

(1977) finding that repeaters tended to be anomic tourists and Crompton's (1979:418) observation that for some people, "trips were people oriented rather than place oriented."

Two generalizable implications appear to emerge from this study. First, it reinforces an earlier finding that "The distinctiveness of the repeater and non-repeater segments suggests that uniquely different marketing efforts targeted at each segment would be successful" (Gitelson and Crompton 1984: 215). Second, much of the tourism industry appears to continue to operate primarily on the premise that pull factors are the key motivators and that people go on a vacation to do and see things. Many researchers appear to have tacitly endorsed this premise, and this has been manifested by the relatively substantial literature that has emerged on destination image and attributes. In contrast, there has been relatively little empirical work reported in the literature relating to push motives. The findings reported here suggest that this imbalance needs redressing. □□

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An Ecotourism Assessment of Tortuguero, Costa Rica

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As the demand for nature-oriented tourism increases and the supply of natural resource amenities decreases, the need for understanding how to manage ecologically valuable areas grows. Currently, efforts to manage these areas and plan for sustainable development are hampered by insufficient information (Boo 1990). This study offers an assessment procedure for existing tourism areas that provides information for managing culturally and ecologically

valuable areas. The assessment procedure compares existing guest and host characteristics with an ideal ecotourism system. An ecotourism system considers all significant relationships among tourists, the host community, tourism businesses, natural resource managers, the natural resource amenities that provide the foundation for ecotourism, and the necessary infrastructure for the elements of the system to function.

Ecotourism is an emerging development strategy for sustainable development whereby natural resource amenities, the local community, and the visitor benefit from tourism activity. Existing tourism development in any area can be compared to an ideal ecotourism development strategy. This development strategy considers the guests and hosts and their long-run impact upon the ecological/cultural amenities of the area. Ideal ecotourists are motivated to participate in culturally and ecologically sensitive activities, expect their expenditures to be used to support the local economy and resource conservation, and are willing to contribute to conservation and sustainable development in the area after their trip (Boo 1990; Kutay 1989; Ziffer 1989).

Consistent with ecotourism values, the ideal host system cultivates infrastructure and superstructure sensitive to environmental and cultural needs. The system maintains a long-term planning strategy that involves local people and fosters an economy in which residents benefit from tourism. Benefits are often manifested by the quality of community services such as education and health care.

The ideal ecotourism system also incorporates local involvement early in the planning stages of conservation projects (Budowski 1982; Nations and Komer 1983). Place (1991) extends this viewpoint to park-based tourism, emphasizing the relationship among conservation, economic development, and local involvement. Furthermore, the ideal system strives to minimize the negative aspects of tourism, well documented by Boo (1990), Britton (1980), Hill (1990), and Wilkinson (1989). Last, this orientation utilizes a system that guarantees the protection of attractions and ensures that they also benefit from tourism activity.

To demonstrate the utility of the ecotourism assessment methodology, tourism development in Tortuguero, Costa Rica, was examined. The Tortuguero area, located on the Caribbean Coast, consists of a village of 211 residents and Tortuguero National Park. Historically, the Tortuguero's economy thrived on sea turtle harvesting, logging, and small scale agriculture, but tourism is now its major source of revenue (Place 1991). With no road access, Tortuguero can only be reached by airplane or boat.

Tourists are attracted to the annual green sea turtle (*Chelonia mydas*) nesting activity and to the high level of biological diversity found in the surrounding Amazonlike rainforest. Its remote sandy beaches provide ideal nesting areas for sea turtles, and a series of inland canals allow access to the rainforest, which is among the last remaining in Costa Rica.

The study was conducted June through August, 1990. The data-gathering portion of the study required approximately 3 weeks. Data were collected from tourists, business owners, local residents, and national park staff. A census of tourist groups in the area during a 1-week period was conducted, using a survey methodology ($n = 87$). In the questionnaire, tourists were asked to give their reasons for visiting the area, their on-site recreational activities, and expenditures. The visitors were also asked if they would be willing to contribute to conservation and sustainable development in and around Tortuguero. On-site observations of the tourists' behavior supplemented the survey data.

Another portion of the assessment incorporated information from observations and a survey of all households and businesses in the village. These data yielded information on demographics, employment, business ownership

patterns, community development, and attitudes toward tourism. Moreover, interviews with national park service staff and historical visitation data gave evidence regarding resource management practices and tourism trends.

The reasons tourists gave for visiting Tortuguero centered on nature-oriented activities. Almost 90% came to observe specific plants and animals, especially sea turtles, while 70% also cited experiencing the rain forest as one of their main reasons for visiting the area. Fewer respondents (15%) indicated the local culture as a reason for their visit.

Recreation activities in Tortuguero reflected ecotourism values. A large portion (90%) of the respondents participated in nature-oriented outings, such as guided canoe tours and sea turtle walks. These activities generated revenues consistent with ecotourism objectives. In addition, visitor groups stayed 2-4 nights and spent somewhere between US\$70 and \$150 per person per night on lodging, meals, transportation, and other expenses.

Many tourists indicated they would be willing to contribute money for the protection of Tortuguero National Park (46%), and a smaller percentage of the respondents (13%) were willing to contribute to Tortuguero's community development. These data reflect not only the visitors' values, but also the actual and perceived needs of the national park and the village. Overall, the motivations of the tourists, their on-site behaviors, and their expressed interest in monetarily supporting the area reveals the guest population held moderate-to-high ecotourism values and behaviors.

Tortuguero residents were overwhelmingly in favor of tourism. Almost 90% of the households ($n = 47$) said tourism was good for their community. Over half of the households (57%) had at least one person employed directly in host services. Most of the other households provided ancillary services to guests. The tourism business survey revealed that 70% of the owners ($n = 14$) lived in the village, and most businesses were staffed by residents. In contrast to the smaller businesses, three large lodges had absentee owners who did not always support the local economy.

Data on entrance fees, budgets, and visitation of Tortuguero National Park were also collected. The national park had a nominal entrance fee (\$1.11 per person), which was insufficient to cover its operating budget at the current visitation level of over 12,000 per year. According to the superintendent of Tortuguero National Park (TNP), the park was operating at a considerable deficit and could not acquire funds to meet its operational budget. She also said some tour operators were considering a boycott of TNP to protest a recent increase in entrance fees from US\$0.28 to \$1.11.

In an ideal ecotourism system, residents benefit from tourism through enhanced community services. Tortuguero has relatively low levels of education, health care, and public sanitation services. Sixth grade was the highest level of education available, and donations for the school were being solicited within the village. As of July 1990, Tortuguero had no resident physicians; the health center was open only 2 days a month when a doctor visited the community. Tortuguero had no refuse collection system; garbage was dumped into open pits near houses. There were no public water and sewage systems, although the former was in the planning stage.

Overall, the hosts evidenced less of an ecotourism orientation than did the guests. Some of the businesses understood the interdependent relationship between protecting the natural resources and providing experiences for nature-based tourism. However, others appeared to be driven by a short-term profit motive.

Profits from the tourism activities did not appear to be shared with the national park or the community services. The ongoing shift from an agriculture and timber-based economy to one based on tourism in the area explains, at least partially, why the rewards from tourism are not more evenly distrib-

uted. Public and private sector institutions, such as the Caribbean Conservation Corporation, may serve a useful role in sustainable tourism management and in the allocation of resources among the various host agencies.

In general, in many developing countries, the demands on nature tourism destinations and the need to economically justify their existence is increasing. The broad-based approach used in this study reflects the complexity of ecotourism and the need for a variety of information when managing environmentally and culturally sensitive areas. The methodology used in this study proved to be operational and relatively efficient, because data collection required only 3 weeks. What the methodology lacks in detail, it gains in addressing the myriad of issues associated with tourism in ecologically sensitive areas.

In conclusion, it is recommended that future ecotourism studies include a multidisciplinary research team familiar with the area's economy, culture, and biological communities. In addition, researchers should select key indicator variables across the spectrum of guest, host, and environmental dimensions to ensure efficiency. Another consideration would be the application of the ecotourism assessment to the same system over time. The assessment could be undertaken in 5-year intervals so as to monitor the sustainability of the tourism system. □ □

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