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Source: BioScience, 58(9): 782-783

Published By: American Institute of Biological Sciences

URL: https://doi.org/10.1641/B580902

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## The Threshold of Sustainability for Protected Areas

ANDY DRUMM

n spite of the bumps in the road created by wars, emerging infections, and terrorism, international tourism to developing countries has increased enormously over the last 30 years. One in five international flights now goes to a developing country (many of those countries are in the Southern Hemisphere), and despite high fuel prices, the UN World Tourism Organization expects international tourism to grow rapidly for the foreseeable future. For Southern Hemisphere destinations, tourism is a major source of foreign income as well as a major employer. Nature tourism and ecotourism, properly harnessed, could go a long way toward closing the yawning financial gaps between current budgets of protected areas in developing countries and the minimum required to provide effective conservation and management of their resources. Unfortunately, in most protected areas, tourism is not being adequately harnessed in this way.

The irony is that wealthy northerners travel largely in search of the culture and nature that Africa, Latin America, and Southeast Asia have in abundance in their national parks, World Heritage Sites, and ecological reserves. Think of Galápagos, Machu Picchu, Serengeti, and Kruger, which draw millions of visitors each year. The Peruvian government reports that an impressive 71 percent of that country's international visitors in 2007 came to visit a protected area. All told, international visitors last year injected \$800 million into the Peruvian economy.

Tourism to developing countries ought, on its face, to be good business all around, yielding happy travelers, increased revenues for park systems, and higher investment in conservation. But park systems in most developing countries are failing to invest at anywhere near the necessary levels to build capacity for managing the growth in park visits. As a result, tourism is now a threat to biodiversity rather than a benefit.

It is not just the megastars of international nature tourism destinations that are becoming crowded. Visitors are coming in increasing numbers to parks such as Guatemala's Yaxhá, Bolivia's Eduardo Avaroa, Tanzania's Manyara, and Indonesia's Komodo. Indeed, conservation scientists at the Nature Conservancy have identified tourism as a threat in 78 international conservation area plans it has produced over the past seven years. The failure of destination countries to budget adequately for tourism management in parks is eroding the very natural capital that visitors travel to see. If the current levels of investment continue, the tourism boom is likely to be followed before long by a bust. Prime habitats will become degraded, wildlife will become scarce, the quality of the visitor experience will decline, and eventually people will choose other destinations.

In some places a decline in the quality of the visitor experience is already apparent. In the Galápagos Islands National Park and Marine Reserve, for example, the number of sites that tourists are allowed to visit has been increased to accommodate the surge in demand. Additional islands have been opened up to cruise ships. Even so, managing visitors is starting to look like crowd control, as guides try to keep their clients on the narrow marked trails while they squeeze past other tourist groups. As recently as the mid-1980s, it was possible to visit one of the Galápagos islands as part of a group of eight or fewer and not run into another person during a whole day. Today, it is unusual to be part of a group of fewer than 16, and you are likely to

encounter another 10 groups along the short trails you are permitted to follow.

A decline in the quality of the visitor experience is not the only change that has followed in the wake of the growth of Galápagos tourism. Impacts on the fauna and flora have increased. Both changes have occurred because the industry lacks adequate checks and balances that are sensitive to quality. So far, the market has exhibited, in economic terms, inelastic demand: the number of visitors continues to grow. But nobody should expect this to continue indefinitely. The situation for many parks in the Southern Hemisphere is like that of a bus driver making a living from selling fares, but never putting oil in the engine. For a while, as long as the driver puts in the diesel, the bus keeps going and operating costs are low. But the business will come, inevitably, to a catastrophic end.

Aside from managing the threats tourism poses, conservationists should also focus on developing the financial opportunity that the growth in tourism represents. Recent studies carried out by the Nature Conservancy in Ecuador and Peru (www.nature.org/ecotourism) indicate that although tourism is still by far the biggest source of self-generated revenue for these countries' park systems, the park systems capture only a tiny part of current tourist spending. Moreover, they invest much too little in ensuring basic tourism management capacity on the ground. Yet-and this is the good news that gives us confidence that a solution can be found-both international and domestic visitors would be willing to pay significantly more to visit Ecuador's and

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Peru's parks than they are currently being asked to pay.

Simply boosting revenues will not by itself solve the problem, of course. The revenues must be reinvested appropriately at the specific sites that generate them, at least at a level adequate to prevent loss of natural capital. The Nature Conservancy is proposing a new paradigm for tourism in protected areas in developing countries. We realize that simply disapproving of tourism is not helpful, nor do we want to allow the status quo to continue. Working with the Ecuadorian and Peruvian governments, we have therefore developed the concept of the "threshold of sustainability." This is the minimum level of investment in the tourism management capacity of a protected area needed to ensure that the area's natural capital does not decline.

The threshold of sustainability is reached by ensuring adequate investment in each of five key management capacity areas: impact monitoring; basic infrastructure; security; interpretation and information; and staff salaries and training. These elements should be built into a sustainable finance plan for each protected area, and must be an integral part of annual park budgets as long as public use remains authorized. We can begin to determine what minimum tourism revenues should be only when we know the financial cost of managing tourism sustainably.

Entrance fees, tourism concessions, and tour operator permits must then be priced high enough to mitigate visitors' impacts. Market research indicates that international visitors are generally willing to pay appropriate fees, especially when the process is transparent and the visitors can see reinvestment in the park. The Ecuadorian tourism industry has shown willingness to support such initiatives after analyzing financial projections that showed greater demand resulting from improved investment.

Our initial experiences in Ecuador show that management decisions that integrate conservation needs and financial realities can be made if financial management concepts and data are brought to the fingertips of conservation managers. This starts a virtuous cycle: protected areas are more clearly perceived as assets for economic development, and investments are made in improved tourism management, which in turn leads to more visits and less poverty. Ministries of finance and economy and of tourism then bring their resources into play to complement those of the environmental sector. The result is that parks and biodiversity are widely recognized for their ecosystem service value, in this case through tourism and recreation. This makes investment in parks a winwin situation, and we can begin to make the case for protected areas as contributors to poverty reduction and economic development. It all starts with ensuring that tourism is contributing adequately to the financial sustainability of the popular destinations that so many parks in the developing world have become. Conservationists around the world would do well to consider the implications for their own protected areas.

doi:10.1641/B580902 Include this information when citing this material.

