Managing ecotourism: an opportunity spectrum approach

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Over the past decade and a half, visitor management frameworks and procedures have been developed to address issues resulting from tourism and recreation use of areas. These have included the Recreation Opportunity Spectrum (ROS), the Tourism Opportunity Spectrum (TOS), Limits of Acceptable Change (LAC), Visitor Activities Management Planning (VAMP), and the Visitor Impact Monitoring Process (VIMP). This paper outlines a new framework, based on existing approaches, within which opportunity for ecotourism may be set. It incorporates and modifies ideas from the ROS and TOS to address ecotourism specifically, is termed the Ecotourism Opportunity Spectrum (ECOS) and contains eight components. The paper concludes with a discussion of the difficulties of assigning relative priorities to ecotourism activities in a region, and assessing the significance of the resulting environmental impacts.

Keywords: ecotourism, management, planning, framework, opportunity spectrum

Within the overall context of tourism, ecotourism has experienced rapid growth over the past decade. Although ecotourism has come to imply a form of tourism which fosters environmentally responsible principles, it appears that the economic benefits that can accrue from this activity have been the primary motivation for some nations to deliberately promote ecotourism within their borders. In other cases nations appear to have been willing to accept the development of ecotourism within their borders. In other cases nations appear to have been willing to accept the development of ecotourism as a result of exogenous market pressures. The magnitude of the ecotourism industry is well illustrated by the fact that over US$25 billion are transferred from the northern to the southern hemisphere annually. Established ecotourism destination areas are located predominantly in the developing nations but recent growth in ecotourism has included new destination areas in Australasia, and the remote landscapes of the polar regions. Expansion has also resulted in opportunities being sought in the less exotic temperate landscapes of the developed world, such as Northern Ontario, Canada. This last trend has emerged in response to the potential that ecotourism may offer the economies of marginal areas, and also the realization that there may be a declining number of new exotic and rare environments available that can be marketed as ecotourism destination areas in the more established regions. Early ecotourism destinations such as Kenya, the Galapagos Islands and Thailand have already suffered extensive impacts as a result of increased numbers of tourists.

In light of the above, it is imperative that only those areas which are suitable for ecotourism be developed and that ecotourism criteria are matched with the resource base characteristics of the region. Once begun, ecotourism, like any other form of tourism, requires management. The impression is often given that a form of tourism which fosters environmental principles will have limited impact in the areas in which it is promoted. Unfortunately, just like other forms of tourism, ecotourism generates impacts that require management. As tourism has developed beyond an undifferentiated phenomenon, it can be segmented into numerous forms, and management frameworks are needed that focus on specific types of tourism, rather than tourism in general.

This paper proposes a framework to manage the
ecotourism experience which will cover both the hard and soft range of the experience being sought. The overall concept proposed is not new but is one which is based on existing approaches used in the field of resource management. It incorporates ideas from the Recreational Opportunity Spectrum (ROS)\textsuperscript{12} and the Tourism Opportunity Spectrum (TOS).\textsuperscript{13} The framework proposed here modifies the ideas presented in TOS to specifically address ecotourism, and is termed the Ecotourism Opportunity Spectrum (ECOS).

There is a large and ever growing literature on ecotourism that has addressed a plethora of issues including how it can be defined,\textsuperscript{1,14} the dimensions involved,\textsuperscript{15-17} and the linkages with other types of tourism and environmental management concepts.\textsuperscript{18-20} In light of this, the authors have purposefully used a broad definition of ecotourism, namely, a form of tourism which fosters environmental principles, with an emphasis on visiting and observing natural areas. The emphasis on tourism, as much as this can be separated from recreation, is deliberate. It is acknowledged that, in reality, there is often very little difference in many respects between such day recreation activities as birdwatching and month-long ecotourism trips to observe birds, except the location where these activities take place, the length of time and the amount of expenditure involved. By definition, however, ecotourism in this paper does not include most of the short-term visits to natural and semi-natural areas, especially those in developed countries where the emphasis is on participation in an activity rather than experiencing nature. Thus a weekend or day visit to a national park in the United Kingdom or even in the United States is not the focus of this paper. Rather, it is on that form of tourism labelled and probably marketed as ecotourism. Implicit in the above definition are the concepts of sustainability and appropriateness to ensure the maintenance of the resource base of the destination area, which may also provide the livelihood for local inhabitants of the area. The emphasis in the model is on the relationship of ecotourism to the physical environment more than to the social/cultural environment. The focus and purpose of the paper is to outline a framework for the management of ecotourism in destination areas. The model and framework suggested here may have applicability in other situations also, albeit after some modification. In developing this framework, the authors drew from the existing literature to determine what should be its various elements, beginning with a review of concepts and definitions.

**Key concepts and related terms**

It should be readily apparent from an examination of ecotourism that the relationship between that activity and the environment in which it takes place is of critical importance. Ecotourism, more than any other form of tourism, is dependent upon the quality of the environment, and extra care needs to be taken by managers and developers of ecotourism destinations to ensure that the impacts from the activity are controlled and minimized. It is important to appreciate that ecotourism, however benign it may be, will still have some impacts on the environment, and therefore requires management and control just as any other form of tourism or other resource activity. As well, the amount of use is a critical parameter for ecotourism, as for any form of tourism.

Two key issues interrelate here. One is the problem of maintaining the quality and ecological integrity of the resource base in which ecotourism is being undertaken, to ensure the maintenance of the resource for its own sake and to ensure that it remains attractive to tourists and to other users also (including, of course, local residents). The second is the problem of maintaining the quality of the recreation experience for the ecotourists themselves, which is based not only on the quality of the natural environment but also on the levels and nature of the interaction between groups of users. Research over the last three decades, beginning with Lucas,\textsuperscript{21} has shown clearly that key factors which affect the quality of the experience for the user include the number and type of other users encountered, as well as the expectations and experience of the users themselves.

Initially the solution to these problems was sought in the concept of 'carrying capacity', that is, placing a limit on the number of users who would be allowed access to a resource, at or below the level at which they would create irreparable damage to the resource. It became accepted quickly, however, that the concept of carrying capacity in recreational and tourist contexts was not as simple as initially thought, and that the mix of users was as important as, or more so, the actual numbers of users in some situations.\textsuperscript{22} Stemming from this came the logical conclusion that the way in which the resource was managed was of at least equal significance to the above factors. Thus by the mid-1980s the concept of carrying capacity had moved from one of finding a limit on the number of users who would be allowed access to a resource, at or below the level at which they would create irreparable damage to the resource. It became accepted quickly, however, that the concept of carrying capacity in recreational and tourist contexts was not as simple as initially thought, and that the mix of users was as important as, or more so, the actual numbers of users in some situations.\textsuperscript{22} Stemming from this came the logical conclusion that the way in which the resource was managed was of at least equal significance to the above factors. Thus by the mid-1980s the concept of carrying capacity had moved from one of finding optimal numbers of users to one involving the management of resources, user expectations and preferences, and physical parameters of the resource.\textsuperscript{23}

Some key elements can be identified from the carrying capacity literature. First, that limits on numbers of users are of little value unless they are placed in the context of management objectives. Second, that it is generally accepted that there are a number of measures of user satisfaction for any area, rather than only one and, related to this, that user dissatisfaction may not be simply a mirror image of satisfaction. Third, that compatibility or tolerance of different user groups to one another varies with the nature of the resource and other elements, including
opportunities rather than identifying specific capacity limitations, the absence of such control (on levels, type and time of use in particular) overuse, misuse and abuse of the resource are likely to occur over time. If such problems continue, then the resource is likely to suffer irreparable damage to the point at which ecological integrity will be threatened.

'Control', therefore, becomes a key issue. In the context of parks and declared reserves, this remains an issue with regard to level of intervention, planning procedures, monitoring and enforcement, but the idea of control is normally accepted and established. In the case of many tourist resources and destinations, control is a major problem as there may be no specific agency which has control of the resources in question, or has a mandate for activities such as ecotourism. If numbers of tourists become excessive at a destination and the tourist experience declines, visitor numbers may decline because of the unattractive nature of the setting, but by this time it may be too late to restore the area to an attractive state.

**Management procedures and frameworks**

Over the last two decades a number of management procedures have been developed with particular reference to wilderness and natural areas to resolve the problems identified above. In general these frameworks have placed a focus upon recreation opportunities rather than identifying specific capacity limitations, although the issue of numbers of users, quality of experience and quality of environment underlie all of them. One of the first, and the most widely adopted framework was the Recreation Opportunity Spectrum (ROS) which attempts to incorporate relationships between setting, activities, user expectations and the role of management. This framework takes a behavioural approach, defining the recreational setting as the combination of physical, biological, social and managerial attributes. It establishes a spectrum of recreational settings which vary from pristine wilderness to high-density urban recreation. It utilizes six specific attributes to define the nature of the opportunities for recreation which are deemed possible within each setting: access, management, social interaction with other users, non-recreational resource uses, acceptability of impacts from visitor use, and acceptable levels of control of users.

The ROS has proved attractive to managers of recreational resources because it has a high degree of flexibility in ways in which recreational opportunities can be supplied by integrating the setting with visitor priorities and preferences. By incorporating the spectrum concept into management plans, specific sensitive areas can be identified and protected, and other settings more capable of withstanding heavier levels of use can be earmarked for more intensive forms of recreation.

A variation of the ROS concept, the Tourism Opportunity Spectrum (TOS) was developed by Butler and Waldbrook.13 This was created to adapt the ROS approach to a tourism context (tourism in the Canadian Arctic), and to provide a background and setting against which tourism development and change could occur. The purpose of the TOS and similar concepts is to provide a context and framework within which information and data can be examined prior to decision making in respect of the activities which should be allowed or prohibited, and the kind of facilities which should be developed. The availability of accurate and up-to-date data is of crucial importance to the successful application of such concepts and frameworks.

In the above spectrums, the emphasis is upon opportunities for recreation and tourism. It is also important to consider the effects of visitor use on the resources base, and approaches to managing both the resource base and the visitor. One attempt to solve some of the problems of identifying maximum use levels was the Limits of Acceptable Change (LAC) approach, proposed by Stankey et al.25 This concept accepted that, as the solutions to the issues of carrying capacity were likely to have to be found and instituted by resource managers, a process to assist them to identify acceptable use levels was required. The LAC concept places an emphasis on positive planning and management pre-empting inappropriate or over-use, thus avoiding the need for remedial or after-the-fact management actions. However, it places a considerable responsibility on managers, with no guarantee that managerial values and decision will be in line with user preferences, particularly as both of these elements are dynamic.26

Two other management concepts which have some relevance to ecotourism areas are the Visitor Activity Management Process (VAMP)27 and the Visitor Impact Management Process (VIMP).28 The VAMP process was developed by the Canadian Parks Service (CPS) for use in National Parks, and is incorporated into the CPS Natural Resources Management Planning Process. It is aimed at producing management decisions which are based on both ecological data and social information, and is, in reality, a generic planning model, incorporating objectives, terms of reference, analysis of data, options, recommendations and implementation.

Its counterpart, VIMP, was developed for use within the US National Parks, with the aim of
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**Figure 1 Components of the Ecotourism Opportunity Spectrum (ECOS)**

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>Existing Infrastructure</th>
<th>Acceptance of Visitor Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult</td>
<td>Moderate &amp; easy</td>
<td>none</td>
</tr>
<tr>
<td>Access System</td>
<td>waterways, trails, roads</td>
<td>visitor's degree of acceptance</td>
</tr>
<tr>
<td>Transportation</td>
<td>planes, trains, roads</td>
<td>low to high degree of acceptance</td>
</tr>
<tr>
<td>Marketplace</td>
<td>personal experience</td>
<td>low to high degree of acceptance</td>
</tr>
<tr>
<td>Information Channels</td>
<td>advertisement</td>
<td>low to high degree of acceptance</td>
</tr>
<tr>
<td>Means of Conveyance</td>
<td>foot, canoe, horse</td>
<td>low to high degree of acceptance</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>OTHER RESOURCE-RELATED ACTIVITIES</th>
<th>ATTRACTIONS OFFERED</th>
<th>EXISTING INFRASTRUCTURE</th>
<th>SOCIAL INTERACTION</th>
<th>LEVEL OF SKILL &amp; KNOWLEDGE</th>
<th>ACCEPTANCE OF VISITOR IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td>more oriented to natural environment</td>
<td>no development</td>
<td>avoid or little contact</td>
<td>professional and extensive</td>
<td>none</td>
</tr>
<tr>
<td>Visibility</td>
<td>...depends on nature and extent...</td>
<td>development only in...</td>
<td>frequent contact</td>
<td>and expensive</td>
<td>low to moderate...</td>
</tr>
<tr>
<td>EXISTING INFRASTRUCTURE (continued)</td>
<td>...area...</td>
<td>moderate development...</td>
<td>some interpretation</td>
<td>extensive to limited...</td>
<td>...high degree...</td>
</tr>
<tr>
<td>Complexity</td>
<td>not complex...</td>
<td>level of complexity increasing...</td>
<td>some interpretation</td>
<td>and expensive</td>
<td>high degree...</td>
</tr>
<tr>
<td>Facilities</td>
<td>none...</td>
<td>search &amp; rescue...</td>
<td>some interpretation</td>
<td>and expensive</td>
<td>moderate to strict control...</td>
</tr>
<tr>
<td>tract</td>
<td></td>
<td>roads...</td>
<td>&amp; use of basic services</td>
<td>and expensive</td>
<td>moderate to strict control...</td>
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<tr>
<td>Social</td>
<td></td>
<td></td>
<td></td>
<td>and expensive</td>
<td>moderate to strict control...</td>
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Development of the Ecotourism Opportunity Spectrum (ECOS)

The ECOS model was developed to provide a conceptual management approach for ecotourism destinations, but it is acknowledged that the approach is evolutionary rather than revolutionary, that is, it builds on models already present within the literature. Figure 1 illustrates eight factors viewed as important to ecotourism: (1) accessibility, (2) relationship between ecotourism and other resource uses, (3) attractions in a region, (4) presence of existing tourism infrastructure, (5) level of user skill and knowledge required, (6) level of social interaction, (7) degree of acceptance of impacts and control over level of use, and (8) type of management needed to ensure the viability of areas on a long-term basis. The first seven factors are set against a spectrum of ecotourism opportunities which ranges from eco-specialists to eco-generalists. The spectrum suggested by Fernie 29 which has been adopted for the ECOS framework is very similar to other classifications of ecotourism 30 including the "hard" and "soft" categorization by Wilson and Laarman, 15 Laarman and Perdue 31 Fennell and Eagles, 3 which was based on the interests of the tourist and the physical rigour of the experience itself. The eighth factor links decision makers and stakeholder groups that may be involved in managing a region for ecotourism.

According to Fernie 29 (p 4), 'eco-specialists' may be perceived as those ecotourists who participate as individuals or in small groups, immersing themselves in the local natural and cultural environment, requiring minimal infrastructure and generally having minimal environmental impact. They may, however, desire and obtain close and lengthy contact with local inhabitants, and individually have considerable social and cultural impacts on such populations by entering the "backstage" of the cultures visited. They often have specialized knowledge and obtain a high skill level to participate in activities. In comparison, 'eco-generalists' are usually involved in larger groups, often organized in ecotourism tour packages, prefer a certain level of comfort which requires a tourism infrastructure and, as a result, tend to make greater demands on the host culture and environment. The intermediate forms of ecotourism are similar to the 'mainstream nature' type suggested reducing or controlling negative effects of use of parks areas. It focuses on identifying problems and unsuitable conditions, on identifying likely causal factors resulting in undesired impacts, and on identification of management strategies for mitigating or preventing unacceptable effects of use. It has proved reasonably effective as a management strategy where a system of control, data collection and analysis and management is in place.
by Ziffer in her typology of ecotourism, which ranged from 'hard-core' to casual-nature' types of experience. This intermediate form of ecotourism is seen developing as visitor patterns are established, numbers increase, expectations change, and awareness of the destination area and the attractions it offers develops. Intermediate ecotourists generally travel in small groups rather than individually, use basic forms of transportation and local infrastructure and services, and rely on prearranged facilities and touring services.

Access

Access within the ECOS framework includes the level of difficulty in travelling to an area, the nature of the access system in place in the area, the type of transportation used to travel to and within areas, and the channels of information available to promote ecotourism within the region. In terms of difficulty, this may range across the ecotourism spectrum from left to right, with access classified as being arduous and hard for eco-specialists, difficult and vigorous for the intermediate type and moderate and easy for eco-generalists. It is expected that most ecotourists would use some form of mechanized transportation (e.g. car, train, float plane) to reach an access point to the ecotourism region. Some specialists may prefer to use non-motorized means to reach access points, travelling along waterways or trails from communities located close to access and egress points. Within an ecotourism area, it would be expected that the specialist would prefer to use natural routeways, such as rivers or pathways created by wildlife. Generalists, on the other hand, may be viewed as preferring an access system comprising both paved and gravel roads. The intermediate type, while accepting the existing road network, would be more willing to use trails created for other purposes such as resource-related activities which may be present in an area.

The market-place would differentiate ecotourists. The eco-specialist is perceived as preferring to travel alone, often gaining knowledge about the opportunities an area affords for ecotourism based on personal experience of travelling through an area previously or based on information obtained from contacts who have visited the region. In contrast, the eco-generalist prefers to travel as part of an organized tour, set up by companies that specialize in catering to ecotourism. This market is therefore diverse but not as general as that perceived for mass tourism. The intermediate form of ecotourist may be identified and catered for by local tourism operators who own camps and outposts within an ecotourism area and provide guides who accompany tours. The information channel used may include word of mouth of previous users, or advertisements that describe the facilities and operations available within the ecotourism destination area.

The last aspect of access involves the means of conveyance used. It is expected that the eco-specialist would select non-mechanized forms of transportation to limit the impact on the environment. Motorized forms of transportation would be more acceptable for the other types of ecotourism, with the use of motorized forms of transportation being reduced as one moves closer to the left of the ecotourism spectrum.

Other resource-related activities

Butler (p 224) stated that in the context of the integration of resource uses, complementarity was the highest goal, implying that 'each use or activity is not only not in conflict or competition with the others, but by their presence and interaction add something to each other'. A position of compromise may be viewed as where compatibility exists between users in terms of neither use nor activity detracting from or harming the other. The problem of ensuring compatibility between uses is compounded by the fact that 'the relationships between different uses may be extremely dynamic and subject to sudden and significant changes' (p 226). At the opposite end of a spectrum of integration is the condition of competitiveness, where incompatibility exists (the situation in which two or more uses or activities cannot exist in the same area at the same time using the same resource).

The degree to which ecotourism should be compatible with other resources users and other tourism users is an important part of the definition for ecotourism within any area. The presence of other resource users and their relationship with ecotourism is treated as an important factor within the ECOS framework, and it is unlikely that a position of complementarity can be reached in many cases where there is a range of uses. Often, compatibility is a possible goal but one which would be dependent on the nature and extent of ecotourism promoted within a region and the nature of the other uses. The level of compatibility would be less for eco-specialists as they are perceived to avoid and to be less accepting of other activities in an area, particularly when those activities may detract from the experience they are seeking. The presence of logging, trapping or mining activities, for example, would impact negatively on an eco-specialist's experience, and would be avoided. The eco-generalist's perception of ecotourism may be such that the level of compatibility between uses is higher, but there may still be conflicts between specific resource-related uses and ecotourism activities and experiences within areas. Where a cultural experience is an anticipated part of the ecotourism experience in a particular area, for example trekking in the Himalayas, all participants may view landscape elements, such as those created by traditional agricultu-
ral practices, as enhancing rather than detracting from their overall experience.

**Attractions offered**

This element represents the first departure from the factors developed in the ROS and TOS frameworks. Attractions are taken to mean the types of experience an area may offer given the characteristics of the setting. The inclusion of attractions within the ECOS framework was considered to be important as it is the nature of the experiences which characterizes this form of tourism.

Fernie explored how the type of previous ecotourism experiences influenced the perception of ecotourism. She concluded that an ecotourist more orientated to the natural environment may not perceive cultural-urban settings as being important or appropriate for ecotourism, and that the type of past ecotourism experiences may also influence perceptions of specific settings as acceptable destinations for ecotourism. In terms of the ecotourism spectrum, the eco-specialist can be perceived to be most orientated to the natural environment, focusing more on exploring, viewing and admiring vegetation and diversity of wildlife, paying less attention to the cultural aspects found within the region.

In contrast, the eco-generalist is more likely to enjoy attractions of the cultural environment equally with those of the natural environment. It should be noted, however, that the attraction of viewing elements of the natural environment is still of major importance to eco-generalists, and a major part of the experience may often be the chance to view wildlife seldom seen elsewhere.

**Existing infrastructure**

This refers to what is labelled 'tourism plant' in TOS. Within the context of ecotourism, the infrastructure differs markedly from that found in other tourism areas, which often includes the provision of shopping and entertainment facilities. Existing infrastructure is used in place of tourism plant as the emphasis is primarily on provision of suitable accommodation for ecotourists along with minor modification of existing infrastructure to conform to meet other essential needs of the ecotourists themselves. Modifications of existing infrastructure for elements such as water, power and sewage will vary in terms of extent, scale, visibility, complexity and the number as well as the type of facilities involved, but for eco-specialists would be minimal and not irreversible.

Eco-generalists may accept more extensive development that suits their wider preferences, while those in an intermediate position may accept limited developments in isolated areas. As for visibility, a range from none to obvious changes would result as one moves from left to right across the ecotourism spectrum. The aspect of complexity anticipates eco-specialists preferring simple development with the level of complexity increasing for both the intermediate type and eco-generalists. With respect to the last factor, facilities, eco-specialists do not desire formal facilities, while the intermediate type may accept rustic accommodations (e.g. camp cabins, outpost huts) along with services such as search and rescue operations and the modification and creation of new trails. In contrast, eco-generalists may desire a minimum level of comfort and convenience, such as a hotel or cottage with modern conveniences.

**Social interaction**

Over the past few decades a substantial amount of research has focused on tourist interaction, including that with the host (local population) and with other guests (other tourists). The extent to which such interaction occurs has important implications for the opportunities an area may offer as it brings into play the variable of experiential or social carrying capacity and how this influences the level of satisfaction of tourists. In recent years the level of satisfaction (which may represent a measure of the acceptable level of interaction), has been expressed in terms of norms. Social interaction beyond norms or expected encounter levels may result in changes in the experience obtained within a region, and, in turn, impact on the opportunities that a region may present to tourists.

Much of the research undertaken on norms has been focused either on water-based recreation or on recreational activities undertaken within backcountry wilderness-type settings. While recreation rather than tourism has been the focus of such research, the types of activities which have been considered are common to ecotourism destinations, and the use of norms may be an appropriate approach to indicate the level of social interaction acceptable.

In terms of interacting with other ecotourists, the level of contact would increase as one moves from left to right across the ecotourism spectrum. Eco-specialists would tend to avoid contact with other tourists, focusing on their desire to explore the natural environment and view wildlife present in a state of relative isolation. In contrast, the intermediate type of ecotourist would be in contact with others as they would be travelling in a group which may include the use of a guide. The size of such groups would normally be small as too many people would detract from the level of satisfaction desired from the trip. In contrast, eco-generalists would normally traverse a region as part of a larger organized party using a guide, and accept the presence of other tourists and even other organized groups. Their overall ecotourist experience, even though it often may represent only a small part of their overall vacation, might still be negatively affected if they visited locations at which the level of use was
impacting visibly on the natural environment and reducing the quality of the experience.

The extent to which ecotourists use the services and facilities present in a region influences how much interaction occurs between guest and host. The type of experience itself, whether the interest is much interaction occurs between guest and host. The knowledge and skill level of the intermediate group will range from limited to extensive, and their trip duration and prior knowledge about the region may determine whether or not they will use a guide. Eco-generalists will probably have minimal skills and knowledge about an area and its ecology or culture, the visit will generally be of a short duration (weekend to day trips), in an organized party, following a specific itinerary, with accommodation provided and a guide present to offer interpretation.

Acceptance of visitor impacts
This factor involves the degree and prevalence of impact and the need for control to be exercised over impacts that occur. As numbers of users increase across the ecotourism spectrum from left to right, the range and severity of impact they cause will also increase. It should be noted that eco-specialists may have greater impacts than is often suggested, as they frequently enter less accessible areas which may be highly sensitive to human intrusion. In terms of prevalence, impacts by eco-specialists may be minimal or uncommon. In contrast, the incremental impacts of larger numbers of eco-generalists will probably be confined to specific trails and viewing areas that are heavily used, but not be evident away from these areas, as the majority of this group will keep to trails and pathways.

When level of control over use is considered, for the most part, the eco-specialist normally leaves only a limited impact on the environment and little direct control may be needed. Such users often find unacceptable the impacts generated by other users, and seek out new experiences and opportunities in areas not yet considered ecotourism destinations. Eco-specialists may be aware of the impacts occurring from ecotourism in a region, and be willing to accept moderate to strict control over the number of groups permitted, their size and the types of activities they are permitted to undertake. However, impacts may still be considerable and prevalent.

Acceptance of a management regime
In developing the TOS framework, Butler and Waldbrook alluded to the problems of attempting to control tourism development and identifying responsibility for this control, problems which apply equally in the case of ecotourism. Successful or sustainable ecotourism development may be regarded as where the product (opportunity and experience) can be maintained over the long term ensuring the viability of the resource base on which it is based. It is equally important that ecotourism in an area be compatible with established local activities. To attempt to introduce or impose ecotourism into an area or a community with which it is incompatible or in which it is unwanted should clearly be unacceptable. Part or all of the purpose of establishing ecotourism in an area is normally to improve the economic and social viability of the local communities. If ecotourism is not appropriate to or compatible with established local activities and cultural beliefs, then it will not achieve goals established for it, will not be accepted locally or be sustainable, and may even be actively opposed or undermined.

Many of the factors within the ECOS framework need to be controlled through management. Figure 2 shows the components of a management regime in which it is recognized that decision making is ultimately a political process. However, as the model shows, the decisions on how ecotourism should be managed in a region, especially where other resource-based uses exist, have to involve all of the various stakeholders present in the area. This will include the tourism industry, resource-based industries, local communities and other public and private agencies. It has to be recognized that in most communities there is rarely complete agreement on any issue, and that within the groups noted above there also will almost certainly be divergence of opinion about development.

Conclusion
This paper has proposed a framework by which opportunities for ecotourism may be identified and located. An obvious next step is the application of
the framework within a destination area seeking to promote ecotourism. Of the eight elements that comprise the ECOS framework, the first four can be determined from on-site study. The remaining factors, excluding the last one concerning an appropriate management regime, require input from ecotourists themselves, preferably from those visitors who have experience in the region under consideration. The eighth element requires dialogue with all the groups and interests involved, both on an individual basis and collectively in order to reach areas of consensus over how ecotourism could be promoted and who should be responsible for overseeing the management of ecotourism within the region. To assist with these tasks, a number of conceptual frameworks have appeared in the ecotourism literature in the past few years which have the potential to be applied to the development of ecotourism.
They have addressed non-consumptive wildlife-orientated recreation as well as the function of the resource tour (group led by a competent guide), and its relationship with and impact on the visitors and the service industry.

Other researchers have commented on how tourism within an area may change over time, noting possible stages in the process of tourism development. Understanding that the type of ecotourist, and hence ecotourism itself, may shift in the early stages of an area’s development away from catering for eco-specialists to serving an eco-generalist population has a bearing on the type of opportunities for ecotourism which an area may create. As a result, marketing may come to play a more significant role in shaping ecotourism opportunities in regions. If marketing is successful in attracting and maintaining the desired and appropriate type of ecotourist to a destination, then it could reduce the pressure on the area, which a set of undifferentiated users would exert. The need for strict management and control over the types of ecotourism activities that could be undertaken could therefore be reduced. If ecotourism regions are to be developed, then the specific developments should be based on guidelines which evaluate the relative priority of ecotourism activities and opportunities compared with other resource uses and community needs, and assess the significance of their environmental and social impacts, and marketing efforts should be in line with such guidelines.

It is important, however, to be able to apply a management framework and management principles to the development of ecotourism destinations. Ecotourism development is often different from many other forms of tourism development in that it is frequently small scale, environmentally responsible and selectively marketed, at least in its early stages. It also occurs mostly in remoter areas. The potential for public sector intervention, control and management is much higher than in the case of a multinational large-scale mass tourism development in an established urban area, for example. Unlike many forms of tourism which take place in urban or developed areas on private land with no public sector management role possible, much of the ecotourism development occurs on public lands and the potential for the establishment of a management regime normally exists. As noted earlier in the paper, ecotourism is often ‘sold’ as beneficial and harmless to destination areas for a variety of motives ranging from ignorance to uncaring exploitation. It is up to decision makers in these areas to ensure an appropriate management framework is in place before development occurs. The framework proposed in this paper is a model, and it is recognized that any model, by nature, includes a considerable degree of generality. Divergent views can be expected to change over time in many directions, just as the type of tourism will also change. Reality is always more complex than any model can portray. That, however, should not prevent the introduction of management controls, particularly where vulnerable physical and social communities may be placed at risk. The fact that ecotourism development tends to occur in the more remote and marginal areas of the world, often in fragile and endangered ecological and human communities, makes the need for such appropriate management all the more critical.

References

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