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Business or leisure? Economic development and resource protection—Concepts and practices in sustainable ecotourism

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ABSTRACT

Ecotourism has proven to be an effective concept in the sustainable utilization of natural resources and development of various communities. Often regarded as an economic justification for resource conservation, ecotourism is providing a concept that is easily understood and appreciated by local communities and stakeholders.

However, ecotourism is still a business methodology that can be subjected to misunderstanding, abuse and misrepresentation which could also lead to negative environmental and sociocultural impacts.

Thus, environmental concepts coupled with social, cultural, and economic considerations should be developed and practiced by institutions wishing to utilize ecotourism as a conservation tool. These concepts would include optimizing the environmental and socioeconomic benefits while at the same time, prevent or minimize compromising the ecological and social values in the destinations. Some of the often-cited concepts include the determination of carrying capacity and the prevention of economic leakage supposedly brought in by the tourism industry. Also introduced in the paper is the concept of the firewalls of ecotourism wherein the introduction of different protection and conservation components is instituted in the operation of ecotourism sites.

Ecotourism has been helping save whales, dolphins, birds, turtles and fragile ecosystems. This is made possible by the fact that ecotourism provides the tangible economic aspect of conservation. However, the same recreation industry can also undo the gains of true ecotourism development through irresponsible tourism development and lack of conceptual frameworks to help guide the destination managers. To help drive sustainable resource utilization through ecotourism, there is a consistent need to develop and apply concepts and practices designed to help protect the resources from the potential impacts of the travel industry.

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1. Introduction

Even in the early stages of modern tourism, it has been recognized, although with varying levels of ambiguity, that the industry should be able to contribute to environmental conservation in view of the fact that it benefits largely from the natural resources in many destinations. The role of the tourism industry in environmental conservation, sustainable resource utilization, and socio-economic equity was given concrete representation when the term **ecotourism** was coined in the mid-1980s. Other terms such as *Alternative Tourism*, *Nature Tourism*, *Low Impact Tourism* were actually experimented on before **ecotourism** was largely accepted by both the environment and tourism sectors as the most palatable

term that can be used to justify or champion the continued use of natural areas for recreation.

Some of the premises of **ecotourism** include the following:

As a concept: Low impact, ethical and equitable distribution of economic benefits

As an activity: Visit to natural areas

National parks in many countries are established ostensibly to help protect their environmental functions and their biological diversity. But both by accident or design, recreation becomes a major management concern or tool in many of the national parks. These areas either gain management effectiveness through increased economic input, or become smothered both by the huge numbers of visitors and their corresponding impacts. To the uninitiated, this situation could become a huge matter that is difficult to embrace and uphold. *For how can you proudly declare*

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success in keeping a pristine environment when there are more people than wildlife in a protected area?

In the tourism industry, this situation is not really a phenomenon. This is just a manifestation of the human need for fulfillment (esteem and actualization) which is clearly illustrated in Maslow's hierarchy of needs (Fig. 1). Having the basic needs fulfilled and with enough disposable time and income, many people would make travel as an activity to fulfill their need for self-fulfillment. The World Tourism Organization's data that states that there were more than 760 million global tourists in the year 2005 [2] further supports the abovementioned statement.

In the early days, ecotourism attracted a highly niched market segment which limited tourist types to scientists, explorers, adventurers, and students. Early studies indicated that only 10% of the total tourist market could be considered as ecotourists. This could have provided comfort to the environment sector which seeks to accommodate manageable or even limited numbers of visitors to natural areas.

Alas, tourism is a highly dynamic industry that as soon as ecotourism became a buzzword, the market mix caught up with the ecotourists and became highly diversified. Because ecotourism is a high profile segment of the industry with many offering quality experience, service, and unique amenities, the market segments wanting to go to ecotourism sites quickly evolved to include now the mass market. The industry can no longer rely on the high environmental and ethical values of the ecotourists that result to zero or minimal environmental and social impacts to the ecotourism destinations. Mass tourist markets have started to make inroads to the pristine, natural areas. Ecotourism in a number of areas are becoming too successful that the mass tourist market now threatens to smother the destinations.

Another issue is that many managers of natural sites are also starting to realize that an appropriate market volume would have to be attained in order to create significant positive impacts to the areas. The market volume is usually very hard to achieve given the low numbers of actual ecotourists. The segment that can deliver this volume is still offered by the mass market. This created hesitation in the environment sector which recognizes the economic benefits of tourism, but at the same time could create socio-environmental problems to the natural areas.

The corresponding degrees of potential impacts of the ecotourists and the mass market are illustrated in Fig. 2.

In this regard, ecotourism can be considered as a tool that can provide both positive and negative outcomes when tourism begins to be an active industry in a natural area. As a positive tool, it can help protect natural sites, increase environmental awareness, and open windows for monetary generation that can then

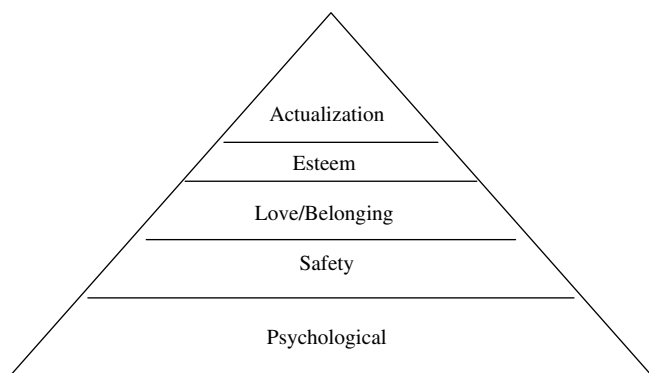


Fig. 1. Maslow's hierarchy of needs. Source: [1].

translate to management resources. As a negative outcome, ecotourism could help bring in more people, compromise ecological functions, cause behavior modification on the wildlife, and create social problems.

But no matter how daunting the prospects of ecotourism in a natural environment are, there is no denying that it can be a potent industry in natural resource utilization. It is an industry that can either make or break the environmental integrity in any given destination.

2. Basic concepts

It is imperative that in order to guard the natural sites from the impacts of tourism (while at the same time promoting them for ecotourism), basic concepts will have to be appreciated by the stakeholders. Some of these include the following.

2.1. Ecotourism (or tourism) is a business industry

No matter what the motivation is for the opening up of a natural area for recreation, the bottom line is that a major effort in managing the site should be focused on running it like a business. Ecotourism is often promoted as an economic justification for conservation. This holds true in almost all aspects. Fishermen who go into dynamite fishing or catching dolphins and manta rays would not totally stop their activities and shift into tourism if they realize that it would give them less income. Government entities that put up huge resources setting up tourist facilities without ensuring the economic returns even for maintenance would realize that they built white elephants. Nongovernment organizations that go into ecotourism would realize later on that they would have to withdraw from their sites without making inroads because all the resources they utilized were just grant money.

2.2. Tourism is a networked industry

Tourism development and control cannot be done by a single entity. Marketing will have to be done by tour operators, accommodation by private entities or local communities, and policies by various government agencies. A common pitfall of environmental organizations going into ecotourism development is that they fail to recognize the roles of other stakeholders and their inherent dynamics.

2.3. Tourism is a market-driven industry

An attraction would have a corresponding market segment. Each would have its own set of characteristics and preferences. Thus, programs and facilities should be geared towards fulfilling the needs of the appropriate market segment. Some destinations suffer the consequences of popularity and uniqueness that large market volumes may visit them even if the sites cannot accommodate such amount of visitors. In the tourism industry, it is an accepted fact that even if an area is not promoted and there is keen interest for a tourist market and enough industry service providers, people would go to the area anyways. Thus, if the area is not prepared for tourism, it could suffer the full negative impacts of the industry.

3. The flow of economic impacts of ecotourism

Another issue that puts legitimate question to the effectiveness of ecotourism as a socioeconomic and environmental tool is the equitability of income distribution from tourist expenditures. While a particular destination could bring in a hundred thousand

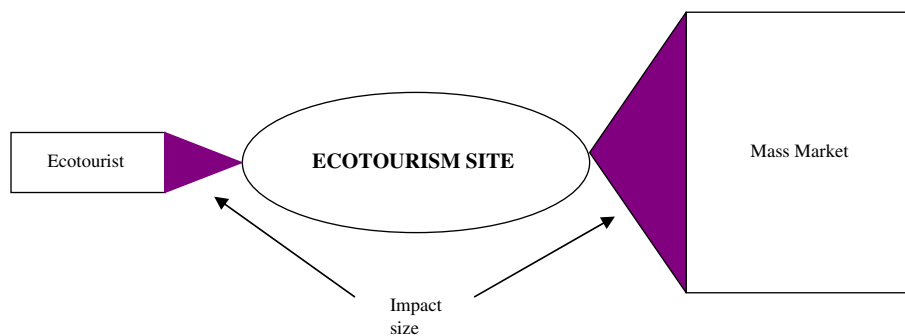


Fig. 2. Market types and their corresponding impacts on ecotourism sites.

foreign visitors to a country, the actual money left for the local community and site maintenance would be equal to a very small fraction of the tourist receipts. This is especially true in government-imposed protected areas where very little economic activity is promoted (usually limited to park fees). Fig. 3 illustrates the degree of economic benefits to different sets of communities within or near the protected area. The ecotourism site would have the smallest amount of visitor money as very little would be spent by the visitors. The primary community would be the immediate area where simple services and facilities are offered. The secondary community would be the area used as a jump-off point towards the primary community. There are more tourist facilities and services here that cause increased tourist expenditure. The national community, which would usually represent the international gateway would tend to get the biggest slice of tourist money due to high facility and service rates comparable to international standards.

This situation could not be reversed due to economic and tourist movement set-ups. However, the amount of money accrued to the ecotourism site and community could be increased if more revenue windows are opened in the area. Local communities, being direct stakeholders, can be encouraged to conduct businesses most appropriate in the areas. There are many opportunities to “capture” tourist expenditure. All it takes is good investment studies, institutional support, and marketing.

An often overlooked significance of ecotourism in a natural area is the relative amount of resources and area that it requires in order to gain optimum socioeconomic benefits. Ecotourism is a nonconsumptive industry. The objects of interest are not necessarily harvested or extracted in order to utilize the ecotourism products. It does not also need to convert whole ecosystems or convert natural sites into built-up areas in order to fully develop a local ecotourism industry. An interesting example would be the Puerto Princesa Subterranean National Park located in the province of Palawan, Philippines. The park covers more than 5000 ha of forest and coastal areas. It has become a major ecotourism attraction in the province which eventually caused the economic growth of the capital city of Puerto Princesa (which serves as the secondary community). Despite the huge coverage of the park, the actual area utilized for tourism is less than 10 ha, or 0.2% of the total land area. This situation is repeated in many countries where tourists are confined to control areas without reducing the quality of experience of the visitors and at the same time maximizing the potential income for the sites.

A theoretical example on a comparative scenario clearly defines the full potential of ecotourism use of a natural area compared to traditional, extractive use (Table 1). In the example, given the same resource (mountain or forest) for ecotourism and slash-and-burn farming, ecotourism could do very little damage compared to the other activity.

4. The local communities as champions for ecotourism

An exciting proposition for ecotourism is that it offers a chance for the local communities to actively take part and benefit from the utilization of the resources within their midst. However, it is not as easy as it seems. In fact, it is very easy to fail in this aspect, especially if the organizations doing the community intervention are under limited timeframe and budget. As in many other community programs, organizing the locals into one cohesive body working towards the protection of the natural area for tourism (or vice versa) could take many years. Many initiatives eventually faltered when a two- or three-year timeframe of an intervening organization eventually lapsed.

Community organizing becomes doubly difficult with ecotourism. Tourism is an alien concept for many local communities who are used to doing their generations-old livelihood activities. From simple farming or fishing, the locals may have to overhaul their skills to become adept at providing service to visitors. For some members of the communities, this is an almost impossible option. On the other hand, the economic promise of ecotourism makes it easy for the local folks to comprehend and eventually champion the conservation of natural areas.

There are areas where community members eventually take the lead in environmental conservation through ecotourism. An

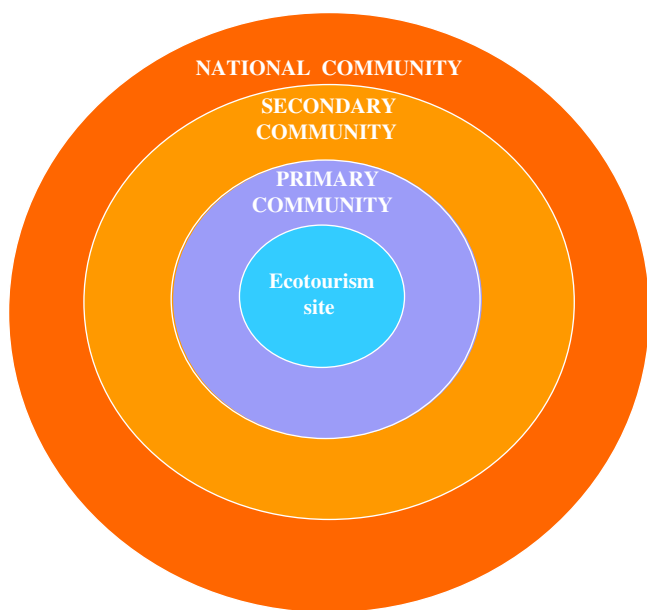


Fig. 3. Degree of economic benefits to different communities. Source: [3].

Table 1
Comparative scenario in a mountain or forest environment.

With Ecotourism	Without Ecotourism
1 Mountain lodge <ul style="list-style-type: none"> • 2 ha site dev't. • 6 Employees (each is head of family) • Impacted areas – 10 km trail of about 1 m width. Total = 1 ha • Total impacted area = 3 ha 	6 Families of slash-and-burn farmers <ul style="list-style-type: none"> • 2 ha community • Each family maintains approx. 7 ha of swidden farm land. • Total impacted area = 44 ha

example in the Philippines is the Donsol Whale Shark Interaction Program. With virtually zero tourism before the large congregations of whale sharks were discovered in the village of Donsol in 1997, the area suddenly transformed into a bustling ecotourism destination. With very little knowledge and skill in both tourism and ecotourism operation, local community members willingly took part in various trainings designed to enable them to become effective ecotourism practitioners. In this situation, external assistance became valuable inputs that helped ensure the success of whale shark-based ecotourism development in the area. Fig. 4 illustrates how local communities can evolve into ecotourism advocates and practitioners. After almost ten years of ecotourism operation in Donsol, the level of accomplishment can be considered very impressive. However, ecotourism development in the area is still in the process of fine-tuning. The prospect of failure is a distinct possibility with the tourism operation in the area degenerating into a purely commercial venture in order to accommodate the most number of visitors. New and enhanced efforts are still being implemented in order to maintain the ecotourism quality and operation in the destination.

5. Ecotourism firewalls

A natural area visited by large numbers of tourist could attain sustained utilization and protection if the concepts of ecotourism are fully integrated in the management of the site. To achieve this, a strategy akin to the establishment of firewalls designed to prevent or minimize negative impacts can be instituted in a destination. There are several firewalls that can be instituted in order to minimize the tourist impacts and ensure the tourism sustainability and environmental integrity of the

natural area. These include establishment of appropriate policies and guidelines, use of naturalist guides, and use of appropriate facilities designed to control visitor movement and behavior. Fig. 5 illustrates the establishment of the firewalls in order to lessen the degree of impacts of the mass market (represented by arrows).

6. Carrying capacity

An often-debated issue in ecotourism is the concept of carrying capacity which establishes the maximum number of people or tourism development in any given space at a given time. While many ecological and physical aspects can be measured and represented by numbers, the social aspect always happens to provide the crux of the debate for carrying capacity determination.

However, both the tourism and environment sectors cannot wait for the debate to settle while the tourism is already being done and promoted in the natural areas. Thus, formulas are being utilized to at least determine an indicative or baseline carrying capacity in some natural areas.

Some environmental advocates promote the concept of limits of acceptable change (LAC) which qualitatively measures impacts and use them as baselines to determine protective or corrective environmental measures.

Perhaps an effective way to determine the carrying capacity of an ecotourism destination is to go back to ecological concepts, particularly the *Liebig's Law of the Minimum* which states that:

“Under ‘steady-state’ conditions the essential material available in amounts most closely approaching the critical minimum needed will tend to be the **limiting factor**”.

Determining the *limiting factor* makes it a lot easier to come to terms to determining the carrying capacity in an ecotourism destination. So many issues may be present in any particular attraction that computing the carrying capacity would be subject to innumerable factors (space, light, climate, animal behavior, local community perception, visitor perception, etc.). The limiting factor establishes one particular consideration for carrying capacity computation.

One example of space as the limiting factor for carrying capacity assessment is the Boullon Model [4–6].

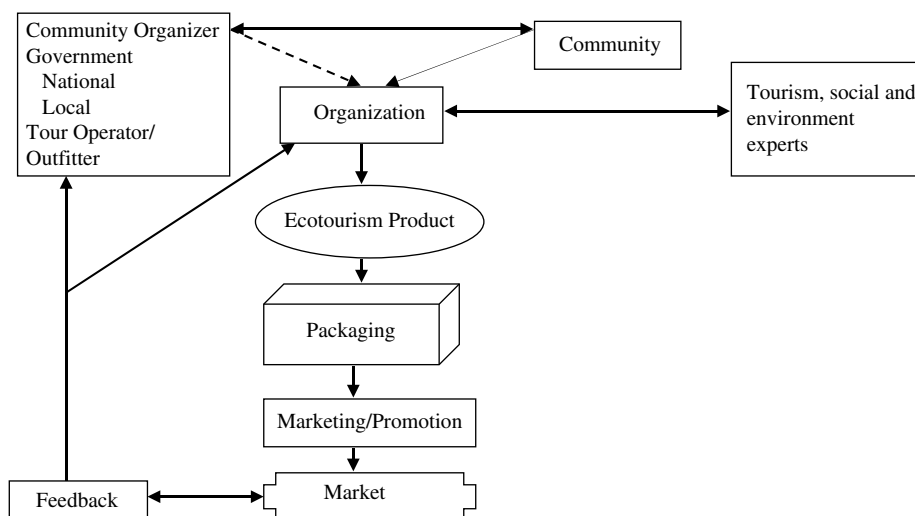


Fig. 4. Development of a community-based ecotourism product. Source: [3].

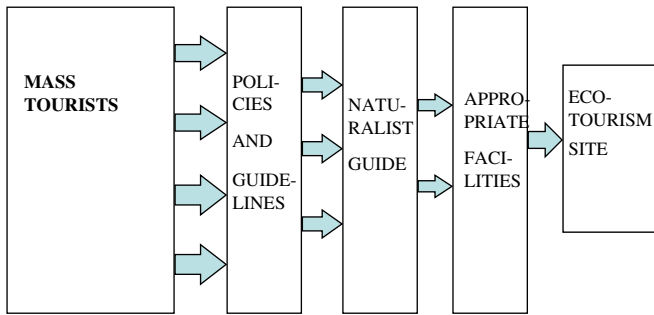


Fig. 5. Ecotourism firewalls. Source: [3].

7. Conclusion

Ecotourism has proven to be an effective environmental conservation tool. But it is a tool that when mistakenly or wrongly utilized, could actually create detrimental conditions to the natural areas. Thus, there is a need to put across the right and effective concepts of ecotourism to the tourism and environmental sectors, and the local communities who are at the forefront to either protect or harvest whatever is left of the natural environment.

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$$\text{Carrying capacity} = \frac{\text{Area used by tourists}}{\text{Average individual standard}}$$

$$\text{Total of daily visit} = \text{Carrying capacity} \times \text{Rotation coefficient}$$

$$\text{Rotation coefficient} = \frac{\text{No. of hours area is open to tourist}}{\text{Average time of visit}}$$