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**SEMINARIO INTERNACIONAL – ECOTURISMO:  
POLÍTICAS LOCALES PARA OPORTUNIDADES GLOBALES**

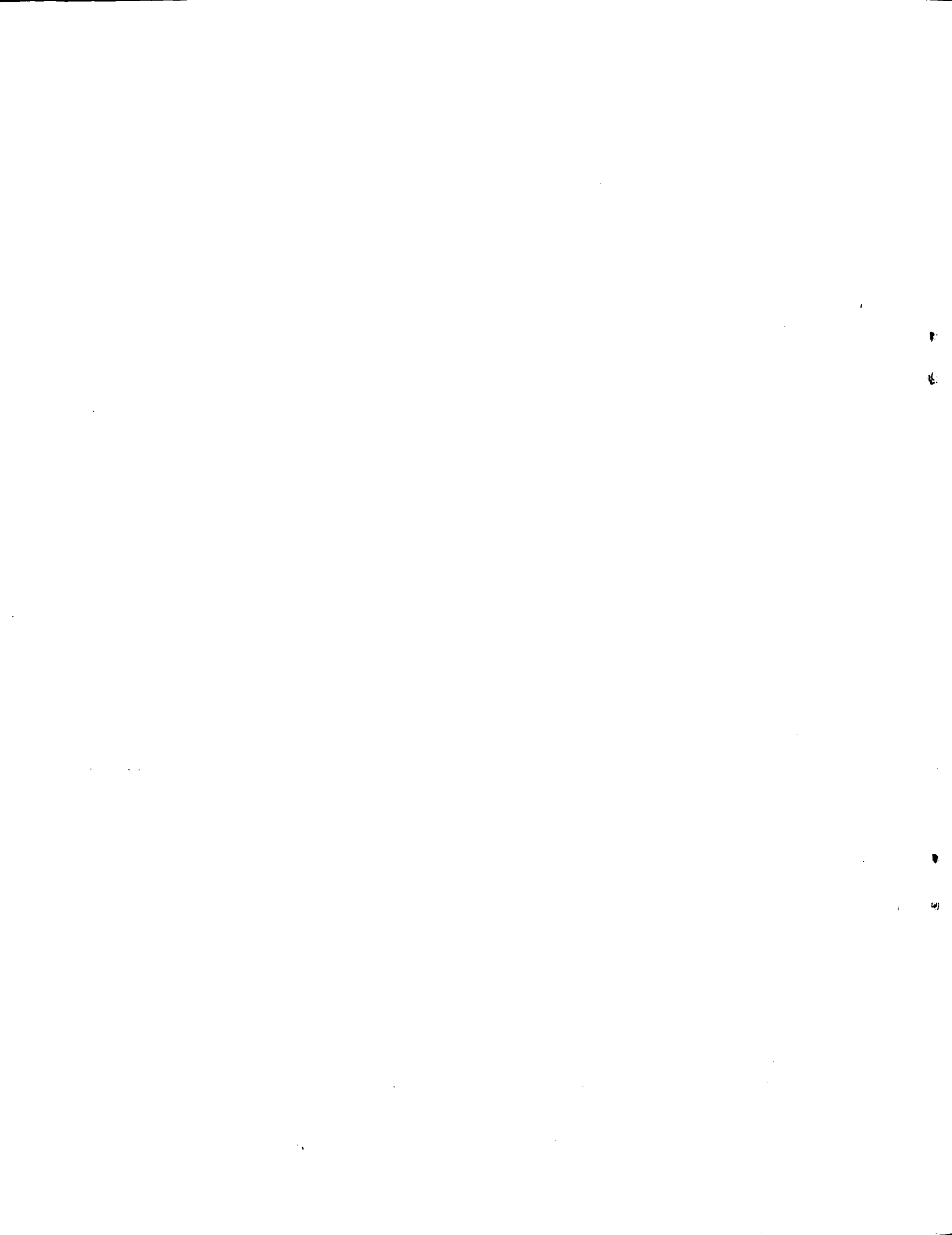
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**ECOTOURISM: INCENTIVES FOR CONSERVATION SUCCESS**

**John A. Dixon and Stefano Pagiola  
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## **Ecotourism: Incentives for Conservation Success**

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Ecotourism has sometimes been seen as a panacea to the problems of protected areas. By bringing in small numbers of visitors who are very interested in nature, it was hoped that valuable areas would be conserved while generating considerable income. The reality is not so simple: the 'ecotourism' label has been used to cover a very wide variety of visitors, not all of which are low-impact; moreover, the truly low-impact, high-revenue tourists are likely to be a small proportion of the total.

Ecotourism does have a number of attractive features that may allow countries and those interested in biodiversity conservation to meet several goals at the same time. Accordingly, this paper considers a number of issues that are important in deciding if ecotourism is likely to be the 'answer' to a country's quest for a development mode that combines biodiversity conservation/protection with generation of important economic benefits. We consider the important questions of who exactly is an ecotourist, how large a market is ecotourism, and what trade-offs a country faces when it promotes ecotourism.

### **What is an ecotourist?**

Definitions of ecotourism have varied substantially. While some use the term very broadly to cover any form of tourism in which nature-based activities are important, others make a sharp distinction between ecotourism and 'nature-based tourism'. The Ecotourism Society (TES) defines ecotourism as "travel to natural areas that conserves the environment and sustains the well-being of local people". Brandon (1996) emphasizes that ecotourism must be small scale "with limited ecological and social impacts." In keeping with these definitions, the ideal ecotourist would have three main characteristics:

- (a) Small numbers.
- (b) Low impact.
- (c) High revenue.

In practice, however, it is hard to meet all three conditions at the same time. Hence, the trade-offs that countries face. Even within a fairly narrow definition of ecotourism, there is a substantial variation depending on the numbers of visitors, their impact on the environment, and the revenues that they generate. The following table illustrates three commonly encountered species of ecotourists (and their latin names!). The actual definition of ecotourism is often in the eyes of the beholder. Different stakeholders will have very different perceptions of what is an ecotourist: a strict

conservationist favors the "true greenies", the *homo verde verde*-species, which has low impact and small numbers. Unfortunately, this species may also have low revenue, as discussed below. The Monteverde Cloud Forest in Costa Rica is an example of this type of ecotourism development. Hotel developers may well favor the "armchair naturalists" — *homo saferiense comodo* — with their larger numbers, less finicky tastes, and potentially much higher revenue. The impact of this species may be substantially higher, however. The tented campments in Kenya come to mind — 5 star meals served to visitors living in a "tent" with all modern conveniences in the African bush. In between, both in impact and income per person, are the "nature lovers", *homo naturophilo*, although their numbers may be considerable. Costa Rica and its system of parks and protected areas, and private nature developments, appeals to just such a class of ecotourists.

Type of Ecotourist	Numbers	Impact	Revenue
True greenies ( <i>homo verde verde</i> )	Low	Low	Low-High
Nature lovers ( <i>homo naturophilo</i> )	Medium	Low-High	Medium-High
Armchair naturalists ( <i>homo saferiense comodo</i> )	High	Medium-High	Medium-High

Several issues arise in considering the economics of ecotourism. First, there is the issue of **revenue per person vs total revenue**. In some circumstances, ecotourists may be willing to pay substantially to visit certain pristine areas. Visitors to Rwanda's Parc des Volcans, for example, paid several hundred dollars per person in entrance fees, plus substantial additional amounts for supplies, to visit the area inhabited by the mountain gorillas made famous by naturalist Dian Fossey. Because the need for low impact resulted in a very low permissible number of visitors, however, the total revenue generated was very low (and even at these low numbers, Fossey believed the impact was unacceptably high). Even had a larger number of visitors been allowed, the arduous nature of the trip, which entailed several days of hiking through mountainous jungle areas, would have limited its appeal, and hence the total revenue that might have been generated. The extent to which income from such limited visitation would have been sufficient to undertake the necessary conservation efforts is extremely doubtful, and indeed conservation work in the Park relied heavily on grants from international conservation groups. This does not automatically mean that mass-based tourism is the only viable option. While small-scale tourism may generate low total revenues, it may also have lower costs, since mass-based tourism is likely to require substantially greater investment in support infrastructure (such as transport and lodging). Whether *net* revenues are higher with a small number of higher-paying tourists or a large number of lower-paying tourists will vary from case to case.

A further consideration regarding the benefits generated by ecotourists concerns the **proportion that is captured within the host country**. It is important to avoid the common misconception of equating tourist expenditures with benefits to the host country. First, tourists often consume a substantial amount of resources during their visit, such as food and lodging, which are therefore no longer available for other uses. The costs of these resources must be subtracted. Second, a large portion of these net benefits often accrues to agents outside the country. Here again, the relative benefits of mass-based vs elite tourism are unclear. Ecotourism is sometimes thought to have lower levels of 'leakage' than mass-based tourism because of its greater reliance on local supplies. This

may be true of the "true greenies" who will hike with packs for two days to visit the Parc des Volcans. The "armchair naturalists" among the ecotourists, on the other, may well demand access to expensive (usually imported) luxury goods. This latter category may spend more per person per day, however, so net benefits to the country could actually be higher even though leakage is higher.

Finally, even when properly measured, expenditures are only a partial measure of the benefits derived by tourists from their visit; often, tourists would have been willing to pay considerably more than they did. This true, maximum willingness to pay of the visitor is referred to as an economic "rent" associated with the destination site. Simply put, if the visitor would have been willing to pay more for the visit that he or she paid (including entrance fees), the country loses this source of income that could have been captured (in part or in full) to use for conservation or any other purpose. Rents not captured by the country are thereby kept by the visitor, and leave the country when the visitor leaves. If the rent is kept by a resident of the country, then the benefit is not lost, it is merely transferred from the country (or whoever provides the recreational resource) to the individual. This is similar to a free outdoors concert, provided by the National Symphony, being enjoyed by both residents and foreign visitors. All viewers benefit, but the visitors take their "benefit" or increase in welfare away with them while at least the national residents retain this increase in welfare within the country. To capture at least part of these rents, fees or other revenue collection mechanisms are required. The level of fees to be charged and, in many cases, whether to charge fees at all, are often very controversial issues.

Moreover, it is not sufficient for net revenues to be generated by ecotourists to be captured in-country. For these revenues to contribute to conservation and to the well-being of local populations, a large proportion of these revenues must also be retained locally. In most countries, however, the funds collected by entrance fees, tourist taxes, and other mechanisms are often channelled to the central government with only a small proportion, if any, remaining on-site.

### **How important is ecotourism?**

No specific data are collected on ecotourism, and so estimates of its importance, both in terms of numbers and economic impact, vary substantially. The table below gives some indicative numbers reported by the Ecotourism Society. Note that the two definitions provided focus solely on the *purpose* of the trip, and say nothing about some of the other aspects contained in the Society's own definition of ecotourism. Note also that these purposes are themselves defined extremely broadly. It is also not clear whether the two categories are meant to be mutually exclusive or if, for example, wildlife-related tourists are a subset of nature tourists. These kinds of problems bedevil all available statistics on ecotourism.

The overall importance of ecotourism is in many ways beside the point, however. What matters at any given site is whether ecotourism might provide an appropriate strategy *at that site*.

	1988	1994
	(million)	
Total International Tourist Arrivals	393	528.4
Nature Tourists	157-236	211-317
Wildlife-related Tourists	79-157	106-211
	(US\$ billion)	
Total International Direct Economic Impact *	388	416
Nature Tourists	93-223	166-250
Wildlife-related Tourists	47-155	83-166

Nature tourists: tourists visiting a destination to experience and enjoy nature

Wildlife-related tourists: tourists visiting a destination to observe wildlife (e.g. bird-watchers)

Source: The Ecotourism Society

## Making the trade-offs

Rather than focusing on ecotourists as a solution, it is more useful to focus on the challenges faced by conservation and ask to what degree, and under what conditions, ecotourism might contribute to meeting these challenges. Simply stated, the two main challenges are:

- (a) Conservation — of particular ecosystems, of environmental services, and/or of social or cultural systems; and
- (b) Income generation — to preserve the specific site being visited and/or other sites.

A range of management options exists for protected areas. Since sites differ substantially from one to another, the optimal approach is likely to differ substantially from case to case. Some of the important dimensions are:

- (a) **Type of tourists.** Management decisions will be limited by the type of tourists who are currently, or who could potentially, visit the site. Depending on their interests and number, different approaches might be called for. In particular, tourists will differ in the degree of creature comfort they require. A large proportion may find their taste for biodiversity to be greatly reduced, for example, if representatives of that biodiversity are crawling around in their sleeping bag. The necessary infrastructure, with its attendant costs and the possibility of impacts on the ecosystem will vary accordingly.
- (b) **Type of ecosystem.** The sensitivity of different ecosystems to visitation can vary substantially. Sites such as the Parc des Volcans are very sensitive to outside intrusions, and will quickly deteriorate if mis-managed. Other sites are much more resilient. Thus, while the mountain gorillas of the Parc des Volcans are easily disturbed even by low levels of visitation on foot, wildlife in the Masai Mara is often all but oblivious to gaggles of minibuses. This is not to say that sites such as the Masai Mara cannot be damaged — perhaps irreversibly so — if mis-managed, but that the requirements for "low impact" visitation differ.
- (b) **Type of site.** Depending on the nature of the site, different types of visits will be most appropriate. Some will hold visitors' interest over several

days, while others will only attract visitors for a few hours. Sites with particularly unusual or popular attractions may bring in tourists from far away, while others may be visited only as an adjunct to a different trip.

Depending on the specific situation both the ideal and the feasible trade-offs will differ greatly; it would be wrong, therefore, to expect that a unique "ecotourism" solution exists which would work in every case.

Because of these differences, it is often best to develop a management strategy for a system of protected areas rather than separately for each individual protected area. In this way, different trade-offs can be made in different areas, thus ensuring that both conservation and revenue generation objectives can be met. Tourist development, particularly that requiring the most intrusive infrastructure, can be concentrated in the more marketable and more resilient areas, while more sensitive areas receive lower-impact or smaller-scale development, or no development at all. {JOHN: Any examples of countries that do this?}

## **Involving local populations**

Involving local stakeholders is both practical and equitable.

Integrating activities of local populations with conservation and ecotourism activities  
Royal Chitwan National Park, Nepal

Buying-out local populations' use rights  
Mantadia National Park, Madagascar

## **Ecotourism in practice: Examples**

- Parc des Volcans, Rwanda

### **Box: Ecotourism in Mantadia National Park, Madagascar**

Madagascar is one of the world's 'mega-diversity' countries, with both a very high level of biodiversity and high rates of endemism. This rich biodiversity is an important factor in attracting tourists from all over the world, but has been under considerable stress from conversion of natural habitats to alternative uses. The government is attempting to protect biodiversity by creating a system of protected areas. The government, however, lacks the budgetary resources necessary to cover the expenses of park maintenance and to compensate local communities for the losses they bear as a result of the creation of protected areas. A set of studies carried out in the early 1990s examined the benefits tourists obtained from visiting national parks in Madagascar, as well as the cost to local communities of giving up their traditional uses in areas brought into the protected area system. Two different methodologies were used to estimate the benefits tourists would obtain from the creation of a new national park at Mantadia. The travel cost method, which uses information on the costs borne by tourists to visit a location to derive their demand curve for the location, and hence the enjoyment they receive from visiting it. The contingent valuation method, in which visitors are asked directly for their willingness to pay for such visits, was also used. Both methods have their strengths and weaknesses, but both gave similar estimates of the benefits, namely about US\$24-65 per trip. Assuming that the number of visitors to this new park is about the same as in neighboring parks, the total benefit generated would be about US\$0.8-2.2

million. The costs to local communities of losing their traditional access to the protected area were also estimated in two different ways -- using contingent valuation, and by estimating the opportunity cost of lost income from the park area. These methods also gave very similar estimates of costs of about \$90-110 per household, for a total cost of about \$0.6-0.7 million. It would thus seem that even at the lower end of likely tourism benefits, income might be sufficient to compensate local communities. Some of this compensation will occur indirectly, through employment and other income opportunities generated by tourism, but it will also be necessary to capture at least a portion of the tourism benefits directly and to redistribute them to local communities. How much of this benefit the park is ultimately able to capture will depend partly on the approach adopted, and on the desires of the tourists.

- East African Game Reserves
- Wadi Rum, Jordan
- Galapagos Islands
- Costa Rica
- Bonaire/Saba
- Cancun, Mexico
- Hanuma Bay, Hawaii

### **Conclusions**

- Don't be afraid to charge
- Use a *system* of protected areas to achieve conservation and income generation goals
- Work with stakeholders

### **References**

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