *Time* magazine, could be seen as fitting this dimension of travel writing with his matter-of-fact prose style, despite his allowance for some subjectivity and analysis. He writes (1988: 24):

I did not bend my plans to look for examples of the Western presence, or to bolster any argument. I simply read those books or articles that chanced to come my way and listened to the rickshaw drivers, strangers, and fellow travelers I happened to meet on the road.

Most travel writers stand somewhere between the Novelist and the Journalist. Along this line, *Outside* magazine, one of the most widely-read regular publishers of travel essays in the world, has described its contributors' works as residing partly in the reportorial world, and partly in the realm of campfire tale:

Outside tries to stake out some wide-open territory in which to conduct its business, with hard journalistic and literary ambitions. It is a general interest magazine that places a premium on reporting, thinking, and storytelling (Abbey, 1997: 5).

Nonetheless, as the *Granta* excerpts suggest, the line between fact and fiction in many travel accounts is blurred. The blurring is, to a great extent, due to the journalistic style that most travel accounts adopt — that is,

the author writes, "I was in this place and this is what happened." In a newspaper, such tales would be read and generally understood to be all true. In fact, when a newspaper journalist strays from the ideal of non-fiction — as various ones have by making up stories — it can sometimes serve as grounds for dismissal. Yet when aspects of stories are made up for travel accounts and published in magazines and books, the reader is expected to accommodate the author's fictionalizing.

The Expert

A latent third dimension exists for travel writing, somewhere between the Novelist and the Journalist: that of the Expert. If "pure non-fiction" and "pure fiction" — idealistic categories that, in actuality, likely include few writers — exist at opposite ends of an imaginary continuum of writing, the subjective reporting of the Expert falls in the middle. The Expert evaluates what is good or bad and reports his truth to the reader, either explicitly (as would a film critic or food critic) or more subtly, such as by mentioning the "best beach in the area" within an otherwise journalistic travel account. Guidebooks exemplify this dimension. Through these evaluations, the Expert wields significant power in terms of imposing standards and setting touristic trends. Arguably, to become a travel critic does not involve substantial training: one can write about hotels and restaurants without having to go to school for formal training. Inversely, however, this dimension holds the most influence in directing touristic behavior. The Expert — whose status is either self-proclaimed or conferred/assumed by the reader — is similar to the *flâneur*, a concept discussed earlier.

How travel writers from each of the above dimensions define and disseminate truth in their writings is, to a great extent, intertwined with the sense of responsibility they feel toward informing the reader of details of their travels. The Novelist is least inclined to provide specific details — or, at least, objectively reported details — since

the most important aspect of his writing is disseminating only the essence (or essential truth) of the experience about which he is writing. The Journalist is most likely to report objective details, since his responsibility is to report on what happened, where it happened, how it happened, etc. The Expert — and particularly the guidebook writer — will also report details (though viewed subjectively), since a primary driver for many Experts is the sense of responsibility they feel toward informing readers of the best travel options. In short, the three dimensions each feel a responsibility for disseminating truth, but in markedly different ways: the Novelist provides the essential truth, the Journalist provides the objective truth, and the Expert provides the subjective truth.

Conflict of Responsibilities

As noted earlier, the travel writer's definition and dissemination of truth influences the reader/tourist, and can affect touristic behavior, including by increasing tourism in areas profiled by writers. As increased tourism can cause change to the destinations and locals being visited — especially if those areas did not previously sustain a high level of tourism — writers, in disseminating truth, could bear responsibility for changing the places and people about which or whom they write. With this in mind, we sought to find out if travel writers acknowledged the power role that they played and, if so, whether they ever manipulated the truth in their writing in order specifically to restrain the tourism levels that might otherwise result from publication. In essence, we wanted to find out how travel writers handled the conflict between their professional sense of responsibility to report facts, and any ethical sense of responsibility they felt (akin to the physician's oath of "First, do no harm") toward protecting a place or people they had visited.

Do travel writers acknowledge their power role? Obviously, guidebook writers do. Their *raison d'être*, as noted earlier, is to

guide the travel of tourists. Guidebook writers and publishers are well aware of the historical influence of their works on touristic behavior.⁸ Historian Alain Corbin (1994: 47) writes that on the Grand Tours of the 18th century, aristocrats relied so heavily on their guidebooks that they rarely, if ever, strayed from the texts' recommendations:

A commonplace spot, no matter how tiny, could attract great attention if it had been ennobled by the gaze of one of the ancients.... On the other hand, all visual perception was lost in the face of sites not mentioned in prestigious texts.

Modern guidebooks have been acknowledged as having the same effect. The Rick Steves' *Europe Through the Back Door* series of travel guides, marketed as a tool with which to explore the lesser-known corners of Europe, now outsells the popular Fodor and Frommer guides to Europe (1998: 2), thus making its "off-the-beaten-track" claim seem questionable. In fact, the series has been accused of creating its own packs of "Steveites" – crowds of tourists, all clutching their Rick Steves guides – marching in step across the continent, going to the same restaurants, hotels, and theatres (Balter, 1998).

Steves and Tony Wheeler – the latter publishes the *Lonely Planet* series of travel guidebooks – embrace their role of steering tourists. Steves (1997: 282) writes:

By traveling vicariously with me through these chapters, you'll get a peek at my favorite places. And just as important, by internalizing the lifetime of little travel moments that I've enjoyed and compiled here, you'll develop a knack for finding your own.

Wheeler (1998) said he rejoices in opportunities to open up formerly "closed" countries to tourism:

People always want to get to a place that's just been reopened. Like Lebanon, for example. It's fun to do a guidebook to a place that people would have no idea of going to.⁹

Wheeler and Steves spoke of their responsibility to the reader. Their reputation rests on their reporting, they said, and if they don't let their readers know of all the good places they have visited, they as writers are not doing their job. Steves (1997: 283) writes of the reporting of secluded places, and of the conflict of responsibility that he has felt:

The promotion of a tender place that has so far avoided the tourist industry reminds me of the whaler who screams, "Quick, harpoon it before it's extinct!" These places are this Europhiles' cupid. Publicizing them gnaws at what makes them so great. But what kind of a travel writer can keep his favorite discoveries under wraps? Great finds are too hard to come by just to sit on. I keep no secrets.

While Steves regrets that places he "discovered" eight to ten years earlier are now developed and commercialized and that some suffer from tourist congestion, he continues to resolve his conflict by erring on the side of reporting, rather than not reporting.

Wheeler (1998) spoke of the changes he had seen in secluded places about which he had written, but did not suggest that guidebooks had played a significant role in changing them:

We've seen a lot of places over the past 25 years that have become spoiled. There are a lot of reasons for that: Boeing keeps building 747s, more people have money to travel, etc. It's a difficult problem, and we don't have the answers.

Like Steves and Wheeler, *Outside* magazine and *Adventure* magazine (the latter is published by the National Geographic Society) both pride themselves on directing their readers to uncongested spots. *Adventure's* editor wrote in the premiere issue about how the magazine would assist people in getting to previously untraveled-to places (Rasmus, 1999: 20):

We want to capture that passion and spirit and expertise – and help set you

out on your own adventures. And the time is right. Over the last several decades, the wildest corners of the world have opened up. Almost any of us, with a little time and a little savings to spend, can travel to places and do things that no previous generation could.

Outside magazine, while historically featuring travel accounts, has also established a tradition of printing guide-like articles extolling the virtues of destinations like “a world-class surf town that’s yet to be discovered by surfers” (Salkever, 1999) or providing “an island hopper’s guide to world-class hiking, wreck diving, and sea kayaking on and around the Pacific’s best-kept secret” (Payne, 1999). Philip Armour (1999), a publicist for the magazine, said the publication tries to be as “honest and forthright” as it can be in passing along information to readers, but also tries to balance that honesty with an ethic of environmental and cultural protection:

Hopefully Outside doesn't sell out all the sweet spots just to sell a magazine. Granted, we do increase the chance of people traveling to these places even by mentioning them, but we try to use our best judgment. Hopefully our readers will be a little more sensitive than just going to one of these secluded places and trampling on it. Would we advise people to go to a beach where sea turtles are breeding? Maybe if there was a guided tour. But otherwise, perhaps not – it would be a judgment call.

Armour said the editors leave most decision making to the contributing writers in terms of which places are written about and which ones are not. “As for a writer divulging his favorite spot, it’s up to his discretion”, he said.

The link between travel accounts and tourist behavior may be less direct than that of guidebooks and tourist behavior, as travel accounts are usually not written for the express purpose of guiding a traveler. Nonetheless, we found that in contrast to the

above writers, several writers of travel accounts willfully manipulated their reporting of details of their trips in order expressly to control the number of tourists following in their footsteps.

Jonathan Raban, while asserting that he rarely thinks of his audience when writing, admits to having changed details of his book, *Bad Land: An American Romance*, in order to keep secret the specific locations of the places about which he was writing. “I was rather careful, in fact, not to tell how to get to any of these places, in order to keep the gawkers away”, he said (1999). Although he adds that *Bad Land* was the only book of his for which he was “concerned about what the reader might do,” his omission of details is an example of how one travel-account writer has resolved the conflict of responsibilities – in this case, by siding with his sense of responsibility toward protection.

Raban’s example is repeated by several other writers. Barry Lopez, author of the American Book Award-winning *Arctic Dreams*, claims to have given misleading directions in at least one of his writings for how to get to certain secluded places, with the intent of steering tourists away (1998). Steve Raymond (author of *The Year of the Angler*), who writes about fishing and fishing destinations in books and magazines, admits to having kept his favorite fishing holes secret, even though his reporting duties require him to direct readers to good spots (1998). M. Wylie Blanchet’s memoir of voyages with her children through the coastal waters of the Pacific Northwest, *The Curve of Time*, explicitly omits the names of Indian villages that she visited, in the interest of allowing the villagers to retain their privacy (1993: 1). Richard Nelson’s tales of island life in Southeastern Alaska provide the same type of omissions (1991).

It is clear that in situations where heightened tourism is not desired, multiple writers have chosen to follow the responsibility they feel toward protecting the places and people they have visited, rather than their

responsibility to report all details of what they have done. They have recognized the power role that they wield as travel writers, and have responded by manipulating the role in order to divert touristic attention away from their special places.

Conclusion

No man, they say, is an island; in the age of international travel, not even an island can remain an island for long.

— Pico Iyer, *Video Night in Kathmandu* (1988: 14)

Call someplace paradise. Kiss it goodbye.

— Don Henley, "The Last Resort" (1976)

The travel writer plays a major role in affecting how destinations and locals experience the reader's travel. One writer's mention of a beach or shoreside village untouched by tourists can lead to the arrival of such tourists within months, weeks, days, or even hours, depending on the available readership and the mode of information transmission. The most immediate effects may come via the internet, whose abundance of ready information can inform and steer tourists in greater number and with greater speed than ever before. In fact, surfers can now log onto the World Wide Web for real-time monitoring of waves at popular breaks, a capability that has been accused of causing overcrowding – and even related violence – at the best wave spots (Salkever, 1999: 2).

As we have described in this paper, the travel writer's power comes with the responsibility to wield it with its consequences in mind. In saying this, we are neither condoning nor opposing the idea of writers keeping secrets from their readers. Rather, we are calling on writers to understand their significant influence upon readers, and to behave accordingly. From the remarks above, it appears that many coastal and marine writers have already given extensive thought to this issue. In times when

there may be conflict between the writer's professional responsibility to disseminate facts, and an ethical responsibility to cause no undue tourism in a place where heightened tourism may not be desired, writers have considered the consequences and made their decisions, choosing one direction or the other.

In addition, we call on other brokers, tourists, and locals to recognize the power relationship that travel writers hold with each of them, and to be cognizant of its potential and real impacts. Travel writers are able to influence, or even dictate, vast touristic patterns, and the people who are affected by these patterns should be mindful of this fact. In this sense, the writers amount to (intentional or unintentional) policy-makers, determining how destinations – including their economy, culture, and people – will be impacted by the outside world. To overlook the integral role that travel writers play in the tourism industry would be to ignore one of the largest drivers of touristic behavior.

How the coastal and marine tourism industry grows, changes, and adapts is a result of the interaction of all actors within it. Travel can mean the "ugly" side of tourism with cultural misunderstandings and unintended consequences, or it can mean the thoughtful promotion of understanding between cultures and people. Among writers, other brokers, locals, and tourists, what the tourism industry promotes is up to everyone.

Notes:

¹ Miller and Ditton (1986: 11) wrote:

In the instance of recreational travel, the tourist prepares for a contrast in physiological and mental well-being. In instrumental travel, contrast occurs as the tourist deliberately secures information, resources, and obligations unavailable at home. In educational travel, the tourist achieves contrast by replacing familiar physical and cultural stimuli with exotic substitutes.

² It is assumed that most travel writers would cringe at being called a "tourist", due to the often-negative connotation of the term (Miller and Auyong, 1996), and would rather think of themselves as unique "travelers" (Andrus, 1998). Pico Iyer appears to be an exception, as he is willing to describe himself even in the worst light of tourism: "Like every tourist, I found myself spreading corruption even as I decried it" (1988: 14).

³ The writers with whom we communicated for this paper included some who would more readily define themselves as nature writers than travel writers.

⁴ Holland and Huggan (1998) suggest that such subjective impressions are commonplace in modern travel accounts:

Contemporary travel narratives ... rely upon the authority of the witness even if they are less likely to be taken at face value or to expect their myths, passing as facts, to be (mis)read with an eye for profit. ... [T]he eyewitness, real or not, functions as a rhetorical strategy to persuade the reader of the "authenticity" of what is reported.

⁵ Note the similarity of this phrasing to Pratt's suggestion that modern travel writing — at least when covering non-European cultures — was heavily influenced by the 19th century Linnaean discipline of classifying plants and animals. (Pratt, 1992: 34)

⁶ Wearing and Wearing (1996) would likely disagree, as they see tourists less as flaneurs or sightseers and more as individuals who take home an experience that impacts on the self in some way.

⁷ The term *travel writer* appears to be considered a stigma by writers of travel accounts, particularly those who would fit in the Novelist dimension like Raban and Bruce Chatwin, but writers of guidebooks seem not to have as much trouble with the term's application. Rick Steves and Tony Wheeler — the latter of whom publishes the *Lonely Planet* series of travel guides — both refer to themselves as travel writers.

⁸ The guidebook's power role is recognized by other agents as well. Rick Steves (1998) has remarked on how aggressively tourism brokers have marketed their destinations to his staff, hoping to draw attention and earn a mention in the guidebook. Along the same line, Philip Armour (1999) of *Outside* magazine noted that although the publication does not accept invitations from brokers to write about their destinations, "When

we do cover an area like a ski resort, the people there are giddy and thankful. It's free press for them, and we have 550,000 subscribers."

⁹ In fact, Wheeler and Steves point out that the power role they wield has also had effects in the geopolitical realm, sometimes due to the maps their books offer or the name they apply to a country. Wheeler said his series' book on Burma, which that country's government calls Myanmar, was not popular there, and its book on Malawi had also met disfavor from that country's president. Pico Iyer writes that tourism has carried "American dollars and dreams" to every corner of the world, particularly since the 1980s, and that the export of American culture has created a geopolitical sea-change (1988: 6):

Tourists were the great foot soldiers of the new invasion; tourists, in a sense, were the terrorists of cultural expansionism, what Sartre once called 'the cool invaders'.

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GRAY WHALE CONSERVATION AND LOCAL TOURISM MANAGEMENT IN BAHIA MAGDALENA, BAJA CALIFORNIA SUR, MEXICO

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Abstract: *Gray whale watching activities in the coastal lagoons of Baja California Sur, Mexico were promoted by both Mexican and foreign brokers in the early '90s. Although the activity allowed a new economic alternative for the fishermen in the region, the Mexican Ministry of Fisheries and the Environment (SEMARNAP) became concerned with the rapid increase of a tourism industry related to a species that, until 1993 had been on the endangered species list.*

In the management of whale watching, SEMARNAP allocated a limited number of permits to local fishermen and others to provide whale watching services. The lack of organization within the fishing cooperatives to provide services, coupled with the overwhelming number of visiting tourists, resulted in low quality service to the tourist, sub-utilization of the resource, and inter-institutional conflicts. In addition, it was feared that whale watching could possibly threaten the long-term conservation of the whales.

With this situation, the management problem concerned the protection of the gray whale, while providing social and economic development through whale watching in the communities adjacent to the Bahía Magdalena coastal lagoons. With the support of Pronatura, A.C., a large Mexican Non-Governmental Organization (NGO), a project was coordinated to develop a proposal for integrated tourism management. Community participation was the main focus of this project.

As a result of the project, a need to develop region-specific tourism promotion strategies was identified, as well as the need for specific management measures to protect the whales in each lagoon. The communities made a commitment to participate in the development of the tourist activity within the framework of sustainability.

These results illustrated the first step in community organization toward obtaining regional benefits in using an irreplaceable and valuable marine natural resource within the Magdalena lagoon complex. The process demonstrated that NGOs can be influential in the generation of policies involving the tourism and fisheries industries.

Keywords: *community development and coordination, conservation, whale watching, non-governmental organizations (NGOs)*

Introduction

In the region of Bahía Magdalena over the past decade, tourism has grown dramatically by brokers' increased efforts in the advertising of whale watching. From the winter season of 1996 to the season of 1997, there was an increase in tourism of 19% (Sánchez, 1997). The two main coastal fishing communities of Bahía Magdalena, Puerto San Carlos and Puerto Adolfo López Mateos, were not prepared to receive massive tourism. Meanwhile, the gray whale is still being strictly monitored after it was delisted from the endangered species list in 1993 (MMC, 1994). Although several efforts were made by the Mexican Ministry of Fisheries and the Environment (SEMARNAP) to establish low impact whale watching, the regulations conflicted with the possibilities for economic development of the fishermen providing the service. In 1997, in an attempt to ensure conservation and economic development, Pronatura, A.C., a large Mexican non-governmental organization (NGO), developed a method for local participation in search of a solution to this conflict for the

long term conservation of the gray whale and the associated whale watching industry.

Geographic Area

The Bahía Magdalena Lagoons Complex is located approximately between 24 and 26 degrees N, on the Pacific side of Baja California Sur, the southern state of the Baja California Peninsula, México (Figure 1). The complex is formed by a series of lagoons and narrow channels, bordered by barrier and large islands. The northern part of the complex is a series of narrow channels, estuaries, lagoons and barrier islands. The average depth in this area is 33 ft. The community that uses this area is mainly the fishing town of Puerto Adolfo López Mateos, located along the península of Baja California, with an approximate population of 1000. The second part of the complex is composed of a series of channels and a big lagoon: Bahía Magdalena. This area is mainly used for fishing by the communities of Puerto San Carlos on the península, with an approximate population of 3000, and by Puerto Magdalena with a population of 800, located on Magdalena Island. The third and southernmost part of the complex is formed by a series of lagoons, the larger being Bahía Las Almejas, and to the south, Bahía Santa Marina, bordered by Santa Margarita island and Creciente island respectively. This southern part is mainly used by the fishing community of Puerto Chale located on the península with an approximate population of 300, and the Puerto Alcatraz and the Naval community of Puerto Cortés on Santa Margarita Island with no more than 200 people respectively.

Every year, during the months of January through March, the gray whale arrives to the Baja California's coastal lagoons to mate and give birth. The complex has been designated as a site of high priority for conservation by national and international organizations (CONABIO- PRONATURA, 1996), not

only because of the presence of the gray whale, but because of the richness and health of its vast array of mangrove channels. This area, being one of the last non-modified wetlands along the Californias (Young and Dedina, 1993), allows for the diversity of flora and fauna that use the complex, most important for resident and migratory birds, as well as for the fishing industry (Casas and Ponce, 1996).

Background

At the beginning of the present decade, gray whale watching tourism started to become popular, offering an economic alternative to small scale fishermen in the Bahia Magdalena lagoons. The rapid growth of tourists visiting the area prompted the Mexican authorities to take emergency regulatory measurements to conserve the breeding areas of the cetacean, which until 1993, has been on the endangered species list (Marine Mammal Commission, 1994).

The Mexican Government, having been a pioneer in declaring the breeding lagoons as Sanctuaries and Refugees for this species of marine mammal (Diario Oficial, 1972a; 1972b; 1979), became concerned with the rapid growth of tourism visiting the area.

Through the publication of a temporary Emergency Law (Diario Oficial, 1996), the Ministry of the Environment, Natural Resources and Fisheries (SEMARNAP) established several guidelines in 1996 to regulate the whale watching activity. These guidelines were the establishment of regulated whale watching zones inside the lagoons, regulation of the number of boats allowed to be used in the whale watching zone at any one time, and regulation of the type of boat used for the activity. The only type of boat authorized for whale watching was the kind used by the local fishing fleet, a 20-24 ft skiff with an outboard motor. It also became

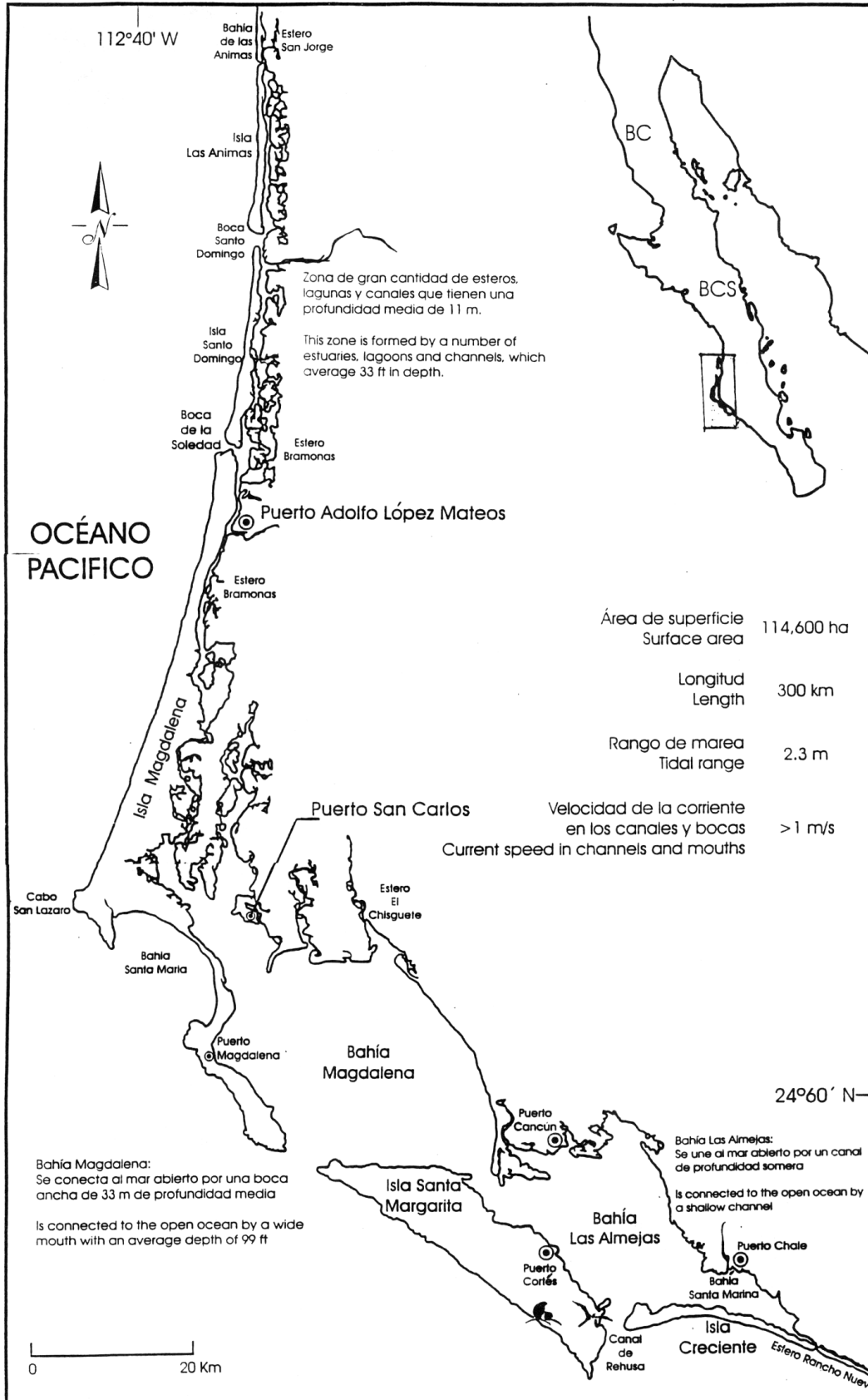


Figure 1. Bahía Magdalena region on the Pacific side of the Baha California Peninsula

mandatory for outside companies to contract the service through local fishermen, who usually are the owner/ operators of the skiffs (Sánchez, 1997).

Lack of coordination between government institutions and the historical conflict for the use of the natural resources within the local fishermen (Young, 1995) prompted a series of irregularities and disorganization in the development of the tourism activity. This situation manifested itself with the dissatisfaction of the tourist, who had to use the small skiff which often lacked certain safety equipment. At times, tourists did not have proper interpretation due to lack of local bilingual guides. Also, sub-utilization of the permits was a result of disorganization. For example, sometimes, many tourists had to wait for long periods of times to board a skiff, while other times skiffs and the permits were not used at all (Sánchez, 1997). Inter-institutional and intra-community conflicts were also ongoing. In addition, it was feared that the situation could be seriously threatening the conservation of the gray whale population through disturbance of the species during the mating season.

Previous efforts were made by governments, academics and groups of nongovernmental organizations to call attention to the problems associated with the whale watching. For example, Conservation International produced a film to present to all stakeholders about the controversies of gray whale watching. In a report by Dedina and Young (1995) presented at the Marine Mammal Conference in Baja California Sur, the need for inter-institutional and community coordination was again noted. Community participation was required during meetings called by government agencies each year before the gray whale season. Local fishers, now brokers, and representatives of local tourist companies were asked for suggestions and proposals to organize the activity. Some of their suggestions have been written in several documents (Plan de Desarrollo Turístico de La Paz, 1993; Plan Municipal de Desarrollo, 1996). Several of

those suggestions have been implemented, while others were incorporated into the writing of the Emergency Law (Diario Oficial, 1996). Still other suggestions are contradictory or controversial for certain stakeholders, and some have had no follow-up. For example, in an attempt to prepare fishermen for the whale tourism, Pronatura, A.C. and the Mexican Ministry of Tourism supported a nonprofit organization, The Rare Center for Tropical Conservation (RARE) in an effort to provide nature guide training courses to the fishermen. However, these efforts were not integrated into a general participatory program. Therefore, Pronatura, A.C., a large Mexican nongovernmental conservation organization, set to the task of playing the role of coordinator to develop a community-based proposal towards tourism management and conservation in Bahía Magdalena, a proposal that would ensure social equity and resource conservation.

The Process Toward Local Tourism Management

1. Searching for the latest information, integration of an interdisciplinary team

Existing information was gathered and new studies were conducted on the different aspects that needed to be put together to design an integrated proposal. The new information consisted of a study on the distribution of gray whales that visited the lagoons in the winter 1996-1997 season. To conduct this study, a team was formed with researchers from the Marine Mammal group of the Autonomous University of La Paz (UABCS), and with researchers from the Regional Center for Fisheries Research in La Paz (CRIP).

The team at UABCS had been doing gray whale distribution research in San Ignacio lagoon prior to 1997 (Urbán and Gómez, 1995, 1996), while the team at CRIP have been the only institute to have conducted studies on gray whales in Bahía Magdalena.

At the same time, Pronatura, A.C. promoted coordination with the Center for Wetland Studies, based in Puerto San Carlos, a field station which was willing to collaborate with infrastructure and human resources.

Another study that aimed to obtain and integrate other new information was a socioeconomic assessment of the two main fishing communities that inhabit the coastal zone of the whales' winter breeding lagoons. The communities of Puerto Adolfo López Mateos located in the northern area of the lagoon complex, and the community of Puerto San Carlos located along the middle section of the complex, were selected because they provide the majority of the whale watching service.

Pronatura, A.C. also collected data made available by the Ministry of Tourism on the permits used by fishermen in the Magdalena lagoon complex during the winter season of 1996-1997. The information analyzed related to the number of persons that visited the area in the season, number of skiffs that were whale watching at the same time in the lagoon, time of day with higher demand for the whale watching service, and days and weeks which illustrated higher demand.

The information gathered about the dynamics of the whale watching activity, together with the data of the study conducted by UABCS-CRIP, and data from the socioeconomic study, were reviewed during a round table on July 7, 1997 at the CRIP library in La Paz. Only the main researchers and expert consultants participated during this stage. During this work, many proposals were made to modify the temporary Emergency Law (Diario Oficial, 1996) based on the new data generated. This information was the basis for the next step: designing an interview and providing data-based information to involve all stakeholders.

2. *Designing a preliminary management proposal: integrating all stakeholders*

Based on the results obtained from the round table with researchers, an information base and an interview were developed.

Information was presented and the interview was applied to individuals in the fishing communities of Puerto San Carlos and Puerto Adolfo López Mateos. Representatives of the different sectors were selected from the communities to make it representative (Fowler, 1990).

The results of these first interviews were added to the original list of proposals for modification of the temporary Emergency Law and new proposals for tourism management were generated.

Based on the new list of proposals, a second interview was prepared. The second interview contained proposals for management and opportunities for action, on which the interviewees could elaborate and either support some of them or give their own points of view.

At this stage, forty-five interviews were made by fax, telephone, or in person in the communities of Puerto San Carlos and Puerto Adolfo López Mateos again, and also to the La Paz and Mexico City stakeholders. With the results of the second interview, the importance of certain proposals of management and the action opportunities were corroborated and new proposals were generated.

3. *Testing different proposals: providing multiple tourism management scenarios*

With the objective to evaluate the importance of tourist activities during the gray whale mating season in each of the communities of Puerto Adolfo López Mateos and Puerto San Carlos, a series of scenarios were designed for evaluation.

The different tourism management scenarios were evaluated quantitatively by Pronatura, A.C., using data generated for the distribution of the gray whale in the lagoons, and data generated on the socioeconomic conditions in each one of the towns involved. The evaluation of scenarios was achieved through the environmental, social and economic criteria.

In addition to the interview, the responders were asked to evaluate several tourism management scenarios in qualitative form. A document with the summary of results was produced. This document would be the basis for the discussion of the integrated whale watching tourism management proposals. The document would be presented during a community workshop in each one of the participant communities. The document integrated proposals from all sectors involved.

4. Presenting the information to the community: community workshops

In order to present the information gathered for the integrated tourism management proposals, a workshop was planned for each of the two participant communities. To ensure attendance of the largest number of people, an intense one on one invitation campaign was organized and conducted. To achieve this, Pronatura, A.C. hired a campaign coordinator, a person that was well known to the communities before. The coordinator announced the event two weeks before the workshop by going home to home to visit people, broadcasted the event on the radio, and the mobile media information system in both communities.

Different stakeholders including fishermen and representatives of government and private industries were invited. Some of them had been participating before as interviewees, others had only heard about the project by word of mouth.

Taking into account the traditional conflicts among the fishing cooperatives and among individuals in the area, Pronatura, A.C. hired a professional mediator with experience working with fishing communities to conduct the workshops.

During the workshops, the proposals that were compiled through the previous process were presented. These proposals were analyzed with the audience under different mediation methods and opportunities were then identified. Through negotiation dy-

namics, the participants established consensus on opportunities that were a priority for the benefit of the communities which provide whale watching services. The participants initiated dialogue toward an integrated tourism management proposal.

Results and Discussion

The method used for community involvement can be summarized in the model proposed by Flores (1995) for local coastal community involvement in marine conservation projects (Figure 2). In this model, the management agency may have the control on the information generated and distributed by the researchers. The non-governmental organization can function as an interpreter, getting all the parties together, and searching for key community members. In the process described in this paper, the NGO Pronatura, A.C. functioned as the main interpreter by bringing together researchers and community members towards a common goal: the economic benefit for the communities by using and conserving a valuable marine resource: the gray whale.

Processes to involve communities have to be done in several steps if support is to be gained from them. Sometimes, the processes involve long periods of time only to find the ways of communicating (Flores, 1995; Skydancer, 1995; Collinson and Shultis, 1999).

As a result of the community involvement process in Bahía Magdalena, alternative tourism management proposals for the economic benefit of the region's inhabitants were proposed by the community and involved stakeholders. This type of proposed management scheme has the benefit of reducing the costs of enforcement and therefore, reducing the threats to the resource, since it is directly in the benefit of the community itself to respect the self-imposed

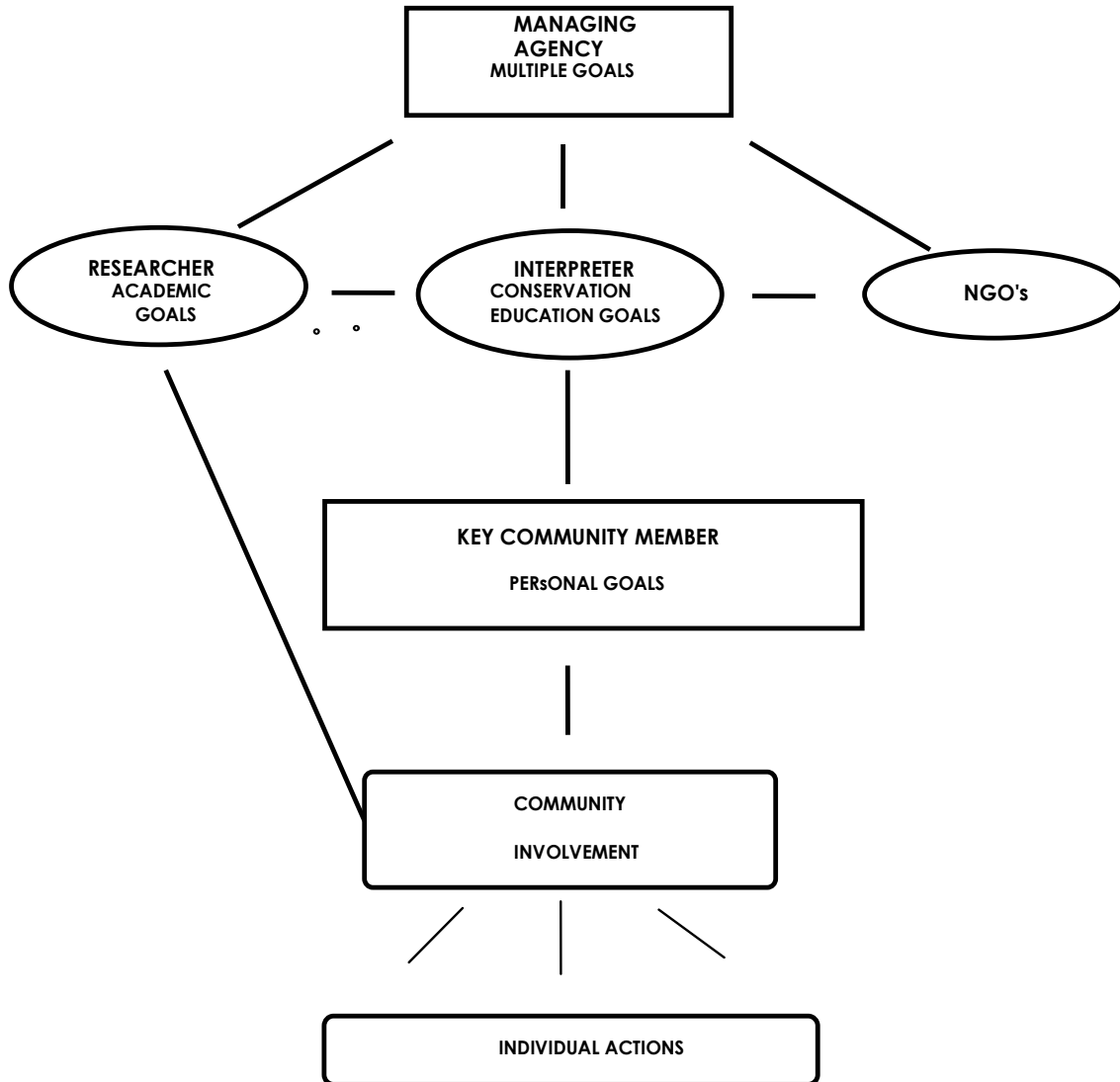


Figure 2. A model for involving local coastal communities in marine conservation projects

regulations. In some cases it has been demonstrated that involving the communities directly in the design and implementation of conservation strategies for the resource management, makes a difference in success (Western and Wright, 1994).

In addition, as the locals become brokers, according to the model of Miller and Auyong (1991), the dynamics of their relationships with the tourist and the environment change. During the process presented in this paper, some changes in attitude were noticeable by the end of the workshops, where members of the communities engaged in certain commitments.

During the workshop at Puerto San Carlos, the representatives of the fishing cooperatives that provide whale watching tourism services, made a compromise to write a document to propose modifications to the Emergency Law for the regulation of the tourist activity. The proposal would include consideration of both communities in Bahía Magdalena, Puerto Adolfo López Mateos and Puerto San Carlos, as two zones with different social and economic profiles, as well as with differences in the spatial distribution and threats to the gray whale.

In Puerto Adolfo López Mateos, fishing brokers asked Pronatura, A.C. to work with them in a proposal to improve their organization and efficiency. The brokers also proposed to work with the NGO to obtain funding for education and training about managing tourism and environmental issues. Realizing the importance of understanding and conserving the resource is a first step towards economic development. As has happened in other countries, the lack of understanding of such a connection between natural resources and nature tourism is against local economic benefit (Alam and Naser, 1998; Pinel, 1999). By having increased understanding about the resource they use, the communities could achieve ecological sustainability and social and economic development. According to Bailey (1996), it is likely that locally initiated de-

velopment remain small in scale, placing relatively little stress on local resources and social systems. It has been demonstrated, through the results of this process that an NGO can help in achieving such goals.

Based on the results of the workshop, the NGO was capable of providing an informed community-based recommendation to the government authorities. The results demonstrated that an NGO can be influential in managing coastal tourism for the conservation of the environment, and the economic development of fishing communities and the tourism industry.

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CREATE A GOOD FIT: A COMMUNITY-BASED TOURISM PLANNING MODEL

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Abstract: *Communities are rarely at the helm of the tourism planning and development that affects them. This paper describes a Community-Based Tourism Planning (CBTP) Process Model and case study. This places otherwise common strategic planning and community development principles into a tourism planning approach. This provides a comprehensive framework for steering tourism planning toward becoming a beneficial and lasting fit with other aspects of community and area well-being. This CBTP approach relies on initial and ongoing assessment of stakeholder experiences, concerns, hopes, fears, and dreams to guide tourism-related decisions.*

A community assessment case study in the Kyuquot Sound area, a remote coastal tourism setting on Vancouver Island, British Columbia, demonstrates the potential of using tourism planning as a stimulus for other aspects of community communication, organisation, and development. The depth of community-generated insights depicts an otherwise untapped local expertise about their tourism situation. This case study assessment reveals that the Aboriginal and Non-Aboriginal residents, tourism operators, and other stakeholders share many tourism-related perspectives that were otherwise not being discussed or acted upon. This is a powerful example of how local stakeholder wisdom can correspond closely with general principles of ecotourism and sustainable tourism development. This suggests significant latent benefits of shifting toward tourism decisions that are more community-based instead of only market- or expert-driven.

This CBTP approach can be particularly relevant for areas facing difficult transitions from dwindling or collapsed resource-based economies. It can provide a social and perceptual inventory that complements more accepted biophysical, supply, or demand inventories used in tourism

and resource planning. Tourism planning can then better inform and influence other socio-cultural, resource use, and economic decision processes. With more explicit local guidance, tourism development can better avoid typical "host-guest" conflicts and stereotypes, and can stimulate more clear stewardship of tourism resources. This increases the ability of all stakeholders to guide a better fitting, longer lasting, and less depleting tourism industry in concert with local needs, desires, abilities, and capacity.

Keywords: *planning, community assessment, community development, integration, new models/old concepts*

Introduction: The Concept

This paper highlights findings and insights from a community assessment case study¹, and associated Community-Based Tourism Planning (CBTP) Process Model (Figure 1).² The CBTP Model proposes that tourism planning should build from an awareness of community values and organisational needs to guide more locally-appropriate tourism development that fits with other community needs, initiatives, and opportunities. This brings otherwise established strategic planning and community development principles to tourism planning practices so that stakeholders (residents, operators, government) can together guide a more sustainable and consistent tourism industry for communities, not at the expense of communities and local ecosystems.

In planning and development theory and practice, local citizen and stakeholder input are increasingly stressed as necessary elements for accepted and effective decisions which balance economic, social, cultural,

and environmental factors (Hutchison, 1998; Friedman, 1987; Verhelst, 1987). Similarly, there is a growing and more genuine appreciation of the need for increased community involvement in tourism planning (van Harssel, 1994; Prentice, 1993: 218; Boo, 1990: 48; Murphy, 1985) to help preserve and maintain unique, special, or valued local features and tourism attractions. Such planning can better prepare a community to “adapt to the unexpected, create the desirable, and avoid the undesirable . . . [and] promotes the opportunity for improving the total community rather than improving one part of the community at the expense of other parts” (van Harssel, 1994: 208). This does not suggest that every tourism decision must be made on a community-wide consensus basis. Instead, direction can come from a set of periodically refreshed guidelines or principles generated by the many stakeholders.

In corporations and institutions, values and visions are commonly clarified at the outset of strategic planning processes and form the basis of short- and long-term decisions and actions. A similar approach can be used as the basis for tourism planning. This acknowledges that “Community demands for active participation in the setting of the tourism agenda and its priorities for tourism development and management cannot be ignored” (Inskoop, 1991: xi). Though more time-consuming than a top-down approach to planning and development, when a community guides their own development, “the results are often longer lasting and more effective over the long-term” (Reid, Fuller, Haywood, and Bryden, 1993: 71, Inskoop, 1991: 27). Making and pursuing conscientious and co-operative choices for community development requires patience and perseverance from all stakeholders.

Independent operator initiatives, government promotion, and market responses to tourist demands commonly drive tourism development. As a result, tourism planning, development, and marketing typically focus on tourist trends and desires, thereby insufficiently identifying, upholding, or pursuing

the aspirations of affected communities or local residents in a “destination area” (Reid et al., 1993).

This paper first describes the Community-Based Tourism Planning Process Model (Figure 1), then provides a brief profile of the case study context, process, and outcomes. Of significant note are the potential Guiding Elements for Tourism Planning (Figure 2) that were generated by—and for—the case study area stakeholders. These Guiding Elements are summarised before further discussing the relevance and practical considerations of applying the CBTP Process Model elsewhere.

CBTP Process Model

Some assert that, “All travel is linked with communities no matter how urban or remote the purpose may be. This inescapable fact can be a blessing or a curse depending upon how well a community accepts its tourism role and maintains a balance between traveller and resident development and management” (Gunn, 1988: 241). Rather than “accepting their role”, CBTP promotes that the community should define their own—and the tourism industry’s—role. To accomplish this, a community needs to create opportunities for stepping back from tourism marketing and product development pressures. Then, stakeholders can evaluate their tourism experiences and local values while setting a direction for their own tourism development in partnership with other significant stakeholders. This community-based approach is fundamentally linked with a “belief in human potential for favorable growth” (Biddle and Biddle, 1965: 58) which relies on community members having a positive view and understanding of their own potential (van Willigen, 1986: 97; Freire, 1968).

CBTP relies on an initial and periodic community assessment process (Phase 1, Figure 1) that harnesses the experience, expertise,

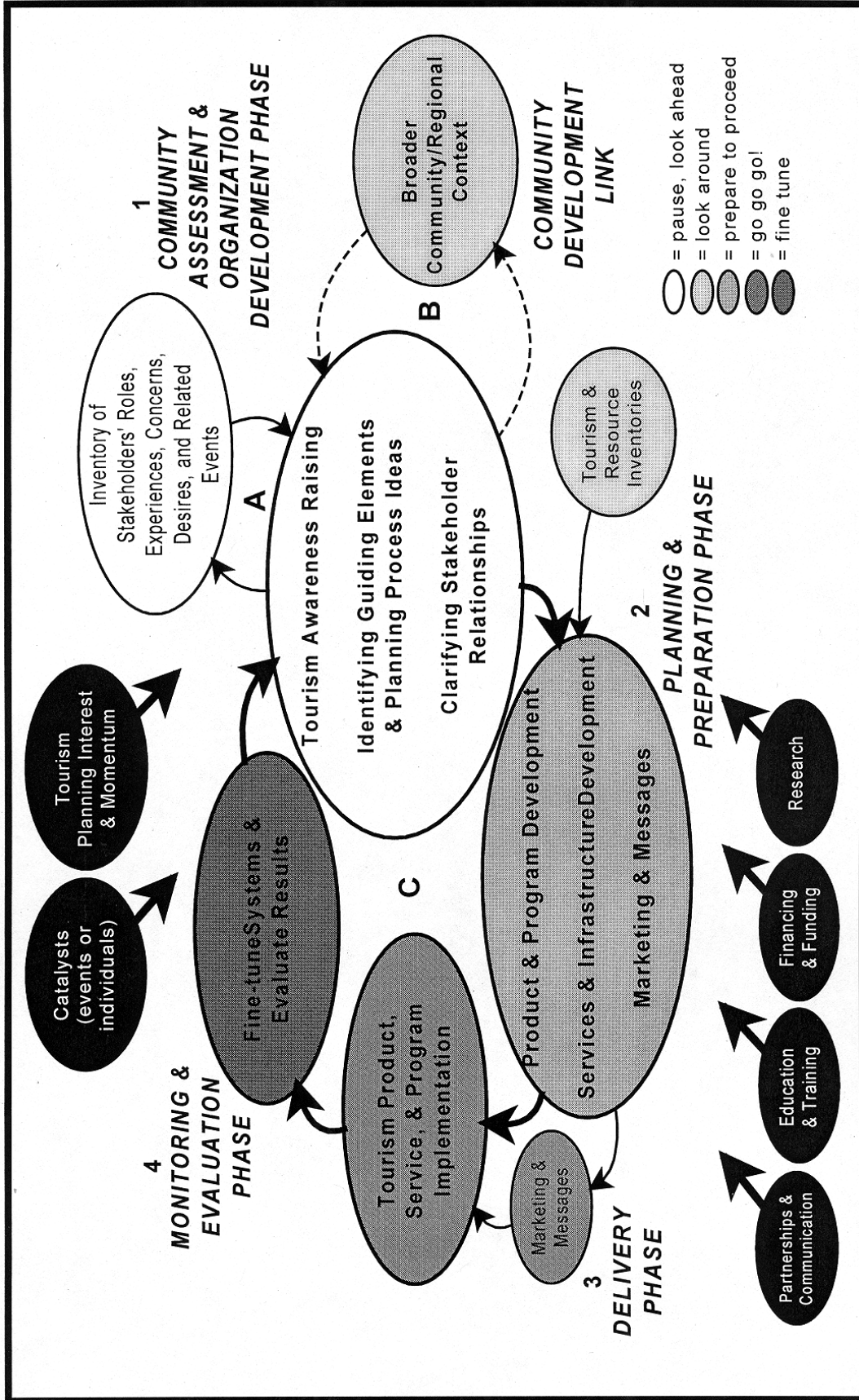


Figure 1. Community-Based Tourism Planning Process Model (adapted from Pinel 1998a)

desires, and support of local residents together with tourism operators and other stakeholders (government, organisations, and industry). Such assessment can generate an inventory of perceptions about tourism-related changes (experiences, concerns, hopes, fears, and dreams). This “social or perceptual inventory” can complement other tourism resource inventories (infrastructure, services, attractions, biophysical features, and cultural features) for making more informed and accountable decisions while building organisation and infrastructure capacity.

Careful thought and discussion about “what matters to us”, “what we can offer”, and “how we want tourism to affect our home/community/area” can help to chart a clear course with guiding principles for local tourism planning and development. This process is invaluable when rural, remote, and First Nations communities are involved—where there are often close communities, shared lands, common resources, and sensitive cultural heritage. Similarly, in more populated destinations, insightful guidance and collaboration can emerge from an assessment process within the many layers or sectors of the community, i.e., “the many communities” affected.

Community-based tourism planning is about: 1) introducing more “strategic” and “future” thinking or visioning to tourism development; 2) relying on residents and community leaders as their own “experts” about community needs and desirable tourism influences; and 3) providing opportunities to clarify community strengths, challenges, obstacles, and opportunities for social, economic, and ecological well-being. CBTP encourages and facilitates reflection about how a “destination” is also a “home” (for residents, flora, and fauna). Tourists are more likely to appreciate and return if they feel a “good fit” between aspects of “destination” and “home” rather than experiencing tourism as a source of tension or negative impacts.

This CBTP Process Model emphasises the need for catalysts from events or individuals to initiate an assessment process, and to keep the process going through tasks that stimulate co-operation, trust, tourism awareness, and links with the broader community development context. The actual “little steps” will vary by community and depend on previous experiences from working or planning together. The success or failure of reducing negative tourism impacts on communities and ecosystems clearly depends on how relationships are valued—relationships between people, and between people and their ecosystems.

Case Study Background

The Kyuquot Sound area on the Northwest coast of Vancouver Island is one of the island’s last remote coastal tourism destinations, and has one of the most isolated communities of its size. By most accounts, tourism activity is slowly increasing here, but has not yet seriously influenced local planning and development in the community and surrounding wilderness and protected areas. During Kyuquot’s two month peak tourism season in 1997 (July and August), the four sportfishing lodges, three B&Bs, and one sea kayaking and marine tour company were operating at about 60% of their combined capacity of about 90 clients/day. There is currently no monitoring of recreational tourist numbers, however, a rough estimate is that commercial tourism accounts for approximately one sixth of visitors to the area. Though not promoted as such, the many provincial protected areas (Parks and Ecological Reserves)³ adjacent to Kyuquot Sound are undoubtedly tourism draws. Tourism is creeping northward on Vancouver Island and the people of Kyuquot are only beginning to more carefully consider its implications and opportunities.

In the peak of the summer, there are an estimated 300 seasonal and full-time residents. About two thirds of this population are from the Ka: yu: ‘k’ t ‘h’ (Kyuquot) and

Che:k'tles7et'h' (Checleset) First Nation. This is the northernmost band of the Nuuchah-nulth Tribal Council (NTC) which spans most of Vancouver Island's west coast. Kyuquot's past is generally described as that of a small and remote commercial fishing village that has survived several boom and bust cycles in the whaling and fishing industries during the last 80 years (current generations). As in many coastal regions of BC, most local residents are struggling with an almost collapsed local economy that has relied on fishing and forestry. Recently, a report through the federal Department of Fisheries and Oceans (DFO) ranked Kyuquot as the hardest hit of all coastal communities affected by changes in the commercial salmon fishery (Gislason, 1999).

The case study community assessment relied on local and non-local stakeholders as the experts for describing Kyuquot's own tourism planning situation and organizational needs. Formal and informal interviews and focus group discussions brought together experiences, observations, and insights from over 80 of Kyuquot's tourism stakeholders.⁴

Community Assessment Outputs

The community assessment provided many tangible and less-tangible outputs from, and for, the many stakeholders. In summary, some tangible tourism planning outputs included (Pinel 1998b, 17-51):

- A background inventory of tourism planning efforts and dynamics.
- A summary of related influences on the future of tourism.
- A summary of direct, indirect, and potential stakeholders and their roles.
- A set of potential guiding elements for tourism planning.
- A summary of significant hurdles for tourism planning.
- A possible tourism steering group model.
- Initial task suggestions as planning catalysts.

Each of these outputs provides a valuable reference for ongoing tourism-related discussions, organisation, and planning, or for later evaluating the path and successes of tourism planning and development efforts.

Some less-tangible community assessment outputs included:

- Encouraging stakeholder awareness about tourism implications and possibilities.
- Identifying shared community and stakeholder interests not otherwise being discussed.
- Demonstrating the collective community wisdom and potential of combining stakeholder input, experience, and expertise.
- Stimulating constructive and cooperative discussions.
- Clarifying relationships and needs.
- Prompting links with other local issues, decisions, and initiatives.

Each of these less-tangible outputs adds to the momentum necessary for stakeholders to begin having a more community-based influence on how tourism affects their lives and the area.

Several stakeholders felt that tourism-related decisions and initiatives could become opportunities for the community to begin addressing chronic economic, social, and cultural challenges. Some of these same stakeholders worried that continued haphazard tourism growth could add to economic, social, and cultural conflicts, including lingering tensions between the Native and non-Native local residents.⁵ Regardless, awareness is increasing about how tourism is beginning to influence other aspects of community and area well-being.

Guiding Elements for Tourism Planning

The most significant assessment outputs were the potential "Guiding Elements" for Kyuquot's tourism planning (Figure 2) which came from themes identified through stakeholder comments. With some further

Inclusive Cooperation	<ol style="list-style-type: none"> 1. Using tourism planning to "pull together" local residents; 2. Including broad stakeholder input; 3. Clarifying co-operative stakeholder roles sooner rather than later; 4. Preparing children/youth with values & skills for tourism and community stewardship; 5. Creating a more unified local voice for external relations and communication;
Understanding & Shaping Implications and Expectations	<ol style="list-style-type: none"> 6. Better understanding the implications, potential, demands, and expectations of tourism; 7. Working toward a consistent tourism season by satisfying those who come; 8. Ensuring the safety of tourists and locals; 9. Communicating clear community messages to tourists; 10. Encouraging friendly and respectful attitudes between residents and tourists; 11. Setting local land and marine stewardship examples by residents; 12. Working to reduce socio-cultural stereotypes; 13. Shaping appropriate tourist expectations to match local realities; 14. Respecting resident and tourist privacy while also influencing tourism activities and behaviours.
Local Maintenance & Enhancement	<ol style="list-style-type: none"> 15. Maintaining the ability to keep living and working in the area; 16. Managing for gradual growth that matches local capacity; 17. Showing pride in the area and in cultural backgrounds; 18. Protecting the wilderness and waters as primary resources for all local economies; 19. Protecting the mystique, freedom, and other features attractive to locals and tourists alike; and 20. Treating all local resources as a complete system.

Figure 2. Summary of Potential Guiding Elements for Kyuquot's Tourism Planning (Condensed from Pinel 1998a)

discussion, refinement, and community ratification, these can serve as the foundation principles for tourism-related decisions in Kyuquot. These are a starting point for providing more clear and consistent community messages to tourists, tourism operators, government agencies, politicians, and others who influence how tourism affects the community and area.

This helps to demonstrate the comprehensive collective wisdom that can be tapped through a community assessment rather than suggesting or imposing a prescribed list of tourism principles. These stakeholder-generated Guiding Elements offer more depth and local meaning than what could otherwise be suggested to the community with concepts of eco- or sustainable tourism.

One resident astutely commented that it is much easier to simply make a 2^o shift in tourism development directions now, than

having to eventually make a 90^o shift to change and repair undesired impacts from tourism. This pinpoints the purpose and advantage of identifying guiding elements early in tourism planning. Another resident reflected that, "You have to feel good about your home before you can invite others to it." This is at the heart of community-based tourism planning. Not surprisingly, there are important ways in which all tourism stakeholders can work to support Kyuquot as a healthy home and place to visit.

Other Community Assessment Observations

Some stakeholders indicated that several native and non-native residents increasingly avoid or resent tourists who appear to take the community, fishing, and favourite local places for granted. A few residents described their observation that some tourists see the village like an incidental "backdrop for their experience," and not as a living

community with real people. Others have had tourists stare at them as though studying “a real Native” like a “monkey in a cage”. One youth explained that, “it seems that when we try to approach some of them [tourists], they act ignorant, like they’re higher than us and richer. We know that they are [richer] if they can afford to travel, but they sure don’t have to bring this to our attention....” These types of encounters and experiences can quickly shatter local confidence, respect, and hospitality in resident-visitor relationships. One Native resident insightfully added that, if local residents increasingly withdraw from contacts with tourists, this will unfortunately only add to the potential for conflicts and stereotyping in both directions, and may subsequently increase tensions within the community.

Many described essential links between the “visitor experience” and the “local community experience” whereby each affects the other. As such, Kyuquot’s remoteness, quaint village, local services, sportfishing, secluded beaches, and protected areas are linked to the collective “stakeholder experience” of residents and tourists alike. One tourism operator described hopes that tourists can become more knowledgeable, educated, and inspired from the area and from local people—that tourism can catalyze more meaningful understandings and respect for coastal ecology, remote and rural communities, and Native people.

The Relevance of CBTP

Throughout the research, there was almost a universal stakeholder concern about—and desire to move away from—the status quo of continuing with haphazard, market-driven, and externally imposed tourism development. Co-operative, inclusive, and community-based tourism planning can be approached as casually or intensively as suits the local context. For Kyuquot, many of the tourism planning “task suggestions” focused on education and training, initiating community co-operation, discussing tour-

ism implications, clarifying community expectations and messages, and stimulating local pride and stewardship. Given the stakeholder awareness of both desired and negative tourism impacts, there is ample reason to believe that these same stakeholders can prioritise ways of working together to address tourism concerns, and to refine and follow some guiding elements for their own tourism future.

Though few case study interviewees specifically mentioned “sustainability”, many of the resultant “Guiding Elements” (Figure 2) describe an interest in balancing tourism development to “meet the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987: 8). During this community assessment, Kyuquot’s tourism stakeholders clearly demonstrated their awareness of:

- The “functional interdependencies ...of recreation, conservation, and tourism” (Gunn, 1988: 15) and other resource uses.
- The importance of resident satisfaction for visitor satisfaction (Reid et al., 1993: 24).
- The need to “balance the commercial imperatives of tourism with the cultural integrity of the community” (Masterton, 1994: 23).

In tourism planning, issues of sustainability are often linked with other resource and protected area management efforts, especially where protected areas attract visitors. In Kyuquot, many residents have felt alienated from local protected area management. Policies and activities that have emphasized land or marine areas as everyone’s resource, playground, or treasure (the “public good” and “provincial interests”) typically overlook the greatest potential stewardship asset—the local residents. All residents aren’t necessarily “connected with the land” or setting stellar examples of treating their home area with care; but if not included in the planning and management, they feel even less of an obligation or need to be stewards. The community assessment iden-

tified the need for tourism and protected area management strategies formed through partnerships between local residents and government agencies. Otherwise, the “tragedy of the commons” remains a tragedy of approaching it as the commons. If tourism and protected area policies are drafted with nobody’s home in mind, then nobody in that home is likely to respect, welcome or embrace those policies. Similarly, Kyuquot residents will be reluctant to respect tourists who don’t acknowledge that they are visitors or guests to somebody’s home area.

It remains to be seen whether the community assessment will stimulate further community-based tourism planning in the Kyuquot area. Nothing more may happen without significant increases in tourism-related pressures and conflicts or without further initiatives from key stakeholders. Nevertheless, stakeholder feedback has been positive about the community assessment contributions to clarifying tourism-related issues and relationships.

Applying the CBTP Process Model

The CBTP Process Model (Figure 1) makes the following three assumptions:

- That local capacity building and organisational development can be most effectively guided using the knowledge and insights of stakeholders.
- That most stakeholders can look beyond their immediate circumstance.
- That with community values identified, most stakeholders will move together toward acknowledged desires that respect local area and community well-being.

As noted earlier, these assumptions relate to community development and strategic planning principles. The facilitated community assessment case study has shown that the first and second of the above assumptions are realistic, and that the third may be

a reasonable expectation. Only time and examples of CBTP initiatives elsewhere will provide more insights about the value of this Process Model and validity of its assumptions.

A CBTP approach doesn’t ignore or preclude more market-conscious tourism planning and development, but first establishes a common framework for shaping a locally appropriate tourism industry. In the CBTP Process Model, the three major feedback loops (for community assessment, with community development, and for refining the tourism products and services) allow for tourism development to be guided and massaged by community, area, and market-conscious inputs. Subsequent assessments could be done after every tourism season, once a year, or at two- or three-year intervals—the frequency would depend on the intensity of tourism pressures, other shifts in the local planning context, and stakeholder satisfaction. The specific community approach taken will vary by population size, cultural context, local need, tourism intensity, seasonality, and previous tourism planning efforts. Nevertheless, the CBTP concepts and framework can remain the same.

Along the planning path, it is the recipe of individuals—their talents, skills, experience, limitations, commitment, time, patience, and perseverance—which ultimately determines the success of any community-based process. Stakeholder alienation, turnover, attrition, and burnout can leave a well founded process stalled or unable to progress along an accountable decision path. Personality dynamics and seemingly unrelated personal demands and agendas can block, accelerate, or accentuate positive planning outcomes. With every tourism season and cycle of growth or decline, the roles, influence, and relationships of tourism stakeholders change (Reisinger, 1994; Smith, 1977). Accordingly, community-based tourism planning can be pursued as a flexible and responsive process instead of as the quest for a rigid plan.

Acknowledgements

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Notes:

¹ The case study was conducted in the Kyuquot Sound area on the Northwest coast of Vancouver Island, British Columbia. This applied research was for a Masters thesis about community-based tourism planning (1997/98), and as volunteer consulting to advance stakeholder understanding and discussion about tourism planning and development implications in the Kyuquot Sound area. The thesis findings (Pinel 1998a) and the subsequent condensed working report (Pinel 1998b) have since been used for other resource, tourism, community, and parks planning reports (e.g., Clover Point Cartographics 1998, Comox-Strathcona Regional District 1999, Synergy 1998). The findings will be referred to for guidance during forthcoming economic diversification efforts in Kyuquot and the region.

² The macro approach used for this research was partially inspired by the "Tourism Planning Community Development Model" developed by Reid, Fuller, Haywood, and Bryden (1993) but not yet applied or tested in a tourism planning process. This thesis research deconstructed the Reid et. al. model, then reconstructed it as the "Community-Based Tourism Planning Process Model" (Pinel 1998a) using many insights and experiences from the community assessment case study in the Kyuquot area.

³ Protected areas in the Kyuquot area include: 1) Brooks-Nasparti Provincial Park (approx. 51 631 ha), 2) Big Bunsby Provincial Park (approx. 639 ha), 3) Checleset Bay Ecological Reserve (approx. 34 650 ha), 4) Rugged Point Provincial Marine Park, 5) Tahsish-Kwois Provincial Park (approx. 10 829 ha; includes Tahsish River Ecological Reserve), 6) Dixie Cove Provincial Park (approx. 156 ha), 7) Clanninick Creek Ecological Reserve (37 ha), and 8) Artlish Caves Provincial Park (234 ha).

⁴ Most of the field research occurred between March and May 1997. Approximately six weeks were spent conducting over 75 interviews and meetings in the Kyuquot area or where non-local stakeholders or officials were located (Campbell River, Courtenay, Parksville, Vancouver, Victoria). A draft of the interim findings and analysis was prepared and distributed to approximately 50 stakeholders/research participants for feedback and was used as a discussion reference during two focus group sessions in the community (approx. 20 participants, many of whom had previously been interviewed). Additional and unexpected research contributions came from grade 11/12 students who discussed one of the focus group questions as a class exercise, and who wrote commentaries about parts of the interim findings. Primary data (interviews, focus groups, researcher observations) was supplemented with secondary references (reports, previous theses, etc.) relevant to tourism planning and development in Kyuquot.

⁵ In many respects, the Kyuquot area is a microcosm of the issues and challenges facing rural, remote, and coastal communities through-out the province and country.

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A GIS-BASED ANALYSIS AND PREDICTION OF LAND-USE CHANGE IN A COASTAL TOURISM DESTINATION AREA

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Abstract: *South Carolina is the nation's second largest coastal resort state in terms of beach destination trips, superseded only by Florida. Its coastal resources and tourism industry are now undergoing tremendous coastal change due to tourism development and associated commercial and residential growth. As the negative elements of coastal change draw more public attention, and sustainable development becomes a goal for many coastal communities, the continuing coastal change associated with accelerated growth becomes a critical issue. Many agencies and organizations have initiated research programs to develop new techniques for obtaining timely and valid land-use change information to assist in coastal management. This study, as an integral part of a five-year multi-disciplinary and multi-institutional coastal research project funded by NASA/SC-EPSCoR, is designed to develop and apply GIS-based methodologies for analysis, modeling and prediction of coastal land-use change. It takes a micro approach to examine the parcel-based land-use change at the local scale. A spatial multivariate logistic regression model was developed and 20 variables were selected for predicting the possibilities of land-use change for Murrells Inlet.*

The results indicate that GIS has advantages over conventional methods in integrating various data sources, performing spatial analysis, modeling spatial process, and mapping the results in land-use change studies. It appears that

building permits and parcel data should be used as alternative data sources for change detection and analysis because they contain detailed change information. They are available in digital format and can be updated on a regular basis as more local government agencies utilize GIS for creating and maintaining parcel maps. The logistic regression model used successfully predicted spatial land-use change. Both maps and statistical results show that the primary roads, commercial cluster, commercial zoning, private ownership, and land availability are significant predictor variables for commercial parcel land use. In addition, beachfront, open view, residential zoning, private ownership, land availability, primary roads and commercial centers are major factors that predict residential development.

The results also indicate that Murrells Inlet has experienced tremendous land-use change over the last three decades. The recent period from 1982 to 1996 has brought about rapid residential growth, but little commercial development. The continuing growth appears to be transforming the area into a residential community for metropolitan Myrtle Beach. There is a significant difference in spatial preference between commercial and residential land uses with commercial parcels linearly distributed along the primary roads. As beachfront and waterfront areas are encroached mainly by seasonal homes, residential development moves inland though somewhat restricted by existing parklands and wetlands.

Overall spatial patterns show that the area is lacking an integrated plan for development. Limited public access to waterfront and beachfront and the lack of a focal point in the business district are major problems from the tourism planning perspective.

Keywords: *land use planning, waterfront development, technological tools/data or information/GIS development*

Introduction

South Carolina is the nation's second largest coastal resort tourism state in terms of beach destination trips only superseded by Florida. Coastal tourism in this state generates approximately USD\$4.2 billion in revenues annually. For many South Carolina coastal communities, the tourism industry is the mainstay of the local economy. Unfortunately, both tourism resources and the tourism industry are now threatened by dramatic coastal change induced by human activities. Large-scale tourism, residential and commercial development over the past three decades have transformed vast coastal areas, especially those with extraordinary tourism-recreational resources and those close to big cities, into urban environments, resulting in so called "tourism urbanization" or "coastal residentialization". This process involves at various degrees, transformation of the landscape, degradation of the natural environment, destruction of coastal ecosystems, introduction of new residents, alteration of the existing social structure, and use conflicts. All these physical, economic, and sociocultural changes are undermining the foundation upon which coastal tourism relies. As the negative elements of coastal change draw more public attention and sustainable development becomes a goal for most coastal communities, the continuing coastal change will become a critical issue for planners, developers, managers, policy makers and communities. In order to address this situation, the detection, analysis, modeling and prediction of coastal change are currently priority topics of research of various

governmental agencies and other organizations.

Background

The rationale for studying land-use change at the local level or small scale is multifold. (1) Coastal tourism destination areas together with urban fringes, mountainous areas, and lakeshore environments are the fastest growing areas with rapid land-use change. The impacts, positive or negative, of land-use change are therefore relatively more serious. (2) Land use, land tenure, and land value can be decisive factors in tourism development (Davis and Simmons, 1982; Pearce, 1989). (3) 95% of land use decisions are made at the local level (Kleppel, 1998). This implies that appropriate decisions lead to favorable land-use changes and sustainable development. (4) Previous research on land-use change at this level is not adequate (Pearce, 1995). Coastal tourism has perhaps been studied more than any other form of tourism. Many conceptual models about spatial structure (Pearce and Kirk, 1986; Jeans, 1990), spatial evolution (Lundgren, 1974; Miossec, 1976; Oppermann, 1993), and temporal change (Bulter, 1980) have been developed as a result of study on coastal resorts or coastal tourism. But as Pearce (1987 and 1995) has noted, most studies found in the literature of tourism have discussed land-use change only in general terms. (5) Conventional methodologies have some limitations on the detection (monitoring), assessment (analysis), modeling (assimilation), and predicting (projection) of land-use change. On the other hand, new data sources and GIS technology provide some promise to improve tourism destination land-use change studies.

The application of GIS in tourism research has been minimal though GIS technology has been discussed in the tourism literature for over a decade (Gunn and Larsen, 1988). Tourism planning, recreation and park management, and visual resource assessment are the three tourism-related fields

where most applications of GIS have been found (Gunn, 1990; Wicks et al., 1993; Boyd et al., 1994; Bishop and Hulse, 1994). In tourism marketing, it is still difficult to find good examples of applications of GIS in solving real world problems, though the role of GIS in tourism marketing and business has been discussed by a few researchers (Sussmann and Rashad, 1994; Elliott-White and Finn, 1998). Currently, no tourism research has taken a GIS approach to address land use and land-use change at the parcel level.

Techniques and methods of using satellite imagery as data sources have been developed and successfully applied for land use classification and change detection in various environments including rural, urban, and urban fringes (Shepard, 1964; Robinove et al., 1981; Jensen and Toll, 1982; Fung, 1990). However, studies on land-use change utilizing satellite images are lacking in the tourism literature. This is perhaps because tourism destination areas are relatively small in size and satellite images are generally coarse (cover large areas) in spatial resolution. Satellite-based remote sensing technology cannot yet be used to monitor land use at the level of accuracy required by developers, engineers, planners, and real estate interests. Thus, new techniques for study of tourism resources at local scales are needed.

The building permit system has been used for monitoring and controlling building activities in Europe and the U.S. for over three decades. Building permits and building inspections are now common data sources at the county or municipal level. The utility of building permits has been recognized in studies on tourism and urbanization (Pearce, 1995). Building permits generally record an applicant's name, owner's name, address, parcel identification number (PIN), building activity (e.g., new, add, convert), structure type (e.g., commercial, single-family residence, multi-family residence), ground area, floor area, housing units, estimated value and cost, and date as well as plats if new structures are involved. Multi-

year building permits can provide detailed land-use change information over a period of time. But, building permits show only the intent to build. For change detection, it is important to know which parcels have been both permitted and built. This information can be derived from the building inspection.

Cadastral data or parcel data usually include two sets: assessor's information and parcel maps. The former has the owner's name, address, land-use code, assessed value, tax status, legal description, and recent sale price and date. The latter depicts the boundaries of land ownership parcels, each with a parcel identification number (PIN), site address, tax map number and parcel number. There is a trend that more and more counties and municipalities across the country are creating their digital parcel maps using GIS. Combined with building permits, parcel maps can provide more information about land-use change in the finest spatial resolution with the highest accuracy in terms of spatial analysis because parcels are the smallest units of geographic divisions commonly delineated.

Purpose and Objectives

As an integrated part of the NASA/SC-EPSCoR Wetland Research Project involving three institutions in South Carolina, this study focuses on the land-use change and its impacts. The overall purpose is to better understand the process of coastal land-use change and its consequences in order to minimize negative impacts and to sustain coastal resources and development around nearby wetlands. The project is funded for five years and covers three geographic areas in coastal South Carolina: Murrells Inlet near Myrtle Beach, Mount Pleasant near Charleston, and Hunting Island near Hilton Head. All of these three areas are among the most important coastal tourism destinations in the state. For the Murrells Inlet component of the project, four immediate objectives were:

- Seek an alternative approach that emphasizes human aspects of issues related to land-use change.
- Develop a parcel based GIS model for assessing land-use change in the past.
- Apply this model to observe and map tenure change, residential change and commercial change for the Murrells Inlet area.
- Build and apply a logistic regression model to predict the possibilities of future land-use change for the area.

The contribution of this study will be to further understand the process of parcel based land-use change and the factors and constraints that affect this process. It will add an alternative methodology to the literature in land-use change analysis, especially in terms of understanding change in tourism destination areas.

Methodology

The study area for this research is Murrells Inlet, South Carolina and its vicinity. It is located on the southern fringe of metropolitan Myrtle Beach, SC about 85 miles northeast of Charleston. Sandwiched by the Atlantic Ocean to the east and Waccamaw River to the west, there is no place within this area that is over four miles away from either the water front or the major highway (US 17). This unique location gives Murrells Inlet an advantage as a gateway to Myrtle Beach, controlling all the tourist flow moving from south to north along the coast. In addition, this area is well bestowed by Mother Nature with sandy beaches, estuaries and bays, salt marshes, forests, and many wildlife species including alligators, dolphins, and rare birds, all of which are significant tourism resources. Pollution from residential use and recreational boating has resulted in the permanent closure of the shellfish ground in the northern part of Murrells Inlet and the frequent closure of the entire inlet, especially after strong storms. A few restaurants have been driven

out of business because of reduced number of tourists or overdevelopment. Unlike declining commercial development, the area has seen a rapid residential growth over the past two decades. It has become obvious that the area is transforming from a major tourist destination into a residential area for metropolitan Myrtle Beach. This is the major concern of the local community and a special community-wide program has been set up for dealing with these problems.

Database Development

A GIS database has been created for the NASA/SCEPSCoR Wetland Research Project and is shared by all the project teams from Clemson University, the University of South Carolina and the College of Charleston. A specific database has been built for assessing parcel based land-use change in the past and predicting land-use change in the future. This database consists of three key data sets: building permits (tabular data), parcel maps (coverage), and miscellaneous data that were used for deriving spatial variables (coverages) for prediction of the likelihood of development.

The building permit data was provided by Georgetown County, South Carolina. Only those permits issued during 1982-96 were selected to be compatible with the temporal series of data used by other teams of the project.

The digital parcel map was provided by the GIS department of Georgetown County. The original coverage was registered to the South Carolina state plane system. A good match of the major roads was found when overlaying the parcel map onto the USGS 7.5" quadrangle topographic map of the area, indicating that the overall quality of the parcel map was within the acceptable standard error.

The database also includes land cover, roads, digital elevation model (DEM), and tourism resources. Land cover data is used for three purposes: checking parcel based land use classifications, deriving polygon

coverage of tourism resources, and deriving spatial variables for establishing the relationships with parcel land use. Because the study area is relatively small, about half of the size of a topographic quad, a land cover map with detailed classifications was highly desired. Locations of tourist facilities and businesses including retail stores and restaurants were collected from the field by using GPS (Global Positioning System) and then differentially correcting (error reducing) the point data.

GIS Models

Although land use classification is not the focus of this study, it is necessary to briefly describe the land use classifications used for this study to avoid any ambiguity. It is a general classification that includes the commercial, institutional, multi-family residential, single-family residential, public/semi-public, utility, and undeveloped/vacant areas. This research is designed for assessing and predicting the parcel-based land use in order to provide information about what, when and where land-use change has occurred in the past and will take place in the future. These two issues are related but two separate models are needed.

The first model, a procedural GIS model for assessing parcel-based land-use change in the past was developed. The operation of this model requires an input comprised of a parcel map linked through parcel identification number with two attribute data sets: cadastral records and building permits. Through spatial database management and map algebra operations in a GIS environment, a series of maps are derived.

Tenure change over time can be easily derived from the model because it involves only manipulation of tabular data of the parcel map using database management functionality provided by the GIS software. Dates on the deed show when the parcels have been sold or resold, split or created. They provide important information about the tenure change or ownership change of

parcels over time. Dates in the attribute table can be aggregated by year. Then the total number and acres of parcels were calculated on a yearly basis.

Land-use change in Murrells Inlet was assessed using this model. The historical land use map for 1981 was overlaid over the NAPP aerial photograph to check if any parcel was vacant but misclassified as developed since some parcels were permitted before the study period but developed during the study period. Those permit data were not collected. Parcels that belong to this category were eliminated from the 1981 map and added to the land-use change map. The parcel change in use intensity was mapped by selecting those parcels onto which a type of structure has been added. In other words, an "add" activity had occurred. Using spatial statistical tools, descriptive and referential statistical analyses were performed interactively on the map.

The second model, a predictive model for parcel based land-use change is based on logistic regression (Tabachnick and Fidell, 1996). Factors that influence land-use change are so complex that predicting land-use change is extremely difficult. However, substantial need exists to warrant efforts to make predictions. The driving philosophy is that a better prediction will reduce risks in land use decision-making. Prediction of land-use change involves several steps: selecting the predictor variables, obtaining the measurements (preparing the variable coverages), establishing the relationships between the dependent variables and independent variables, building and running the prediction model, and mapping out the predicted values.

As has been discussed previously, variables used for predicting land-use change in other settings are not appropriate for predicting in tourist destination areas. Variables used by Gunn (1990) for identifying the potential tourism destination areas in Upstate South Carolina and those used by Boyd et al. (1994) for identifying the ecotourism area in Ontario Canada are not appropriate for our

prediction because of the differences in scale. Three criteria were used for selecting 20 variables for our prediction. (1) Variables must characterize coastal tourism destination areas; (2) variables must represent the spatial relationships; and (3) variables must reflect the properties of parcels. As a result, two predictive logistic models were developed for residential land-use change and commercial land-use change respectively.

Results

Parcel Tenure Change

Tenure change occurs when a parcel splits or the ownership of a parcel changes. It is a legal process that reflects overall trends of parcel development over time. Although this legal change of parcels could take place pre- or post-development, it is often the case that parcel use change occurs after a parcel is purchased, especially when a building activity is involved. Tenure change therefore sets up a framework for other land-use change induced by humans. There are five aspects of parcel-based change in which we are particularly interested: (1) overall trends of temporal changes that reveal factors that affect the change during a specific period; (2) parcel physical parameters such as number and size; (3) spatial patterns and their spatial relationships to tourism and recreation resources; and (4) ownership of large parcels that indicate who or which agents have been involved in the parcel-based land-use change.

In Murrells Inlet, the period before 1973 saw little land transaction. The fastest growing period has occurred since the mid-'80's and the pace has slowed slightly in the '90's. It is interesting that the land-use change in terms of tenure change at this micro level shows a strong correlation with the macroeconomic conditions in the nation over the same period. Because virtually no industry, agriculture or commercial fishing exists in the area, tourism development, commercial development and residential development are the key factors that caused the land-use change.

Big developers, conservation groups and government agencies were key players in the transaction of large pieces of properties during this period. It is noted that many parcels created after 1991 are surrounded by large properties purchased in the 80s, suggesting that they are the parcels split, built or unbuilt, and resold by the big developers mentioned above. They look like well-planned subdivisions following the clustering development principles. Clusters of small parcels generally indicate where the human activities are intensive. They are mainly located along the beach, waterfront, major roads, or in the inland subdivisions. Large parcels, on other hand, are mainly the wetlands within Murrells Inlet and along the Waccamaw River, the parkland in Brookgreen Gardens and Huntington Beach State Park in the south, and the forestland along the county border to the north and adjacent to Brookgreen Gardens to the south. As the wetlands and parklands are restricted from development, the private forestlands contain the only large parcels that may be available for cluster housing development in the future.

Commercial Land-Use Change

Business in Murrells Inlet can be roughly grouped into three categories: tourism, fisheries, and local services. Tourism related businesses include restaurants, marinas, accommodations, rentals, fishing suppliers, and gift shops. The terms "commercial" and "business" were used interchangeably in this study to include all the service and retail establishments. Only 24 out of 36 permitted parcels have been transformed into commercial use over the period 1982-1996, indicating little commercial growth in this area. These results are congruent with the perception of locals. Most of the commercial growth occurred in the mid-'80s with little in the '90s. It is also found that some restaurants have been closed due to lack of business. Slowing down or declining of business in Murrells Inlet has made the local community so concerned that a special revitalizing plan-2007 was established in 1997.

It is also noted that there is no dominant commercial center or town square found in this destination area, though few relatively small and sparsely distributed business clusters are identifiable. Because Murrells Inlet is a non-incorporated area, this has become one of the disadvantages it has in competition against its commercialized neighbors. Essentially, none of these commercial clusters are big enough to attract more tourists to stop or stay longer. Even though Murrells Inlet is one of the primary cuisine destinations in the Grand Strand tourism region, most tourists leave immediately after dining. The growth of local service businesses and decline of restaurant businesses suggests that Murrells Inlet is undergoing some transformation of its functionality. Factors and constraints that form the environment for business development should be studied.

Residential Land-Use Change

The most significant land-use changes that have occurred in Murrells Inlet over the last 15 years were mainly due to the residential development of both primary homes and vacation homes. Unlike commercial development, there have been 947 permits issued for residential development, of which 715 parcels have been built over the period 1981-96, totaling 440 acres. The turnover rate is much higher too, about 76% compared to 33% for commercial development (Figure 1). Three peaks of growth occurred respectively in 1985, 1990, and 1996 at an interval of approximately five years. Single-family dwellings have led all categories in number of newly built house units since 1986. There are over 50 house units built per year and this number has increased to 200 in 1996, showing a strong trend of continuing growth in the future. In contrast, condominiums were the biggest contributor to the increased housing units in the early '80's but none have been built since 1988. Murrells Inlet has also seen a fast growth in mobile home dwellings in the recent years. Over 300 permits have been issued for new mobile homes and 200 have changed ownership.

Tourism Land-Use Change

Four aspects of changes that have occurred are worth emphasizing. First, government agencies and interest groups have acquired large pieces of wetlands for conservation purposes. The first land transaction was done by the South Carolina Wildlife and Marine Resources Department acquiring 64 acres of wetland within the inlet area in 1984. Brookgreen Gardens Society and S E Flora & Fauna purchased over 304 acres of former rice fields along the Waccamaw River and annexed them to its wildlife park of Brookgreen Gardens. Those lands are important wildlife habitats, have a great potential for ecotourism uses, but are threatened by development. Second, accompanying the residential or resort development, 210 acres of forestland have been converted into a golf course and provide more recreational tourism opportunities in the Murrells Inlet area. Another golf course has been planned and parcels for that have been demarcated. Third, through a public-private partnership agreement with the Brookgreen Gardens Foundation, the South Carolina Department of Parks, Recreation and Tourism extended the lease of Huntington Beach State Park for another 30 years in order to preserve the pristine beach, fresh water lagoons, saltwater marshes, and natural habitats for wading birds and coastal raptors. Finally, the filling-in of residential development by private owners along the beachfront and waterfront has eroded the public open space. Views are blocked; access is limited; and on-site activities are confined. The overall quality of tourism recreational resources have been degraded.

Future Land-Use Change

Future land use in Murrells Inlet was predicted in terms of the possibilities of parcel transition using a logistic regression model. The results are reported in three parts: model reliability, predictor variables, and predicted results for residential land use and commercial land use. Figure 2 depicts the predicted residential change using the

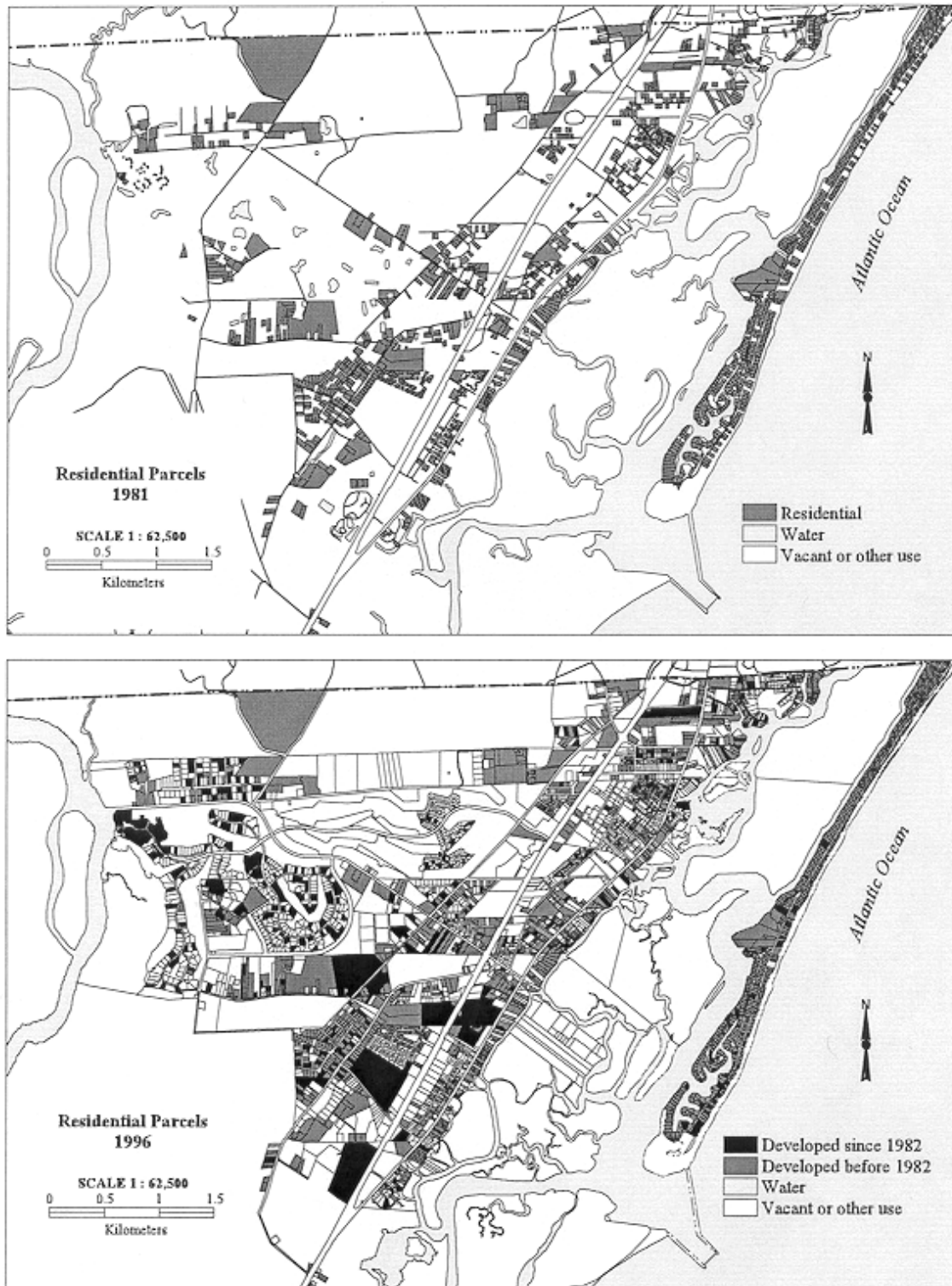


Figure 1. Parcel-Based land-use change 1981-1996, Murrells Inlet, South Carolina, U.S.A.

year 2010 as a cut off value in the logistic regression model.

A spatial logistic regression analysis was performed on all 20 predictors over 4107 total cases (parcels) of which 2591 were used as the "selected" for building the model and 1516 as the "unselected" for validating the model. Of the total parcels, 2139 were residential and coded as 1 while 1968 were non-residential and coded as 0. The slope variable was dropped off because it was determined not significant for this coastal area. A test of the full model with 19 predictors against a constant-only model was statistically reliable, $\chi^2(19, N = 4107) = 2342.048$, $p < 0.001$, indicating that the 19 predictors, as a set, distinguished between residential and non-residential parcel use. Prediction success was very impressive, with 90% for the residential and 92% for the non-residential correctly predicted, for an overall success rate of 91% for the selected cases. The prediction success rates were even better for the unselected cases, 95%, 91%, and 93% respectively.

A similar spatial logistic regression analysis was performed on commercial land use predictors over 113 cases of commercial use and 3994 cases of non-commercial use with residential zoning replaced with commercial zoning. The analysis indicated that a full model with 19 variables was also statistically reliable, $\chi^2(19, N = 4107) = 709$, $p < 0.001$. Prediction success was relatively less impressive because only 69% of commercial parcels were correctly predicted, though 99.57% was predicted for non-commercial use and 98.73% for overall success. The Wald test shows that proximity to the primary roads, proximity to commercial clusters, commercial zone, private ownership, and vacancy are significant predictors ($p < 0.05$). A model built upon these five predictors shows an adequate fit to the perfect model according to the result of a Hosmer and Lemeshow goodness-of-fit test, $\chi^2(8, N = 4107) = 26.5$, $p < 0.001$. The prediction success rates are 65% for the commercial, 99.65% for the non-commercial, and 98.69%

for the overall. The predicted possibilities of commercial land-use change in the future show that commercial development will most likely take place along US 17 Bypass with most development in the northern part of Murrells Inlet.

Conclusion

This study used GIS as an integrating system and analysis tool to assess and predict parcel-based land-use change. It appears that building permits and cadastral data contain timely and valid information about land-use change. They are the important alternatives of data sources for change analysis. This is especially significant for tourism destination areas as they are often too small to be analyzed with traditional land-use change analysis techniques. GIS has advantages over the conventional methods in integrating various data sources, performing spatial analysis, and mapping the results in land-use change studies. The Murrells Inlet study shows that using GIS in conjunction with building permits and parcel data can generate sufficient information about parcel tenure change, land use type change, temporal change and spatial change. The logistic regression model appears to be appropriate for the prediction of spatial land-use change. The success rates of prediction are 89% and 65% for the residential and commercial land-use change respectively, with overall rates over 90% for both cases. The ArcView based land-use change analysis and predicting model is a handy tool for county and local planners.

It is admitted that there are some limitations of this study. These limitations are mainly due to the data constraints and parcel properties. Obtaining the status of building permits (already built or not yet built) and improving data quality are critical to deriving the accurate information of parcel-based land-use change. An integration of imagery-based change detection and parcel-based change analysis is recommended in order to

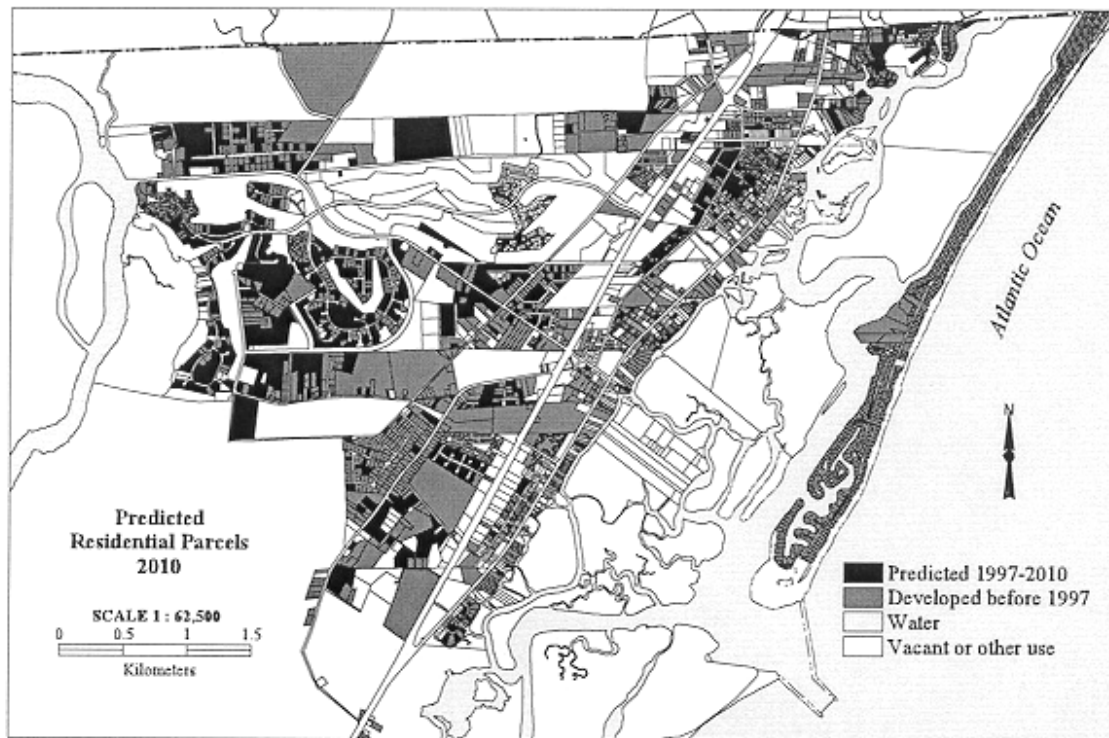


Figure 2. Predicted Parcel-based land-use change 1997-2010, Murrells Inlet, South Carolina, U.S.A.

get timely and valid information on both physical change and social economic change at the finest resolutions possible. Although future spatial land-use change can be predicted with reasonable error, it is difficult to determine exactly when this change is going to happen. Murrells Inlet is only a small area and its land-use change is a function of many different factors including physical, economic, political and social change at a regional level. How to integrate the regional variables into a local predictive model is still a great challenge. At this point the authors have identified no GIS-based research that has addressed land-use changes involving different geographic scales.

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A PROCESS FOR COMMUNITY-SCALE TOURISM DEVELOPMENT MODELING

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Abstract: *Hit hard by cyclical market downturns and systemic restructuring in forestry and fishing, resource-dependent communities in the province of British Columbia, Canada, are seeking to diversify their economic bases through tourism. Visitors and host communities both are increasingly demanding that new tourism development not disrupt existing environmental, community and economic values. A recent project in Nootka Sound explored a planning process and technical methods to identify opportunities for new tourism business while seeking to address many of these concerns. This paper describes a development planning process which took steps toward empowering the local community to direct its own development future, while supplying meaningful input to officials charged with on-going operational management of the Sound's resources. It reports how the project applied GIS-based digital modeling techniques to identify and map areas of high biophysical resource capability for specified tourism products. These methods may hold useful lessons for communities seeking to identify their own tourism development potential.*

Keywords: *tourism, tourism development planning, community development, resource management, GIS, capability modelling*

Introduction

Canada's Pacific province, British Columbia (BC), has an economy which has traditionally been dominated by resource extraction (logging, fishing and mining) and primary manufacturing. The boom-and-bust eco-

nomical cycles of these resource industries have created both instant communities and ghost towns over the province's 128-year history. Today, reductions in the levels of employment provided by forestry, fishing and mining threaten the viability of some resource-based communities, chiefly smaller settlements outside the province's urbanized southwest corner. Now, many residents of BC's resource-dependent communities are unwilling to relocate in pursuit of the next resource boom, if one can be found. Efforts to diversify local economies to better weather downturns in any one sector have been undertaken by most communities. Tourism, which may be informally described as the business of providing accommodation, transportation and other services to recreating visitors, is frequently cited as a potential growth area.

This paper will describe a process model and set of GIS-based analysis methods used to identify tourism development opportunities in a manner which respects community values, providing useful direction to operational resource managers. The paper will describe a project in Nootka Sound, BC, conducted as the first phase of an intended comprehensive tourism planning process. GIS resource values, and, by modelling the capability of the natural and cultural resource base to support a set of technology assisted in compiling an inventory of tourism products, defined areas of high tourism development potential.



Figure 1. Location of Nootka Sound

Discussion will review the principal lessons learned through this project and the paper will conclude by noting how this project may point toward a workable tourism planning approach which incorporates community values. A complete description of the project and its map outputs are available in the project report, *Nootka Sound Forest Recreation and Tourism Opportunities Study* (Nootka Sound Economic Development Commission, 1998).

Background: Nootka Sound

The western coast of BC was first charted by mariners who described a set of five sounds, or navigable indentations in the mountainous face Vancouver Island presents to the Pacific Ocean. At the centre lies Nootka Sound, where fjords reach inland to tidewa-

ter communities at Gold River, Tahsis and Zeballos. The bulk of Nootka Island shields the communities and their waterways from the worst of the Pacific storms. The Nootka Sound study area boundaries were defined by its sponsor's sphere of influence, amended slightly by other key administrative boundaries, to include about 370,000 ha of land. The area is home to a population of about 3,600.

The Sound abounds in extraordinary natural resources. The aboriginal First Nations had an elaborate and sophisticated culture supported by the Sound's wealth. With European contact, economic attention focused first on the furs of marine mammals such as the sea otter. Then canneries sprouted on oceanfront pylons to package fish for overseas markets. Gold and iron were mined at Zeballos, fine building stone

was quarried at one of the smaller inlets. Logging flourished in stands of huge timber, and sawing lumber created Tahsis, while pulp and paper production built the town of Gold River.

In turn, each of these industries has boomed, then collapsed to a fraction of its previous size and economic importance. The otter were hunted out, the shoals of fish depleted, the gold dug up. Although enormous tracts of forest remain, much of the best old-growth timber has been harvested. At the time of this project, forestry remained the Sound's dominant economic activity, accounting for a clear majority of direct employment. However forestry too has given troubling signals for the future. Shortly after this project concluded, ownership of the area's chief private forest products company changed hands. Then the new owners announced the permanent closure of the Gold River pulp and paper processing facility, the flagship of the forest industry in Nootka Sound, and by far the area's single largest employer.

Clearly, this forest-dependent community has a pressing need to diversify its economy to provide employment and business opportunities for local residents.

Locally-Directed Planning Process to Empower Community Interests

Tourism in BC is managed by several agencies, with responsibility for tourism resource planning lying with the Ministry of Small Business, Tourism and Culture (MSBTC). Since 1992, MSBTC's Tourism Policy and Land Use Branch has been working to incorporate the industry's requirements into strategic, regional-scale land use planning processes.

Adapting the tools used for tourism resource planning at the strategic scale to the needs of the community scale calls for more than simply recompiling the data at higher resolution, more than simply "zooming in"

on a detailed area at a smaller scale. At the strategic scale, the planning objective is to maintain resource quality and access. At the community scale, the chief objective shifts to the identification of near-term business development opportunities which will not compromise community values. At any scale, tourism planning requires a process which reflects the economic and social priorities of the community. Given real-world budgets and political priorities, there is little prospect of a full forum for the complete integrated resource and land use planning of the Sound in the near term, however. The process applied here is an attempt to find a workable, results-oriented set of methods which meaningfully provide community direction and input on tourism development planning, while producing technical results suitable for operational use by government and private sector agencies.

Tourism planning in Nootka Sound is conceived as a three-step process, after the approach advanced by Clare Gunn to incorporate tourism planning in the matrix of its community context (Figure 2). First, assemble an information inventory of resources and identify candidate tourism development opportunities; second, conduct a planning process to select from among the tourism development options in the context of community values; and third, implement the tourism plan by issuing tenures and initiating tourism businesses in areas identified as appropriate. This project undertook the first of the components, providing the key data required for the second, and helping lay groundwork to facilitate the third.

The process was designed with a local organization, the Nootka Sound Economic Development Commission (EDC), as the project sponsor. It was the EDC which applied for and obtained funding to conduct the project, which provided administrative management, and which appointed the Steering Committee that directed project operations. Ensuring local input, the Steering Committee, chaired by the EDC's Miriam Trevis, was made up of representatives from

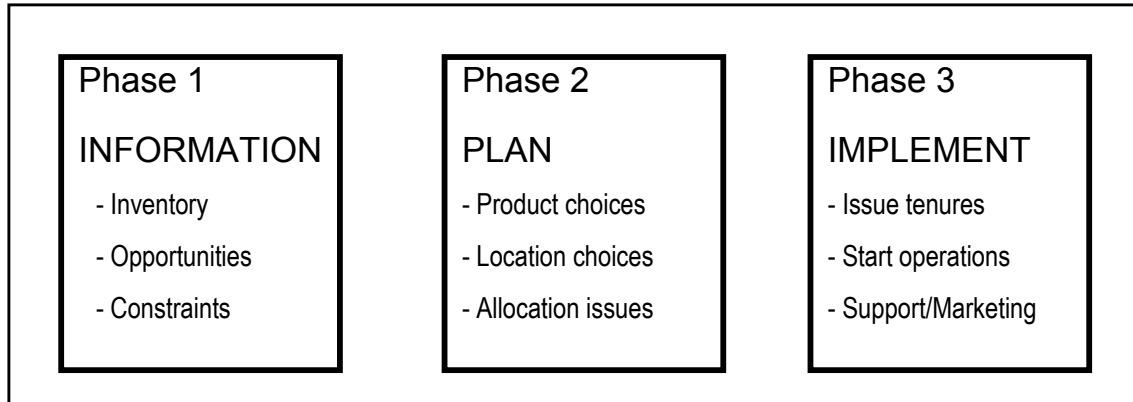


Figure 2. Tourism Development Planning Phases

recreational groups, tourism operators, municipal government, provincial government, First Nations and the major forest company. The Steering Committee directed the project, guiding the selection of tourism products to be modelled, providing data on constraints to tourism, and helping to shape the tourism capability models to reflect community values.

To be effective, a plan must be implemented. The Nootka project set the stage for implementation by seeking the active participation of the agencies which make operational resource management decisions that impact on tourism. In Nootka Sound, almost all of the land outside townsites is owned by the provincial government. Recognizing the outcomes of the project could provide useful aids to their own operations, representatives of provincial managing agencies accepted appointment to the Steering Committee, where they could provide input and direction, and to the Working Group, where they could supply experts and information. These included the Ministry of Forests, which administers most of the Sound's forested landscapes; BC Parks, which manages parks in or bordering the Sound; BC Lands, which issues and administers tenures to use public lands for tourism or other operations; and Forests Renewal BC, an agency which funds a range of activities on forest lands in support of resource-dependent communities.

While the Steering Committee assumed overall responsibility, a smaller group called

the Working Group provided operational, day-to-day direction to the contractor engaged to carry out the project's first phase, Clover Point Cartographics Ltd. This technical group, led by tourism and recreation specialists from MSBTC and the Ministry of Forests, provided expert and technical recommendations to the Steering Committee.

Spatial Inventory Location of Tourism's Assets

A key tool allowing MSBTC to describe the existing industry and its resource needs has been the Tourism Resource Inventory (TRI) (Resources Inventory Committee, 1994). The TRI uses GIS technology to describe and map the locations of businesses involved in tourism, the resource features of importance to the industry, and the routes and areas used by tourism operations. Original information is captured via a survey of tourism operators, supplemented by a variety of other sources, and recorded at a nominal scale of 1:250 000, considered suitable for strategic planning. The TRI also uses predictive modelling to describe the capability of the resource base to support specified tourism products, providing mapping of relative potential across the landscape. The TRI approach was adapted to the community scale by substituting the TRI's 1:250 000 National Topographic Series base with the BC Terrain Resource Information Mapping (TRIM) 1:20 000 digital base, and by restructuring the

analysis used to identify resource capability for tourism products.

Clover Point engaged the services of a researcher resident in Gold River to conduct the survey of tourism operators, as experience had demonstrated responses would be more forthcoming to a local questioner. Using existing TRI data for Vancouver Island and any other available sources to identify candidates, the researcher issued a four-page survey form and blueprint base map via mail-out, asking tourism businesses to identify their operations and the locations of the resources they use. The researcher followed up with telephone interviews and personal meetings, to secure a 56 % response rate from 118 contacts. Including other sources, a total of 137 operations either based in the Sound or conducting tourism-related activities there were identified.

Data points were remapped on the new base. Attribute definition coding used the

TRI standard, which parallels the Ministry of Forests Recreation Features Inventory for consistency. A portion of the facilities and features captured are shown in Figure 3. Behind each point or line is a database describing its attributes. Data on most other resources, including recreation features and forest resources, were available only at smaller scales, and data standards varied with their sources. Other important data, including wildlife populations and virtually any type of underwater feature, were simply not available. The results of analysis based on these multi-scaled data are therefore not reliable to the nominal base scale of 1:20 000. This means the outputs must be considered cautiously, and reminds us that any actual development should be preceded by a site-specific feasibility analysis.

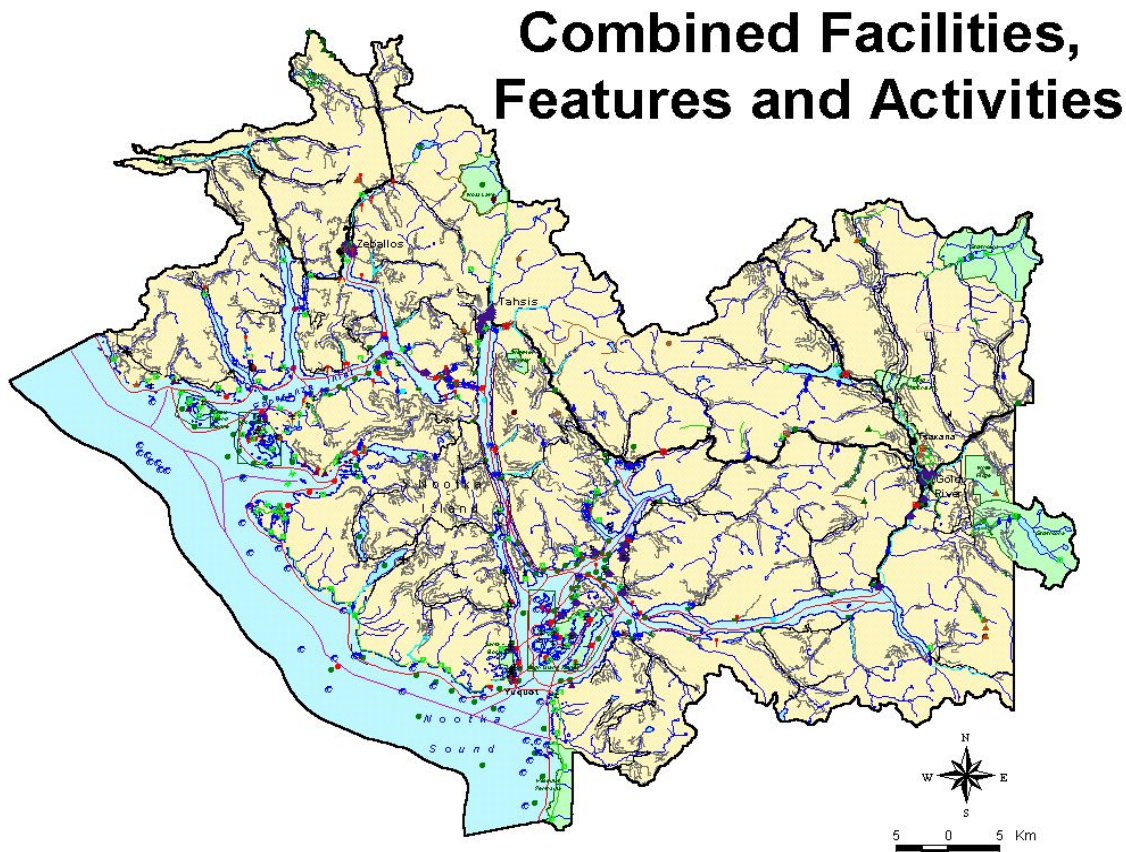


Figure 3. Tourism Facilities and Resource Features in a Portion of Nooka Sound

Resource Modelling Maps Areas of Capability for Future Tourism

MSBTC has been developing methods to model the capability of natural and cultural resources to support tourism products since 1992. The concept is to draw upon the experience of successful tourism operators to define the conditions which make for a good location for a specific activity, or product. GIS overlay functions permit mapping of areas where the desired conditions occur on the landscape. At the strategic 1:250 000 scale, simple models have yielded information useful for regional land use planning. This project followed a similar general approach, with the added ingredient of local direction in setting modelling parameters.

A product evaluation selection matrix helped pick which products should be modelled. A list of 34 possible activities, grouped into water-based, land-based, snow-based, touring and facility/services types, was drawn up by the Working Group for ranking according to a suite of resource, market and economic criteria (Table 1). Though subjective, this ranking allowed for synthesis of expert and local knowledge, and an evaluation of factors about which little data is available. The Steering Committee then selected ten products from the top-ranked products on the list, incorporating local values including a stated wish to investigate products likely to lead to near-term development.

Saltwater fishing, the traditional mainstay of tourism in the Sound, was not chosen. The Steering Committee felt fishing would become a part of almost any activity occurring in the Sound. The Committee also voiced concerns about the carrying capacity of the fish resource, and about recent uncertainties on fishing regulations.

The products selected and modelled were:

- Automobile Touring (2WD and 4WD)
- Heritage Tours
- Hiking (Day and Overnight)

- Caving/Karst Tours
- Remote Access Lodge/Resort
- Marine Cruising
- Scuba Diving
- Sea Kayak Touring
- Snomobile Touring
- Wildlife Viewing

Using previous experience and input from Steering Committee and Working Group members, models were developed to evaluate how the Sound's resources met the conditions required for the tourism products. Generally, the models were predicated on two sets of factors. The first is the presence of attributes essential to the activity (and the absence of attributes which preclude the activity). The second is the presence of factors which modify the quality of the activity.

Accessibility was considered an essential component of the product models in order to best represent tourism development capability with existing infrastructure. Marine accessibility was ranked by considering the composition or type of shoreline and the level of exposure, while land accessibility was ranked by classifying the road network. Combined, these layers defined the relative accessibility of coastal and inland areas. It is important to note that in this largely-undeveloped region, residents and tourism business people repeatedly suggested infrastructure improvements (road construction and upgrading, wharf and marina rehabilitation) as a key requirement for tourism growth.

Features include any natural or cultural reactivity, whether it is the primary focus of the activity (i.e., the Upana Caves to a spelunking tour), or just an enhancement to some other activity (i.e., the same caves to a family on a camping vacation). A total of 43 types of biophysical, heritage, wildlife, existing use and facility features were considered, where relevant, in the models.

The flow chart below (Figure 4) shows the conceptual model for determining capability for one product, marine cruising. Marine cruising includes private or charter power

Evaluation Criteria	Definition
<i>Resource Criteria:</i>	
Quantity	Does the resource exist? How extensive is the resource base? What is the ability of the resource base to support each product?
Quality	What is the quality of the resource from a tourism perspective?
Accessibility	How accessible is the resource for this product usage? Distance from population centre? Transportation to resource? Terrain. Safety. Appropriate access for product?
Seasonality	How many months can the product be utilized?
<i>Market Criteria:</i>	
Existing Market	How often is the product utilized in the region today? How important is the product in relation to other products offered in the region?
Trends in Tourism	How does this product relates to local, regional & national trends in tourism activity participation?
Potential Market	What is the potential of this product to attract additional visitors to the region or have visitors increase their stay? This criteria is dependent on resource quality, existing market and market trends.
Geographic Market	What is the "highest" visitor market to which this product appeals? In increasing importance these area 1) local, 2) Provincial, 3) border states and provinces, 4) remainder North America/International.
<i>Economic Criteria:</i>	
Job Creation	What is the likely job creation potential associated with expanding the market for this product?
Job Duration	What is the duration (weeks/months/full year) of jobs created to support this product? This criteria relates to resource seasonality.
Tourism Revenue	How much are tourists and recreationists willing to spend to participate in this activity? Is there potential to increase the actual per capita spending on this activity?
Employment Income	How does this product contribute to the local economy in direct and spin-off jobs?

Table 1. Tourism Product Evaluation Criteria

Marine Cruising Capability Model

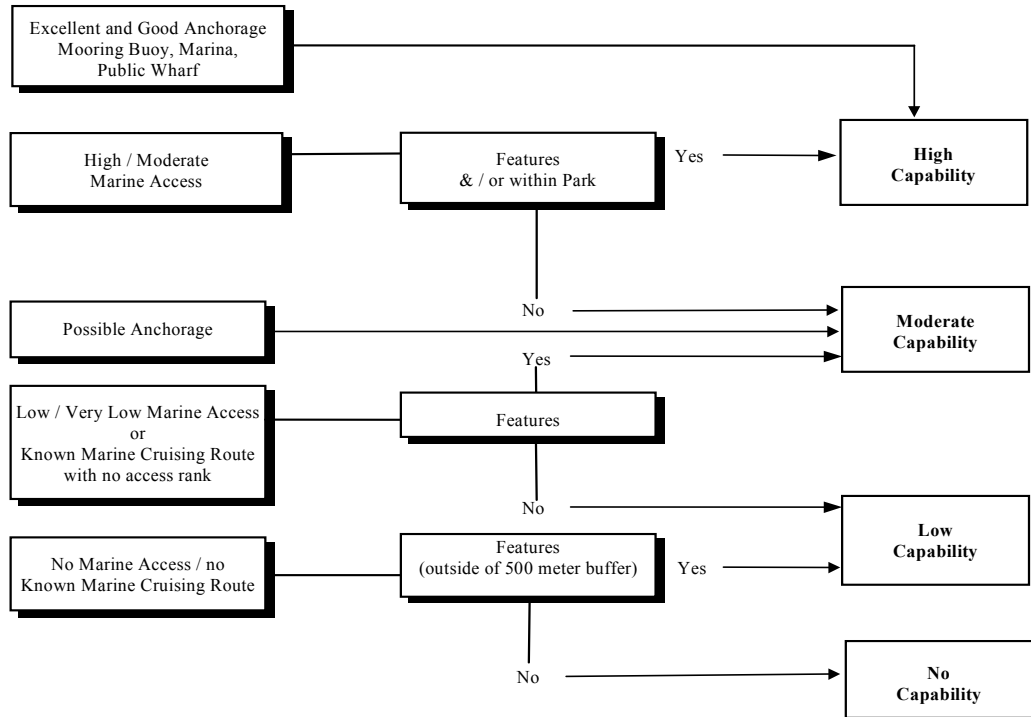


Figure 4. Marine Cruising Tour Capability Model

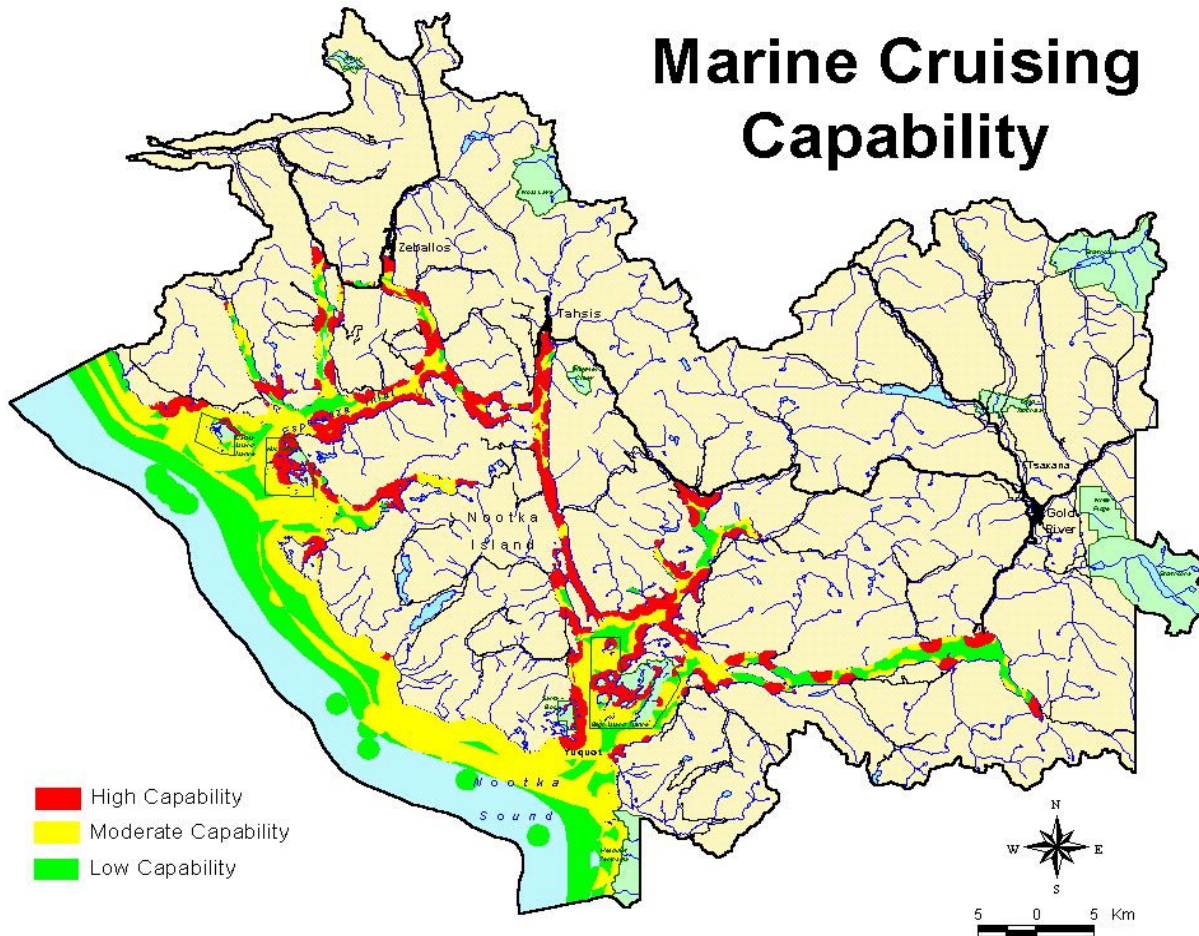


Figure 5. Marine Cruising Product Capability for Nootka Sound

and sail boats, on day or overnight excursions. Challenging open-ocean conditions off-shore mean the region receives very few transient mariners arriving by sea, but trailerable vessels with Canadian and U.S. registry numbers are common on protected in-shore waters.

The model is based on the premise small craft are unable to travel under adverse weather conditions, and that even under the finest skies mariners must overnight in some kind of haven. Known good anchorages, mooring buoys, marinas and public wharves therefore are classified directly as having a high capability for this product. Outside these defined stopping-places, the marine access layer provides an indication of whether the mariner will have the option of lingering. The presence or absence of fea-

tures relevant to the marine traveler will modify the essential condition established by access, and entice the visitor. Presented as a thematic overlay, the model mapped areas of high, moderate, limited or nil capability for the marine cruise touring product (Figure 5).

Local Values Add Constraint Filters

The constraints to tourism development in Nootka Sound, as expressed to this project through direction from the Steering Committee, survey results, public meetings and other sources, are extremely varied. These constraints represent social and economic priorities. Many are beyond the scope of a resource development planning effort (fi-

nance and marketing), some are in use in other management or planning areas (recreational use, First Nations values, provincial, regional and municipal land use zoning), while others were captured as exclusion areas in the models as representing de facto social decisions (active use by other resource sectors, such as aquaculture tenures or log handling areas).

At this phase of the process, only constraints indicating active use for other purposes have been applied in the models. Data on other types of constraints could be applied to the models, if direction on social values were provided. Data on constraints posed by environmental factors, and analyses based on indicators of the resource base's carrying capacity could also be provided.

In addition to mapping the mappable, the project documented constraints identified in the categories of the biophysical, infrastructure/services, regulatory/policy and marketing/promotions environments. This information will inform decision-making on land and resource use, and contribute to defining areas where taking the tourism development process to its next level - determining economic feasibility - should occur.

Discussion: Steps Toward a Technically-Sound Approach to Tourism Development Planning at the Community Scale

This project completed the first of three intended phases of an integrated tourism planning process. It collected information on the resources important to tourism, used modelling techniques to identify areas on the landscape with capability for tourism products, and defined important social and environmental constraints to the development of tourism opportunities. In so doing, it has presented a process model which provides for a high level of local input and direction, supported by technical expertise from government and private industry, and

a data modelling method which brings spatial analysis tools to the task.

Of the two, the process model is most likely to offer an enduring lesson to tourism development planning in other areas. The digital modelling methods are continually being revised, as new data become available, and as market forces reshape the kinds of activities visitors will seek out. Mapping of tourism development potential is no more than a tool aimed at supporting informed decision-making. Certainly, the methods described here can be applied anywhere, using the best available data and the expert knowledge of tourism business people to describe the resource requirements of tourism products, and to map the capability of the resource base for those products.

Traditionally, tourism development planning has occurred either as regional economic development studies or as site-specific feasibility studies. While each provides useful information, the first does not consider the "where" question, while the second considers only a predetermined location. This project has suggested a way to address the "where" question across a community-scale region, seeking to spatially identify areas where business-style site feasibility analysis is appropriate on resource and social grounds. The resource capability is provided by the GIS analysis, and the social suitability has been suggested by local direction of the process.

Acknowledgments

Thanks to the people of Nootka Sound who participated in this project, including "ordinary" citizens, civic leaders, tourism operators, recreational enthusiasts, and the forestry sector.

Christopher Hamilton, formerly of MSBTC and now with BC Parks Cariboo Region, was the chief spark in getting this project off the ground.

Working Group members Mason Davis, Bill Heidrichs (Zeballos); Laura-Lee Fenton (Tahsis); Margarita James (Tsaxana); Bob Volk, Miriam Trevis (Gold River); and Recreation Specialist Charlie Cornfield, of Ministry of Forests Campbell River, deserve special recognition for their contributions.

Portions of this paper were presented by the authors at GIS '99.

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OCEANS BLUE FOUNDATION

A Blue Revolution

Coralie Breen

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Abstract: *Oceans Blue Foundation, an environmental charitable organization, was founded in 1996 to develop conservation best practices for the tourism and travel industry with a vision of environmentally responsible tourism. This focus responds to recent rapid, unmanaged growth in tourism, both worldwide and in the Pacific Northwest, and the resulting impacts on environmental quality, specifically in coastal regions.*

Conservation efforts are focused on encouraging environmentally responsible behavior – blue manners - in activities related to travel and tourism. This is done through the development and identification of environmental standards – or “best practices” for residents of and visitors to coastal communities, as well as the tourist operators who service them.

In its six year existence, the Foundation has implemented a series of programs to raise awareness, education and develop standards for all sectors in tourism, including the Cruise Ship Stewardship Initiative.

Keywords: *Conservation, Tourism, Environmentally Responsible Tourism Marine Protected Areas, Best Practices, Cruise, Whale Watching, Certification, Standards*

Introduction

Is travel a right or a privilege? Can we protest the destruction of the rainforest when we are prepared to burn 15,000 pounds of fossil fuels per hour on a fourteen hour airplane flight? One study suggests that each of us should only be entitled to just one such flight in our lifetime.

Today, greater efficiency in the use of resources has been more than matched by in-

creases in production and yet greater travel. Ten years after the Rio Earth Summit in 1992, no national government has developed a policy for sustainable travel and tourism best standards, consumption or production, and no third party legitimate eco-labeling schemes exist to inform tourism and travel consumers.

Tourism is touted as the world’s largest and fastest growing industry, of which “nature and adventure” travel is the fastest growing sector. This makes communities with relatively pristine environments extremely popular destinations – both for the international traveler and the vacationing resident. Increased coastal tourism results in increased stress on local environments. Just a few of the environmental impacts of high tourist volumes are: litter in beach and park areas; chemical effluent from boats and marinas; marine and coastal habitat denigration; stresses to local sewage systems; and compromised air quality due to air, marine and ground transportation.

Many strategic issues in tourism are debated upon and have yet to be resolved. While tourism can offer resource communities an alternative to vicious boom-bust cycles of more traditional, extractive industries, it will only do so responsibly if the industry initiates using fewer toxic materials, reduces, reuses and recycles it’s wastes, maintains clean and eco-friendly sites and preventatively looks upon the sources of its own environmental emergencies. At times, this may mean judging whether a new tourism activity or facility is even the “best use” of the region’s environment. Some current systems of tourism management that promote environmental responsibility include Rocky

Mountaineer Rail-tours, Fairmont Hotels and the Vancouver Port Authority.

We must continuously ask ourselves if increases in some forms of tourism will create similar problems as overfishing, industrial pollution, and haphazard development have. Some industry critics suggest that we are protecting those individual interests that benefit the most from tourism dollars and leaving the burden of tourism impacts to those least able to resolve them. To ignore such assertions is to risk tourist destination boycotts and actions of environmental groups such as Sierra Club Hawaii, which is now suing the State Tourism Authority for failing to undertake an environmental assessment on worsening tourism impacts prior to spending yet more public funds to promote Hawaiian tourism.

With 2002 the UN proclaimed, "International Year of Ecotourism", major debate has ensued due to the growing awareness that the ecotourism industry is not as benign as initially believed - in fact, many studies conducted around the world demonstrate that ecotourism falls short of the ideal inherent in the principles it promotes - benefits to local communities and conservation.

For the tourism industry to avoid the resource conflicts, reproaches and recriminations which have come to characterize relations between conservation organizations and the timber, fishing, mining, aquaculture and biotech industries, our general philosophy should be to cooperatively "overprotect" coastal wilderness until any tourism industry impact is clarified.

Principles

Our mission is:

"To maintain and enhance environmental quality in coastal communities by encouraging highest possible standards of environmental responsibility among residents and visitors."

Oceans Blue Foundation is a Vancouver-based Canadian environmental charity established in 1996 to maintain and enhance coastal environments through the delivery of education and awareness programs. Activities are directed by a nine-member volunteer Board of Directors. In addition, thirteen volunteer advisors representing environmental, tourism, and academic sectors assist Oceans Blue Foundation with our overall direction.

The organization was created in response to the need for an independent body to provide standards and guidelines for the conservation of coastal environments in a climate of rapid tourism growth to these regions. The premise was that environmental protection is neither the sole responsibility of government nor counter to business success, as the tourism industry and the environment are interdependent.

There is an urgent need to preserve the Pacific Northwest's spectacular natural qualities, and a great motivation to do so. The tourism marketing slogans of Vancouver and British Columbia, "Spectacular by Nature" and "Supernatural B.C." can also be said to be based on the draw of the Pacific Northwest environment in attracting the domestic and global traveler. Not only is the advertising integrity of millions of dollars in promotion marketing at stake, but also the economic viability of many wilderness-adventure operations and Seattle-Vancouver gateway facilities. Industry leaders and associations alike must strive to look for far-reaching solutions to habitat and species loss, contain urban sprawl and development, and unsustainable industrial use of resources, as well as possibly making more use of its own soapbox.

Programs

Oceans Blue Foundation's *Blue Tourism Initiative* sets out three program areas: Community Programs, Education and Communication, and Strategic Planning. Under the

Blue Tourism Initiative umbrella, Oceans Blue Foundation is engaged in four initiatives targeting specific tourism sectors that have been identified as being priority sectors for urgent action for reasons of conservation concern and/or highly elevated wastewater and air emissions generated by its operations.

Education and Communication: Blue and Green Meetings Initiative

The objective of the *Blue and Green Meetings Initiative* is to reduce, or eliminate, negative environmental impacts associated with the meetings industry. The goals are to identify and/or develop environmental best practice standards for all aspects of the meetings industry, to educate meeting planners, goods and service suppliers, facility operators and other professionals in the meetings industry about relevant environmental best practice standards, and to encourage meetings professionals to apply them.

Oceans Blue Foundation is currently working on Phase II of the *Blue and Green Meetings Initiative*, a web-based informational tool for meeting planners, hosts and suppliers to be launched in July 2002 at the International Association of Convention and Visitors Bureaus (IACVB) annual convention in Vancouver. In the Fall of 2002, Phase III of the Initiative will see an extension of the web-tool into an online education program. The Education Program will allow meeting planners, hosts and suppliers to earn a certificate or designation, which may be used to market their skills in planning and staging environmentally responsible meetings. Phase IV and V of the *Blue and Green Meetings Initiative* will be the development of an eco-label for meetings and events respectively.

Strategic Planning: Cruise Ship Stewardship Initiative

The objective of this initiative is to protect and preserve the Cascadia marine and terrestrial environment from the possible negative impacts of the cruise tourism industry. The goals of the Cruise Ship Stewardship

Initiative are to co-establish an accreditation body of integrity, independence, impartiality and sound governance, including auditing mechanisms that ensure accountability for the highest environmental performance, and to institute a fair, equitable and open process in the development of the accreditation body and standards.

Oceans Blue Foundation is in Phase II, working with leaders and innovators in environmentally responsible cruise tourism in establishing the highest standards of environmental and corporate social responsibility through a cooperative, consultative and communicative planning process. Phase III will certify the observance of these standards by cruise tourism operators and Phase IV will create a campaign to recognize those that meet or exceed the defined standards.

Strategic Planning: Environmentally Responsible Whale Watching in the B2B Region: a pilot of Oceans Blue Foundation's Environmentally Responsible Tourism in Marine Protected Areas Project

In its inception, Oceans Blue Foundation's Environmentally Responsible Whale Watching in the B2B Region project is a partnership with the North American Commission for Environmental Cooperation, and the Baja California to Bering Sea (B2B) Initiative. The Orca Pass International Stewardship Initiative, which designates a marine protected area (MPA) in the shared waters of British Columbia and Washington State, is encompassed within the parameters of the interconnected MPAs proposed under the B2B Initiative.

The objectives of the Environmentally Responsible Whale Watching in the B2B Region project are to enhance and support conservation of whales and marine biodiversity in critical marine habitats throughout the Baja California to Bering Sea region, and develop and strengthen the whale watching industry's stewardship of the marine environment, particularly as community wardens of marine protected areas. Oceans Blue Foundation will deliver an in-

ternational whale watching best practices charter with signatories from a critical mass of Canadian, American, and Mexican whale watching operators committed to exceeding regulatory standards on marine mammal viewing, and provide whale watching operators with reputational and market-based incentives to develop and endorse an international whale watching best practices charter.

Education and Communication: Blue and Green Boating Initiative

Oceans Blue Foundation is starting a pilot program to raise awareness and to educate recreational boaters on the environmentally responsible practices in handling sewage from recreational boats. The key elements of the initiative are:

- Creation of supportive partnerships among key players.
- Develop and distribute promotional material at marinas, boating and marine supplies dealers, and tourism offices.
- Encourage the use of best practices in boating sewage treatment through private and public sector policy changes.
- Encourage retailers and manufacturers of environmentally-safe products to ensure availability of products through-out British Columbia.
- Encourage manufactures of environmentally-safe products to consider Eco Logo certification of their products.

Conclusion

Oceans Blue Foundation delivers four key initiatives: the Blue and Green Meetings Initiative, Cruise Ship Stewardship Initiative, Environmentally Responsible Whale Watching in the B2B Region: a pilot of Oceans Blue Foundation's Environmentally Responsible Tourism in Marine Protected Areas Project, and the Blue and Green Boating Initiative. By working cooperatively with environ-

mental groups, industry leaders and government through the implementation of these programs, Oceans Blue Foundation facilitates conservation through creating and promoting best practice standards for environmentally responsible tourism.

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MAKING TOURISM SUSTAINABLE, SUSTAINABLE TOURISM, AND WHAT SHOULD TOURISM SUSTAIN: DIFFERENT QUESTIONS, DIFFERENT INDICATORS

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Abstract: *As the world's fastest growing industry, tourism has a substantial potential to positively impact important social and economic development goals. At the same time, it often brings other negative and sometimes pernicious impacts. As we move to greater consideration of sustainability as a fundamental political, economic and social goal, there is a need to better understand not only current conditions, but progress toward meeting those goals as well. Indicators are variables that help achieve the monitoring needed to assess progress toward sustainability. Selection of indicators must meet not only important technical criteria but policy relevant criteria as well.*

Understanding what is to be sustained thus becomes a significant question in the pursuit of indicators. Tourism is confronted with several different sustainability constructs that reflect not only different policies but carry implications for selection of indicators. These constructs briefly stated are: (1) what is the sustainability of the tourism industry?; (2) how is sustainable tourism developed and managed?; and (3) what should tourism sustain? The policy implication of the latter question is directly related to integration of tourism as an economic activity into community development; and served as the focus of this study.

Over 100 participants in Montana's tourism and recreation industry - representing the private sector (hoteliers, outfitters), quasi-public agencies (the six destination marketing organizations at the regional level within Montana); and agencies managing public lands used for tourism - answered a brief questionnaire designed to understand what they felt tourism should sustain and what we be useful indicators of that. The results indicated that the highest priority items

generally dealt with important social goals - economic opportunity, protection of quality of life - but indicators selected did not directly reflect those goals. There is an apparent disconnect between the two.

Keywords: *sustainable tourism, indicators*

Introduction

Perhaps the most fundamental challenge confronting the tourism industry today is its ability to contribute to three fundamental goals of human welfare: (1) providing for economic opportunity; (2) enhancing quality of life; and (3) protecting our cultural and natural heritage. In this sense then, the tourism and recreation industry is an agent for societal development, a tool deliberately and carefully chosen to address these three goals. Therefore, the tourism industry is directly integrated into broad community development strategies, rather than viewed as a separate program or entity.

The issues and challenges confronting the tourism and recreation industry in achieving these goals are well documented. The industry is often confronted both with scornful criticism and bestowed with ecstatic expectations about the role it can play in reviving, even saving, small community economies, particularly in areas where traditional resource commodity industries (e.g., fishing, logging, mining, agriculture) have lost ground.

The developmental process, however, has recently been challenged by the debate over sustainability as an important policy goal for the industry. This debate, like others in natural resources, was triggered largely by the report of the World Commission on Environment and Development released in 1987 (World Commission on Environment and Development, 1987). *Our Common Future* suggested that environmental quality and economic opportunity are closely linked and that government policies should emphasize actions that meet "the needs of the present without compromising the ability of future generations to meet their needs". The tourism industry, particularly academics and places with abundant natural resources, has embraced this discussion.

This debate is usually framed in terms of "sustainable tourism", and indeed there are now many books, countless scientific articles, and even a technical journal focusing on sustainable tourism. This literature is littered with definitions of sustainable tourism. These definitions emphasize that sustainable tourism is a "kinder and gentler" form of tourism development that stresses forms that are sensitive to environmental impact, give rise to harmonious relationships between hosts and tourists, and follow a long-term timeframe in consideration of economic consequences (see, for example, Bramwell and Lane, 1993; Innskeep, 1991; Cater and Goodall, 1992). To some, this debate over definitions has gone on too long: the focus on defining sustainable tourism, according to Garrod and Fyall (1998) needs to be replaced with more consideration of implementing the ideals that are represented by the various definitions.

While I agree with this comment somewhat, definitions serve to frame the problem and lay the foundation for future work, assessment, analysis and evaluation. Definitions that are widely shared are critical to effective communication. Widely held debate over definitions helps ensure that problems are framed in useful ways, and examining different interpretations brings out important issues (Bardwell, 1991). Because there

are real needs to assess progress toward sustainability, definitions are important in selecting indicators that can be used to monitor relevant social and resource conditions and provide information on effectiveness of social policy in meeting sustainability goals. Despite the call of Garrod and Fyall (1998) to go beyond the rhetoric of sustainable tourism [definitions], the confusion in terminology remains an important obstacle, and must be addressed prior to selecting indicators.

In this paper, I wish to address two primary questions. First, I discuss the significant differences in implications for how we construct the concept of sustainable tourism. Indicators serve as the bellwethers, as the signals suggesting progress toward or movement away from sustainability. Once chosen and systematically monitored, they become the basis for policy reform. As such, their selection is not only dependent on what construct of sustainable tourism we select, but they are also critical to understanding if actions and policies have changed the future to a more desirable one. As the title to this paper implies, there are multiple meanings to the term of sustainable tourism. I review three such constructs and suggest the implications of each for selecting indicators. Second, I will review what has happened in the State of Montana (U.S.A.) in terms of sustainable tourism indicators research as an example of the difficulties in selecting indicators. This is an example, and it provides particular lessons for identifying indicators.

Worldviews of Tourism and Sustainability

Definitions help communicate ideas and concepts by clearly specifying the underlying meaning of terms. Good definitions lead to both readers and writers agreeing to what was stated, and provide interpretation as to meanings in problematic situations. While some definitions of *tourism* (such as travel away from home of more than 100 miles in

one direction) can meet these criteria, many writers discussing *sustainable tourism* leave readers wondering about what they mean.

That the concept of sustainable tourism remains somewhat elusive is a conclusion to which most writers would agree. McKercher (1993) for example, criticizes sustainability as being "ill-defined", even within the context of the Brundtland Commission report. He argues that the definition may encompass both developmental and conservation perspectives, perspectives that conflict and lead little guidance to resolving complex resource allocation decisions. However, Aronsson (1994) suggests that it is important to recognize limits in tourism development as a key component of sustainability: development beyond these limits leads to overexploitation. He appears to favor the conservation or ecological definition of sustainability that McKercher fears: "*sustainable tourism development entails protecting the resource base*". These perspectives reinforce two major views about sustainable development—with one view emphasizing the existing "expansionist" worldview while the other supporting a newer "ecological" worldview (Taylor, 1991; Rees, 1992).

Such views are important in generating informed discussion about sustainable tourism. While science may play an important role in identifying impacts and consequences of tourism development, how much tourism is acceptable, and under what conditions remains a social and political decision. Tourism development in the context of McKercher's definition requires that decision-makers identify trade-offs between environmental protection and economic development. In this sense, decision-makers are confronted by two conflicting goals and must decide which takes primacy and how much each will be compromised to achieve the other (Cole and Stankey, 1997).¹

In general, tourism development organizations and academics have avoided the debate concerning integrating environmental, social and economic objectives, relying primarily on the economic benefits of tourism

to justify its presence. However, a number of presentations in two recent symposia demonstrate increased concern about the social, political and environmental meanings of sustainable tourism (McCool and Watson, 1995; Reid, 1991). Many authors implicitly, if not directly, emphasize the relationship between tourism and the natural environment as the basis for numerous questions about sustainability, relationships that are particularly significant in coastal and marine environments.

The widely varying approaches to tourism sustainability suggest three worldviews that have meaningfully different implications for not only selection of indicators but even more fundamentally the focus of tourism policy. Within this context the tourism and recreation industry is confronted with three views:

1. What is meant by "the sustainability of the tourism industry"?
2. How can sustainable tourism be developed?
3. What should tourism sustain?

Here I will briefly review the meanings broadly assigned to each of these worldviews.

What is the Sustainability of the Tourism Industry?

This question concerns itself with the long-term presence of the tourism and recreation industry. As such, it is narrowly focused on the industry itself—including the product or supply side. This question would entail responses dealing primarily with promotional strategies, understanding the relationship between demand and supply, competitive products, product quality development and protection, and private sector business practices. In addition, where the industry is based upon natural environments and cultural heritage, the sustainability of the industry is linked directly to actions that protect and maintain the quality of those products. Indicators that address this question would draw upon market size, travel pat-

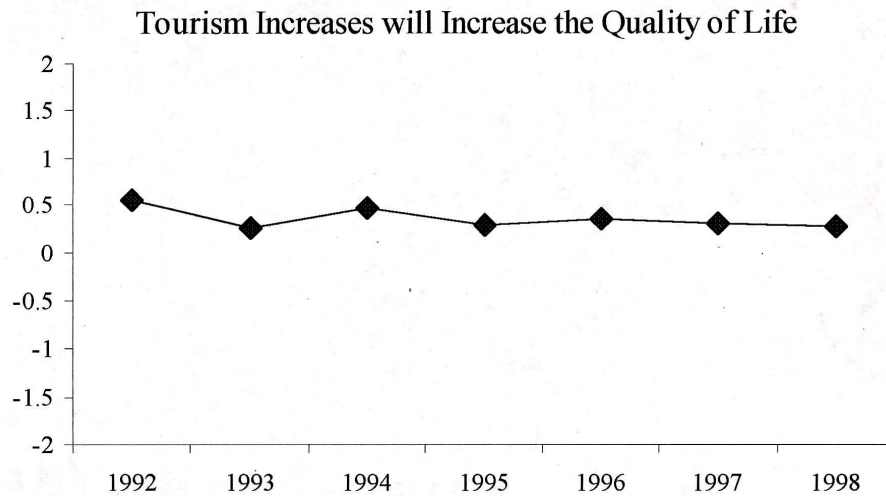


Figure 1. Extent to which adult Montanans agree that tourism increases the quality of life in their community. The data shows less variability in responses the last several years
(Source: Institute for Tourism and Recreation Research, The University of Montana)

terns, occupancy rates, park visitation rates and profitability estimates.

What is Sustainable Tourism?

The literature suggests that sustainable tourism is a different type of tourism than so-called "mass" tourism, a "kinder and gentler" form of tourism that is generally smaller in scale, more environmentally sensitive and socially aware than the former. Sometimes sustainable tourism is also termed "green" tourism or ecotourism. To some, sustainable tourism means the behaviors individual tourists practice; to others, sustainable tourism concerns itself with infrastructure and social policy questions. To others, sustainable tourism focuses on industry codes of acceptable practice. Indicators that deal with this "stainless conception" definition of tourism might focus on waste production, pollution, energy consumption and local resident attitudes.

What Should Tourism Sustain?

This question places tourism in a human and community development context. It addresses the purposes of tourism development and views tourism as a tool, not as an end. Tourism becomes a strategy to enhance certain features of a community. In this sense, public agencies engage in tourism

development because they feel it will lead to socially desirable goals, such as increased employment, higher labor income, reduced crime, greater protection of the natural or cultural heritage, or an enhanced quality of life. In a broader sustainability context, tourism would be viewed as an agent to seek income redistribution and preserving of options for future generations. While this approach directly integrates tourism into community development, the extent to which the private sector feels a responsibility to improve human welfare at the community level is unknown. Of the three questions, this is the most fundamental, because it requires us to address the reasons for economic development. By so doing, it sets the stage for addressing the previous two questions.

What are Useful Indicators of Tourism Sustainability?

Given the concerns and issues identified above, how would we know if we are making progress in addressing concepts of sustainability in our tourism development strategy? One important way is to identify a key set of quantitative measures that we can monitor over time. These measures, or indi-

cators, will inform us if we are making progress and if our actions – such as promotion or protection programs – are effective.

Indicators are pieces of information that measure things that are important to real decisions. Identifying indicators allows for monitoring to determine if policies are leading to community development goals. Vast quantities of tourism information exist and are readily obtainable to address many sustainability concerns (Meyboom, 1993).

Only a limited amount of information is truly useful to decision-makers. Indicators are useful in that they measure a few aspects of a situation, but allow a decision-maker to assess the health or condition of the entire system. Thus, an important criterion for a good indicator is that it can be used to assess more than one aspect of the overall condition.

One example of an indicator concerning tourism's ability to address the needs and concerns of host community residents is how they feel about tourism. Figure 1 shows attitudes of adult Montana residents between 1992 and 1998 in terms of their perceptions of the effect of tourism on their quality of life. The data here show little year-to-year variation, but the values do not suggest a lot of enthusiasm for tourism (nor do they show a lot of negative affect). This information is useful to tourism promotion agencies because this indicator suggests an opportunity to reevaluate the goals of tourism promotion.

What characteristics make indicators useful for tourism policy and decision-making? Linda Merigliano (1989), in her discussion of impacts from recreationists on the environment, provides several criteria for good indicators. For example, indicators should be reliable, easy to measure, quantifiable, relevant to important conditions and sensitive to change. Livermann and others (Livermann et al., 1988) mention additional criteria; indicators must 1) be sensitive to change over time, 2) have predictive ability, 3) have reference or threshold values associated with the indicator, 4) be able to measure reversibility or controllability, 5) have integrative ability, and 6) be relatively easy to collect and use. Indicators must also measure conditions over which people have some degree of control. Similar characteristics have been suggested by McCool and Stankey (McCool and Stankey, 1998, Gallopin, 1997) and many others.

Different conceptions of indicators exist among different authors. For example, Meyboom (1993) conceives of three types of indicators for sustainable tourism; *leading indicators* relate to future events (consumer confidence), *current indicators* signal what is happening now (visits, labor income), *trailing indicators* measure the effects of past action (attitudes of residents, satisfaction of visitors). Manning (1992) believes there are six different types of indicators (see Table 1).

<i>Indicator Type</i>	<i>Examples</i>
1. Warning indicators	Water quality, air quality
2. Measures of pressures or stresses	Fish caught, deer harvested
3. Measures of the state of the natural resource base and use levels.	Current use levels of facilities.
4. Measures of impacts/consequences	Loss of old-growth forest, tourism jobs lost
5. Measures of management effort/action	Regulations on visitor use and numbers
6. Measures of management impact	These indicators measure an item to evaluate if the intervention is achieving the desired result.

Table 1. Types of sustainable tourism indicators and examples of each (excerpted from Manning, 1992)

	Rank										Total N
	1		2		3		4		5		
	N	%	N	%	N	%	N	%	N	%	
Montana natural and cultural heritage	13	12.5%	19	18.1%	12	11.5%	18	17.3%	7	6.9%	69
Community economic stability	22	21.2%	13	12.4%	6	5.8%	6	5.8%	9	8.8%	56
Montana quality of life	27	26%	8	7.6%	8	7.7%	7	6.7%	6	5.9%	56
Unique Montana natural environment	7	6.7%	13	12.4%	9	8.7%	12	11.5%	7	6.9%	48
Tourism promotion activity	6	5.8%	6	5.7%	9	8.7%	9	8.7%	8	7.8%	38
Recreation opportunities	1	1%	7	6.7%	7	6.7%	12	11.5%	9	8.8%	36
Tourism employment opportunities	4	3.8%	4	3.8%	7	6.7%	8	7.7%	7	6.9%	30
Safe and secure community environment	7	6.7%	5	4.8%	7	6.7%	5	4.8%	6	.0%	30
Employment opportunities in general	1	1%	6	5.7%	7	6.7%	7	6.7%	6	5.9%	27
Level of tourism activity	4	3.8%	5	4.8%	6	5.8%	4	3.8%	7	6.9%	26
High quality natural resources	3	2.9%	3	2.9%	13	12.5%	5	4.8%	1	1%	25
Clean air and pure water	3	2.9%	6	5.7%	3	2.9%	4	3.8%	6	5.9%	22
Number of non-resident visitors	3	2.9%	3	2.9%	5	4.8%	2	1.9%	5	4.9%	18
Lodging occupancy rates	2	1.9%	1	1%	1	1%	0	.0%	5	4.9%	9
Access to higher education	0	.0%	1	1%	0	.0%	3	2.9%	3	2.9%	7
Access to affordable housing	0	.0%	1	1%	0	.0%	0	.0%	5	4.9%	6
Biological diversity	1	1%	2	1.9%	0	.0%	0	.0%	2	2%	5
Low taxes	0	.0%	0	.0%	1	1%	1	1%	2	2%	4
Biological integrity	0	.0%	0	.0%	3	2.9%	1	1%	0	.0%	4
Family cohesiveness	0	.0%	2	1.9%	0	.0%	0	.0%	1	1%	3

Table 2. Rankings of potential items that could be sustained by tourism by Montana tourism and recreation industry officials

Developing Indicators in Montana

The former Five-Year Strategic Plan for the travel and tourism industry in Montana called in its vision statement for a tourism industry that “fosters an enhanced quality of life for its residents...” (Travel Montana, 1992). To this end, the plan included as one of its four major goal areas, “Maintaining and Measuring Quality of life and Resource Sustainability.” The specifics of how this was to be achieved were not explicitly stated, although review of proposed tourism developments from the perspective of environmental sustainability was suggested. In addition, monitoring of Montanans’ attitudes toward tourism was indicated as a specific action to be undertaken by the Institute for Tourism and Recreation Research, a task that was initiated in December 1992 and continues today. The more recent strategic plan (Nickerson, 1997) also states that sus-

tainability is the most important of the five tourism development goals identified.

This study was conducted from spring 1996 to winter 1997 (McCool, Burgess, and Nickerson, 1998). The study had, as its primary objective, the response to the question “what should the tourism and recreation industry sustain?” The research was conducted in the state of Montana. The research involved 108 members of Montana’s tourism and recreation industry. These individuals sit on the boards of directors of each of the state’s six tourism promotion regions. During a regularly scheduled meeting of each of the boards, the study was explained and the participants were lead through a questionnaire concerning sustainable tourism. Each participant ranked the importance of 20 items that could be sustained by tourism. Each of the 20 items had been identified through a review of the sustainability, tourism, and economic development literature.

Respondents were also asked to evaluate the usefulness of 26 indicators of sustainability, also proposed in the literature, at three levels of destination marketing: the state, tourism region, and local community. The initial list of 26 items was identified from the sustainable tourism literature and discussions with individuals in the tourism and recreation industry. Many of the items were chosen to represent indicators of the 20 things that could be sustained. Only indicators concerning the community level are shown here.

What Should Montana's Tourism and Recreation Industry Sustain?

Respondents reported a relatively broad range of answers to the question of what the industry should sustain. The items ranked highest (see Table 2) were Montana's natural and cultural heritage, community economic stability, quality of life, and unique natural environment. These four items accounted for 44.1% of the total responses. Tourism-specific items such as nonresident visitation,

	Very useful		Moderately useful		Not useful	
	N	%	N	%	N	%
Hotel occupancy rate	86	81.9%	16	15.2%	3	2.9%
Visits to parks, recreation areas, and historic sites	83	79.8%	17	16.3%	4	3.8%
Number of non-resident visitors	76	73.1%	23	22.1%	5	4.8%
Per capita tourist expenditures	76	73.1%	21	20.2%	7	6.7%
Resident attitudes toward tourism	66	64.1%	34	33%	3	2.9%
Tourism promotion budget	64	62.1%	31	30.1%	8	7.8%
Inquiries from promotions	62	60.2%	35	34%	6	5.8%
Lodging revenues	61	58.7%	33	31.7%	10	9.6%
Annual number of new tourism businesses	60	57.7%	31	29.8%	13	12.5%
Number of tourism employees	54	52.4%	43	41.7%	6	5.8%
Resident perceptions of quality of life	54	51.9%	40	38.5%	10	9.6%
Percent of labor force in tourism	53	52%	42	41.2%	7	6.9%
Highway traffic count	50	47.6%	40	38.1%	15	14.3%
Presence of a sustainable tourism plan	50	48.5%	40	38.8%	13	12.6%
Number of non-resident fishing and hunting licenses	47	45.2%	44	42.3%	13	12.5%
Labor income from tourism	46	44.2%	49	47.1%	9	8.7%
Water pollution from sewage	36	35%	36	35%	31	30.1%
Airline deplanements	31	30.4%	35	34.3%	36	35.3%
Crime rate	31	30.4%	32	31.4%	39	38.2%
Building permits	22	21.2%	40	38.5%	42	40.4%
Gasoline tax revenue	20	2%	49	49%	31	31%
Number of State Parks	18	18%	37	37%	45	45%
Per capita water consumption	16	15.7%	35	34.3%	51	5%
Real estate sales	16	15.5%	52	50.5%	35	34%
State Park management budget	13	12.6%	38	36.9%	52	50.5%
Per capita energy consumption	6	5.9%	34	33.3%	62	60.8%

Table 3. Ratings of the usefulness of indicators of sustainability

promotional activity and lodging occupancy rates—three variables frequently discussed as objectives of tourism marketing organizations—were ranked significantly lower in importance. Items such as low taxes, biological integrity, and family cohesiveness tended to be ranked the lowest of the items presented to study participants. It is important to understand the highest ranked items tend to be broad social goals, which the participants in this study linked directly to tourism development.

What are Useful Indicators of Tourism Sustainability?

When asked to rate the usefulness of a variety of indicators of sustainability, respondents rated indicator variables that appeared to be directly related to level of tourism activity. The most useful indicators were hotel occupancy rate, visits to parks, recreation areas, and historic sites, and number of nonresident visitors (see Table 3).

Discussion and Implications

The results suggest that tourism industry representatives view sustainability from a very broad perspective, suggesting that tourism development is more of a means to an end than an end in itself. Our data imply that fundamental purposes of tourism development are being re-examined, even in the U.S. where sustainability concepts applied to tourism have generally been neglected.

While study respondents reported relatively broad perceptions of what tourism should sustain, the failure to rank specific indicators dealing with these broad definition highly (e.g., affordable housing, etc.) may have been a result of failure to see at the community level connections between tourism and these potential indicators, a lack of understanding of how the industry could have an impact, or a question about the industry's responsibility to deal with these

items. Ranking indicators such as number of nonresident visitors highly could have reflected experience with traditional methods of measuring tourism industry outputs, may suggest that respondents recognized that numbers of visitors impact such items as quality of life, or may reflect a willingness to accept crude indicators. Finally, ranking indicators may have been a task requiring understanding of a complex set of relationships among a variety of factors, thus making the ranking process itself difficult.

Defining sustainability in relatively broad terms—as a goal rather than a technique—provides the recreation and tourism industry with a strategic framework from which to respond to change and uncertainty. If the goal is economic opportunity, for example, then tourism may be viewed more as a tool to help a community attain it. By viewing sustainability in this manner, actions to enhance economic opportunity can maintain some flexibility in light of changing conditions.

Had we asked our participants to identify indicators of sustainable tourism or the sustainability of the tourism industry we likely would have found indicators that are significantly different from the current results. We would then have embarked on a potentially much different monitoring program.

We have learned that the concept of sustainability, as it applies to Montana's tourism and recreation industry, is an important concept for the industry to address, but is very complex. Simplifying this concept would be a disservice and dishonest. We need to recognize and appreciate all the various complicating factors. However, because the concept is complex does not mean we should ignore it. To the contrary, it is clear the industry feels that human welfare goals are important and certainly need attention. Yet, it is clear that sustainability goals such as biological integrity and diversity that are frequently discussed in the sustainability literature were not favored by this group. The connection between tourism and these goals may not be evident, suggest-

ing the need for venues to discuss the linkages. The study does have several implications for the concept of sustainable tourism. First, the data suggest somewhat of a “disconnect” between preferences for what should be sustained by tourism and indicators that might measure progress toward this goal. For example, maintaining the “Montana” quality of life was the third highest ranked item to be sustained, yet the indicator “resident perceptions of quality of life” was ranked eleventh in usefulness at the community level. While community economic stability was also rated high, indicators that might be useful in measuring this such as employment did not receive a very high rating.

Second, the lack of consistent results may reflect confusion among three important questions: the concept of sustainability, the question of what should tourism sustain, and the idea of sustainable tourism. Each of these concepts includes a variation on the term “sustain”, but represents significantly different notions. The question of what tourism should sustain inevitably leads to a discussion of a variety of economic, social and political processes and how they can be used to produce a better life. Sustainable tourism may represent a particular type of tourism - small-scale, community oriented, environmentally benign, for example. This confusion exists not only in the minds of tourism business operators, but most likely in academia as well.

Third, we note that many of the top-ranked indicators of sustainability identified here represent inputs: they really do not measure the results of tourism development policy, but only the level of tourist activity or tourism promotion activity. For example, the number of nonresident visitors as an indicator does not necessarily measure important economic outputs - such as labor income, nor does it assess the effects of resident-visitor interactions. While there is a statistical association between visitation levels and expenditures, a large variety of factors intervene to make this relationship more difficult to understand: if visitors don't find

many Montana made products to purchase, their expenditures will have smaller indirect and induced effects.

There are several implications for research. First, if tourism is viewed as a tool of development to achieve sustainability, there must be both agreement on what is to be sustained as well as the appropriate routes to that goal. In a dynamic social context, determining what is to be sustained involves significant, meaningful and authentic interactions among all segments of the tourism and recreation industry, but particularly with managers of the publicly owned resources upon which the industry is based. While some interactions are beginning to occur, interaction at both the local level - where tourism development happens - and the national level - where institutional frameworks and cultures originate that form the context for local efforts - are needed. This dialogue must extend to residents in communities where tourism happens so that not only tourism maintains its social acceptability, but the industry learns from residents their concerns and worries. Scientists can assist in this process by applying methodologies and approaches to developing appropriated indicators.

Second, more specific ideas about what is to be sustained are needed. Our research, for example, identified “Montana quality of life” as an important item to be sustained. But what does this mean? For which Montanans? Over what time frame? What indicators would be most suitable? And, most importantly, what is meant by quality of life? Economic development activities, such as tourism, thus are viewed more as a tool than as an end: “there are important qualitative dimensions to development that distinguish it from economic growth” (Barbier, 1987). This suggests a continuing role for research to support the industry in attaining sustainability.

Third, the sustainable tourism literature, while in the developmental stage, needs to address the question of indicators. Some literature exists (see Hawkes and Williams,

1993; Manning, 1992), but many proposed indicators do not meet the criteria for indicators identified in other fields. For example, indicators should be reliable, easy to measure, quantifiable, relevant to important conditions and sensitive to change (Merigliano, 1989). One proposed indicator we used in this study - number of state parks - that has been proposed in the literature doesn't meet all these requirements. While this indicator is easy to measure and is quantifiable, it doesn't fluctuate in response to policy initiation or implementation, and may not be closely related to significant issues such as quality of life. Linking tourism sustainability indicators to the broader discussion of indicators of sustainable development would provide a stronger integration of tourism into a more holistic approach (e.g., Moldan, Billharz, and Matravers, 1997). Identifying indicators that are more directly linked to general goals of sustainability--such as inter-generational and intra-generational equity is needed.

Note:

¹ Actually, sustainability implies the three goals of improved human welfare noted in the introduction. Each of these goals is to some degree compatible, and each is to some degree in conflict with the other. Compromises will have to be made; so decision-makers are confronted with how much compromise in each goal is acceptable.

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STILL SEEKING SUSTAINABILITY

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Abstract: *Tourism and sustainability are two terms more and more frequently seen juxtaposed. Yet sustainable tourism or tourism sustainability issues are frequently viewed as technological or marketing questions. Sustainability carries strong implications for intergenerational and intragenerational justice. These are fundamentally moral or ethical questions rather than technical ones. Limiting discussions of sustainable tourism to technical issues is a serious miscasting of the problem. This paper sets forth some basic propositions concerning framing of the problem of sustainability within a tourism context, based on the author's presentation at a previous Congress on Coastal and Marine Tourism.*

Keywords: *sustainable tourism, institutional capacity, problem framing*

Introduction

The continuing interest in sustainable tourism testifies to its enormous popular and technical appeal.¹ Not only have rural communities, unexpectedly caught by massive structural economic and social change, turned to tourism to salvage their ravaged economies, but academics (and consultants) have launched themselves onto the sustainability "train" before they would be left behind holding bags of increasingly irrelevant concepts and approaches to tourism development. Part of the "beguiling appeal" of sustainable tourism may be its apparent success in resolving economic, ecological and social goals. All one must do is find the intersection of economic feasibility, ecological viability and social acceptability.

Seeking a sustainable world is not easy; indeed the concept of sustainability is often more implied than explicit, more convoluted

and puzzling than simple and lucid, more elusive than tangible. Addressing sustainability authentically requires more than slogans, education and public participation. Sustainability is not an operational issue that can be corrected through better public information, environmental analyses, technology, or refinements in existing law and regulation. The barriers to sustainability are primarily structural or systemic in character (Caldwell, 1990), and changing those types of barriers will challenge the capacity of democracies and capitalism everywhere.

This somewhat pessimistic assessment is triggered not by any type of personal fatalism about the state of the world, but rather by a fear that the illusion of achieving sustainability (through excessively reductionist approaches) may be its most fundamental obstacle. Sustainability is a guiding fiction (Shumay, 1991) in the sense that as long as it remains vague it serves very useful social functions such as motivating and organizing social discourse around problems that are widely perceived, but as more and more specificity is sought, the term tends to lose its value for directing or guiding social action (see McCool, 1996 for previous discussion). It is quite possible that following a meeting on tourism sustainability participants could go away assuming agreement with others when key disagreements really exist.

In the three years since the previous Congress on Coastal and Marine Tourism, much progress has been made in dealing with the concept of sustainable tourism. But that progress is more in terms of what is meant by the term than development of specific policies and actions to achieve it. This is important because problem framing is the key

to not only selection of appropriate actions (Caldwell, 1990), but also to organizing social discourse, allocating resources and implementing plans (Bardwell, 1991). Without attention to problem framing, organizations risk not only addressing symptoms, the wrong problems, (or even solutions parading as problems), but cementing inappropriate answers and losing capacity (because of misspent resources or lack of political credibility) to address the "correct" problem.

Contributions by Budowski (1976), Butler (1991), Pigram (1990), and Hunter (1997; 1995) have helped frame the boundaries of the sustainable tourism issue in policy and conceptual terms. Hunter in particular has linked sustainable tourism to the larger question of community development and sustainability. Nevertheless, the literature has neither synthesized nor adequately linked sustainable tourism to the larger issues of sustainability. Both Wight (1993) and Sadler (1990) argue that sustainable development lies at the intersection of economics, ecology and sociology; Wight suggesting that each be given equal weight "in striving for sustainable tourism"; yet, clearly the natural resources upon which tourism in coastal and marine environments is based is fundamental to all other considerations. These statements have in many ways added clarity, and in some other ways added confusion to the discussion, but in all cases have suggested the framework for further discourse.

In this paper, I wish to outline what I believe are the key elements in understanding and framing the problem of sustainability. While the context may be tourism in coastal and marine environments, the elements are relevant to any area of sustainability. The approach I will use is to identify a series of propositions and support those with logical analysis in the hopes of triggering further thought, debate and deliberation.

Sustainability is More of an Ethical Problem than a Technical One

To a very large degree, sustainability involves decisions concerning obligations of the current generation to future ones while addressing significant equity issues within the present generation. This is what the highly popular Brundtland Commission meant when it defined sustainable development as, "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). The Brundtland Commission was essentially arguing that the current generation has a moral obligation to allow future generations the same opportunities as it enjoys. The values of one generation's needs and preferences are assessed against another's. Tradeoffs between intergenerational equity and goals of intragenerational equity may have to be made.

While the field of neoclassical economics often considers equity issues in evaluation of alternative courses of action, these issues are best identified and assessed through involving those affected by decisions. Mechanisms such as public participation help address issues of intragenerational equity, yet the major question remains as to who best represents future generations (McCool and Stankey, 1998), particularly those in the distant future. In one sense, democratic governments that institutionalize open, inclusive forms of participation provide this representation. However, the complexity of environmental issues often translates into agencies focusing on their own self-interests (e.g., ensuring survival of the organization) rather than the public interest at large. In an era of increasing fragmentation of public interest, it becomes important to address the question of whose interest an agency planner represents.

Given the ethical basis for sustainable tourism concerns, what is the proper role for scientists, technicians and academics in this discussion? Individuals in these occupations

play an important role in seeking sustainability, in that they can provide important information on cause-effect relationships, identifying the consequences of alternative policies and actions, and in raising issues and questions that may otherwise be ignored. These are critically important parts of a multi-dimensional debate. However, academics, technicians and scientists must carefully identify what role they are playing when entering the discourse on sustainability in that values and ethics are often intertwined with science.

Efforts to Attain Sustainability Must Seek to Resolve Problems, Not Displace Them

Temporal and spatial scales are essential components of any discussion of sustainability. We need to understand how long some thing should be sustained over what spatial scale. Without such definitional precision, the concept of sustainability may have little specific meaning. The inclusion of scale in the discussion forces participants to develop a framework for understanding equity issues--who benefits and who pays the costs, across time, space and communities.

Advocates of sustainability are confronted with a major paradox: efforts to make local communities more sustainable may result in problems of pollution, resource extraction and consumption being shifted to other places. Thus, when a community adopts strict population growth management policies, the community may effectively deal with the issues within its boundaries, but growth problems may be pushed elsewhere. Prohibiting polluting facilities in one jurisdiction may lead to those facilities being located in another. Putting off controversial decisions now may require future generations to deal with them, potentially without the same breadth of options the current generation may have available.

This is an issue of problem displacement, and is one fundamentally of the spatial and temporal scales at which sustainability is studied and implemented. Displacing problems to other places or generations has at least two effects: First, the problem is not resolved, just moved around, yet such displacement may lead to the *illusion* of sustainability briefly mentioned above. This false sense of security may result in decisions that may not otherwise be made if the illusion did not exist. Second, the places or generations that receive the problem thus displaced may not have the institutional, financial or political capacity to deal effectively with the problem, potentially leading to resource or environmental impacts above what would have otherwise happened. The result is that the problem (e.g., pollution) is not solved, only displaced to other places or generations. And, again the capacity to effectively move toward sustainability at larger spatial scales is threatened.

A related issue is that of functional specificity. Tourism is generally only one component of an area's economy. Efforts to seek sustainability for tourism must do so within the larger context of sustainable development. Failure to consider linkages between tourism and other components may lead to negative social and economic impacts. For example, promoting tourism without considering the impact of tourism on other land uses may lead to incidental unemployment.

Sustainability is a Messy Problem

As a concept, sustainability contains a lot of appeal, but the concept is a guiding fiction (Shumay, 1991); moreover, the concept is so broad it may hide fundamental disagreements. Dovers and Handmer (1993) summarize this issue by stating 'Sustainability is indeed characterized by deep-seated contradictions -- paradoxes, conflicts, and tensions -- between perhaps irreconcilable goals or directions'. In fact, participants in sustainability discussions may have entirely different mind-sets and visions of the future,

yet believe they agree. Situations where goals are in conflict are termed wicked problems (Allen and Gould, 1986). When coupled with scientific uncertainty or disagreement over cause-effect relationships, the problems become messy ones. Messy situations require dramatically different approaches to resolution than the types of problems for which most planning processes have been developed. Traditional decision-making or planning processes have been based on engineering approaches and have attempted to be apolitical (Friedmann, 1993); such approaches are not effective when dealing with messy problems.

Decision-making processes in messy situations must focus on consensus building (to deal with conflicting goals) and mutual learning (to confront uncertainty and conflicting science). Since these situations are likely to be contentious, venues for discussing sustainability must not be hostage to stormy and threatening dialogue. As Yankelovich (1991) argues, such settings should provide opportunities to deliberate, which may mean authentic, considerate social discourse.

Unfortunately, government institutions are not particularly well adapted for dealing with messy situations. Decision-making processes used in NEPA, for example, tend to promote divisiveness, positioning, and formalization of "bullet-proof" agency decisions. Agencies may attend to procedure more than content as a defensive mechanism in this age of contentiousness. The capacity of agencies themselves to facilitate dialogue and learning is limited because many agencies are staffed with resource and environmental specialists who have little, if any training, in conflict resolution techniques.

Lack of Integration is a Barrier for Nature-based Tourism Development

Nature-based tourism development - in coastal, marine and other nature-dominated environments - is often confronted with a lack of integration between government and private sectors. In one sense, government planners represent those who have little power to participate in planning processes - such as those with little income or those from future generations. While government planning processes can assist communities in developing visions of sustainable futures, specific development decisions are often the responsibility of individual private entrepreneurs whose temporal and spatial horizons are different from the collective. Government - particularly in the U.S. - may have little control over where, how and what type of development occurs. Controls may be only indirect. No doubt this disparity between goals and implementation can be the source of a great deal of frustration.

A second issue concerning integration is the frequent disconnect between state/ provincial tourism promotion agencies and natural resource administrations that manage the recreation opportunities promoted as part of a nature-based tourism effort. These agencies are usually located in distinctly different ministries or departments. One has a goal of economic development, the other, protection of the natural environment. While these goals are not necessarily conflicting, lack of coordination and understanding frequently lead to conflicting actions, as when one agency promotes a park in the "shoulder" season when the park is normally closed. When natural resource agencies are losing institutional capacity and expertise to manage parks and protected areas, efforts to promote and increase visitation will often be viewed both negatively and defensively.

By framing the problems of economic development (success measured by larger numbers of visitors) and protected area

planning (success measured by nondegradation of resources) differently, managers and planners may develop more effective and mutually agreeable policies. For example, by understanding that the objective of tourism development is increased labor income (not larger numbers of visitors) promoters can design programs to maintain smaller numbers of people in an area for longer lengths of time. This would be consistent with many protected area managers' desires to educate visitors and provide quality experiences. It would require manager's to be directly involved in such promotion efforts. Such a strategy can lead to as much economic impact as more visitors, but have less impact on resources.

Conclusion

Our efforts to form sustainable solutions to tourism development questions must be based on a clear and widely shared definition of what we plan to achieve. Framing the problem is a necessary step in moving toward a sustainable world. Framing the problem as one with technical dimensions only, when it is primarily an ethical issue, would be a serious miscasting of the challenge of sustainability. Certainly, understanding relationships between causes and effects, which results in accelerating concerns about human impact on the environment, is important, and key to technical solutions.

Scale is an important consideration because it forces us to consider equity issues, which are foremost in people's minds (witness the NIMBY syndrome). Scale provides a framework to evaluate who wins and who loses, and may encourage development of potential win-win resolutions. Forcing inclusion of scale leads to more comprehensive evaluation of the trade-offs involved in developmental decisions and avoids the functional specialization characteristic of the division between tourism promoters and resource providers. In addition, considering

scale requires an analysis of who represents future generations to be explicit.

It is unlikely that economic, environmental and social acceptability concerns can be valued equally in sustainability discussions. Economic feasibility is so dependent on short-term market and financial conditions as to be counter to the long-term notion of sustainability. Social acceptability varies significantly across cultures, so we are confronted with the question of: acceptable for whom? There are no clear, technically based guidelines for answering this question. Dryzek (1987) argues in this context that social choices must be first ecologically rational, for if we lose the environmental basis for human life, there is no future for other considerations.

While these questions and challenges are complex, there is no particular reason that they cannot be surmounted. The most fundamental barrier to sustainability is not the complexity of the question, not the dilemmas or paradoxes that confront sustainable tourism, nor the contradictions facing those who argue for a more sustainable world. Rather, it is the illusion of sustainability that accompanies reductionist approaches.

Note:

¹ Please see the companion paper in this volume by the author for a discussion of various sustainable tourism terms.

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IMPEDIMENTS AND OPPORTUNITIES IN TOURISM DEVELOPMENT IN SOUTHWEST ALASKA

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Abstract: *The Bristol Bay region of southwestern Alaska is sparsely inhabited, but richly endowed in resources that could support a major tourism industry. Despite an abundance of natural and cultural attractions and a clear need for economic diversification, the tourism industry is still largely undeveloped.*

Several factors account for this unfulfilled opportunity, including high travel costs, lack of visitor facilities, a shortage of capital, willing labor and skilled management, local resistance, problematic weather, and an ignorance of the region on the part of tourism promoters and the traveling public. A dynamic involving local people, tourism service providers, and the tourists themselves is required for successful development of an industry and this dynamic is not yet fully in place in the region.

Bristol Bay presents numerous opportunities for regional tourism development and for local individual enterprise. Governments, associations and communities may play a role in assisting business owners to capitalize on those opportunities. However, it remains to be seen whether the region's residents will come to the point of endorsing further tourism development, and whether local individuals will find ways to make new tourism businesses work in the region.

Keywords: *Bristol Bay, Southwest Alaska, tourism development*

Introduction

The Bristol Bay region encompasses some 120,000 square miles of land and water in the southwestern corner of mainland Alaska, north of the Alaska Peninsula and bordering the southeastern Bering Sea. About half of that area consists of the tidal

waters of Bristol Bay itself, the remainder being tundra, rolling hills, and mountains, laced by dozens of rivers, hundreds of creeks, and thousands of lakes and ponds. The total population is about 7,000 which means that people there are outnumbered by bears.

The regional economy has long depended primarily on the commercial salmon fisheries, but changing environmental and economic conditions have drastically reduced the value of the commercial fisheries, and the region has earned several state and federal economic disaster declarations in recent years.

About two-thirds of the region's people are classified Alaska Native and belong to any of three regional cultural groups: Yup'ik Eskimo, Aleutiq Eskimo (some consider themselves Aleut), and Denaina Indian. They are distributed among some 32 towns and villages, the largest of which is Dillingham with a year-around population of about 2,200 persons. No roads connect the region to any other part of Alaska, and within the region only a few communities are connected to one another by road. Shallow water, severe weather, and seasonal ice covering preclude passenger vessel access. Virtually all travel into and within the region is by airplane.

The region is rich in potential visitor attractions. Wildlife abounds, including moose, caribou, black and brown bears, wolves, porcupine, otter and beaver, walrus, seals and sea lions and several species of whales, plus many species of seabirds, shorebirds, raptors and migratory water fowl. Thousands of miles of clear rivers and streams

support healthy wild populations of trout, charr, salmon, grayling and pike, and serve as corridors for rafters, kayakers and motor-boaters. Snow-capped mountains, some with glaciers and volcanic peaks, give way to scenic timbered hills and tundra lowlands suitable for hiking and camping, as well as for big game hunting and wildlife photography.

In most Native villages people continue to conduct traditional subsistence activities. Local languages are spoken, dances performed, and arts and crafts such as walrus ivory carving, skin sewing and grass basket weaving, are practiced. Although village architecture is dominated by the ubiquitous and homely "HUD house", visitors may still see the log cabin, the smoke house, the meat rack, dog sled, the seal or bear hide tacked to the shed wall, and even the skin-on-frame kayak.

A few dozen high-end sport fishing lodges and hunting guides account for the bulk of the tourism trade in the region. Most sportsmen fly into hub town airports (many in their own or their corporations' Lear jets), transfer to bush planes, and fly out to the remote lodges. Most lodges and hunting operations are owned by non-residents of the region, and most fishing guides are hired from other parts of the country. It is possible for a visitor to spend a week and several thousands of dollars in the area without ever meeting a local person.

Impediments to Tourism Development

Several impediments retard development of a broad and locally based tourism industry. These include the high cost of access to and travel within the region, climate and weather, cultural resistance, lack of capital, lack of expertise and management skills, lack of visitor facilities and amenities, and ignorance of the region by the public and the tourism industry.

As noted above, virtually all travel to and within the region is by air, and because of low volume and high operating costs, fares are disproportionately high. For example, round-trip commercial airfares for the 300-mile flight from Anchorage to Dillingham currently range between \$329 and \$489 during the summer season. Local commuter fares (to villages with airstrips) average \$2 to \$2.50 per mile, and seat fares (when available) on bush planes (landing on beaches or on floats) are \$3 per mile or more. In most cases bush flights require charter of the whole plane (with three to six passenger seats) at a cost of \$350 to \$500 per hour, and the rate is applied to the air time for the plane making the return flight from the drop-off point as well as the time passengers are on board. Since many of the region's recreational attractions are located 50 to 200 miles from hub locations, air travel cost can be a significant deterrent to potential visitors.

High insurance, fuel and maintenance costs, along with a long slow travel period in the off-season, keep air travel costs up. Although start-up companies are constantly entering the market, attrition is high. In the last ten years alone, three of the five major regional air carriers serving the Anchorage-Bristol Bay market have gone out of business¹, as have numerous commuter and bush flying services. No indicators currently point to a lowering of air travel costs in the foreseeable future.

The Bristol Bay region is only a few hundred miles east of the home of the Aleutian Low, the atmospheric phenomenon that spawns storms for the entire Bering Sea. Summer temperatures normally are in the mid-40s to low 60s (°F), with frequent overcast skies and rain through the summer. In some years isolated snowdrifts remain into June, and by early August autumn colors begin to appear. Fog is common, especially where warmer air overlies cold river waters. Frequent squalls of 20-30 knots, and occasionally up to 50 knots, buffet the region during the summer. Waterborne activities, including kayaking, sport fishing and marine

wildlife viewing, are frequently curtailed or interrupted by weather. Uncertainties about weather delays of flights make a trip to Bristol Bay less appealing to some potential visitors.

Residents of the widely dispersed Native villages within the region are divided in their attitudes about tourism and tourists. An illustration of the dilemma is the classic confrontation over catch-and-release fishing. While anglers and fishery managers favor non-retention, particularly of rainbow trout and other sport species, traditional Native people are highly offended by the practice, which they disparagingly refer to as "playing with your food."

Other serious conflicts arise, such as spatial competition for quality fishing sites between anglers and subsistence fishermen, and offense taken by local people who are studied and photographed in their villages. Some Native people believe that tourists bring bad habits to village youth and encourage an unhealthy interest in money and material goods. Most villages are split on the issue, with some members actively opposing while others are planning to engage in or currently enjoying financial rewards of tourism businesses. Where tourism has succeeded it has created a class of haves in a cash-poor community of have-nots.

Most of the residents of the region live on small earned cash incomes, and rely to a large extent on subsistence activities and on services and transfer payments from government. Savings are low to non-existent, and many people don't have checking accounts, or a credit history. Access to capital for business start-up is sorely lacking. Although various funds exist to assist with small business development, some exclusively for Native people, few local people meet minimum standards for cash equity and creditworthiness.

Also lacking is business expertise and managerial skill. Few area residents have experience with any kind of business other than commercial fishing, and in that indus-

try the processors do much of the maintenance, procurement, and accounting for most of the local fishermen. Other area businesses, such as general stores, air taxis and construction, tend to be managed by outsiders, and relatively few local people are hired even as technicians and laborers. College courses offered through rural campuses and by distance delivery emphasize office skills and village government administration, but not business management².

Many but not all villages in the region have one or more bed and breakfast-type lodging facilities, but otherwise tourist infrastructure is scarce. Dillingham, Naknek and King Salmon each have a few hotels and restaurants; otherwise the exclusive fishing and hunting lodges are about the only other source of tourist facilities. Opportunities for shopping and dining, which consistently rank at the top of the list of activities enjoyed by Alaska tourists, are sparse and considered low in quality by visitors to the region. Although most of the land area of the region is encompassed by various reserves, including Katmai and Lake Clark National Parks, Wood-Tikchik State Park, Aniakchak National Monument, and the Togiak, Alaska Peninsula and Becharof National Wildlife Refuges, nearly all of these areas are *de facto* wildernesses. In fact, with the single exception of the Brooks Camp location in Katmai, none of those millions of acres of public lands is even graced by an on-site administrative center. Again, with the exception of Brooks, not one has roads, campgrounds, concessions or other visitor facilities. Even a high-profile visitor destination like Round Island in the Walrus Islands State Game Sanctuary has only six plywood tent platforms and a single out-house as its complement of visitor amenities.

Possibly the single biggest impediment to tourism industry expansion in Southwest Alaska is a general lack of knowledge of the region on the part of tourism professionals and the traveling public. The perception of Bristol Bay is that it is a "terra incognita - a distant, difficult-to-reach land"³. Only

about eight per cent of Alaska's tourists visit the Southwest, which encompasses about 20 per cent of the state⁴. Cruise ships do not visit the region, no roads bring automotive visitors, and package tours generally omit it. Few Anchorage-based or outside tour packagers and wholesalers have ever visited Bristol Bay. When inquiring about opportunities there, some potential visitors ask if they can fly directly from Juneau, whether they can drive to their destinations, or they ask if they can see glaciers, musk ox, polar bears or even penguins⁵.

Among those who know of Bristol Bay at all the association is with superlative trout and salmon fishing, and with caribou and bear hunting. A much smaller group, mainly Alaska residents at that, associates the region with bear viewing at Katmai, walrus at Round Island, and kayaking/rafting in Wood Tikchik and on various other rivers.

Tourism Development Opportunities

Because sportfishing is considered by some to be nearing capacity, and hunting is locally controversial (see below), this inquiry addresses three somewhat interrelated directions that tourism development could take: nature/wildlife-based ecotourism, cultural tourism, and possibly adventure travel.

- Ecotourism, based on the region's abundant birds, mammals, wilderness scenery, lakes and rivers, probably represents the greatest growth potential. Bird watching and large mammal viewing may serve as the biggest draw. Key attractions for wildlife enthusiasts: the 200,000-plus Mulchatna caribou herd, the walrus at Round Island, the 8,000 brown bears on the east side, belukha (white) whales in the Nushagak and Kvichak, and several million red salmon escaping past commercial fishing fleets and into crystalline lakes and rivers. Sparse

and widely scattered human populations leave plenty of room for undisturbed wildlife, and the large amount of land in federal reserves protects habitat while assuring access to visitors.

- Cultural tourism could be based largely on the still relatively intact Eskimo and Indian cultures of the region. Village tours, music and dance performances, native foods feasts, arts and crafts creation and sales, demonstrations of subsistence activities, storytelling, and home stays are all potential cultural tourism attractions. In addition to Native cultures, tourism based on "economic cultures" such as commercial fishing, fish processing, prospecting and mining and similar activities could provide a northern version of the "agricultural tourism" that is popular elsewhere in the country. Museums, cultural and visitor centers, and community festivals can enhance both Native and non-Native cultural appeal.
- Adventure travel can encompass everything from whitewater rafting and mountaineering to windsurfing, hang gliding, jet boating, snow machining, dogsled travel and winter camping.

Each of these options has been developed at least to some extent. A few small village-based operations exist that combine cultural tourism with wildlife and nature viewing⁶, and some of the sport fishing and hunting lodges also have cultural and ecotour components to their program⁷. The bear viewing site at Brooks Falls is probably the best known ecotourism destination in the region (along with McNeil River on the "back side" of Katmai if you count the west shore of Cook Inlet as part of Bristol Bay). The village of Togiak has a cultural center that serves as a workshop for village crafts producers, and hosts visitors⁸. A few individuals have experimented with commercial fishery based visitor programs, hosting tourists at their setnet sites. One individual

outside of Kotzebue (800 miles north of Bristol Bay) has made a business out of hosting groups of visitors at her setnet site through the Elderhostel program, serving as an example of the potential⁹.

Adventure travel is probably least developed of the three. A considerable amount of rafting is done on some rivers, but mostly in conjunction with sport fishing as those rivers have little whitewater. Various individuals have considered going into snow machine or dogsled tours but have been stymied in part by inconsistent winter weather that presents 40-below temperatures one week and warm winds the next that turn the snow to slush and make the rivers dangerous to cross.

Interest in nature/wildlife and cultural tourism is growing, and an affluent class of professionals and retirees with financial resources and free time points to the potential for a bright future. Nationally, ecotourism growth in the 1990s grew at a rate estimated at 30 per cent annually, and although no Alaska data are available, it appears that the trend is replicated in the state. Crowding and overuse of quality recreation areas in other parts of the country, awareness of wildlife and natural systems instilled by cable television nature programming, and an increasing reverence for Native cultures are all contributing to increased interest in the amenities Bristol Bay offers.

In particular, the effort on the federal and international levels to create a Bering Land Bridge international park, and attention directed on the Bering Sea by international conservation organizations¹⁰, are focusing national consciousness on western Alaska. Although the perception is that the Land Bridge encompassed only a narrow strip of what is now the Bering Strait, the fact is that it was a very broad expanse of the current Bering Sea floor, extending south to the heart of Bristol Bay. As more progress is made on park development, and as more information reaches the public on the results of scientific work in the region, greater pub-

lic interest is sure to be expressed in the form of increased tourism.

Discussion

Elsewhere tourism theorists, academics and planners may argue over whether tourism is good or bad for local people and communities, and how to develop and regulate it and mitigate its effects. In Bristol Bay it is still an open question whether an expanded tourism industry is even possible. In all of Alaska west of Cook Inlet (with the possible exception of Kodiak) tourism is viewed theoretically as a panacea for regional economic woes (or as a threat to traditional lifestyles and values), without significant first-hand experience. Mass tourism is unknown in the region, and even the more exclusive low-volume, high value tourism is limited to select locations and is largely out of the view of, and little understood by, most residents.

An often expressed sentiment within the region goes something like this: "If fish prices don't come back up, we might have to turn to tourism," as if it is a less-desirable industry that at least has the advantage of being an easy and reliable source of income.

Several components have to come together for tourism to work:

- A marketable attraction.
- Capital for goods and for operation costs over a period of several start-up years.
- Provisions for acquiring pertinent permits and complying with laws and regulations.
- Willing and capable workforce.
- Managerial expertise.
- A viable marketing plan.

As indicated above, some of these elements are missing or in short supply in Bristol Bay.

As outlined by Miller and Auyong¹¹, the tourism industry is comprised of three components—locals, tourists, and brokers—and development of the industry in the Bristol

Bay region depends on a suitable dynamic involving all three components. This does not mean that they all have to be in agreement and work in concert, but rather that a balance is required whereby the goals of each can be reasonably accommodated without unduly harming the others.

Tourism is controversial in Bristol Bay, and it remains to be seen whether local people are going to get behind it, at least at the village level to allow it to develop on the broadest terms. In a 1996 survey of area village councils conducted on behalf of the Bristol Bay Native Corporation, 12 of 14 responding councils registered support for tourism development. However, most opposed cultural tourism, most perceived tourism as causing conflicts with traditional activities, most viewed sport hunting as denying access to subsistence foods, and most viewed sport fishing as creating conflicts with subsistence fishing and the health of the fishery resources¹². A similar survey conducted five years later indicated a diminished support for tourism in general, despite increasing need for economic development due to poor financial returns to the fishing industry.

To be sure, acceptance by locals is not essential for further tourism development. Just as most tourism businesses currently are owned and run by non-locals, there is nothing to prevent further development by outsiders. Brokers, public sector and private, may continue to promote and exploit opportunities where they exist, whether local people choose to participate or not, and for that matter, whether they like it or not. The question is not whether locals will stop industry expansion, but whether they will facilitate and benefit directly from it.

The bigger question is whether those brokers, particularly entrepreneurs directed at providing tourism services, can put together the necessary components in order to develop new or expanded tourism businesses. Marketable attractions exist and compliance with laws and regulation is not a difficult hurdle to cross, so those brokers need capi-

tal, workers, managerial expertise, and a workable plan for marketing those attractions to potential tourists.

Notes:

¹ Mark Air, Yute Air and Reeve Aleutian Airways were regional carriers that provided service between Dillingham, other Bristol Bay locations and Anchorage with jet or turboprop aircraft during the 1990s. All three have gone out of business.

² According to course catalogues of the Bristol Bay Campus (University of Alaska Fairbanks) and the statewide distance delivery catalog of the College of Rural Alaska, also UAF.

³ Beck, Chris. For the Bristol Bay Native Corporation, Christopher Beck & Associates. p. 4-8.

⁴ For the Bristol Bay Native Corporation, Christopher Beck & Associates, 1995, p. 1-11.

⁵ These are all questions posed to the author by prospective visitors. One lady announced that she intended to "do" Alaska in a week and planned to see "the beautiful glaciers, the polar bears and penguins." Penguins, of course, do not occur in the Northern Hemisphere.

⁶ For example, the Maranatha Lodge in Koli-ganek, owned by Roger Skogen, who retired after 20 years as a schoolteacher there and his wife, Vera, a Yup'ik woman who grew up in that village.

⁷ For example, Chrystal Creek Lodge, located about 20 miles from Dillingham, specializes in sport fishing but also takes guests to see walrus and to visit the cultural center in the village of Togiak.

⁸ Marie Paul, Togiak city manager, speaking at the Bristol Bay village leadership conference, Anchorage, December, 2001.

⁹ LaVonne Hendricks, Arctic Circle Educational Adventures, located at Kotzebue.

¹⁰ The World Wildlife Fund and The Nature Conservancy are two prominent national organizations currently with Bering Sea and Beringia initiatives.

¹¹ Some specific examples of brokers in this story are the people referenced in notes 6 - 8, which can be further separated into private, part-time brokers and brokers also in government, illustrating the range and interconnectedness of dynamics. Locals include those in other trades such as

commercial fishermen, and all residents uninterested, against or unaware of tourism, including elements of the native population mentioned.

¹² Beck, Chris, personal communication, December, 2001.

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PARTICIPATORY RAPID RURAL ASSESSMENT IN ZANZIBAR

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Abstract: *The small island of Zanzibar [population 800,000] has embarked on a strategy of tourism development in the last 8 years. With a World Heritage Site and world-class marine sports activities, Zanzibar is a competitive destination. Visitor arrivals topped 60,000 in 1995 and have been growing at 12 percent annually, though the country remains mostly rural. The first formal efforts to plan for and attract a tourism industry were in the mid-1980's, as the clove market collapsed - with positive response from the international market and the investor community. This paper investigates the history of tourism here and asks what the keys to sustain that success are.*

Zanzibar has a history of investigating tourism as a tool for economic development since 1987, though resource-use conflicts have caused the President to declare a moratorium on further leasing of islets for tourism until scientific study of resource capacities and "best use" could be undertaken.

A study of Participatory Rapid Rural Assessment (PPRA) was conducted, with twenty professionals (three women) within government selected as PRRA trainees. The project objective was to use PRRA tools to assess the resource status and social issues on small islets together with the knowledge and input of local people who know it best.

Among the findings being compiled are the observation that the resource base for most islands - both inhabited and uninhabited - was used at or over capacity, both for agriculture and extraction of marine products. While changing fishing grounds throughout the year appears haphazard, it is in fact a highly institutionalized system with use patterns firmly entrenched.

However, there is also willingness to compromise on the use of beaches or islets if access and use rights in perpetuity were guaranteed.

As a result, a rational first step in understanding the complexities of tourism investment is plans to develop a community tourism awareness campaign in urban and rural areas of both islands, of which PPRIA is a useful tool in putting more emphasis on local understanding.

Keywords: *tourism development, Participatory Rapid Rural Assessment, Zanzibar*

Introduction

As even the name Zanzibar is evocative of the fragrance of spices and an "Arabian nights" fantasy, so too this small Indian Ocean Island [population 800,000] has embarked on a strategy of tourism development in the last 8 years. With the classic architecture of its old Arab Stone Town designated a World Heritage Site by UNESCO, complemented by world-class marine sports activities, Zanzibar is a competitive destination upon entry into the marketplace. While visitor arrivals topped 60,000 in 1995 and have been exhibiting a 12 percent annual growth, it remains mostly rural with many small farms and subsistence fishing. With the collapse of the clove market in the mid-1980's, the first formal efforts to plan for and attract a tourism industry were put in place - with positive response from the international market and the investor community. What are the keys to sustain that success?

History of Tourism Development

Zanzibar has been a trade center for the West Indian Ocean for centuries, where numerous cultures came together in commerce. However, from the time of independence in 1964, the modern phenomenon of travel was considered a "friendship" force for continuance of the African socialist agenda, as evidenced by the positioning of the tourism bodies in social Ministries related to youth and culture, rather than the economic sector. With liberalization in 1987 and an Investment Act, tourism was first openly encouraged as a tool for economic development.

One of the initial land allocations made for hotel development was on Mnemba Island, a small islet on the remote northeast coast, leased by an Italian firm. While not inhabited, Mnemba had a long tradition of being used for "logo," that is as a seasonal fishing camp where migratory fishermen live in temporary huts, dry their catches, and base their daily operations. The location of Mnemba outside a break in the fringing reef, meant there were no substitutes fishermen could use that did not require crossing the reef at limited times and returning to the main island. Its' important role also meant that the nearshore reef on Mnemba was seriously overfished, so that the de facto protection offered by the resort enhanced the biodiversity of one of East Africa's most important reefs (Bryceson, 1981).

With government approval, the management of Mnemba Island established a 300 meter no-entry zone around the islet and rigorously enforced the no-trespass rule. Ten simple, but upscale "*bacndas*" (huts) were constructed which rent for over USD\$300 per night. The compensation to fishermen was limited to 2 new wooden boats and a place to dry their fish. For the first several years, fishermen repeatedly defied the ban, blocked supply and client boats going to the islet, and an atmosphere of conflict and harassment was created as broadcast at one point by the BBC. Seven years

later, the ban on local use of the island is still in place, there are few entry conflicts, and the resort does a good business in luxurious getaways for the rich and famous, with an emphasize on world-class diving. But, as the paper will show, the legacy of Mnemba Island as Zanzibar's first entry into international tourism lives on.

The Zanzibar Investment Promotion Agency (ZIPA), a one-stop shop for investors, was established in the liberalization act. To date, over 70 land leases have been granted to foreigners for hotel construction, and tourism accounts for the majority of the ZIPA portfolio. A new investor to the main island of Unguja would not find any beachfront land still in the traditional communal "ownership" of the village, but would have to deal with a group of speculators - elites from Zanzibar Town who hold land for themselves or mainlanders - or broker a buy-out of the original hotels. On many sites that have been locked up, no construction has begun in defiance of the 3-year requirement. While there are over 750 rooms in the rural areas now, over 60 percent of the current units are of poor standard built by local entrepreneurs and catering to the budget backpacker market.

Some of the experience regarding land rights and tenure Zanzibar residents have gained from hotel developments to date include:

- Loss of plots for seaweed farming, an economic activity introduced 8 years ago which is now the largest income source for residents (especially women) on the East Coast, where tourism is concentrated (Uroa).
- Relocation of the village and the dhow harbour for "suburban" hotel construction (Mazizini).
- Loss of access and stopover privileges in transit to the mainland to an island operating as a private Coral Park and marine conservation education centre (Chumbe Island).

- Construction of low-quality accommodations halted for lack of funds on an island just offshore from town, in an area very important for recreation by visitors.
- Land withdrawn from production for a major hotel development approved over 6 years ago, with no visible evidence of construction at present.

Coupled with very predictable impacts of tourism in general, such as localized inflation [villagers can no longer afford to buy fish and eggs, the only protein sources in their diet, since these items are being sold to the hotels), and continued cultural conflict over tourist dress and behavior (e.g., use of alcohol, photography) in a conservative Muslim society, there has been controversy over the direction of tourism development. The 53 offshore islets in particular are seen by Zanzibaris as being extremely vulnerable to loss and degradation. There is a conflict by definition between tourism resorts and fishermen: both are seeking sand beaches with deep-water access. For this reason, the President declared a moratorium on further leasing of islets for tourism until scientific study of resource capacities and “best use” could be undertaken.

Participatory Rapid Rural Assessment

Overview

While the Commission for Tourism (CFT) and the Commission for Lands and Environment (COLE) are both partners in the investment decision making as convened and led by ZIPA, it was felt that the process bypassed local residents and was simply a rubber-stamp endorsement without thorough analysis. Therefore, expatriate advisors at CFT and COLE proposed that the Presidential call for detailed study of probable island sites with high tourism potential be achieved through application of participatory rapid rural assessment techniques (PRRA).

PRRA was developed in the 1980's as a means of involving local people in creating information, rather than extracting it from them. PRRA involves role reversal, where researchers learn from local residents. It is characterized by (Chambers, 1991):

- Optimizing tradeoffs between data quantity, relevance, timeliness, truth, and actual beneficial use. In the process, attempts are made to achieve “appropriate imprecision” and “optimal ignorance”, meaning knowing what is not worth knowing, and knowing when enough is known. PRRA tries to offset complete reliance on statistics and formal methods.
- Offsetting biases such as wealth, gender, seasonality, access etc. by trying to see and learn what is normally not mentioned or out of sight (or down the worst road!).
- Triangulation of methods and team composition, such that multiple confirmation of results are possible.
- Learning directly from and with rural people with direct face-to-face contact.
- Learning rapidly and progressively, in a flexible, adaptive and exploratory mode. The idea is to engage in an iterative process, making decisions about what to do next on the basis of what has been discovered so far.

The PRRA toolkit is extensive (Kane, 1994). While key informants and group meetings are used, semi-structured interviews within some preset guidelines or perhaps a checklist format are the cornerstones of the technique. Respondents may be asked to develop a seasonal calendar of their activities or engage in pair-wise ranking (e.g., do you like option one better than option two?; do you spend more time in activity one or activity two?) to quantify responses to some extent. Direct observation of both biological and community attributes from mapping a transect - walking or boating a line - can systematize “data” collection. Because it is im-

portant to know how different segments of society are affected differentially by development, wealth rankings where informants use their own criteria to stratify inhabitants and neighbors' economic status are commonly used. These results and interpretations are shared with contributors as part of the evolution of an information package.

Project Implementation

Twenty professionals (three women) within government representing the Commission for Tourism, the Commission for Lands and Environment, the Fisheries Department, the Forestry Department, and the Investment Promotion Agency were selected by their own institutions as PRRA trainees and team members. The project objective was to use PRRA tools to assess the resource status and social issues on small islets together with the knowledge and input of local people who know it best, as input to recommendations about "best use" of specified islets: open for leasing for tourism development, inclusion in a protected areas system yet to be established, or maintenance of the status quo because traditional resource uses were so well established and/or critical.

Two Zanzibaris from the Department of Forestry who had been trained in PRRA methodology in Europe were recruited to train the group, after consultation with the Ministry of Agriculture about its' use of PRRA to assess cash crop opportunities and the introduction of a farming systems approach (Thomas, 1993). It is important to note Zanzibaris were trained in a one-week session, with field visits, by Zanzibaris with experience in application of the methods, rather than by non-national advisors.

Three 6-person teams, two with an expatriate advisor, were then set up to conduct field studies, with each team studying 4 islets. The study sites, often remote with difficult access, were selected based on perceived tourism pressure as evidenced by the level of investor interest to date. Most were located in the isolated northern island of Pemba where only one small diving camp is

in operation, with the exception of islands off Zanzibar Town. Four to seven day visits were scheduled on each islet, with logistical arrangements for camping or staying in local homes made to minimize dependence on government leaders ("*sheha*") in the villages, and thus the appearance of a conflict of interest. With the Zanzibaris' strict hierarchical approach to leadership, it was difficult to utilize "*mzee*" - older, often religious, leaders - as informants while keeping the process open to women, the poor, and those not affiliated with the ruling party.ⁱ After each visit, the team met to evaluate progress and plan for improvements on the next field study, a process replicated in writing the final reports for each islet.

One significant advantage of PRRA is low-cost. The PRRA training and field visits extending over a 6-month period were completed for approximately USD\$8,000 (excluding advisor time). The most significant expenditures were boat rental for travel to the islets and per diem for team members. The expenses were shared by the World Bank and the Finnish bilateral donor FINNIDA, with government salary contributions.

Findings

Individual reports are being prepared for each islet, but this paper summarizes some commonalities. First, it was observed that the resource base for most islands - both inhabited and uninhabited - was used at or over capacity, both for agriculture and extraction of marine products. The level of effort for fishing activities reported and observed was very intensive, ranging from octopus harvest and netting (both done by foot), to spearfishing, to line fishing by boat. Residents in Pemba, in particular, reported that the islands served as "banks" for the poorest of the poor, who could move to these last few islands where land was not already being farmed. The use patterns for fishing are firmly entrenched, and while the change of fishing grounds throughout the

year appears haphazard, it is in fact a highly institutionalized system. Non-local fishermen at “dago” (camp) will in fact protect their fishing grounds from other external users. These islet communities appear to have few options if they are excluded from the areas they now occupy or their extractive activities are severely limited.

When asked what benefits the community and individuals expected from tourism, improved social services rather than economic return were cited. Villagers wanted a clean and convenient water supply, schools, access to health care, better (or a) roads, rather than direct mention of jobs, money or starting a tourism-related business. The only exceptions were a stated desire to sell fish to the hotels --which due to transport and storage problems and erratic swings in production is not an automatic benefit --- and to learn English so as to have future options within the tourism economy.

The fishing community expressed a willingness to compromise on the use of beaches or islets (i.e., giving it up), if access and use rights in perpetuity were guaranteed to other islets by the government and investor. Fishermen were able to come to agreements on priorities, such as which islets were so critical that no negotiation on access was possible, and on which there was compromise.

Finally, island inhabitants and fishermen generally wanted or would allow day visits by tourists, but wanted permanent construction of lodging facilities to be built on the main island only.

Results and Conclusion

When individual reports are completed this summer, they will be forwarded for presentation to government authorities. The project is behind schedule because of the November 1995 election when attention was diverted to other issues. Because the PRRA studies fill such a critical information gap and in many

cases are the only source of information about islet use patterns and inhabitation, it has been proposed that PRRA be required as part of the ZIPA investment analysis, with the team available for hire by the potential investor. This would be in addition or complementary to the environmental impact assessment requirement that was recently passed as part of the new environmental legislation. To date, “business as usual” is the norm and the investment process proceeds unchanged; at least one island has been leased in the interim to a foreign investor. In continuing the exercise, it seems prudent to involve more staff from the investment agency and to try to get high level decision-makers out in the field in Zanzibar and other destinations to understand the complexities of tourism investment. A rational first step that has resulted are plans to develop a community tourism awareness campaign in urban and rural areas of both islands. PRRA seems to represent a change in emphasis to put people first, and to give the poorest people, a forum for opinions about how to maintain their lifestyles in the face of increasing resource and economic constraints.

Note:

ⁱ Tanzania's first multi-party election was held just after the completion of the PRRA field studies.

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***1999 International Symposium on
Coastal and Marine Tourism***

APPENDICES

TOURISM AND SUSTAINABLE DEVELOPMENT ON VANCOUVER'S WATERFRONTS: SUMMARY OF THE WATERFRONT TOUR

Robert F. Goodwin

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Abstract: *Vancouver, a major coastal metropolis, has an extensive marine shoreline. One-day field trips during the symposium provided an opportunity for participants from around the world to observe first-hand, some of the shoreline planning and marine conservation issues in two areas, False Creek and Granville Island.*

Keywords: *Vancouver, coastal zone planning, waterfront revitalization, water dependency*

Introduction

Diverse issues in coastal development abound in the very city in which the four-

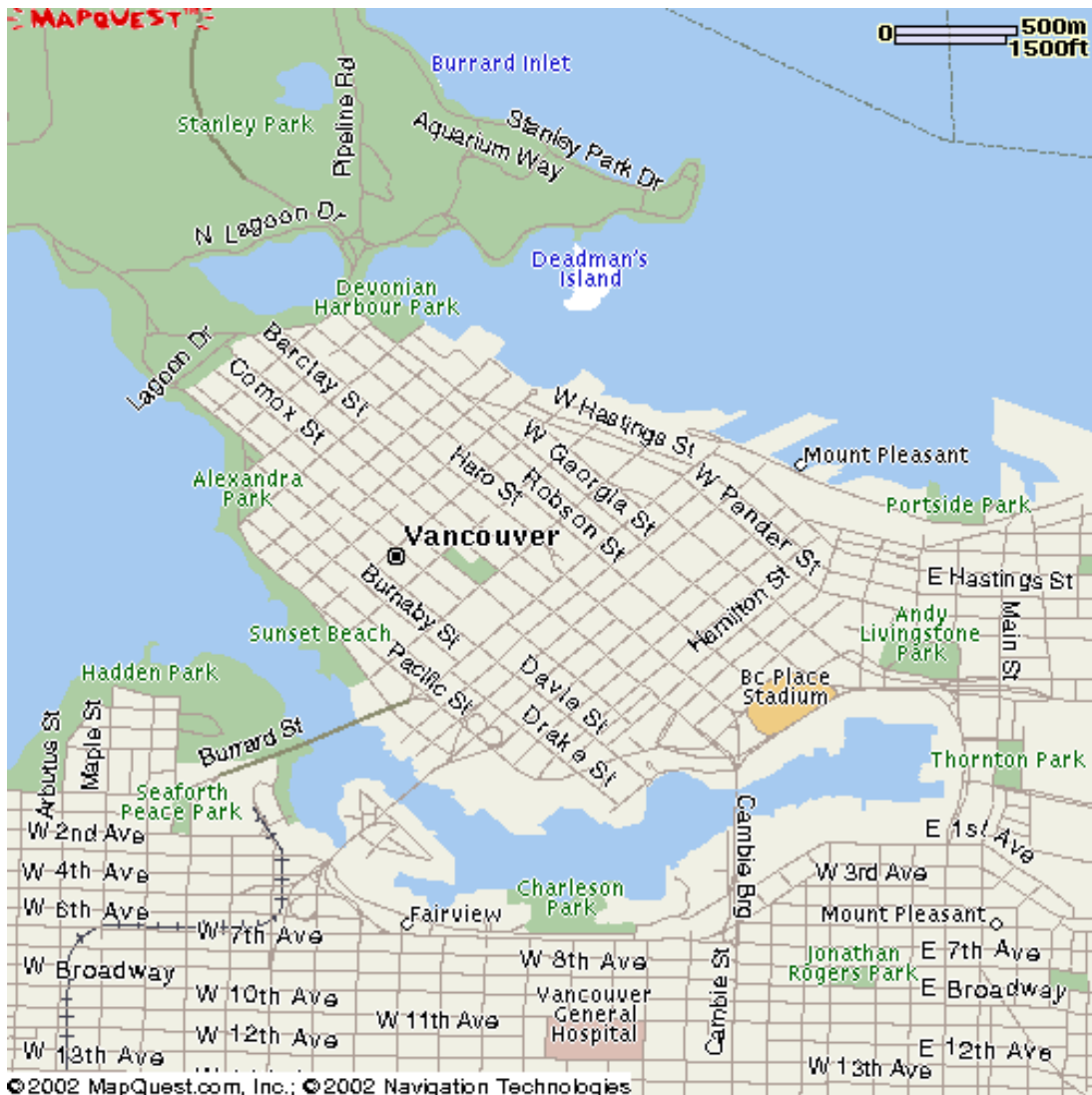


Figure 1. Map of Vancouver

day symposium was held, Vancouver, British Columbia. One-day field trips as part of the symposium provided an opportunity for participants from around the world to observe first-hand, some of the shoreline planning and marine conservation issues being addressed in the region.

Vancouver, a major coastal metropolis, has an extensive marine shoreline. The City's downtown occupies a peninsula bounded on the north by Burrard Inlet, a long east-west fjord; on the west by English Bay, and on the south by False Creek, a shallow inlet. Coal Harbor, a protected natural anchorage off Burrard Inlet, is the historic port area, now the locus of downtown waterfront redevelopment. Hotels, a cruise ship terminal, smallcraft moorage and a seawall walkway now line Coal Harbor. Stanley Park occupies the entire west end of the peninsula (See map).

Local Challenges

An originally planned bicycle tour of the waterfront and a marine conservation/whale watching tour were combined into a single boat tour, incorporating the two themes of *sustainable waterfront development* and *nature-based tourism and ecosystem management*. The tour began near the conference hotel at Coal Harbor, and made its way around Stanley Park, English Bay and False Creek to Granville Island where participants enjoyed a catered luncheon. In the afternoon participants reboarded the boat for whale watching in Haro Strait. The tour brought together conference participants and stakeholders of different stripes, including approximately 30 conference participants, two city council members, city and regional land-use planners, and commercial maritime interests. Stakeholders had a wide range of views and interests concerning the forces and effects of tourism and changing development and spoke of the past, present and future of Vancouver's coastal zone.

A look at two areas with differing histories and challenges explore sustainable development issues that have emerged in Vancouver and the approaches taken towards them: False Creek and Granville Island.

False Creek

False Creek embodies a tension commonly found in areas undergoing urban waterfront redevelopment today: competition for waterfront space between traditional marine industries and new recreational, residential, and mixed-use developments that threaten to displace them. On False Creek, shorelines once heavily dominated by traditional marine industry are undergoing redevelopment with recreational marinas, restaurants and pubs and linear public access. Tugboat operations, as well as boat repair and sand and gravel companies are among the industries most at risk from these land-use trends on False Creek

Tour participants had the opportunity to discuss this and other issues with stakeholders present on the boat cruise, including a tugboat operator and the two city council members, one of whom championed Vancouver's Blueways Initiative, a blueprint for the future of the City's waterways that enunciates principles to protect navigation and water-dependent industry.

With a relatively fixed amount of developable waterfront on urban coastlines today, the allocation of space among industrial and recreational waterfront-dependant uses is an important issue and one that will remain at the forefront of urban coastal tourism and development.

Granville Island

Granville Island illustrates another situation in coastal development. A small island off of Vancouver's southwest coast ---, it is widely perceived to be a successful and well-planned example of coastal development. It's institutional and physical setup is unusual in North America in that the entire island is owned

by the federal government and management is undertaken through a public development corporation created specifically for that purpose. Granville Island was historically made up entirely of factories for marine industry: boat building, shipyards, wireworks, barrel and chain manufacture, etc. A downturn in those industries led to the closing of most of the factories and the onset of dilapidation.

Key to the successful redevelopment of the island has been the active involvement of stakeholders in the planning and decision making process. The federal owners engaged in public meetings and other community-based planning activities with the remaining industry representatives, recreational boaters, residents, tourist interests and others to create a multi-use redevelopment plan that addressed the needs of all.

Through a guided walking tour, participants were able to observe the island firsthand on their stop there, and learn about the redevelopment process from the principal of the architectural firm that developed the plan and from two representatives of the Granville Island Office, the authority that manages development and leases property.

Granville Island mixes recreational boating, marine industry, educational institutions, a hotel, houseboats, a brewery, retail stores, art studios and galleries, restaurants and places “for kids only” – all in a pedestrian-friendly environment in which cars and trucks are able to move slowly on narrow, brick-paved alleys, sharing the road with tourists on foot or bicycle. Old industrial buildings have been adapted for new uses and infill structures echo their industrial architectural heritage.

The success story of Granville Island was clearly influenced by its unique advantages. Federal ownership of the island played a major role in the “ease” of development, and a single management

entity ensures that day-to-day decisions conform to long-range planning and management goals.

Conclusion

Current and future plans and projects in the coastal zone will need to balance a myriad of uses, conflicts and concerns. Through dialogue, interaction observation and experiences in Vancouver during this field trip all participants gained a heightened awareness of how one N. American metropolis is meeting these challenges.

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APPENDIX II: ABSTRACTS OF PRESENTATIONS SANS PAPERS

COMMUNITY-BASED SOLID WASTE MANAGEMENT IN COASTAL TOURISM DEVELOPMENT

William Trousdale

*EcoPlan International
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As we enter the new millenium, coastal and marine tourism faces the growing challenge of achieving sustainability. One of the more pronounced components of any sustainable tourism effort is implementing solid waste management. Nowhere is this challenge greater than in the developing world where the disparity between advanced engineering systems, community participation and local capacity collide in a startling array of ill-conceived technological fixes, decision paralysis and makeshift solutions. All too often action is crisis driven, as tourism communities lurch into the future without a common understanding of the problems, or workable plans to address them.

This paper focuses on the sensible and the sustainable. It offers an example of hope in the area of solid waste management. It examines a community-based approach that utilizes interactive waste assessment and action planning techniques. The approach incorporates learning and cooperation in order to tap into the local knowledge base and empower the community, thereby promoting durable solutions.

The approach is contextualized through a case study of Borocay Island, Philippines, where increasing pressure on the solid waste management system parallels tremendous growth in tourism visitation and development. Initiated by a partnership between the Canadian Urban Institute and the Philippines Department of Tourism on Borocay (partially funded by CIDA), a planning project based on the systematic use of multiple objective decision analysis (MODA) was undertaken. It had the support of international, national and local organizations. Not only did the project focus on management of the collection, transfer and disposal of waste, but also the sources of waste – tourists and residents. Invol-

ing the community from the assessment phase through planning stage promoted essential “buy-in” from key stakeholders that is currently being reflected in successful implementation.

The research supports the conclusion that through the transfer management technology and applied action research at the local level, successful solutions for achieving effective solid waste management at the community level are possible. The Borocay case study is intended to alert the participants of the 1999 World Congress on Coastal and Marine Tourism to opportunities and constraints of managing tourism’s solid waste in a coastal developing world setting by exploring the approach, the results and the lessons learned on Borocay.

Keywords: *community action planning and coordination, solid waste management, recycling, social and environmental impacts, technology transfer*

APPENDIX III: CONFERENCE PROGRAM

Editors' Note: The original conference schedule follows; minor changes to the program were made in the course of the meeting. The papers in the Proceedings may be slightly modified from the original presentations, and are organized to correspond to presentations in the program.

Asterisks() in the program indicate that papers are unavailable for selected presentations, and therefore do not appear in the Proceedings.*

1999 INTERNATIONAL SYMPOSIUM ON COASTAL AND MARINE TOURISM

The Westin Bayshore

Vancouver, British Columbia

CANADA

April 26-29, 1999

(P) signifies session discussants

Monday, 26 April: Rethinking Tourism: Choices, Responsibilities, and Practices

7:30 AM-3:30 PM	Registration and Coffee (<i>Stanley Foyer</i>)
8:30 AM	*Welcome Jan Auyong, CMT99 and Oregon Sea Grant, USA
9:00-10:30 AM	*Keynote Plenary, Part A: the changing fabric of tourism planning and development <i>The British Columbia experience</i> Moderator-Coralie Mackie, Oceans Blue Foundation *Michael Harcourt, former premier of British Columbia *Rick Antonson, Tourism Vancouver
10:30-11:00 AM	Break
11:00-12:00 AM	*Keynote Plenary, Part B: the changing fabric of tourism planning and development <i>The roles of the public and private sectors</i> Moderator-Gordon Goodman, BC Ministry of Small Business, Tourism, and Culture Don Alcock, Cooperative Reef Research Centre for the Great Barrier Reef World Heritage Area, Australia -The Cooperative Research Centres model: collaborative science for sustainable tourism *Bill Henwood, Parks Canada -National Marine Conservation Area (NMCA) feasibility study in the southern Strait of Georgia
12:00-1:00 PM	Lunch-will be held in the Discovery Room

continued

Monday, 26 April continued

- 1:30-3:30 PM ***New Tourism Planning Perspectives**
 Moderator-Alison Gill, Simon Fraser University
Tim Tyrrell, University of Rhode Island, USA-Economic issues in environmentally sustainable coastal tourism: practical project analysis
***Rick Rollins, Malaspina University College & Stephen Connolly, Ministry of Small Business, Tourism, and Culture, Canada**-Tourism planning in Clayoquot Sound
Steven Parker, University of Nevada, USA-Management of tourism on Australia's Great Barrier Reef: public and private dimensions of regulation
***Florence White, Aqua-fact International Services Ltd., Ireland (P)**-New perspectives on the role of tourism in marginal coastal communities in the west of Ireland
Veronica Dujon, Portland State University USA (P)-The challenge of ecotourism in the Caribbean: structural constraints and local potential
***Katrina Van Dusen, USA (P)**-Destiny 2000: A Strategy For Sustainable Tourism In Downeast Maine
***Abraham Hallenstvedt, University of Tromso, Norway (P)**-Marine recreation and integrated coastal management
- 3:30-4:00 PM Break
- 4:00-5:30 PM **Concurrent Session A: Tourism Planning Approaches**
 Moderator-Alison Gill, Simon Fraser University
William C. Norman & Tiffany J. McClinton, Clemson University, USA-A profile of visitors to National Estuarine Research Reserves: implications for interpretive programs
James Sweeting, Aaron Bruner, and Amy Rosenfeld, Conservation International-The green host effect: sustainable approaches to large-scale tourism and resort development in natural areas
Lisa Testoni, The University of Queensland, Australia-Planning for sustainable coastal tourism in Australia
***William Trousdale, EcoPlan International, Canada**-Community based solid waste management in coastal tourism development in the Philippines
Gunathilake Tantrigama, University of Sri Jayewardenepura, Sri Lanka-Coastal resources management and sustainability of tourism in Hakkuduwa, Sri Lanka and Goa, India: a comparative study
- 4:00-5:30 PM **Concurrent Session B: Discussion on the public-private dimensions of ecotourism regulation in British Columbia**
Special speakers:
 Don Alcock, James Cook University, Australia
 Steve Parker, University of Nevada, USA
 Glen Milbury, Coastal Connections, Canada
 Peter LaBor, North American Water Trails, Inc.

continued

Tuesday, 27 April: Field Trip Day

Tour 1, 8:00 AM: Meet in Westin Bayshore lobby

Tourism and Sustainable Development on Vancouver's Waterfronts

Enjoy this half-day bicycling or van tour of Vancouver's beautiful and dynamic marine waterfronts, including Coal Harbor, Stanley Park, English Bay, False Creek, and Granville Island guided by Vancouver City Councilors Nancy Chiavario and Sam Sullivan, and municipal and regional planning experts (lunch at Granville; bicycle rental included) We suggest you wear comfortable, soft clothing and bring light rain gear.

Tour 2, 8:00 AM: Meet in Westin Bayshore lobby

Nature-based Tourism and Marine Ecosystems Management

This trip features whale watching for resident Orca pods as well as marine ecosystem management lectures and discussions. We will be guided by BC Tourism and BC Land Use Coordination Office planning staff, in addition to Oak Bay Marine Group scientists. (Boat tour of Vancouver Harbor and, weather permitting, whale watching in Haro Strait and visit to Victoria Harbor on Vancouver Island; lunch at scenic coastal spot included.) Bring light rain gear and warm, layered clothing.

Wednesday, 28 April: Clients of Natural Resource Tourism

8:00 AM-3:30 PM Registration and Coffee

8:30-10:30 AM

Industry Workshop-Who is our client?

Moderator-Robert Goodwin, Washington Sea Grant

***Raymond Chan, Tourism British Columbia-Trends** in nature based tourism and redefining the client

***Mark Consiglio, Reef Point Adventure Station, Canada-A** case study: The transition between natural resource dependency and tourism in Ucluelet

***Connie Robertson, Canadian Pacific Hotels & Resorts-Redefining** business practices: implementing "The Green Plan"

***MacMillan Bloedel, Canada-Redefining** business practices: coexisting with tourism providers

***Craig Murray, Nimmo Bay Resort, Canada-Meeting** your client's special needs

10:30-11:00 AM

Break

11:00-12:00 AM

Workshop continues

Peter Williams, Simon Fraser University, Canada; and Terry Hood, Pacific Rim Institute of Tourism, Canada-A Case Study of the Community Fisheries Network Tourism Strategy

12:00-1:00 PM

Lunch (on your own)

continued

Wednesday, 28 April continued

1:00-2:45 PM

***Market strategies for the nature based tourism business**

Moderator Jan Auyong, Oregon Sea Grant

Russell Currie & Laani Uunila, Lakehead University, Canada-Market feasibility of a water trail

Gail A. Vander Stoep et al., Michigan State University, USA-Shipwreck management: developing strategies for assessment and monitoring of newly discovered shipwrecks in a limited resource environment

Elizabeth Halpenny, The Ecotourism Society-Marine ecotourism: an update on private sector best practice guidelines implementation

***Kenji Hotta, Nihon University, Japan**-A study on the physiological effects of ultrasonic waves of coastal area on human brain waves

Bruce DeYoung & Erin Williams, Oregon State University, USA (P)-Low power radio: an antidote for coastal visitors looking but not seeing!

Raymond S. Tabata, University of Hawaii Sea Grant, USA (P)-Thematic itineraries: an approach to tourism product development

Peter LaBor, North American Water Trails, Inc. (P)-Marketing cultural heritage on water trails

2:45-3:15 PM

Break

3:15-4:45 PM

Concurrent Session C: Enhancing marine protected areas

Moderator-Jan Auyong, Oregon Sea Grant

Brijesh Thapa & Vinod Sasidharan, Pennsylvania State University, USA-Debt-for-nature swaps and protected area tourism in coastal and marine environments: a symbiotic relationship for developing countries, debt for nature swap

David McVetty, Parks Canada & Michele Deakin, Gwaii Haanas National Park Reserve/Haida Heritage Site, Canada-Optimizing the outcomes of tourism in co-managed protected heritage areas: the cases of Aulavik National Park and Gwaii Haanas National Park Reserve/Haida Heritage Site

Aimee M. Lowe, The Nature Conservancy, USA (P)-Ecological and economic sustainability of tropical reef systems: establishing sustainable tourism in the Exuma Cays, Bahamas

Reinaldo Estrada and Antonio Perera, National Centre of Protected Areas, Cuba-Planning and management of marine protected areas in Cuba

3:15-4:45 PM

Concurrent Session D: Transformations in commercial recreation

Moderator-Tom Bird, Executive Director, Sport Fishing Institute of British Columbia

***Craig Murray, Nimmo Bay Resort, Canada**-Setting the standard for environmentally responsible adventure tourism

Colin Wood & Margo Stoilen, University of Victoria, Canada-Problems ahoy: marina operators' perspectives on the coastal zone

John Shultis, University of Northern British Columbia, Canada-Charting a new course? sport fishing lodges and tourism in coastal British Columbia

***Kristin Berg Nordstrand, Norway**-Fish as bait: recreational fishing- vision and reality

5:30 PM

Waterfront Centre **Hotel-Reception** (no host)

6:30 PM

Waterfront Centre **Hotel-Banquet** - Special Speaker: **Dr. Joe MacInnis***continued*

Thursday, 29 April: Integrating Tourism into Environments and Communities

8:00-12:00 AM	Registration and Coffee
8:00-9:30 AM	<p>Concurrent Session E: Exploring the relationships between Brokers, Locals, and Tourists Moderator-Marc Miller, University of Washington So-Min Cheong and Marc Miller, University of Washington, USA-Power, Foucault, and Coastal Tourism in Seattle, Washington Robert Preston-Whyte, University of Natal, South Africa-Contested and regulated seaside space at Durban Joel Martineau, University of British Columbia, Canada-Otter skins, clearcuts, ecotourists: re-resourcing Haida Gwaii John Davis and Marc Miller, University of Washington, USA-Travel writers as power brokers: testimonies from the front lines of marine tourism</p>
8:00-9:30 AM	<p>Open Discussion, Concurrent Session F: Sea Grant Network Strategies for Coastal and Marine Tourism and Recreation Moderator, Jack Thigpen, North Carolina Sea Grant, USA</p> <p>Delaware-Jim Falk Hawaii-Ray Tabata Minnesota-Glenn Kreg North Carolina Jack Thigpen Oregon Jan Auyong, Shari Currey Puerto Rico-Alida Ortiz Washington-Bob Goodwin</p>
9:30-10:00 AM	Break
10:00-12:00 AM	<p>Part A: Integration Strategies for Tourism Moderator-Sandra White, Aboriginal Tourism Team Canada</p> <p>*R.J. Payne et al, Lakehead University, Canada-Reassessing marine tourism in the Caribbean: local views on issues and opportunities *Lucille Bell and John Shultis, University of Northern British Columbia, Canada-Developing a community consultation process to assess support for coastal tourism in a First Nations community Lourdes de Maria Flores O. de Skydancer, Baja California Natural: Consultores Ambientales, Mexico-Gray whale watching in Baja California Sur, Mexico: alternative tourism for resource conservation in Bahia Magdalena David P Pinel, Canada-A community based model for tourism planning *Sandra White, Aboriginal Tourism Team Canada (P)-First Host Program *Grant A. Roden, USA (P)-Fais Island Tourism Development Strategy</p>
12:00-1:30 PM	Lunch-Searching for Sustainability

continued

Thursday, 29 April continued

1:30-3:15 PM

Part B: Strategies for tourism integration

Moderator-Gordon Goodman, BC Ministry of Small Business, Tourism, and Culture

Jeff Allen, Kang Shou Lu, and Tom Potts, Clemson University, USA-Using Geographic Information Systems (GIS) for tourism planning**Bruce Whyte, BC Ministry of Small Business, Tourism and Culture, and David Nicholson, Clover Point Cartographics Ltd., Canada**-Explorations into modeling tourism development opportunities at the community scale***Sarah L. Richardson, Texas A&M University, USA**-Balancing community and regional interests in tourism development: lessons from the Texas coast

1999 INTERNATIONAL SYMPOSIUM ON COASTAL AND MARINE TOURISM

The Westin Bayshore • Vancouver, British Columbia • CANADA • April 26-29, 1999

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