



Towards a conceptual framework for wildlife tourism

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Abstract

Tourism based on interactions with wildlife is increasing in popularity across the world. A conceptual framework is presented which begins to classify the major components of wildlife tourism/recreation and indicates the roles of and the relationship between these components. It is suggested that the values of conservation, animal welfare, visitor satisfaction, and profitability are often in conflict in wildlife tourism (WT) and trade-offs are necessary. While there is a range of factors involved, the most germane are impact on the environment and quality of the experience. Sustainable tourism depends on encouraging the desirable and discouraging the undesirable. Such mechanisms are discussed. © 2000 Elsevier Science Ltd. All rights reserved.

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1. Introduction

Growing concern for conservation and the well-being of the environment over the past two decades has brought about a closer relationship between the environment and tourism. This relationship has incorporated several phases over the past four decades. These include it being viewed as one of working together (Zierer, 1952), disharmony and opposition (Akoglu, 1971), with symbiotic possibilities (Romeril, 1985), and as an integrated whole (Dowling, 1992). From the tourists' point of view, there is a rapidly increasing desire for interaction with the natural environment in a range of ways (Jenner & Smith, 1992). This general interest in nature and nature-based experiences is reflected in an increasing demand to experience these, and increasing value being placed on, animals in the wild, as opposed to those in captive or semi-captive situations (Gauthier, 1993).

People have always been interested in animals, as illustrated by the fact that domestic pets have been the companions of humans for millennia. However, the non-consumptive side of human relations with wildlife has until recently, received much less attention than wildlife as a source of food, trophies, fabric and other resources.

The experiencing of wildlife by tourists has become the business of wildlife tourism (WT). Essentially, this is

about increasing the probability of positive encounters with wildlife for visitors whilst protecting the wildlife resource. There is a wide range of species, habitats, methods of observing, tricks for improving the encounters, and levels of interpretation involved. Some of these are more desirable than others, both from the observer's and/or animal's point of view.

One key to the effective management of wildlife is an understanding of the public's relationship to this resource. Aldo Leopold (1966) remarked: "The problem of game management is not how we shall handle the deer — the real problem is one of human management. Wildlife management is comparatively easy; human management difficult."

We propose that wildlife tourism (WT) lacks important information on the needs, desires and opinions of the public. There is a need to know just how vital wildlife is to human welfare and to identify the social and economic benefit derived from this use of wildlife resources. Indeed, Duffus and Deardon (1993) suggest: "The importance of doing so is to reinforce the idea that both human and ecological dimensions must be understood, and balanced, in the planning stages for management. To ignore either is to invite conflict that will result in the degradation of the resource base... and/or degradation of the recreational experience."

We present a conceptual framework to classify the major components of wildlife tourism/recreation, and indicates the role of and the relationship between these

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components. The values of conservation, animal welfare, visitor satisfaction, and economic profitability are often in conflict in WT and tradeoffs are necessary, so some guiding principles for mitigating the conflicts are required.

Conservation is only as strong as its community support. The increase in the proportion of the population that is urban and remote from the natural world is driving the increasing demand for WT. It has great potential importance as a tool for conservation. If done well, WT builds support for conservation.

2. Wildlife tourism (WT)

Tourism based upon wildlife has become the leading foreign exchange earner in several countries. Fillion, Foley and Jaquemot (1992) and The Ecotourism Society (1998) outline the magnitude of this market. They both suggest that between 40 and 60 per cent of international tourists were nature tourists, and that 20–40 per cent of these were wildlife-related tourists. The second report further suggests that in 1994 there were between 106 million and 211 million wildlife-related tourists worldwide. They define nature tourists as people visiting a destination to experience and enjoy nature, and wildlife-related visitors as tourists visiting a destination to observe wildlife. The reports do not suggest how much of a tourist's activity time was related to wildlife. It therefore seems useful to create a framework that shows the relationship between WT and other forms of nature-based tourism.

A focus on WT has become important because some of the issues peculiar to wildlife are obscured in the more broadly based discussion of nature-based tourism or the more tightly defined ecotourism (which includes requirements for education, conservation, and respect of other cultures). These in turn overlap with consumptive uses of wildlife, such as hunting and fishing, some of which is in a tourism context. Rural tourism is concerned with broader issues of regional development in a farmed landscape which may have substantial natural areas.

There is a large body of research about human relations with animals. The issues include the role of pets as therapy, animal rights, animal husbandry and aspects of wildlife management. This literature has some relevance to wildlife-based tourism. Thus WT may be defined as an area of overlap between nature-based tourism, ecotourism, consumptive use of wildlife, rural tourism, and human relations with animals. Thus it inherits traditions which include aspects of ecology, psychology, physiology, ethics and other aspects of social science research, including tourism (see Fig. 1).

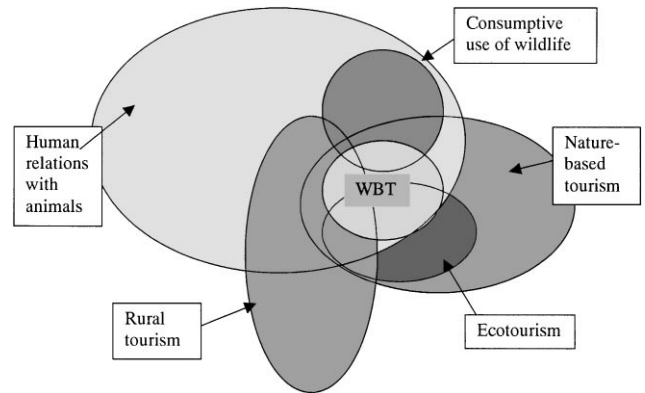


Fig. 1. Wildlife-based tourism.

3. Current research

The growth and development of a recreational relationship with wildlife is based on several developing issues (Duffus & Dearden, 1993). The first is a growing societal re-evaluation of wildlife and of nature in general, and its place in society. The second issue is its part of the growth trend in nature and wildlife-related tourism, and the third issue pertains to society's changing attitudes to particular species as wildlife education becomes more accessible and entertaining.

The traditional view of research in the area has been to focus research on either:

1. *Effects on the tourist of the experience*, with measurement of enjoyment/satisfaction and behaviour lifestyle change (see Kellert, 1980, 1989; Berry & Kellert, 1980 or Bitgood, 1987).
2. *Effect on the natural environment*, including both negative (actions to minimise disturbance to the environment) and positive (actions that contribute to the health of the environment); (For a review see Dalal-Clayton, Leader-Williams & Roe, 1997).
3. *Carrying capacity* as a means of setting numbers of visitors using a site. (see Sharkey, 1970; Wagar, 1964 or Williams & Gill, 1991).

Lately there has been a willingness to go beyond these traditional confines. Current approaches to the management of tourists' interactions with wildlife have fallen into three broad categories.

1. *Identification of participants* and constituent parts of the wildlife tourism process: Who is involved and affected by the process, and what makes up a wildlife tourism attraction as opposed to other forms of activity. Examination of this area also allows us to consider the use of wildlife by humans as either consumptive or non-consumptive. (i.e. Duffus & Dearden, 1990; Orams, 1994 or Johnston, 1998).

2. *Satisfaction management*: This area examines both the demand side (i.e. who desires interaction, where and under what conditions does the interaction take place, and what do the participants expect out of the encounter), and the supply side (i.e. information regarding resources, social needs and managerial conditions which facilitate realisations of desires of the participant), (see Blamey & Hatch, 1996; Cumbow, Jurowski, Noe & Uysal, 1996).
3. *Impact and trade-off analysis*, which includes social and biological impacts resulting from development and preservation strategies (see Tisdell, 1993; Decker & Enck, 1997 or Bright, Cordell & Tarrant, 1997).

4. Essential characteristics of wildlife tourism

Instead of the traditional approach outlined above, we suggest that considerations of wildlife–tourism interactions would benefit from placement into a systems framework. Others have created frameworks for examination of these interactions. Duffus and Dearden (1990) suggest a conceptual framework for non-consumptive recreational use of wildlife. Their model uses an interaction between ecology, the recreational user and the historical context of the human–wildlife relationship. They draw on Bryan’s (1977) Leisure Specialisation Continuum, Butler’s (1980) model of the evolution of tourist places, and Stankey, Cole, Lucas, Peterson, Frissell and Washburne (1985) concept of limits of acceptable change. While this ground-breaking work discussed differences between the generalist and the specialist user, and suggested some management strategies, the paper does not attempt to analyse the human–wildlife interaction, or motivations of the tourist. Indeed, they suggest (p. 226) “Increased knowledge of the user in terms of expectation, motivation and satisfaction will allow more precise manipulation of the human component . . . to maintain the ultimate proviso of protection of wildlife”.

Orams (1996) takes a different approach by viewing the range of opportunities in a “Spectrum of Tourist–Wildlife Interaction Opportunities”. Orams divides his model into interaction opportunities (the way a tourist might meet an animal in a wild, semi-captive or captive state), management strategy options (such as physical or economic restraint and educational programs) and outcome indicators for both the tourist and the wildlife.

The approach taken in this paper takes the discussion and analysis further by firstly identifying additional factors that affect wildlife tourism and the tourist. From these, the combination of circumstances that give the best possible outcome in terms of tourist satisfaction and protection of wildlife resources can be determined. Our approach also helps identify leverage points that allow managers and operators to improve the quality of the

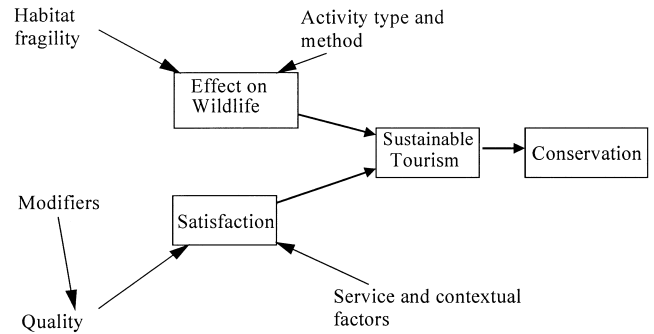


Fig. 2. Conceptual framework of non-consumptive wildlife-oriented recreation and tourism. Main categories of influences in wildlife-based tourism framework.

WT experience while ensuring protection of the wildlife resource.

In order to examine how to make WT a better experience for the tourist while minimising the effect on the animals and habitat, it is important to examine its component parts. Hammit, Dulin and Wells (1993) and others have measured some of the dimensions of satisfaction in wildlife viewing, and our approach adds to these elements. Fig. 2 shows the main categories of influences on WT, and the factors and modifiers that control them.

It suggests the principal factors of “effect on wildlife” and “satisfaction” lead to “sustainable tourism” and ultimately serve the interests of conservation. It also suggests that “habitat fragility” and the type and method of activity engaged in by the tourist influence the effect on wildlife. Tourist satisfaction is affected by both tangible and intangible factors (Braithwaite, Reynolds & Pongracz, 1996). These tangible factors include service and contextual factors such as comfort and design of facilities, the number of people involved and the weather. The intangible quality modifiers include the duration of the event, the exhilaration felt and the authenticity of the experience.

5. The WT product

A perusal of brochures about a wide range of WT products suggests that most can be placed in one of seven categories.

Nature-based tourism with wildlife component: Many nature-based tours show wildlife as a key but incidental part of the product.

Locations with good wildlife opportunities: Some accommodation establishments are located in close proximity to wildlife-rich habitat. They may even contrive to attract wildlife through provision of food or other enticement.

Artificial attractions based on wildlife: Some species are amenable to forming the basis of a man-made attraction where the species is kept in captivity, and may even be

trained. Some of these attractions may have detrimental effects on the animals.

Specialist animal watching: Such tours cater for specialist interests in a species or group of species. Bird watching is a good example.

Habitat specific tours: Such tours are based on a habitat rich in wildlife and usually amenable to being accessed by a specialised vehicle or vessel.

Thrill-offering tours: The basis of these is the exhibition of a dangerous or large species enticed to engage in spectacular behaviour in the wild by the operator.

Hunting/fishing tours: This consumptive use of wildlife may be in natural habitat, semi-captive or farmed conditions. This may involve killing the animal or releasing with an often frequent high rate of mortality.

The list above illustrates the wide and diverse range of interactions which are available under the banner of WT.

6. Conditions favouring WT

Apart from the business-related parameters, some nature-based criteria need to be considered for a WT operation to be successful from a tourist's perspective.

6.1. Species

In a report prepared for Alberta Tourism, Prism Environmental Consulting Services (1988) suggested that successful WBT incorporated the following points in relation to the species observed.

Animals or birds should display most of the following characteristics. They should be:

- predicable in activity or location;
- approachable;
- readily viewable (open habitats);
- tolerant of human intrusion (for some time of the year);
- possess elements of rarity or local super abundance;
- diurnal activity pattern.

However, it is not essential for a species to display all of these characteristics. For example, in Australia some operators display nocturnal species using spotlighting tours.

6.2. Habitats

Habitats might also be considered in the same way. The most desirable habitats are those which:

- support a number of watchable and interesting species;
- are open and allow good visibility of animals;
- have cover which obscures the observers' approach from animals;
- have features which concentrate animal activity at times (e.g. waterholes);

- allow the protection and mobility offered by transport such as vehicles or boats.

Benefield, Bitgood, Landers and Patterson (1986) in discussing visitor behaviour, also suggest that the power to 'hold' visitors is increased by the:

- motion of the animal;
- size;
- visitor participation;
- presence of an infant;
- ease of viewability;
- visitors perceptions of the species characteristics (i.e. rarity value, 'cuteness').

7. Motivations of participants

From the wide range of types of product available it is evident that there is a wide range of participants, in age, socio-economic background and motivation. It is clear that participants in wildlife tourism approach interactions from a variety of life backgrounds and motivations. Any examination of the components of WT must take customer motivations and attitudes into account. Researchers such as Eagles (1991), Moscardo, Pearce and Haxton (1998), and Beaumont (1998) and others have recognised this important factor. Muloin (1998) goes further and suggests not only the motivations but also the psychological benefits for a particular sector of WT. A 1990 report for Alberta Tourism (HLA, Gaia and Cottonwood Consultants, 1990) suggested that people involved in consumptive wildlife use were mainly male (90 per cent) and few held degrees (5.6 per cent), while in non-consumptive users the sexes were evenly balanced and 60 per cent held degrees. Kellert (1980) has suggested a typology which reflects fundamental differences in values. An individual may encompass more than one category. That is, the same person may express the characteristics of different categories at different times and under different circumstances.

Naturalistic: Primary interest and affection for wildlife and outdoors.

Ecologistic: Primary concern for environment as a wildlife-habitat system.

Humanistic: Primary interest and strong affection for individual animals, mainly pets.

Moralistic: Primary concern for the right and wrong treatment of animals, especially cruelty.

Scientistic: Primary interest in physical attributes and biological functioning of animals.

Aesthetic: Primary interest in artistic and symbolic characteristics of animals.

Utilitarian: Primary concern for practical and material value of animals or habitat.

Dominionistic: Primary interest in mastery and control of animals, typically in sporting situations.

Negativistic: Primarily active avoidance of animals due to indifference, dislike or fear.

Kellert (1980) further suggests that members of the general public tend to be humanistic and moralistic, and that wildlife managers tend to be ecologicistic, scientific and utilitarian. Such differences are likely to be the basis of tensions between many managers of the WT experience and users of that experience.

8. Categories of impact on wildlife

There are many classifications of impacts on wildlife by recreational and tourism activities. For example, Knight and Cole (1995) list four broad causes of impacts; harvest, habitat modification, pollution and disturbance. They then specify a hierarchy of immediate responses, long-term effects on individual animals, species populations and animal communities. For the present purposes, we have produced an expanded set of categories.

Harvest/death: Activities like hunting and fishing cause the immediate death of some animals. Death may also be caused by collision with a vehicle or similar.

Clearing of habitat: This is the first of four habitat modification factors. Fairly obviously, it deals with complete or near-complete removal of the native ecosystem.

Changed plant composition: This is usually a mixture of loss of native plant species and the invasion by some exotic plant species. The net result is usually a loss of resources used by the native wildlife. New resources attractive to exotic fauna may also occur.

Reduced plant production: This impact is a form of reduced resource availability. The production of new growth, the level of flowering and fruiting may be diminished. Trampling for example may change localised hydrology through compaction of the soil. Wave action from boats is another example. It may cause salt intrusion which impacts on non-salt-tolerant communities.

Changed plant structure: Thinning of trees, mowing, changing fire regimes, are all intentional or unintentional management actions which can change the structure of the plant communities and thereby alters its attractiveness to native wildlife.

Pollution: The introduction of harmful concentrations of chemicals into animal habitat. Such by-products of tourism and recreation may cause death or reduce the health of the animal.

Animal emigration: This and following animal disturbance factors are commonly the result of direct disturbance of the animals, but it should be noted that the same effect can be produced by habitat modification or pollution. Basically animals can leave an area for many reasons. Sometimes emigration is a prelude to mortality in that they do not find somewhere else suitable.

Reduced animal production and reproduction: Animals generally only dedicate resources to breeding when they

are in good condition. If tourism activities decrease the feeding time and/or increase the energy expenditure due to disturbance from perceived danger, the condition of animals is likely to deteriorate, causing a decline in reproductive success.

Habituation: This is an animal learning not to respond to stimuli. It increases the ease of observation of animals by making them unnaturally tame to approach by humans and is thus may be encouraged by WT managers. The learning process is, however, also a stress in that feeding time is lost and energy is expended in fleeing. Management of the process of habituation can be an important issue.

Animal dietary distortion: The feeding of animals by visitors may produce an imbalanced diet with vitamin and mineral deficiencies decreasing the vitality and survival of animals.

Stereotyped behaviour: Animals in captivity can develop neurotic behaviour such as pacing. Presumably under less extreme situations, there are more subtle forms of modified behaviour.

Aberrant social behaviour: If the frequency of encounter between animals is increased by interaction with humans, this can have negative effects. When animals are attracted to an artificial food source, for example, the rate of agonistic behaviour can increase to artificially high levels with consequent loss of condition and survival.

Increased predation: Disturbance of breeding animals can increase the risk of discovery of young by predators. For example, this is often seen at bird rookeries.

Modification of activity patterns: The activity patterns of animals are generally a compromise between the need for feeding and avoiding predation. It is well known the hunting pressure can cause animals to become more nocturnal, so presumably excessive human contacts can do the same thing.

Altered community structure: If species leave an area or die out, then inevitably the species composition changes. This may have impacts on the remaining species. It may facilitate or allow exotic animal species to establish.

Fig. 3 shows the inter-relationships between human impacts on animals and habitat.

9. The wildlife tourism experience

9.1. Richness/intensity

Six quality factors are suggested to be intrinsic to the situation and capture the essence of quality and richness of the WT encounter for the person experiencing it. Four of these are general to all tourism experiences, and two are specific to WT.

Authenticity has been widely used as an estimate of the “honesty” of the attraction. The degree of natural behaviour exhibited by the fauna, and the environment which it

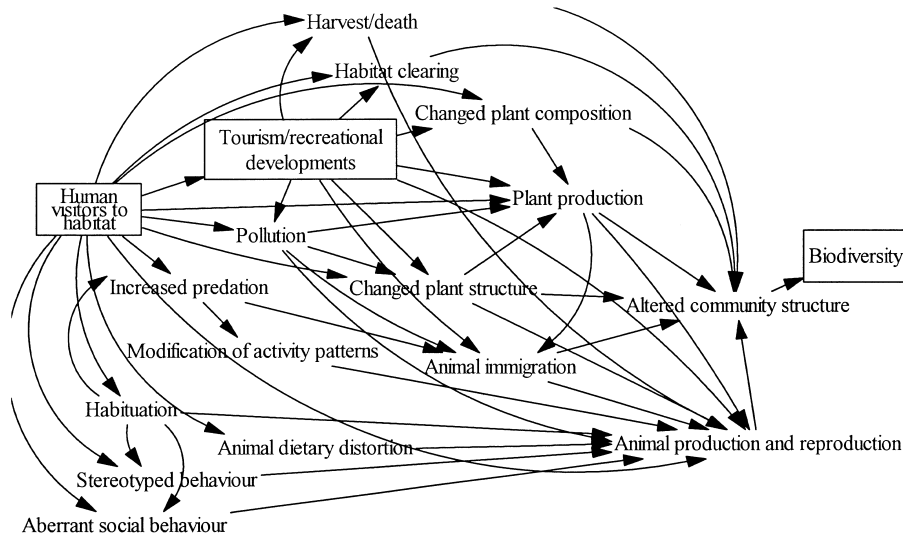


Fig. 3. Diagram showing inter-relationships between impacts of tourism and recreational activities.

is viewed in. Authenticity will not be perceived not be high if the experience is obviously contrived (MacCannell, 1973).

Intensity refers to the excitement generated by an experience. Other words that capture this concept are enthrallment, and for some the feeling may be an adrenalin rush. (Braithwaite & Reynolds, 1996).

Uniqueness of the experience is the sense of the experience being special and unusual and therefore the participant being privileged.

Duration refers to the length of exposure to the stimuli. Up to a certain point the experience is heightened. Beyond this point the visitor is saturated with the particular experience.

The following two attributes are specific to WT.

Species popularity is driven by a range of factors, which include physical attractiveness, its size, danger and drama associated with the species and the publicity that the species has enjoyed in the public media.

Species status refers to the rarity of the animal. Species on rare and endangered lists appear to hold a special attraction.

These quality factors have a series of modifiers which effect the strength of effect of these variables.

There are also a set of *context variables* which describe space and time factors including time of day and time of year. They are natural factors which still affect the quality of the transaction, but are out of the direct control of the management, such as temperature and humidity.

In addition to the above there is a set of standard and manageable *service variables* that also affect customer perception of quality. Management potentially has control over the service, and therefore the impact on the end user (both human and animal). The variables might include the guide commentary (skill) and comfort and

design of the facilities. (Braithwaite, Reynolds & Pongracz, 1996, p. 136)

These variables combine when the customer is assessing value. The basis of any successful tourism venture is the delivery of a product which is perceived to be value for money. The price people are willing to pay is a complex judgement based on past relevant experiences. The judgement of satisfaction of the current transaction is based on a combination of all these variables (Duffus & Dearden, 1993).

9.2. Control of encounter

It is clear from service management research (Sparks, 1994, 1997 and many other examples) that control over the WT encounter is a key determinant of customer satisfaction or dissatisfaction. The amount of control the tourist has over the experience may also have an effect on both the impact on the habitat and wildlife.

There has been considerable discussion of strategies to control tourist interactions with wildlife. These include physical and regulatory methods that control through external manipulation and have dominated most tourist-wildlife interactions in the past (e.g. Wallace, 1993). More recently, economic strategies have also been utilised. Authors such as Plimmer (1992), Beckman (1989) and Orams (1996) suggest educational strategies. These strategies generally seem to try to control the number of tourists, and are forms of regulating numbers of people to carrying capacity of a site, rather than the interaction or experience itself.

The quality of the experience can provide greater or lesser satisfaction for an observer, and depends on the degree of control of the wildlife encounter which the observer *feels he or she has*. Circumstances affecting

the sense of control include:

- under direct control of a guide or ranger;
- under a set of rules, such as in a national park;
- the number of people in the group;
- degree of exposure to the animal;
- degree of unpredictability and potential danger from the animal;
- the fragility of habitat and/or rareness of the animal;
- whether armed or not;
- knowledge of the observer.

Some WT experiences rely on observation of animals in a natural situation. Others involve a situation contrived by humans to make the animals more observable (e.g. the provision of food). In situations where observation of wildlife occurs regularly, animals become habituated or more tolerant of the presence of human observers. That is, providing nothing happens to the animal, it will learn not to flee and will allow closer approach over time.

Management methods for control of the experience can be divided into physical and intellectual. *Physical control* is managed by tangible separation from the animal, a guide being present, or other forms of barriers external to the observer. The control factor may also regulate the activities to prevent risk of injury to the visitor. *Intellectual control* is the amount of expert knowledge transmitted by the guide or other interpretation mechanism. This may include ‘tricks’ that improve the encounter.

A person experiencing a high level of personal physical control over the encounter would be close to the wildlife, possibly being able to touch it. The possibility of harm to the “exhibit” is therefore high, and with some species there may be the prospect of harm to the visitor. As mentioned above, this may add considerably to the experience, but may have damaging effects on the fauna (or the tourist).

Perhaps of more interest is the amount of intellectual control that may be exercised in an encounter. The notion that a person must have expert knowledge of an exhibit to appreciate it is currently untested. However, a guide or other type of interpretation mechanism may increase enjoyment of the experience. Sparks (1997) has also demonstrated that the communication method affects the satisfaction level of the service encounter. It is currently unclear what type of interpretation will lead to increased levels satisfaction in WT encounters.

Equally it is clear that the level of understanding available at a wildlife encounter can strongly influence the level of satisfaction of the observer. Relevant factors include:

- educational level of observers;
- communication with previous visitors;
- pre-reading by observers;
- level of knowledge of guide (if applicable);

- communication skills of guide;
- personal guide–observer rapport;
- motivation levels of guide and observer (e.g. could be affected by tiredness);
- on-site interpretation aids.

Guides are also able to manipulate and (generally) positively affect the quality of the experience for the visitor by their behaviour. Examples include:

- building anticipation verbally;
- taking a circuitous route to viewing place;
- teaching observer to speak quietly and move slowly (even if not strictly necessary);
- guide uses quiet confiding voice to observer;
- using sounds to attract animal thereby increasing sense of intimacy;
- making the particular experience seem special and the observer feel fortunate.

10. Options and tradeoffs in WT

Recreational use of wildlife incorporates an array of economic and non-economic values (Duffus & Dearden, 1993). It is perhaps unfortunate that the short-term economic benefits often appear to take a central role in wildlife resource management, especially where allocations of resources among a group of competing uses are considered. (Furze, de Lacy & Birkhead, 1996). Non-economic values for users, management and society are more difficult to measure. Driver and Tocher (1970) suggested a behavioural approach which concluded that the goal of such recreational engagement was an *experience*, in that each individual who undertakes a trip has expectations, knowledge and past experiences which go together to evaluate whether such a trip was a success. There has been considerable research on satisfaction in the services sector (e.g. Parasuraman, Zeithaml & Berry, 1985, 1988), and the hospitality sector (e.g. Barsky, 1992; Brown, Fisk & Bitner, 1994; Sparks & Bradley, 1997; Oh & Parks, 1997). However, a tourism-based model has additional variables, including many that are difficult to measure (see Hall & McArthur, 1993 or Reynolds, 1999). The added dimensions with wildlife increase the complexity still further. Shackley (1996) suggests several added dimensions which include:

- differential popularity (not all animals are as popular as others);
- differential fragility (not all animals and ecosystems are equally fragile);
- ease of habituation (some animals will alter their behaviour, sometimes to the advantage of WT).

Braithwaite et al. (1996) show that, when a range of issues are investigated in the one study and in an integrated

fashion, it is possible to understand the possible compromises between the needs of various stakeholders in a particular WT context.

The tradeoffs and compromise options available to managers of WT can be expressed thus:

Values of conservation vs animal welfare vs visitor satisfaction vs profitability.

The key issues of the WT experience are the “Richness of Experience” and the “Effect on Wildlife”. In order to assess each WT product it is necessary to construct a framework which shows different types of WT, whether consumptive or non-consumptive, their effects on the person involved, and the consequences to wildlife.

Fig. 4 provides a framework in which WT experiences can be placed. It is clear that some interactions will be more desirable than others, in both environmental and tourist satisfaction terms. Operations that cause minimum impacts and maximum richness or experience are clearly the most desirable. The framework can display both WT practices which may be advocated, and those which might be discouraged because of adverse impacts on the wildlife or the visitor.

10.1. *Effect on wildlife*

Fig. 4 shows the “effect on wildlife” dimension scaled from vicarious experiences of wildlife to “in nature” experiences with rare or endangered animals. This dimension also demonstrates the access to and availability of the experience which has an inverse relationship with impacts on habitat and wildlife.

Vicarious experiences: Books, television shows, documentaries and films, which have very little impact on wildlife. The making of the book or film does have an impact (which may be high), but the book or film is experienced by many people, therefore for the number of experiences that occur the actual impacts are low.

General access wildlife areas: National Parks, wilderness areas, public foot paths, walking trails. Animals are in their own habitat, and displaying natural behaviour, although in high usage areas some amount of habituation may occur. The interface between the visitor and the wildlife may be managed or unmanaged. A high number of people may participate.

Contrived experiences: Zoos, Circuses, wildlife parks, pets. The interaction is contrived. The animals are not in their natural habitat, but there are few animals and many people involved.

Limited access, rare animals: Animals in natural habitat. The visitor is interested in the rarity value of the species (and its behaviour, numbers, habitat, etc.), and desires a close interaction with the animal.

Restricted access, rare/ endangered animals: Animals in natural habitat. Contact with wildlife would probably incur high physical and/or monetary cost.

10.2. *Richness of experience*

The second dimension, “Richness or Intensity of experience”, is a measure of ambient factors already described. The important elements are those of an intangible nature, namely Exhilaration, Authenticity and

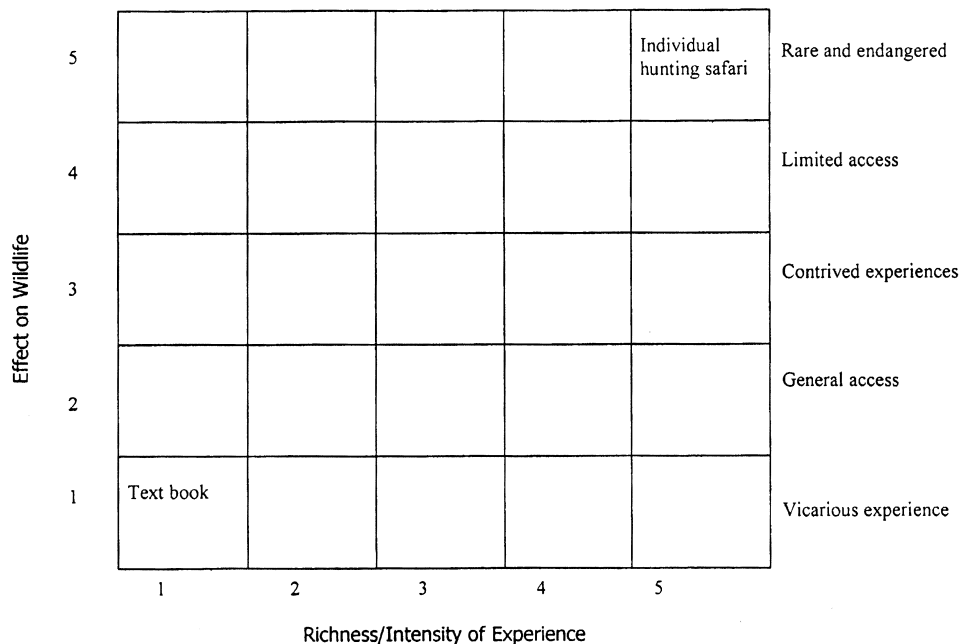


Fig. 4. Experience and tradeoffs diagram.

Uniqueness. However, the other factors of Involvement, Duration, and the Status and Popularity of the species interacted with clearly affect the profundity and strength of the WT experience.

It is clear that there is a wide range of possible experiences and wildlife/human interactions. These range from a low contact/low enthrallment/non-consumptive vicarious experience, (an example of which might be a person reading a wildlife textbook in a place far removed from where the wildlife live), to a high contact/high enthrallment (and high impact) consumptive interaction of big game hunting. In between these two examples lie a range of activities which include films and documentaries, zoos, safari parks, circuses, guided and unguided walking, bird watching, etc. These activities need to be examined so as to ascertain their attraction for the tourist and their effect on wildlife.

Once examined and measured by the factors described above, the interactions can then be placed on a matrix (Fig. 5). Note that the examples shown in the framework diagram are for indicative purposes only and require careful study to determine impacts and quality of experience). Three diagonal lines are placed across the framework as an indication of four broad categories of a complex range of features (A, B, C, D). The categories attempt to capture the trade-offs between impact on the environment and quality of the experience.

High effect/high enthrallment experiences (A) need to be carefully managed to lessen impact. The higher the quality of the experience the greater the need to pay should be. It can also be argued that the higher the

impacts on the environment the greater the need to pay. The costs to society of providing some experiences may call for special consideration. People who choose attractive experiences of high impact may be required to pay for the privilege by way of additional taxation or fees which would be dedicated to conservation. In this way not only would conservation be funded, but less desirable WT experiences would be discouraged.

It is likely that at the high ends of the scales there is also a high personal risk factor, and for some this may be an enriching factor (Roehl & Fesenmaier, 1992). This may represent a greater commercial hazard for the operator. In this situation, there is a strong potential for unacceptable environmental and other costs for society.

Section B includes interactions that while probably rating higher on the richness/intensity of experience scale are likely to have some negative effects on wildlife or habitat, or may lack authenticity.

The areas C and D indicate a range of activities that might be deemed to have more minor effects on wildlife and still provide a valid experience for the tourist. These activities need to be encouraged if there is to be sustainable growth in WT.

11. Directions for future research

The emerging issues include: the biological impacts of non-consumptive and consumptive uses of wildlife, the analysis of visitor satisfaction with various types of wildlife experience, determining carrying capacity of sites,

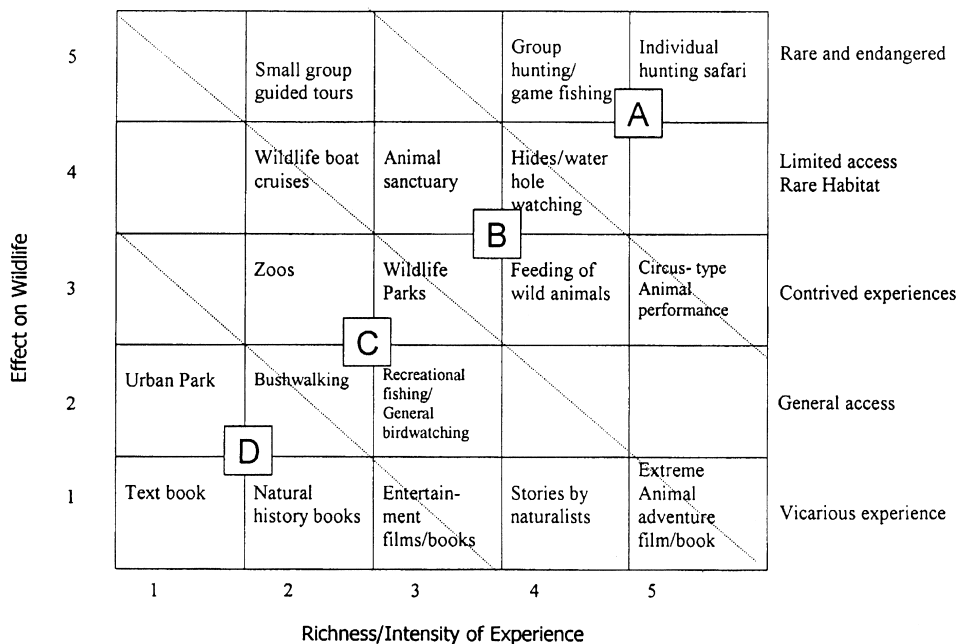


Fig. 5. Experience and effect tradeoff II.

the economic implications for tourism and conservation, and the impacts on society and education.

Further research is also required in the role of interpretation and guiding in the management of tourist satisfaction in WT. It is suggested that management of this factor will have a significant effect on the level of satisfaction of the visitor (Moscado, 1996).

12. Conclusion

A wide range of activities fall within the ambit of WT, apparently catering for a wide range of needs and in a variety of ways. Some WT is more attractive to the general public than others, however it is critically important that the environmental sustainability of WT operations be given the highest priority due to the inherent fragility of the resource.

There are a number of different tensions or problems between tour operators and protected area managers. The most common and basic seemed to be between operators seeking greater and closer access to wildlife and managers seeking to restrict access and increase the distance between visitors and the wildlife. From the perspective of some in the tourism industry, protected area managers seek to restrict visitors based on a philosophical or social objection to visitors rather than on sound evidence of ecological impacts on the visited environment or wildlife. From the perspective of some of those concerned with wildlife conservation and management, operators often make claims about the viability of their operations that cannot be backed up by evidence. In each case there appears to be a lack of understanding by each party of the constraints and pressures on the other and in each case people are often operating on a precautionary principle not understood or recognised by the other. In the case of managers, restrictions are often based not on evidence of actual impacts but on concerns over possible impacts. In the case of operators, concerns over what will make acceptable and saleable experiences for visitors are also driven not by direct evidence but by fears of possible problems. Clearly what is needed is reliable, independent and relevant evidence on both impacts of visitors on wildlife and environments and on what visitors seek and are prepared to accept in a wildlife-based tourism experience. The proposed model (Fig. 5) links the two areas of the quality of experience and impact on wildlife and points a way forward for responsible management in wildlife tourism. The model portrays part of the complex of trade-offs and compromises that are inherent to WT which will assist both operators and managers. Clearly sites and interactions of low quality and high impact are less desirable than the converse.

If we are to move towards sustainable tourism it is necessary to encourage the desirable and to discourage the undesirable through a variety of methods. The range

and effectiveness of different methods is open to discussion, but might include a differential taxation system, education (of both tourists and operators) or self-regulation. Although it is likely that a multi-disciplinary approach is called for (Cellabos-Lascrain, 1993), indeed, Plimmer (1992, p. 125) suggests "... we have a wide range of management techniques. We can add to them as we realise the possibilities. It is essential that we look at all these possible techniques as a menu, and choose the one, or combination, best suited to the situation."

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