

pacts from a few visitors have been as severe as those from larger numbers in some areas. For example, significant trampling damage is done to some soils and vegetation by even low levels of hiking [29].

Reducing per capita adverse impacts can thus be as important as controlling visitor numbers. In some cases, this can be done by controlling visitor movements within a park. Canada has used a "Visitor Activity Management Plan" (VAMP) to channel and direct visitors to various points within its national parks [32].

Users cause unnecessary damage to an environment in many cases out of ignorance. One way of preventing such damage is education: codes of ethics, films, or other orientations to a site are initial ways of "opening eyes." Increasingly, tour operators and conservation societies that sponsor ecotours are formulating or adopting codes of ethics designed to provide guidance to visitors on proper and improper behaviors and activities at ecologically sensitive sites. For example, the Antarctica Visitor Guidelines, developed by the National Audubon Society, have been adopted by all U.S. ship tour operators. Guidelines range from reminders never to step between a parent animal and its young, to admonitions against trampling fragile mosses and lichens [40].

Issue:

Regulatory and voluntary approaches can be used to control visitor numbers, activities, and behaviors in protected areas. Under what circumstances might the "carrot" or "stick" approach be more appropriate or effective?

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While some ecotour operators are out simply to make a profit with little consideration of environmental and social issues, others are sensitive to these issues and may actively contribute to conservation projects/goals [68]. For example, licensed charter-boat operators carrying tourists to the U.S. Virgin Islands' Buck Island National Monument give 3.5 percent of their gross income to the National Park Service (Thorsell and Wells, 1991). However, the potential role of ecotour operators in conservation efforts still is largely unexplored [7]. How can ecotour operators be encouraged to act responsibly and actively to contribute to conservation? Should there be a code of conduct for this group as well as for ecotourists? Should a portion of their profits be earmarked for support of the parks they utilize (beyond entrance fees)? How should these be collected (e.g., taxation)?

## CONCLUSIONS

A wealth of literature has emerged that addresses the nature and growth of ecotourism, its potential environmental and sociological impacts, and planning and management issues related to this travel phenomenon. Although no definition of ecotourism has been universally accepted, data commonly are questionable, and much more information and study is needed to assess the impact of nature travel in various parts of the world, on balance, most of the literature on ecotourism is positive.