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Elizabeth Malek-Zadeh

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NUMBER 99

The Ecotourism Equation: Measuring the Impacts

JOSEPH A. MILLER, BULLETIN EDITOR

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Enormous initiative and inspiration were involved in organizing the 1996 ISTF Conference, *The Ecotourism Equation: Measuring the Impacts*, held at Yale University on April 12-14. This was a powerful example of the effectiveness of community-based efforts.

Most of the work was done by graduate students from the Yale School of Forestry and Environmental Studies. Valuable assistance came from the University of New Haven, which provided significant support during the conference weekend. The conference was a success from many, many points of view, not the least indicator of which was that on Sunday afternoon, as the conference was drawing to a close, the room was filled with as many enthusiastic participants as it had been at the opening sessions several days earlier.

Special thanks are due the following individuals for their extensive involvement in the conference or the production of the conference proceedings. Neither would have happened without their skill, hard work, and generosity: Joseph Miller, Robin Sears, Alexandra Grinshpun, Kelly Keefe, Christina Cromley, Alison Ormsby, Michele Dash, Sharr Steele-Prohaska, Eva Mossberg, Vicki Hornbostel, Eva Garen, Diane Palmeri, Richard Solaski, Russell Shaddox, Joseph Guse, Jane Coppock, Alexander Evans, and Jim Bryan.

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Introduction

To truly understand what ecotourism means, you must listen to those who define and shape its direction each day. A goal of the conference *The Ecotourism Equation: Measuring the Impacts* (April 12-14, 1996, Yale University) was to avoid circular and unproductive discussions about what ecotourism is supposed to mean. Instead, we focused on understanding the reality dealt with daily by those defining ecotourism through their work. Many perspectives were represented at the conference and are present in this volume. Tour operators, professors, government officials, lodge owners, researchers, non-profit organizations, and local people are all found here. Each provides insight into the complex issues of ecotourism.

At the conference, we hoped discussions would address three main questions. Each of these questions generated diverse responses from speakers and participants. Following is a description of each question along with a review of the topics discussed in the working groups.

1. What are the impacts of ecotourism and how are they measured?

Speakers were asked to address economic, socio-cultural, or ecological impacts. Both positive and negative impacts that result from ecotourism were requested. In addition, the implications of these impacts were to be analyzed. Methods for arriving at conclusions were to be addressed. Finally, ways in which future measurement and analysis could be improved or made easier were to be considered.

Little data currently exists on the impacts of ecotourism. Vivian Newman pointed out that the definition of ecotourism is value-laden. Gene Cope emphasized the positive impacts of marketing power gained by countries hosting ecotourism and developing new jobs. New data on the specific impacts on wildlife was presented by Lori Hiding. Jeff Langholz and Bill Talbot documented impacts on protected area management. The importance of channeling research to appropriate decision-makers was stressed by Marsha Sitnik. Jerry A-Kum suggested that ecotourism can minimize the impacts of tourism itself. James MacGregor also considered the capacity of ecotourism to raise personal awareness. And Geoffrey Wall carefully defined the need for descriptive and predictive measurement and indicators. Overall, there was agreement that more data will need to be collected, and that a common definition of ecotourism will be necessary to achieving comparative analysis.

2. What are the parameters of ecotourism success?

We were interested in considering the essential elements that constitute a successful ecotourism project, and on the specific techniques for evaluating projects. Information was drawn from field studies, experience, and research.

Most speakers stressed the often overlooked need for profitability to accompany resource conservation. The need for regulatory frameworks through international and governmental institutions was emphasized by Françoise Simon. Carol Holtzman Cespedes spoke of getting feedback from tourists, tour operators, and local communities in order to ensure markets for specific sites. In the working group of Megan Epler Wood, it was suggested that tourist education be a parameter for ecotourism success. The determination of parameters and of ratings must be a continual process, as was emphasized by Beatrice Blake. Most were in agreement that ecotourism must not become the principal aspect of local area management, but must be part of a diverse combination of economic and ecological initiatives.

3. How can ecotourism projects be successfully designed and implemented? Policy and management perspectives.

Based on information about the impacts of ecotourism and analysis of the parameters for success, this question asked speakers to propose possible solutions and suggestions for improvement of ecotourism project implementation.

Specific ideas came from speakers who have been experimenting with new techniques for effective management. According to Silvio Magalhaes Barros, Secretary of Tourism, Parana, Brazil, there must be financial and legal incentives for responsible ecotourism. Job creation was stressed by James MacGregor as important for generating political interest. David Barkin suggested that ecotourism should play a role in subsidizing food production and supporting traditional community economics. Keith Sproule spoke of the importance of establishing criteria for how much tour money goes to a community and allowing communities to collectively decide how to spend their profits. The use of Cultural Brokers or Intermediaries in assisting ecotourism development was suggested by Sharr Prohaska. Miriam Torres spoke of the importance of ensuring that baseline research and ongoing monitoring be incorporated in management plans. According to Stanley Selengut, the internationalization of appropriate technology is making it more affordable to be ecologically responsible. And Douglas Trent stressed that it is the consumers who are the impor-

tant link to creating a demand for an ecologically responsible market.

Outside of the structured questions of the conference, some underlying themes emerged. The first common theme was the questioning of former assumptions. Some of the questions considered:

- the significance of ecotourism to traditional development. Is ecotourism a concept which can be isolated from the intertwining influences of everyday civilization (Newman and Sage)?
- commonly quoted numbers about the magnitude of ecotourism (MacGregor).
- the principles of ecotourism behind the regulations, guide lines, or codes (Wallace)?
- the definition of ecotourism used when quantifying the impacts of ecotourism (Brandon, Rattner).
- the ability of the travel industry to appreciate and act on advice generated by conservation institutions and community development organizations (Trent).
- the assumption that the impacts on communities and environments is unidirectional (Wall).

Although data on impacts is not abundant, we have much to learn from former experience. Examples of efforts to work with park management and other governmental and non-governmental organizations were provided by Torres, Sproule, Talbot, and Odendaal. Each provides valuable advice and insight to others embarking on similar efforts to coordinate inter-institutional efforts.

Quantifying and analyzing impacts can be extremely difficult and frustrating. Yet working within the current definitional and logistical difficulties, bold and informative efforts were made by Hidinger, Langholz, Odendaal, and Holtzman Cespedes towards increasing the data and information analysis available.

The ambiguity surrounding ecotourism must be accepted and dealt with. With all its vagueness, the concept of ecotourism still holds the potential to instigate positive change. The papers of A-Kum, Sooaemalelagi, Holle and Nycander reflect the hope that exists in many countries. Whether this hope can ever be fully realized within existing political structures is unclear. But the economic power of the travel industry, the capacity of travel to introduce new ideas and different people world-wide, the urgency of ecologically responsible behavior, all affirm the potential of ecotourism to affect the well-being of future generations.

A second theme at the conference was recognition of the unique nature of individual ecotourism sites. Most situations will demand

creative new approaches relevant to their own specific political and ecological situations.

A third common theme was the need for greater understanding of incentives. The economic benefits of ecotourism are now thought to be the main incentive for local people to preserve their environment. But as tourist demands increase and the business of ecotourism grows, environmental objectives may be sacrificed. Speakers at the conference referred again and again to other values and desires like the quality of life, pride of place, and meaningful existence, as goals which may ensure protection and long-term stability. The kinds of questions falling under the heading of “alternative incentives” might include:

- Besides ecotourism revenue, what other reasons cause local people to conserve their local environmental resources?
- What leads tour companies or governments to involve local people in their ecotourism efforts?
- What are the specific benefits which drive governments to encourage partnerships among different sectors influencing ecotourism?
- What could lead tourists to do background research into the ecological policies of various tour groups?
- What reasons do tour companies have for educating tourists about things which tourists may not have an immediate interest in learning about?

Adventurousness may explain the successes of some leaders who spoke at the conference. The papers of Holtzman Cespedes, Selengut, Blake, Becher, and Segleau Earle each provide examples of entrepreneurs who profited by providing a quality product and from following responsible inclinations. They make clear that there are economic benefits which follow from this sort of pioneering energy.

As in all conferences, we found that there wasn't enough time to get the full benefit of the ideas and experiences contributed by the people who came to this weekend event. We hope this collection of papers will make available many of the issues and ideas discussed.

But it also seems clear that ecotourism cannot proceed without thoughtful planning, realistic expectations, business savvy, cultural sensitivity, and above all, respect for the natural environment.

Elizabeth Malek-Zadeh, Volume Editor

Keynote Address

Developing a National Sustainable Tourism Strategy: Going Beyond Ecotourism to Protect the Planet's Resources

James MacGregor
ecoplan:net Ltd.

ABSTRACT

Ecotourism has been promoted as a significant contributor to resource conservation and environmental protection. However, the typical ecotourism trip usually includes a number of transportation, accommodation, and food service components that are not necessarily environmentally responsible, but which promote sustainable tourism. Nevertheless, the tourism industry is possibly one of the only industry sectors that can arrest the constant environmental destruction caused by such phenomena as global warming. A concerted effort by all stakeholders in tourism to adopt sustainable tourism policies and practices at the national and international levels could achieve substantial results over the next generation. The Bahamas Government in cooperation with the Organization of American States commissioned the most comprehensive set of Sustainable Tourism Policies yet prepared. The model presented below reflects on the initiative taken in the Bahamas and outlines in detail the responsibility of government agencies, travel trade, NGOs, and the public in achieving a sustainable tourism industry.

Because of the size of the travel industry, sustainable tourism at the operator, national, and international level provides one of the few options available to reverse the ongoing destruction of the planet's resources and life support systems. To some, this role may seem like a complete contradiction. Tourism has traditionally polluted pristine water bodies, irreversibly altered indigenous cultures, and decimated untold acres of forest to produce billions of brochures, newsletters, and fliers that have been used to market travel.

There have, however, been significant changes in the past ten years. The 90s are now frequently called the "decade of the environment." Consumers have consistently rated environmental concerns among the top priorities over the past seven or eight years¹. The consumer interest, at least in North America, also supports increased travel industry responsibility. For instance, a USTTA survey (March, 1995) as reported in *Travel Weekly*, indicated that 83 per cent of consumers expected their travel supplier to act in an environmentally responsible manner.

The new tourism markets are also interested in experiencing the environment and participating in nature-related travel. Ecoplan:net Ltd. has recently participated in a large consumer survey of travelers in five U.S. and two Canadian cities, representing approximately 13.2 million consumers². Virtually all of those surveyed plan to take

¹ A 1996 Survey of British Columbia residents by the University of British Columbia, which showed environmental concerns as the number two issue after job creation.

² *Ecotourism-Nature/Adventure/Culture: Alberta and British Columbia Market Demand Assessment*; HLA and ARA Consultants, 1995.

a nature-based trip in the next two years. This represents a level of interest in nature travel that exceeds even the impressive results of the 1994 USTTA study on “Tourism and the Environment,”³ which indicated that there were approximately 43 million American nature-oriented tourists. Virtually all components of tourism must therefore become active and committed proponents of sustainable tourism if resources are to be protected for future generations. Ecotourism is an important shift in the marketplace, but will contribute little to environmental protection and restoration. A complete change in attitude and information throughout the travel sector is required.

THE LIMITATIONS OF ECOTOURISM

When asked to prepare this keynote address to the Yale Ecotourism Conference, I wanted to focus on how this emerging market segment could contribute to substantive environmental protection. However, in assessing the activities and product of the more than 200 ecotourism operators from our files, I found that their overall impact on resource conservation and cultural heritage protection was almost irrelevant in the face of the major environmental issues of the next generation. Whatever ecotourism contributes to the slowing of desertification, global warming, pollution of ground water, and unbridled population growth, passes unnoticed. In fact, the ten major international hotel chains that have embraced green management practices are contributing much more to resource protection than the hundreds of eco (and not-so-eco) tourism operators promoting ecotours to the last of the undisturbed areas of the planet. Energy reduction schemes at Ramada Hotels, water conservation initiatives at the Hilton chain, or even food composting at a major hotel like the Royal York in Toronto can have a very significant influence compared to the well-intentioned efforts of an ecotourism operator delivering a few hundred tourists annually.

Perhaps much of the reason for the relatively minor impact of ecotourism lies in the limitations of its definition. The term ‘ecotourism’ was first used by Hector Ceballos-Lascurain, who, in 1991, defined it as:

travel in undisturbed, natural areas with the objective of admiring, studying, and enjoying the scenery and its wild animals and plants and culture.⁴

It is important to notice that this definition *only* applies to the experience once the traveler is “in” the undisturbed, natural area.

³ *Tourism and the Environment*, US Travel Data Center and Travel Industry Association of America; Washington, DC, 1994.

In fact, the ten major international hotel chains that have embraced green management practices are contributing much more to resource protection than the hundreds of eco (and not-so-eco) tourism operators promoting ecotours to the last of the undisturbed areas of the planet.

⁴ The Australian Ecotourism Strategy, Ministry of Tourism, Canberra, Australia, 1994.

In other words, ecotourists could take an older generation, fuel-consuming charter aircraft (B727, L1011) to the destination country, stay in a standard hotel that has not incorporated energy conservation practices, eat meals made from imported foods, travel to the ecotourism site in a gasoline vehicle, and still believe they were on a responsible ecotourism trip. This arrangement unfortunately describes a typical ecotourism trip.

The definition of ecotourism has, nevertheless, matured over the past five years. The Australian definition in their Ecotourism Strategy adds “travel which avoids damage or deterioration to the experience of others.”⁵ The Ecotourism Society also suggests that the traveler should contribute to the well being of local communities, and the 1996 Brazilian Ecotourism Strategic Plan includes the notion of the businesses being sustainable.

⁵ Ibid.

While the latter may assume that an operation can only be sustainable if acting in an environmentally responsible manner, it is not clear. In any case, even if one small component (e.g., lodge or tour operators) is operating with environmental awareness, it does not mean that the rest of the industry components are being responsible. In fact, ecotourism operators may provide such a small part of an overall 10-day itinerary that their influence on an environmentally responsible tour product may be insignificant.

Our efforts at ecoplan.net to expand the influence of ecotourism as a tool for environmental “right action” have been the result of a broader definition that encompasses the concept of sustainable tourism. It states that ecotourism is:

travel for the purpose of learning about the natural and cultural environments, while contributing to local community development, and the conservation and restoration of resources, while using only those operators and suppliers that are making a significant effort to practice sustainable tourism and green management.

If “sustainable tourism practices by each component of the ecotourism product” is considered a legitimate definition, then few if any countries can offer ecotourism.

THE IMPACT OF ENVIRONMENTAL DEGRADATION ON THE TOURISM INDUSTRY

Despite the abundant warning signs of significant environmental change that will effect our travel industry, there has been relatively little movement toward environmental responsibility. On the other hand, both the size of the industry in terms of revenues and employ-

ment as well as its political influence in many countries, suggests that tourism could be a major leader in promoting and defining sustainable development policies and practices. Tourism requires healthy consumers and a relatively intact and authentic environment. Both these conditions will be under even greater stress in the next fifty years. If we do not move collectively as an industry toward implementing significant changes in the way we do business, then the sustainability of tourism, as we know it, is highly questionable.

Ecotourism as presently conceived, with its focus on site-specific or even local community activities, will not have a substantial influence on national policies, industry practices, or consumer shifts toward environmentally responsible action. However, a concerted and comprehensive partnership among all tourism stakeholders could potentially reverse or at least contain the level of environmental destruction that is being forecast for the next few generations.

TOURISM AND GLOBAL WARMING

One area of environmental change where tourism could play a significant role is in arresting the increased warming of the planet. In fact, tourism may be the only legitimate force that could significantly reverse what appears to be an almost irreversible change to the earth's atmosphere. Within our generation, the energy industries have become the most significant enterprise on the planet. With annual sales in excess of \$1 trillion dollars and daily revenues exceeding \$2 billion, oil alone supports the economies of many countries including Mexico, Russia, Great Britain, Venezuela, and the nations of the Middle East. These countries want, and indeed promote, increased levels of fossil fuel burning, which contributes to global warming. We have become so dependent on fuel sources that if we were to experience a rapid decrease in the burning of fossil fuels, it would result in unprecedented unemployment, worldwide economic depression, and probably a war.

Part of the reason for lack of action from the tourism sector is ignorance and a refusal to look at the facts concerning global warming projections. Let's look at some of these facts:

We have been receiving warnings for the past twenty years that we have now officially moved into an era of global warming. In fact, ten of the hottest years on record have been recorded within the last twenty years.

- London, which is of course a major world tourism destination, has reported that 1995 was the driest summer since 1727 and the hottest since 1659. In that same year, 500 people died in the U.S. midwest from an unexpected heat

One area of environmental change where tourism could play a significant role is in arresting the increased warming of the planet. In fact, tourism may be the only legitimate force that could significantly reverse what appears to be an almost irreversible change to the earth's atmosphere.

wave that followed the second 100-year flood in just three years. The list of climatic aberrations goes on with the subsequent influence on the movement of travelers and the sustainability of travel destinations.

- Rising sea levels will eliminate the Maldives as a nation within the next 75 years, and similar levels of coastal dislocations will effect many of the prime beach front properties in the Caribbean and the Indian Ocean Regions, especially those in low lying coastal zones.
- Last year, researchers discovered a 70 per cent decline in the population of zoo plankton, off the coast of California. This has been linked to an increase between one and two degrees in surface water temperature over the last fifty years. This and other environmental changes are all but destroying the sport fishing industry in some regions of North America.
- For the summer of 1996, record rains in Eastern Quebec virtually destroyed the season's industry. Dams overflowed, destroying access roads, dislocating 12,000 people, killing twelve people and laying waste to several tourism oriented communities. Scientists have blamed global warming for this unprecedented deluge of rain.
- There is evidence that the hurricane season is expanding and this year Bertha arrived in early July—approximately two months before the season usually begins.
- The mosquito responsible for dengue and yellow fevers has traditionally not been able to survive at altitudes greater than 1,000 meters. This insect is now being reported at 1,200 meters in Costa Rica and 2,200 meters in Colombia. More areas will become unsafe for travel.

It does not take a doctoral degree in climatology to appreciate the fact that by pumping 6 billion tons of carbon dioxide into the 12-mile atmosphere around this fragile planet, change will occur. If we require still more proof from the scientific community, then no source is more “chilling” than the opinion of the 2,500 climate scientists who make up the Inter-Governmental Panel on Climate Change (IPCC). Last year this group issued an unequivocal state-

ment on the prospect of a forthcoming catastrophe caused by global warming. The panel flatly announced that the earth had entered a period of climatic instability likely to cause “widespread economic, social, and environmental destruction over the next century. Continued emission of green house gases would create protracted crop destroying droughts and a host of new and recurring diseases, hurricanes of extraordinary malevolence, and rising sea levels that will inundate island nations.”⁶ This does not sound like the conditions for a successful and sustainable tourism industry.

The projections for increased hurricane activity alone could play havoc with Caribbean Region tourism. When combined with rising sea water and the corresponding destruction of coral reefs, wave action will potentially eliminate many of the existing destination resorts. Loss of beaches due to this wave action will also curtail future development options.

These impending problems are one of the reasons why the Government of the Bahamas with its 700 islands and thousands of kilometers of low lying coastal regions is the first nation to prepare a comprehensive Sustainable Tourism Policy and Practices. And although the Bahamas may be demonstrating responsible leadership as a country, it alone cannot significantly contribute to reduction in global emissions and environmental destruction.

AN INTERNATIONAL PARTNERSHIP FOR SUSTAINABLE TOURISM

The Bahamas must be joined by a coalition of countries that collectively work together to incorporate widespread, planet-wide sustainable tourism practices. What better force to counteract the annual \$1 trillion in revenues from oil than a \$4 trillion tourism and travel industry? The clout of the world’s largest industry in shifting consumer attitudes and government policy from the hell-bent production and sales orientation of the energy sector can only be accomplished by the economic power, broad employee base, and consumer connections of the travel industry.

The obstacles are significant. The National Coal Association spends about \$700,000 annually on projecting its position on global climate issues. In 1993 alone, the American Petroleum Institute paid approximately \$2 million to the public relations firm of Burson-Marsteller to defeat proposed green taxes on fossil fuels. While the transportation segment of tourism may also agree with that position, the other 80 per cent of the travel sector has much to lose by such short term and irresponsible thinking.

One of the most aggressive challenges to the reduction of global warming comes from the \$400 million consortium of coal suppliers

⁶ “The Global Crisis,” *National Review*, June 1996.

What better force to counteract the annual \$1 trillion in revenues from oil than a \$4 trillion tourism and travel industry?

and coal-fired utilities called the Western Fuel Association. They were very successful in influencing the Bush Administration with promises of a new era of agriculture based on reclaimed desert lands with carbon dioxide-forced growth of grasslands. Their influence is obviously still felt in the existing Republican Congress. The combined efforts of those environmental groups concerned about global warming, including the Environmental Defense Fund, the Sierra Club, the Union of Concerned Scientists, and the World Wildlife Fund, must be joined by travel sector components. As stakeholders who are deeply concerned about the future of the environment, we should stand behind these groups with financial and corporate support.

While we can all agree that more scientific data on the rate of global change and its link to global warming could be done, as a travel industry consultant, I would rather accept the expert opinion of the 3,000 to 4,000 scientists over the self-serving interests of the fossil fuel trade associations and their highly paid scientific consultants. Do you remember the arguments by industry in the 1970s and 1980s discrediting the negative impact of CFCs? Well, the scientific community was right, and fortunately, governments responded with the elimination of these ozone depleting chemicals. A similar change in fossil fuel-related policy will not be as easy. For instance, serious reductions in fossil fuel use will be rejected by the United States, Japan, and the OPEC nations. As the economies of China and India become stronger, they too will resist policy changes at least until they have seen significant reductions from the U.S. The voices then of those small island nations and even the stronger European countries will not significantly shift the existing trends. However, the multi-trillion dollar tourism industry, with its connections to many other industrial sectors such as agriculture, fisheries, transportation, food processing, and construction could generate the type of partnerships that would make government reconsider. A comprehensive national sustainable tourism initiative from dozens of countries could perhaps be the most significant improvement we have seen in the planet's environment in the past 1,000 years.

I believe that this change is possible. In the past five years, ecoplan:net ltd. has provided sustainable tourism and green management information to thousands of delegates in workshops, seminars, and conferences. I have been very impressed to see hotel managers who upon entering the workshop knowing nothing of environmental action or green management, make substantial changes in their properties.

The combined efforts of those environmental groups concerned about global warming, including the Environmental Defense Fund, the Sierra Club, the Union of Concerned Scientists, and the World Wildlife Fund, must be joined by travel sector components.

THE BAHAMAS SUSTAINABLE TOURISM MODEL

In 1994, the Minister of Tourism at the time announced that a major ecotourism initiative was being prepared for the Out Islands. The rationale was simple:

- a need to create jobs in the islands
- a combination of land and marine resources and Bahamian culture that appeals to ecotourists
- a desire to broaden the market segments to the Bahamas from the traditional mass markets associated with beach tourism, gambling, and cruise ship visitors

Rather than bring a number of products to the market that were neither operating on sustainable principles or reflecting basic ecotourism standards, it was decided to create a foundation for responsible tourism to be delivered by an environmentally friendly industry. Ecoplan:net was subsequently hired, and over ten months, worked closely with Ministry of Tourism officials, the OAS (who paid for the study) representative, Michael King, and most significantly, officials from numerous other government departments (agriculture, fisheries, planning, etc.), NGOs, and, of course, the travel trade.

This collaboration and involvement from all the players—from the Cabinet ministers of the various departments to conservation organizations to small resort operators—proved to be the only way these policies and guidelines could be implemented.

Following are some of the initiatives which the process in the Bahamas has started:

- Priority policies have been selected for Cabinet approval.
- A Sustainable Tourism Unit has been formed and is initially responsible to the Permanent Secretary, who in turn has the direct support of the Minister, The Honorable Harold Watson.
- Ecoplan:net is now preparing an Implementation Strategy.
- The Commonwealth Secretariat has reviewed the policies and is considering funding a model project for the Caribbean.

Because I believe that the Bahamas Sustainable Tourism Model is the most progressive and comprehensive to be developed to date, I would like to present it as a method for a country, state, or province to embrace sustainable tourism. It will make up the first block in developing an international coalition of nations prepared to make a

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stand for the environment in order to assure the long term sustainability of tourism resources. Certainly the Bahamas and their Caribbean neighbors may have the most to lose in the short term because of global warming and other environmental issues. But then so do the thousands of tour operators and their employees working in tourism generating countries throughout Europe, North America, and Asia.

Perhaps we can consider the Bahamas as an “indicator species,” having recognized that it may be the first of many countries to experience the loss of its primary industry if it does not take action at the national and global level. The Bahamas, which has had little previous history of planned environmental protection has recently become a signatory to many international conventions on environmental management. The Bahamas, in fact, hosted the follow-up Meeting of the Parties to the Rio Convention. And it has embraced thirty-one tough policies that will effectively touch all aspects of its society.

As author of their Bahamian Sustainable Tourism Policies as well as an adamant supporter of the initiatives of the Bahamian government and its travel industry, I am pleased to present this model of sincere effort to establish environmental responsibility at a national level.

I hope that each of you find some opportunity within your job or particular role to contribute to environmental restoration and the prevention of continued environmental destruction. Perhaps this model can be a catalyst to your actions as a responsible tourism representative and a resident of planet earth.

A PARTNERSHIP FOR NATIONAL SUSTAINABLE TOURISM

The Bahamas can also serve as a model for creating a national sustainable tourism policy. I have prepared an outline of the possible—indeed necessary—activities that you can undertake in both your professional and personal lives. If you are not *personally* committed to sustainability, then you will be limited in your potential to contribute at the professional level.

Commitment—while desirable—is not essential in the first phases of sustainable tourism development. I have seen participants leave our Green Management Workshops and make visible changes to their resorts the next day. However, I cannot say that they “saw the light” and instantly became converted and committed. But change did take place. . . and that is what this conference is about: discussing the impacts of ecotourism, how to measure them, and how to mitigate with sustainable practices.

The Bahamas, which has had little previous history of planned environmental protection, has recently become a signatory to many international conventions on environmental management.

As I have stated, these goals can only be achieved through a partnership of all individuals within the travel industry and its associated sectors (agriculture, transportation, environmental associations, etc.).

The following actions, therefore—presented on an organization-by-organization basis—can provide you with a sense of what you and your colleagues may do to advance sustainable tourism when you leave this conference.

NATIONAL OR STATE DEPARTMENT OF TOURISM

- identify urgent environmental and ecotourism issues
- prepare Sustainable Tourism Policies & Implementation Strategies
- provide training programs in sustainable development, green management, sustainable ecotourism product development
- create community awareness of the value of tourism and the importance of environmental protection and restoration
- support environmental impact assessments of all tourism development
- work with other agencies to assure the protection of natural and cultural resources
- prepare regional/community Sustainable Tourism Master Plans
- prepare Site Development and Architectural Guidelines
- contribute to heritage protection guidelines and criteria
- coordinate the environmental activities of the travel trade

Tourism could be a major leader in influencing national sustainable development policies and practices.

DEPARTMENT OF AGRICULTURE

- prepare guidelines for sustainable agriculture and organic farming
- promote local agricultural products to tourism industry
- prepare recipes requiring local agricultural products
- eliminate toxic herbicides, pesticides, and fungicides
- encourage local market gardening (e.g., fruits and vegetables)
- provide financial incentives to small farms

DEPARTMENT OF NATURAL RESOURCES

- identify and inventory all areas of unique natural resources
 - endangered species
 - rare birds and plants
 - nesting areas

- unique geological features
- intact ecosystems
- designate and plan conservation areas for tourism (e.g., viewing areas, circulation)
- prepare network of integrated resource protection areas, including wildlife travel corridors, wildlife reproduction (i.e., calving), feeding
- in collaboration with travel trade, identify user fees and visitation levels
- provide green management training for staff

DEPARTMENT OF ENVIRONMENT

- prepare and enforce guidelines for environmental impact assessments
- train staff to prepare and review EIAs
- establish regulations for site development
- define standards for waste management, especially dumping stations, incinerators, tile beds, etc.
- undertake public environmental education campaign in collaboration with hotels and restaurants

PLANNING DEPARTMENTS

- support legislation and regulations that protect threatened or unique resources
- create or contribute to Roundtables on the Environment
- ensure that sustainable development practices and guide lines are integral to all planning processes
- identify carrying capacity for all proposed site developments
- ensure tourism is an integral part of all economic development plans
- consider all linkages between travel trade and other industrial sectors (e.g., agricultural, fisheries, transportation)

DEPARTMENT OF TRANSPORTATION

- prepare guidelines for greater use of ethanol and recyclable fuels
- promote alternative energy vehicles in tourism transportation
- ensure optional green management practices in fuel handling
- use travel transportation as a model for environmentally responsible activities in other sectors of transportation

DEPARTMENT OF FORESTRY

- promote sustainable forestry practices in all tourism destination regions
- promote greater use of local wood products in tourism construction
- discourage use of high energy concrete, aluminum, steel, and plastics in tourism facility construction
- prepare prototypes of wood-built accommodation and food services facilities
- identify opportunities for use of recycled wood products

DEPARTMENT OF PUBLIC WORKS

- prepare national or state Waste Management Strategies
- identify opportunities for waste reduction and recycling
- finance recycling demonstration products for hotel industry
- ensure green management practices in all government buildings
- introduce alternative waste treatment systems (e.g., composting toilets, kitchen waste composting for hotels and restaurants)

UTILITIES CORPORATIONS

- introduce Power Smart Programs for energy conservation
- bulk-buy energy efficient bulbs, low flow faucets, water dams, etc.
- encourage conservation initiatives with billing mail outs (i.e., recycling, reducing, etc.)
- create SWAT teams to work with hotel and restaurant management on water and power reduction
- prepare Energy and Water Audit Guidelines for hotel and restaurant sector
- provide awards for energy efficient hotels, resorts, restaurants, tour operations

HOTELS, MOTELS, AND RESORTS

Prepare Corporate Green Strategy including:

- environmental goals and objectives
- commitment by management

22 THE ECOTOURISM EQUATION: MEASURING THE IMPACTS

- participation by shareholders and investors
- creation of 'green team'
- staff training
- community conservation projects
- monitoring and reporting

Water Energy Conservation and Solid Waste Management

- assess current use
- identify losses and leakages
- retrofit electrical and water systems
- verify output with operation manuals
- compost kitchen waste
- use of grey water for landscape irrigation

Purchasing Procedures

- institute bulk buying
- eliminate excessive packaging
- research environmentally friendly products
- eliminate all hazardous chemicals (e.g., housekeeping)
- prepare environmentally responsible purchasing guidelines
- educate suppliers
- purchase durable products
- consider second hand equipment

TOUR OPERATORS

- prepare guidelines for supplier selection
- identify environmentally responsible hotels and resorts, attractions, restaurants, transportation companies
- prepare green marketing plan
- use co-op advertising with eco-friendly manufacturers/agencies
- contribute to conservation projects
- prepare Tourist Code of Conduct
- create education programs

PROTECTED AREAS AND NATIONAL PARKS AGENCIES

- prepare Green Management Strategy
- undertake comprehensive environmental audit
- identify responsible tour operators

- offer environmental education programs
- create a sustainable tourism demonstration project

ENVIRONMENTAL AND CULTURAL ASSOCIATIONS AND NGOS

- identify conservation-based tourism projects
- collaborate with environmentally responsible tour operators
- create environmental education program
- co-venture with 'green' resort
- partner with educational institution (e.g., Smithsonian Native American Museum)
- promote conservation/corporation cooperation

Following are professional groups that can be directly involved in promoting sustainability:

PROFESSIONALS AND PROFESSIONAL ASSOCIATIONS

Tourism Planners
Park Planners
Architects
Foresters
Recreation Specialists
Resource Managers
Hotel Operators/Managers
Guides & Wardens
Engineers

In the space allotted, it is not possible to give specific activities that can be carried out by all the above professional groups. So I have chosen to highlight three to provide examples:

ARCHITECTS

- learn sustainable design and construction
- source 'green' materials
- prepare Sustainable Architecture Guidelines
- educate investors and developers
- educate architectural materials suppliers
- collaborate with environmentally responsible landscape architects and engineers

TOURISM PLANNERS

- promote Sustainable Tourism Development Strategies
- study sustainable tourism policies / initiatives
- learn green management practices

- determine sustainable tourism partnerships
- promote Sustainable Tourism Policy Guidelines
- ensure all plans consider:
 - local benefits
 - inter-generation equity
 - economic impacts
 - identification of protected areas
 - preparation of EIAs

FORESTERS AND FOREST ENGINEERS

- prepare and review environmental impacts of forestry
- promote sustainable forestry practices
- prepare comprehensive forest management plans
 - identifying
 - areas for ecotourism
 - environmental education
 - resource protection
 - wildlife corridors and production areas
- construct ecolodges and huts adjacent to visitor activity zones
- collaborate with local groups and associations

STUDENTS

- conduct informal environmental audit of your school
- select sustainable development class projects
- conduct consumer surveys
- study sustainable forestry practices
- study buyers' environmental policies (e.g., the Kimberly Clark Corporation will not buy paper products from non-sustainable forestry companies.)

RESIDENT OF PLANET EARTH

Householder

- compost immediately
- promote recycling among friends
- car care
- consider the environment in all purchases
- recycle everything

Employee

- promote sustainable activities in work place
- read of techniques and savings for business

Parent

- listen to your children
- think of your grandchildren with each decision

Conference Participant

- consider the impact of your decisions on your grandchildren

CONCLUSION

If we accept the definition that ecotourism must operate on sustainable tourism principles, then ecotourism makes up a very small segment of tourism and is probably not growing at a very significant rate—unlike the demand for nature tourism or for casinos on Native reserves. If, however, we are committed to creating environmentally responsible tourism for the purpose of environmental education, distribution of revenues, and contributing to conservation, then we can potentially be involved in the most significant transition in the travel industry since Thomas Cooke printed travelers checks. But our focus then has to be on:

- identifying how each tourist impacts the environment;
- understanding sustainable tourism principles, products, and procedures and how they can be implemented;
- identifying our role in supporting sustainable tourism;
- monitoring and measuring the results;
- teaching others, especially those committed to a quality ecotourism product;
- continually researching and studying sustainable “best practices.”

As students, you have a remarkable opportunity to identify an area of interest and explore it from a sustainable perspective. Take the time to:

- select the best available technology
- determine the most appropriate measures and operational criteria
- prepare new measurement standards based on your definition of ‘sustainability’

This knowledge *will* be valuable when you enter the job market. As members of the travel trade, we too must be students and follow each of the above steps. . . except we must be responsible for *imple-*

menting the standards and practices. If not, there will be little left to measure and nothing left to mitigate. The well-known physicist Stephen Hawkins has given the planet about 100 years before it is destroyed—taking with it ecotourists and all others who further contribute to the loss of the planet's resources. With all due respect, we must prove Mr. Hawkins wrong by working immediately toward our own professional and personal practice of sustainability.

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Opening Address

The Bottom Line: Getting Biodiversity Conservation Back into Ecotourism

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ABSTRACT

This paper argues that the distinguishing feature of ecotourism should be that it benefits biodiversity conservation. We propose a set of five benefits to conservation which should be evident in any tourism activity which claims to be ecotourism. These benefits will not happen spontaneously. They will only result from first specifying a clear framework for analyzing the linkages between project-level activities and conservation. This paper identifies a series of steps which need to be undertaken as part of project design which help to identify the logical links between the project design cycle and measuring project success. When such methodological rigor is introduced into ecotourism initiatives, there will be a much greater chance for success to be verifiable and measurable in relation to real-world impacts. It can then provide better sources of learning for other projects and places, and genuinely benefit biodiversity conservation.

Ecotourism is widely, but perhaps uncritically, accepted as one strategy to provide environmental, socio-economic, and cultural benefits at both local and national levels. The major underlying assumption of ecotourism is that visitors can provide the necessary economic incentives to achieve local conservation and development. In theory, ecotourism generates revenue which will be used to protect and conserve the biodiversity and natural resources that draw visitors to a particular site. Yet broader expectations of ecotourism are found in the literature, such as the claim that ecotourism “is a mode of ecodevelopment which represents a practical and effective means of attaining social and economic improvement for all countries” (Ceballos-Lascurain 1991). Such broad expectations of ecotourism—to simultaneously advance both conservation and socio-economic aims—can be paradoxical, and may set the stage for disharmony, as lack of a clear “bottom line” for ecotourism may lead to conflicts or project failure: conservation may not always be compatible with development objectives. By striving to satisfy a myriad of environmental, social, economic, and cultural objectives at multiple levels of society, it is inherently difficult to determine, measure, and analyze the criteria for success of ecotourism activities.

The views expressed are those of the authors, and not necessarily those of their organizations.

The definition of ecotourism has evolved from one emphasizing nature-oriented tourism to one which emphasizes both environmental and cultural goals. For example, The Ecotourism Society's (TES) definition of ecotourism is: "purposeful travel to natural areas to understand the culture and natural history of the environment; taking care not to alter the integrity of the ecosystem; producing economic opportunities that make the conservation of natural resources beneficial to local people" (TES 1991). Others suggest that it may be possible to make "almost any tourism a positive force for conservation, given the right combination of policy, regulation, control, education, income sharing, and so on" (Western 1992). Rather than being a kind of tourism, Western argues that ecotourism should be seen as "a set of evolving principles and practices for improving nature tourism as a whole" (Western 1992).

A broad-based literature review suggests that ecotourism is used commonly to mean any form of "green" or "environmentally friendly" tourism that protects the environment in any way, such as through recycling, waste reduction, or if it is nature-based. Much of the literature on ecotourism consists of reports detailing its impacts or success at particular sites; there is a great deal of anecdotal information and case studies. Yet few case studies present either a conceptual framework of what they mean by success or any way of measuring such success. The few cross-cutting studies of ecotourism have indicated that ecotourism has not lived up to its potential. For example, an early analysis of twenty-three Integrated Conservation-Development Projects (ICDPs), most with ecotourism components, found that few of the benefits went to local people or served to enhance protection of adjacent wildlands (Wells and Brandon 1992). Another study of traditional peoples and national parks concluded that "there are only certain conditions ... and planning actions under which the positive economic development benefits [from tourism] will flow to local people" and which can "minimize negative economic, social, and cultural impacts on resident people" (West and Brechin 1991). More recent case studies are concluding that there are difficulties in structuring ecotourism to achieve both conservation and development objectives (for examples, see Wells 1993, Lindberg and Enriquez 1994, Church and Brandon 1995, Cuello et al. 1996, Brandon and Murer 1996, Brandon 1996, and Kinnaird and O'Brien 1996).

How can we assess the true impacts of ecotourism projects? How can we think critically about evaluating ecotourism's successes and failures? The lack of clarity concerning goals, objectives, and definitions found within ecotourism projects is not trivial or semantic: rather, it has led to a lack of clarity in the design and implementa-

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tion of many ecotourism activities. Ultimately, this has translated into unrealized conservation goals and reduced benefits for many of the sectors which ecotourism seeks to support.

In this paper, we would like to highlight the need for analytical clarity as the basis for designing ecotourism projects. We believe that there needs to be consensus about what ecotourism projects should achieve—their bottom line. Without such a bottom line, ecotourism is unlikely to make strong contributions to conservation, as it will be little more than a set of discrete activities, such as private ecolodges, or components of larger projects, which while useful, will have little conservation value overall. We propose a set of five benefits to conservation which should be evident in any tourism activity that claims to be ecotourism. This paper argues that these five types of benefits can form the basis for analyzing whether a given ecotourism project has a positive local and/or national impact on conservation. Also, as more rigorous case studies are undertaken, it will be easier to analyze ecotourism's intended and unintended impacts on conservation worldwide.

DEFINING THE BASIS FOR ECOTOURISM SUCCESS

Broad-brush conceptions of ecotourism, such as Ceballos-Lascurain's cited above, leave a great amount of room for interpretation. There will be all kinds of ways to improve on ecotourism, but there still might not be agreement on when it is successful, who should benefit, and how these benefits should be distributed. In operational terms, fuzzy principles lead to fuzzy projects. Projects which don't have a clear objective, or which have competing objectives as found in many ICDPs, often show limited results. Few ecotourism projects have well-defined, limited, and clear objectives; many are trying to satisfy a multitude of objectives and a multitude of stakeholders. For example, in TES's definition, the objectives are visitor education, non-alteration of ecosystems, and local economic benefits. In this definition, there are three stakeholder groups which benefit: visitors, ecosystems, and local people. Increasingly, it is apparent that it may not always be possible to satisfy all stakeholders or objectives simultaneously.

We would like to narrow the focus and propose that benefits to conservation should be considered as the bottom line for ecotourism and nature-based tourism. The key benefits for conservation can be clustered into five areas (Brandon 1996):

- 1) a source of financing for biodiversity conservation, especially in legally protected areas;
- 2) economic justification for protected areas;

The lack of clarity concerning goals, objectives, and definitions found within ecotourism projects is not trivial or semantic: rather, it has led to a lack of clarity in the design and implementation of many ecotourism activities. Ultimately, this has translated into unrealized conservation goals and reduced benefits for many of the sectors which ecotourism seeks to support.

- 3) economic alternatives for local people to reduce over-exploitation on protected areas and wildlands and wildlife resources;
- 4) constituency-building which promotes biodiversity conservation; and
- 5) an impetus for private biodiversity conservation efforts.

These benefits can involve stakeholders in other sectors, as it promotes the conservation objective. For example, visitor education would not be undertaken as an end unto itself, or just to benefit the visitor, but as a strategy to build a constituency for conservation. More importantly, these benefits provide a basic framework for defining and analyzing ecotourism impacts. Clearly specifying the impacts of ecotourism projects, or any other integrated conservation and development project (ICDPs) is a challenge often neglected by project managers (Wells and Brandon 1992).

A STARTING POINT FOR ANALYSIS

The bottom line for ecotourism projects, as defined by the above benefits to biodiversity conservation, is the ending point for ecotourism project design, implementation, and monitoring. While the benefits provide a basic set of criteria against which we can ultimately measure ecotourism success, the benefits, as specified above, are insufficiently detailed to guide the process of project design. Other concerns must come into play, such as project financial concerns (e.g., source of financing, cash flow), business concerns (e.g., marketing, project management), and physical concerns (e.g., scale, design, and construction). However, if the link to conservation is to be preserved, these elements should be considered secondary to the over-riding concern of providing benefits to conservation during project design and implementation. Design impact assessment should flow out of clarifying of basic objectives or benefits and figuring out how to make these objectives operational.

There are a series of steps which need to be undertaken as part of project design which help to identify the logical links between the project design cycle and measuring project success (Salafsky and Margoluis 1996). In order to elaborate on these links, we will first present the logical steps that should be followed in a forward-looking project design process that allows for analysis and impact assessment. Then we show how these steps can be adjusted to incorporate our bottom line interest in promoting benefits to conservation. These two steps are illustrated in the left and right hand sides, respectively, of Table 1.

We would like to highlight the need for analytical clarity as the basis for designing ecotourism projects. We believe that there needs to be consensus about what ecotourism projects should do—their bottom line. Without such a bottom line, ecotourism is unlikely to make strong contributions to conservation.

LINKING CONCEPTUAL MODELS TO THE “BOTTOM LINE”

The second step listed above—developing the project’s conceptual model—is the most critical step for making the direct links between ecotourism project design and ensuring positive “bottom line” conservation benefits. The development of a conceptual model before designing project activities lets researchers and project managers explicitly see the linkages between these factors and the conservation and development conditions which they seek to modify. Building a conceptual model requires developing and analyzing a series of hypotheses or assumptions about conditions or factors that ultimately lead to some desired outcome. It also allows one to look at the interactions between factors and conditions. Subsequent steps in impact assessment are dependent on a good conceptual model (Margoluis and Salafsky 1996).

Any project model makes assumptions about how the incentives created in the project setting will affect the long-term behavior of people, including both immediate project stakeholders and others, one step removed, who may nevertheless have an impact on project success. These assumptions need careful elaboration because any weak links can undermine prospects for project success. By testing component assumptions or hypotheses in a systematic and consistent manner, we can learn what works and what does not, and under what conditions. One example of how these assumptions are developed is given below. Let’s start with one of the key benefits mentioned earlier:

Ecotourism can provide economic alternatives for local people to reduce over-exploitation of protected areas and wildlands and wildlife resources.

Reformulated as a major assumption, this statement becomes, for example:

Ecotourism provides sufficient per capita income to poor local populations (through employment opportunities, sale of crafts, or other products) to induce them to protect biodiversity and the natural resources upon which their livelihood, at least partially, depends.

Many ecotourism projects operate with this as a key assumption. This assumption, in turn, has many sub-assumptions embedded therein which can be specified. It is then possible to develop a set of objectives, factors, and then performance indicators. The impor-

Benefits to conservation should be considered as the bottom line for ecotourism and nature-based tourism.

Table 1: Conservation as the Bottom Line in Ecotourism Project Design

Steps in Project Design	Using Conservation Benefits as a "Bottom Line" in Ecotourism Projects
Clarification of institutional goal	Is there institutional acceptance that ecotourism success is determined by showing positive benefits to conservation?
Development of a conceptual model based on local site conditions	Are there strong, logically consistent links between the project's conceptual model and local, social, economic, and environmental conditions that will lead to the agreed-upon conservation benefits? The assumptions behind these links need to be described in detail.
Design of detailed project plan	Do the financial, management, and physical dimensions of the project design support the "bottom line," in terms of project cash flow, ownership, political support, land use controls and government / NGO oversight?
Development of monitoring and evaluation plan	Does the monitoring plan include both baseline and progress-related data sufficient to provide information for adaptive management and impact assessment? For example, how will resource conservation, establishment of local, national and international constituencies, and financial flows, be measured and monitored?
Implementation of the project	Are stakeholders able to keep a focus on conservation as the "bottom line" during implementation? Are the conservation objectives evident?
Data collection and analysis	Do the measurements demonstrate benefits to conservation? Are linkages between benefits in other sectors (e.g., employment) and conservation analyzed? Do the data collected identify the conservation ends? For example, analysis and measurement should focus on constituency building for conservation, not just number of visitors, or lectures given.
Information use	Are the data useful in assessment of conservation benefits? Have new insights been translated into changed assumptions in the conceptual model, new activities, and new impact assessment measures?

tance of this process cannot be understated. For the major assumption above, these sub-assumptions might include any of those found in the following incomplete but illustrative list:

1. Local people pose a threat to biodiversity conservation.
2. Local people will, given the opportunity, destroy natural resources indiscriminately if they see no present or future value in them.
3. Local people need cash to cover their basic needs and those of their families.
4. Local people can be sufficiently involved in ecotourism.
5. Ecotourism can provide economic opportunities.
6. Economic benefits from ecotourism can be targeted in ways which will change threatening behavior.

7. Ecotourism's competitive advantage is higher than other forms of earning income for local people.
8. The economic benefits from ecotourism are sufficient to outweigh potential negative impacts (e.g., intrusive tourists, cultural change, local competition, introduction of diseases).
9. Local people will welcome outsiders into their communities, homes, sacred sites, and natural areas.
10. If local people earn sufficient cash from ecotourism ventures, they will value their natural resources more, and this change in value will lead to actions which conserve and protect these resources.
11. National or local governments allow local people to receive the benefits from ecotourism.

Practitioners may disagree with many of these statements; the point is that they all flow logically out of the major assumption stated above. Laying out the specific assumptions allows projects to clarify the appropriate objectives, assumptions, and activities for a given site. For example, numbers 6 and 10 assume that benefits can change behavior and that poor households may switch from illegal, unsustainable, and difficult activities such as fuelwood collection or goldmining to legal activities that generate equal revenue—such as ecotourism. Yet this assumes that poor households are happy substituting the same amount of money from one activity to another and that their income needs are fixed. But many poor households want greater income levels—better than just holding their own economically. They want to improve their income levels. If ecotourism were seasonal, which it often is, at what point will it act as an economic incentive—for the part of the year when the person receives the income or for the whole year? Or will people work in ecotourism and undertake illegal and/or unsustainable activities during other times of the year? To what extent do the ecotourism benefits have to be linked to conservation (Brandon and Wells 1992, Margoluis 1994)? If local people are not a source of threat (sub-assumption 1) at a given site, then ICDPs should target their efforts on policy reforms or other potential threats to ecosystems. Laying out the sub-assumptions forces one to identify causal explanations for how certain project activities will lead to particular actions or changes. This logical sequence is the basis for any reliable impact assessment.

Given all of the sub-assumptions above, at what point would a project be “successful” on the aforementioned criteria? When it provides economic benefits? When economic opportunities benefit local people? At what level of benefit? What if the benefits go to

The development of a conceptual model before designing project activities lets researchers and project managers explicitly see the linkages between these factors and the conservation and development conditions which they seek to modify.

financing for a park and not to local people? Coming up with answers to these questions means having a clearly specified conceptual model. This means that opportunities for project success can be strengthened by building on other areas of knowledge. In the context of ecotourism, that means building on what we know about linking conservation and development. Emerging literature about how to structure locally-based incentives and conservation objectives should be consulted (BCN Annual Report 1995).

We acknowledge that there is a strong link between the social and conservation elements in any project, and that ecotourism projects, to the extent possible, should emphasize progressive, locally-organized ventures. Employment generated in a range of ecotourism-related jobs may be one of the most significant benefits for most rural communities. The issue as to whether this constitutes sufficient incentive to help safeguard protected areas can only be answered on a site-specific basis.

CONCLUSIONS: DEFINING ECOTOURISM SUCCESS AND IMPACTS

This paper argues that the distinguishing feature of ecotourism should be that it benefits biodiversity conservation. Although there are many activities and tourism ventures claiming to be ecotourism, this paper argues that they are not truly ecotourism unless they positively and measurably impact biodiversity conservation. Other forms of tourism may be called green, community-based, or sustainable, but that the main goal of *ecotourism* should be biodiversity conservation. Five benefits to biodiversity conservation are proposed as the basis for developing criteria to measure if ecotourism activities are successful and that net benefits are flowing to conservation from ecotourism projects. However, several topics requiring further thought and discussion remain:

What should the geographic scope of the ecotourism benefits analysis be? The scale of impacts and benefits—including the social and ecological definitions of the boundaries of these impacts and benefits—must be specified. For example, is the point to provide financing to cover the costs of tourism within a park, to the park as a whole, or to the national conservation system? Are the social benefits and impacts to remain in a few households associated with a park or more generally throughout an adjacent community? Or are benefits to act as an incentive for all the communities surrounding a park?

Should the difference between small-scale ecotourism and larger scale nature-based tourism enter into the “bottom line” definition of success? Do small versus large projects, foreign versus local ownership, or high visitor versus low visitor density, affect the bottom line?

Laying out the sub-assumptions forces one to identify causal explanations for how certain project activities will lead to particular actions or changes. Strong causal explanations are the basis for any reliable impact assessment.

What if outside factors contribute to protected area degradation, despite any positive benefits contributed by ecotourism projects? Examples of this could be the impact of fiscal or land use policies on buffer zone or protected area land use; lack of adequate government-provided resources for protected area enforcement; or social, economic, or technological changes in the area that impact the access, land productivity, or economic attractiveness of alternative uses. Can we argue that ecotourism was a success, even though conservation did not occur?

Specifying the implied benefits of ecotourism projects would go a long way toward clarifying the debates about ecotourism impacts. The previous list of benefits forms the basis for developing conceptual models, with appropriate assumptions, concerning how ecotourism operates at local, regional, and national levels. The assumptions, or hypotheses, underlying prevailing models of ecotourism projects need to be debated in the narrow light of the desired “bottom line” benefits for conservation. The challenge is to make the hypotheses empirically testable in the ongoing monitoring and evaluation of ecotourism projects worldwide. Then, the broader question of ecotourism impacts could be much more rigorously addressed.

In conclusion, to improve the role of impact assessment within ecotourism, we advocate that ecotourism projects should have a clear framework for analyzing the linkages between project-level activities and conservation, outcomes which may have both local- and national-level dimensions. Assumptions developed as part of the model should be identified and laid out as hypotheses to be tested. Impact assessment, as part of ongoing monitoring and evaluation, should be encouraged as part of all ecotourism initiatives. When such methodological rigor is introduced into ecotourism initiatives, there will be a much greater chance for success to be verifiable and measurable in relation to real-world impacts. It can then provide better sources of learning for other projects and places, and genuinely benefit biodiversity conservation.

The distinguishing feature of ecotourism should be benefits to biodiversity conservation.

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Development Through Ecotourism in the Interior of Suriname

Jerry Ricardo A-Kum
 METS, Suriname Tourism Company LTD

ABSTRACT

METS (Maatschappij tot Exploitatie van Toeristische verblijven in Suriname), which translates as Company for the Exploitation of Tourism Lodges, realizes that uncontrolled tourism can bring damage to both nature and culture. Also known as the Suriname Tourism Company Limited, this organization's policy is to limit the number of visitors (maximum fifteen visitors per tour at a resort). METS is also creating an atmosphere whereby citizens in the interior (Amerindians & Maroons) are made aware of the guideline that "respect for yourself, respect for others, respect for your village, respect for your country," is very important. Elderly people keep their culture intact, while youngsters are leaning heavily on city life. This process of respecting traditional culture is done together with elderly citizens. Youngsters are informed again and again why it is important to have their own identity. In this way, what the government cannot afford, due to the poor economy, is 'covered' by METS.

GENERAL

Suriname, formerly Dutch Guiana (163,265 sq km) lies on the northeastern coast of South America. The national language is Dutch and the population consists of 406,000 citizens. Hindustanis (East Indians) are the majority, followed by blacks, Javanese (from Indonesia), Chinese, Europeans, and most importantly Amerindians, the first inhabitants of Suriname. Another culturally important group of citizens are the Maroons, descendants of run-away slaves. Five Amerindian tribes and six Maroon tribes inhabit the Surinamese interior. Respect for nature is very important in their culture. Both Amerinidians and Maroons have kept their culture intact, making it unique for Suriname and the world. In fact, the Maroon culture in Suriname has been kept intact for more than 200 years. This part of African culture has vanished even in Africa.

The aforementioned information illustrates that Suriname holds the potential to offer tourism. Suriname is unknown, and unspoilt, thus creating a good base to attract visitors worldwide. Taking into account that more and more visitors are longing for exotic, unknown, and unspoilt destinations, Suriname might turn out to be a very important tourism destination in the future. After all, the nation offers traditional culture at its best, since two thirds of its area is still covered with rainforest—assets, which, if correctly managed, are extremely important in the development of Suriname.

Yet, Suriname has no real tourism tradition, even though it was the first country in South America to erect a tourism office in New York during the seventies. The 1970s were a tourism boom period

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for Suriname, with a peak of approximately 40,000 visitors per year. Political instability during the 1980s brought a halt to the development of tourism. Democracy was finally restored in 1991, when a new democratically elected government was installed. During this new era, tourism was re-established when the Ministry of Transport, Communications and Tourism was created. Suriname was to be promoted again as a destination having a unique cosmopolitan society in one of the most remote areas of the world—a country with unknown nature tourism possibilities.

SURINAME TOURISM COMPANY LIMITED (METS)

With the new Ministry of Transport, Communications and Tourism (simply called Ministry of Tourism), measures needed to be taken to encourage development of the tourism sector. One such measure was taken in 1992 to reactivate the government owned METS (Maatschappij tot Exploitatie van Toeristische verblijven in Suriname), translated in English as Company for the Exploitation of Tourism Lodges. Reactivating METS meant that, functioning as a tour operator, the company would support the initiatives of indigenous inhabitants and develop tourist activities.

The involvement of the indigenous population (Amerindians and Maroons) was manifested by means of:

- cooperative agreements with owners of facilities
- management of METS facilities by local inhabitants
- promoting goods and services from local inhabitants
- providing education, public health, and other primary benefits in cooperation with responsible parties
- reevaluation of traditional culture

But the METS philosophy reaches further and includes these objectives:

- facilities for visitors must be set up in a traditional style using local materials
- tours must be for leisure and information on rainforest, flora, and fauna
- activities must be executed in such a way that the impact on nature and culture is minimized

METS is an ecologically-oriented organization offering nature tourism at three resorts in the Surinamese interior. Palumeu is in southern Suriname where three Amerindian tribes have their living area. Kumalu and Awarradam are located near the Saramaka, the biggest Maroon tribe in Suriname.

Reactivating METS meant that, functioning as a tour operator, the company would support the initiatives of indigenous inhabitants and develop tourist activities.

As mentioned before, METS was reactivated by the Suriname government and was given the task of setting standards for tourism development in Suriname. METS uses the following definition for ecotourism: “Ecotourism is responsible travel to natural areas which conserves the environment and improves the welfare of local people” [Ecotourism Society].

No matter how interesting a product may be, rules regarding minimizing impacts on nature and culture will be considered by visitors as they choose their tour operators. Therefore, METS limits the number of visitors to a resort to fifteen people per tour. Local guides inform visitors in advance what to expect when going to indigenous villages. Leaflets are given to visitors with relevant information on traditional culture, nature preservation, and tourism activities as a whole. Cultural and ecological awareness is created, which is a good base for getting visitors to respect the rainforest and its inhabitants.

Employees are also being educated. They are told that garbage needs to be brought back to the capital, Paramaribo, for responsible processing. They explain to tourists why holiday houses are built in the traditional Amerindian or Maroon style. The guides are taught a golden rule: respect yourself, respect others, respect your village, respect your country. We believe that METS has measurements in place to keep the impact on nature and culture at a very minimum level, but it is still difficult to have a good balance between tourism, conservation, and culture.

METS considers itself an organization aiming to create a general awareness of ecotourism. Amerindians and Maroons operate METS activities at all resorts. Guides, boatmen, and housekeeping are some examples of jobs that they hold. METS, as stated earlier, creates an awareness of self-respect by informing citizens how important it is to have a unique identity. Cultural pride is a long lost feeling, which, thanks to the METS awareness programme, is becoming popular again. Both Amerindians and Maroons want to share their culture with others by providing visitors with information. Thus, the way is paved for having a “controlled system” within a village. Villagers see to it that bad influences from outside are banned. For example, due to the poor economy, rich people sometimes pay money to partake in activities such as hunting in the living area of Amerindians. But since awareness is clear among the Amerindians that present and future generations will benefit from certain rules, hunting is not permitted by our friends from the interior. Amerindians and Maroons see to it that everyone, including personnel from METS, stick to the rules.

We cannot say that we have noticed any specific impact on cul-

METS uses the following definition for ecotourism: “Ecotourism is responsible travel to natural areas which conserves the environment and improves the welfare of local people.”

ture and nature yet. As mentioned earlier, control is provided by local citizens themselves, after being trained by METS. If one would throw a beer can somewhere, for instance, a local guide will politely ask him or her to pick it up since everything is brought to Paramaribo (the Surinamese capital) for responsible processing. The awareness in the interior is, as it used to be, at a very high level. For the most part, the impacts on culture and nature are measured by citizens themselves.

CONCLUSION

Development through nature tourism in Suriname has had several advantages. Since the economy is poor, tourism activities can be a tool for development. Nature tourists who are keen on traditional culture make use of local resources and expertise, thus creating employment in that particular area. METS is aware of the disadvantages mass tourism will bring, and will not allow large numbers of tourists to visit the interior. The company is aware that ecotourism is a sustainable development issue and strict planning must be guaranteed.

JERRY RICARDO A-KUM

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Nature Travel and Rainforests

Gene Cope

Environmental Conservation Tourism Association (ECTA)

ABSTRACT

Many countries needing hard currency for their treasuries sell their rainforest timber to foreign interests. Due to this practice, rainforests in developing Central and South American countries are disappearing at an alarming rate. These forests also contain undiscovered natural resources as well as unique nature and cultural travel destinations. Large numbers of today's tourists will pay well to visit these attractions. The Environmental Conservation Tourism Association (ECTA) proposes developing tourism attractions as a viable alternative to destructive logging. Income from this kind of tourism can flourish for many years and generate additional income from other tourist related businesses while saving the resource. Large scale extractive logging on the other hand offers a one time payment and the destruction of the resource. However, countries can develop nature and cultural tourism and also harvest rainforest timber if sustainable development logging, which is being employed in Costa Rica, is practiced. Both of these developmental approaches will preserve the natural resource while creating revenues.

Certainly in today's fast moving world, change is inevitable. The judgmental environmental elitists who say all developmental utilization of natural resources must STOP will fail. The major reason for that failure is that society cannot police each person's actions even when laws are placed on the books. There are not enough police officers or resources in the world to enforce all of the laws.

Fortunately, there may be another more workable approach. Why not provide compatible economic development options which minimize negative impacts on resources? More often than not, this tactic is much more persuasive than obstructionism. The Environmental Conservation Tourism Association (ECTA) believes in educating people about the principles of sustainable development. Sustainable development is development with the minimum amount of negative impact, and can result in economic benefits while preserving natural resources for current and future generations. For years ECTA members have been involved in encouraging the practice of sustainably developed natural and cultural-oriented travel through active participation in the World Congress on Tourism for the Environment.

Before proceeding, here are some important statistics on recent developments in the tourism business that ultimately create linkages between tourism and the environment.

The World Resources Institute reports that overall tourism is increasing at an annual rate of four per cent, while nature travel is increasing at an annual rate of 10-30%. Chemonics, a consulting firm, reports that 7 million U.S. travelers are willing to pay \$2,000 to

Some travel analysts feel that this nature sensitive travel trend is not a fad, but is indeed a definite trend that may be the style of travel in the 21st century.

\$3,000 for a nature-based travel experience. The U.S. Travel Data Center predicts that 43 million Americans are likely to do nature-oriented travel in the next 3 years. And finally, some travel analysts feel that this nature sensitive travel trend is not a fad, but is indeed a definite trend that may be the style of travel in the 21st century.

With these facts in mind, it does not take a rocket scientist to figure out that one of the hottest ecosystem destinations for these zoologists, botanist, bird watcher groups who want up-close nature experiences is...tropical rain forests.

The flora and fauna of rainforest ecosystems are what attract many of these groups and their tourist dollars. Unfortunately, big money interests are attracted to these same ecosystems, but for quite different reasons. The beautiful, exotic hardwoods found in many virgin rainforests are much sought after and considered extremely valuable. These woods of many beautiful hues and colors come from over 700 species. Interest in cutting this timber comes at a time when the developing countries owning the rainforests are already clearing land for food production to feed an expanding population. Hence, a logging program that accelerates this process by the use of modern machinery, including the construction of roads for timber transportation, and offers jobs and hard currency for government coffers, is very attractive. This type of development is so attractive that rainforests in developing Central and South American countries are disappearing at an alarming rate.

If the obstructionist argument of STOP is proposed by the developed world countries, the proponents face being told to mind their own business. After all, most countries of the developed world stripped their own forests and are still logging those forests for capital gain. So why can't we do that and become rich too? If you want the rainforests saved, pay us for them.

Often, "the quick fix"—short term economic gain—is chosen at the expense of irreparable ecological damage. Some examples of this damage include lost cures for diseases, decreased biodiversity, and unproductive wastelands as more land is cleared and destroyed.

It is in this debate that the conservationists, preservationists, naturalists, and now the nature and cultural tourists find themselves. However, of most importance to ECTA is that the tourists are not obstructionists but can argue options armed with important tourist dollars. Equally persuasive is the fact that, if handled in a sustainably developed mode, nature and cultural tourism is not a one shot destructive extraction but a long-term fast growing economic opportunity.

As many of you must know, too much tourism can also be damaging to the environment and to cultures. ECTA feels that it is inevi-

However, of most importance to ECTA is that the tourists are not obstructionists but can argue options armed with important tourist dollars.

table that even environmentally sensitive travel to wild and isolated places will result in some changes. However, through careful evaluation and management, the related impacts, the negative aspects, can be minimized and often turned into positives.

It also has to be noted that if the logging is done judiciously, both it and nature travel can exist simultaneously. ECTA believes that developing and expanding nature travel tourism is a viable alternative to destructive, extractive logging. When the trees are shipped out, the economic benefits to the country are gone forever. Non-sustainable logging strips and destroys the country's timber resource, while there are thousands of tourists that will willingly pay to look at and photograph these giant trees. This could allow species and economic benefits to thrive for future generations. What is often left unnoticed is that many indigenous people depend on these forest habitats for food and shelter. When the rainforest gets destroyed, they are left without support systems and become endangered themselves. What will the government be able to do for them?

By preserving the rainforests for nature and cultural tourism, the income generated from tourist transport, housing, feeding, souvenir purchases, and other tourism related businesses can be created, expanded, and may flourish for years to come. These economic benefits would be of value to the urban communities as well as the jungle villages and would build a stronger national economy.

Now that the argument of this paper has been stated, it seems appropriate to look at two current case studies.

SURINAME

Suriname is a small country, slightly larger than the U.S. state of Georgia, with a population of 438,000. It is located on the northeastern coast of South America. Formerly a Dutch colony, known as Dutch Guyana, Suriname became independent in November 1975. The 1980s and 1990s have been very turbulent politically and economically. The turbulence has made Suriname a very poor country, desperate for hard currency.

Many developing world countries are economically stressed with growing populations that are struggling to get the necessary food to survive and have no sophisticated job skills. Their leaders are searching for short-term quick sources of hard currency that also offer jobs for their people. Often the easiest option is to sell off natural resources, as seems to be the case in Suriname.

In an effort to bring their sizable deficit under control, the current government invited Asian logging firms to bid on the rights to cut 12 million acres (forty per cent of the country's area) of virgin rainforest. Three companies, two of which are Indonesian,

ECTA feels that it is inevitable that even environmentally sensitive travel to wild and isolated places will result in some changes. However, through careful evaluation and management, the related impacts, the negative aspects can be minimized and often turned into positives.

Suri-Atlantic and Mitra Usaha Sejati Abadi (Musa) and one of which is Malaysian, Berjaya Group Berhad, are offering US\$3 per acre annually for logging rights to these millions of rainforest acres in the middle of the country (U.S. logging rights in the Pacific Northwest cost ten times that).

Musa Group has already obtained 375,000 acres on the outskirts of Paramaribo and is currently logging it. Reports seem to confirm every fear of the environmentalists. Musa has cut 150 foot wide roads suspected to be clear-cuts, taxes are being avoided, bribes are reportedly being offered, and contract restrictions are being ignored. The Dutch government, the U.S. Ambassador, the World Resources Institute, Conservation International, and the Inter-American Development Bank are all concerned and trying to work out a more reasonable solution. One of the possible options being proposed to Suriname is an extensive tourism development program focused on the unique nature, cultural, and wilderness destinations.

It is with this set of dynamic factors that ECTA entered the equation last year. Surinam Airways and its affiliate Movement for Ecotourism in Suriname (METS) invited ECTA to visit their newly developed nature and cultural destinations. METS hoped that ECTA's report would help moderate the government's rush toward foreign contracts to extensively log their lush rainforests. A team of eleven ECTA specialists traveled by small planes and dugouts, deep into the rainforests to visit Bush Negro and Amerindian villages. They experienced cultural dances, partook in Shaman (Witch Doctor) rituals and reveled in fantastically diverse jungle flora and fauna. Before departing the team met in Paramaribo, the capitol, with the press, the U.S. ambassador, and a member of Suriname's Parliament to present ECTA's views.

Without exception, the entire ECTA group thought that Suriname had been blessed with precious, irreplaceable gifts from Mother Nature (Smithsonian representatives estimate 256 species of butterflies, 675 species of birds, and unknown quantities of medicinal plants inhabit these rainforests). ECTA pointed out that many people from around the world would be anxious and eager to have an up-close, non-destructive experience in the rainforests along with indigenous cultures. ECTA proposed that if Suriname opted for sustainable tourism development, the country's environmental, cultural, and economic sectors could reap in creating financial gain while creating great good will with travelers worldwide.

ECTA followed up with a complete report of its findings which was presented to Surinam Airways and the U.S. State Department who had great interest in the situation and actively supported the use of the rainforests for nature travel.

In an effort to bring their sizable deficit under control, the Suriname government invited Asian logging firms to bid on the rights to cut 12 million acres (forty per cent of the country's area) of virgin rainforest.

COSTA RICA

The situation is quite different in Costa Rica. The country has a more stable political and economic situation. It is recognized by the world for its rainforest conservation and its experience in nature tourism. But recently, the pressure to log these wildernesses has increased, again causing concern in the international environmental community. Some see this development as a potential threat to the ecosystem as well as to the extensive tourism business.

Logging is occurring now, but with significant differences. Richard Donovan, formerly from Minnesota, is attacking these threats by applying sustainable development principles to logging operations in Costa Rica.

His work was highlighted in a recent World of Audubon special on PBS entitled "Hope for the Tropics." Mr. Donovan is working with local logging companies to teach forestry techniques that minimize waste and damage to the overall habitat as well as to other trees left standing, while timber extraction is being done. Here are some of the principles he is promoting:

- Discourage slash and burn techniques.
- Cut only selected mature trees.
- Cut so the tree will not injure less mature trees as it falls.
- Cut trees that will not destroy the forest canopy and allow too much sunlight to enter and kill deep shade-loving plants.
- Avoid removing habitat of threatened or endangered species.
- Train farmers to reforest using nursery grown trees.
- Train loggers to keep the forest ecosystem alive and healthy.
- Encourage loggers to plan for long-term profits.

So far, very positive results from his efforts have been documented. Some of the earlier slash and burn practitioners are now nursery men, growing replacement seedling trees for reforestation. Breeding sites of rare bird and other threatened species are being saved, the rainforests are surviving, nature travel is still flourishing, and all affected economic and environmental sectors seem to be benefiting.

ECTA fully endorses this example of sustainable development problem solving, using principles of compromise, conservation, and innovation to address compelling environmental and developmental issues. We think that negative-impact forestry in wilderness areas will permit Costa Rica's nature and cultural tourism to continue for years to come. The Costa Rican approach to rainforest logging could and should be implemented in other countries with similar dilemmas. ECTA will do everything possible to encourage the wider use of this type of cooperative approach to environmental and wilderness experience tourism.

GENE COPE

Gene Cope's involvement in nature and cultural tourism ranges from serving as a Senior Scientific Advisor at UNEP in Jamaica and Kenya to being a Fisheries/Environmental Management Specialist in the National Marine Fisheries Service. His experience culminated in 1994 with the organization and incorporation of the non-profit organization, the Environmental Conservation Tourism Association (ECTA). In addition, ECTA has hosted speakers from the Nepalese Department of Tourism, USAfrica Airways, George Washington University Program of Tourism and of Hospitality Management, South Africa Travel Association, American Central Corporation (TACA, LACSA, NICA, COPA, and Aviateca), and Steppingstones Environmental Tours.

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Measuring the Impacts of Ecotourism on Animal Populations: A Case Study of Tikal National Park, Guatemala

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ABSTRACT

Nature tourism has great potential for negatively impacting animals as tourists seek out rare and spectacular species. Ecotourism-induced stresses on animals may result in changes in population densities, species composition, and community structure. Tikal National Park is visited extensively by tourists, most of whom are concentrated around the Mayan ruins. Potential impacts of tourism in Tikal were evaluated by comparing the population densities of select species of mammals and birds in two regions of the park, with and without tourist traffic. Densities were estimated using visual line transects and distance sampling methods. Trends show the impact of ecotourism is species specific, with some species increasing in density, some decreasing, and others unaffected. An evaluation of the limitations and assumptions of the methods used provides a framework for consideration of the results. Given the potential negative impact of tourists on animals, national parks should develop management strategies to minimize these impacts, such as concentrating tourists in already disturbed areas.

INTRODUCTION

In recent years, ecotourism has been touted as a solution for conservation and development woes because of its ability to protect threatened biodiversity while providing economic growth for people living in and around protected areas (Wells and Brandon 1992). The tourism industry has been growing rapidly along with an increasing interest in nature-based tourism or ecotourism. Ecotourism is defined by the IUCN—The World Conservation Union—as “environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy, study, and appreciate nature (and any accompanying cultural features...), that promotes conservation, (and) has low visitor impact” (Ceballos-Lascurain 1993). While protected natural areas are increasing in popularity as vacation destinations, little information exists on tourism’s impacts on protected areas (Boo 1990). With a rapid increase in ecotourism, it is important to determine the impacts which are occurring despite the difficulty of quantifying these changes.

Animals in protected areas may face stress due to ecotourism. Nature tourism has great potential for negative impacts on animals, as tourists seek out rare or spectacular species—often during sensitive times, such as breeding or nesting (Knight and Cole 1995). Previous studies have found that tourists cause negative impacts on the movement, foraging, and reproductive behavior of large felids and

ursids, the nesting behavior of sea turtles, and the distribution of waterfowl (Kumpumula 1979, Western 1986, Boo 1990, Muthee 1992, Van Schaik, personal communication 1995, Jacobson and Figueroa Lopez 1994, Klein et al. 1995).

Where human traffic is frequent, some species withdraw, some change behavior, and still others may become habituated to human presence (Van Schaik, personal communication 1995, Griffiths and Van Schaik 1993). As animals become habituated to humans, they may use areas in which tourists are present as “escape valves” from predators, which avoid tourist destinations and human hunters.

Long-term studies of primates often report increases in population size, probably due to decreased predation associated with the presence of human researchers (Griffiths and Van Schaik 1993). Ecotourism is likely to have a similar impact, particularly where animals are deliberately habituated to human presence for tourist observation (Griffiths and Van Schaik 1993). However, the long term effects of human presence may mimic those of hunting, changing community structure due to differences in a species’ vulnerability or attractivity as prey (Griffiths and Van Schaik 1993).

Ecotourism’s impacts may result in abnormally high or low population densities of some species in tourist areas and can potentially lead to ecological change through population increases in the habituated or unaffected species, possibly altering the densities of their competitors or prey (Griffiths and Van Schaik 1993). There also may be long-term consequences on the floristic makeup of an area due to altered patterns of seed dispersal and predation (Griffiths and Van Schaik 1993; Terborgh 1995 personal communication). These changes may have effects on the composition and functioning of the entire ecosystem.

Guatemala’s protected areas are important for protecting its biodiversity as much of the country’s forested areas are threatened by human encroachment (Van Schaik et al., in press). Tourism in Guatemala, though still in its infancy, is the country’s fastest growing industry with revenues more than quadrupling since 1986 (Harris and Ritz 1993). However, the impacts of tourism on Guatemala’s National Parks are unknown.

Tikal National Park, comprising approximately 562 km², is located in El Petén department of northern Guatemala and is the core of the Mayan Biosphere Reserve. It is considered one of the true wonders of the world, both for its Mayan ruins and the lush rainforest which surrounds the ruins. Tikal is visited extensively by tourists, most of whom are concentrated in the area around the Mayan ruins. What impact is the presence of tourists having on the fauna of Tikal?

If conservation is the yardstick by which we measure the success of ecotourism, then it is important to determine and measure the impacts of tourists on animal populations; however, they are difficult to quantify.

The goal of this project is to compare animal population densities in two different regions of Tikal National Park to identify variations which may possibly be explained by tourism pressures. Population densities of select species were estimated for two areas of the park: 1) an area frequented by tourists and 2) a little disturbed tract of forest.

METHODS

Densities of mammals and large ground birds were estimated using line transect surveys and distance sampling methods (Buckland et al. 1993). Surveys were conducted in two regions within Tikal National Park, Guatemala. The study site was located in an area frequented by tourists (e.g., along trails around the ruins). The control area was located in a little-disturbed tract of forest in which the Peregrine Fund's Maya Project had cut transects for previous research. Nine transects were sampled in each area. They were controlled for forest type and canopy cover to the greatest degree possible. The areas were described by degree of tourist use, forest type, and additional confounding variables.

The transects in the study area followed existing trails in the Mayan ruins and ranged in length from 0.5 to 1.1 km. The transects were located in upland forested areas around the periphery of the ruins and avoided the open areas of the central plaza.

The control site was located approximately four kilometers from the ruins and consisted of two groups of four transects each plus a ninth along part of an abandoned logging road. The two groups were located two kilometers apart and one kilometer from the road. The transects were located primarily in upland forest and ranged in length from 0.6 to 1.65 km.

The species to be surveyed were determined based on input from the Center for Tropical Conservation at Duke University and the Peregrine Fund's Maya Project (Table 1, page 52).

Line transect surveys were conducted during the morning and evening by slowly walking along the transects (a given direction and distance) and recording animal sightings (Buckland et al. 1993, Burnham et al. 1980, Emmons 1984). Surveys in the ruins were conducted by a single observer. A guide was present during observation in the control areas.

The following was recorded for each sample: length and location of transect, weather conditions, time of day, and number of tourists encountered. For each sighting the following was recorded: species; radial distance (r) from the observer to the animal, measured with a range-finder to the nearest meter; sighting angle (θ), measured with

The presence of tourists may alter the species composition and population densities of some animals, which in turn may have effects on the composition and functioning of the ecosystem.

Table 1. Species Surveyed

Mammals	Ground Birds
Agouti (<i>Dasyprocta punctata</i>)	Crested guan (<i>Penelope purpurascens</i>)
Central American spider monkey (<i>Ateles geoffroyi</i>)	Great curasow (<i>Crax rubra</i>)
Coati Mundi (<i>Nasua narica</i>)	Ocellated turkey (<i>Agriocharis ocellata</i>)
Collared peccary (<i>Tayassu tajucu</i>)	Tinamous (<i>Timamus major</i> , <i>Crypturellus</i> species)
Deppes squirrel (<i>Sciurus deppei</i>)	Plain chachalaca (<i>Ortalis vetula</i>) *
Mexican black howler monkey (<i>Alouatta pigra</i>)	Spotted wood quail (<i>Odontophorus guttatus</i>) *
Red brocket deer (<i>Mazama americana</i>) *	
Tayra (<i>Eira barbara</i>) *	
White-tailed deer (<i>Odocoileus virginianus</i>) *	
Yucatan squirrel (<i>Sciurus yucatanis</i>) *	

* species observed but sample too small for analysis

a compass to the nearest two degrees; and animal behavior. The perpendicular distance (x) from the animal to the transect was then calculated as $x = r(\sin\theta)$. The horizontal distance from the observer to the base of the tree was measured and recorded as r when animals were found in trees. When animals were observed in groups, the distance and angle to the nearest member of the group was measured and the number of individuals in the group was recorded.

For each study area, the density of each species was estimated using the computer program DISTANCE (Laake et al. 1994). Estimates are made based on the detection function or probability of observing an animal given the perpendicular distance observed from the line transect. This probability is related to the number of animals observed, the length of the transect, and the width of the observation band. The probability of detection is assumed to decrease with increasing perpendicular distance from the transect (Buckland et al. 1993).

The data for each replicate transect was pooled. Where necessary, the data was stratified by transect and by week of observation to reduce the amount of variation. Estimates for species that travel in groups were determined by calculating the density of clusters of animals and the expected cluster size and then combining these to estimate animal density. The total length of the replicate transects and the largest perpendicular distance from the transect were used to compute the area over which density estimates were calculated.

The 95 per cent confidence interval was calculated for each estimate of density. Density estimates and confidence intervals were then compared between the two areas to estimate the potential impacts of tourism. Density estimates were considered to be significantly different if the confidence intervals did not overlap. P-values were calculated for each comparison using a Wilcoxon rank-sum test.

Table 2. Density Estimates and Confidence Intervals

Species	Location	Density Animals/km ²	95% Confidence Intervals (Animals/km ²)		p ¹
Agouti	Ruins	160.24	81.69	314.33	0.0296
	Control	14.48	3.81	55.02	
Coati Mundi ²	Ruins	99.35	38.58	171.85	0.0123
	Control	1.00	0.12	8.47	
Collared Peccary ²	Ruins	4.62	0.34	63.01	0.7933
	Control	1.80	0.18	18.26	
Deppes Squirrel	Ruins	32.26	9.52	109.38	0.5415
	Control	2.18	1.10	4.33	
Howler Monkey ²	Ruins	7.28	1.76	30.21	0.0296
	Control	1.86	0.65	5.32	
Spider Monkey ²	Ruins	170.81	108.43	269.09	0.8781
	Control	115.03	53.85	245.71	
Crested Guan	Ruins	0 ³	-- ⁴	-- ⁴	0.001
	Control	49.41	14.30	170.71	
Great Curasow	Ruins	10.85	5.35	22.02	0.0484
	Control	72.01	25.86	200.57	
Ocellated Turkey	Ruins	47.01	15.44	143.13	0.0191
	Control	0 ⁵	-- ⁴	-- ⁴	
Tinamous	Ruins	0 ³	-- ⁴	-- ⁴	0.0493
	Control	4.92	2.61	9.27	

¹p-values calculated using a Wilcoxon rank-sum test

²calculated using the number of clusters of animals encountered and the expected or average cluster size

³while animals were observed, the calculated density did not differ from zero

⁴not calculated

⁵not observed in the control

RESULTS AND DISCUSSION

Density and associated 95 per cent confidence intervals were estimated for each species in each site (Table 2). Three mammal species (the agouti, coati mundi, and Deppes squirrel) and one bird species (the ocellated turkey) were observed to have greater estimated densities in the ruins than in the control. The other three bird

genera (the crested guan, great curasow, and tinamou species) have greater estimated densities in the control than in the ruins. The remaining mammal species did not show any apparent difference in density between the two sites.

The ocellated turkey was observed only in the ruins and appeared to have become habituated to humans. In addition, while turkeys were observed in the forested areas of the ruins, they seemed to prefer the open areas of the central plaza; habitat type may account for the difference in their densities.

Coati mundis, like their cousin the raccoon, are fond of trash cans and garbage dumps and have become habituated to the humans in Tikal, even begging food from tourists. This behavior could account for their increased numbers in the ruins.

Another explanation for the increased density of some animals in the ruins could be that these animals are under less predation pressure when out of the forest. Jaguar tracks and scats were observed along the transects in the control site, but not in the ruins. Decreased predation could be the cause of the increased densities of some of these animals.

The crested guan and the great curasow are hunted for food by humans. They may have developed a healthy fear of humans which could account for their decreased numbers in the ruins. Timamous are generally timid birds and prefer to inhabit areas with denser understories (Stiles and Skutch 1989), which may account for their prevalence in the control site.

While there was no difference in the density estimates for spider monkeys, there was an anecdotal difference in the behavior of these animals between the two sites. Spider monkeys in the ruins did not appear to respond to humans. In contrast, those in the control area shrieked, shook branches, and threw twigs at human interlopers.

EVALUATION OF METHODS

Distance sampling theory expands finite population sampling methods adjusting for the fact that some, possibly many, of the animals are undetected (Buckland et al. 1993). This method can be appropriate when the size of the sample area is unknown and objects are not detected for several reasons.

The number of animals observed is an estimate of the true density and the probability of detection. The probability of detection is a function of many factors including cue production, observer effectiveness, and the environment (Buckland et al. 1993). Distance sampling provides a broad method for estimating population density. While the total count of observed animals can vary for reasons

The effects of tourists on animals densities appears to be species specific, with some species increasing in the tourist area, some decreasing, and others not being effected. Habituation of animals to humans and a probable decrease in predation pressure are likely causes of species increasing in areas with tourists.

unrelated to density, using distances allows for meaningful estimates of density even with variability in detection caused by these factors (Buckland et al. 1993).

There are, however, a number of limitations with using visual line transect surveys and distance sampling methods. Three assumptions of distance sampling may have been violated in the project, introducing bias to the results. The first assumption is that transects are randomly placed and independently located. Constraints on establishing transects in the forest around the Mayan ruins made this impossible. The non-random placement of the transects is likely to have introduced bias because they followed tourist traffic. To reduce the bias due to non-independent transects, care was taken to not double count animals on adjacent transects.

The second assumption is that objects are detected at their initial location, prior to any movement in response to the observer. Animals move both in response to humans and of their own accord. This may increase or decrease the likelihood that they are observed. Density estimates depend on the direction the animals move, and whether they are seen prior to moving out of the observer's range of vision. This was also confounded by animals fleeing in response to tourists walking along the transects.

The third assumption is that objects directly on the line are always detected. This was likely to have held true during sampling except when the second assumption was violated and the linear distance between the observer and the animal was large.

Animals that travel in groups also pose a problem in the collection and analysis of data. The computer program DISTANCE and distance sampling methods can be used to calculate estimates using clusters of objects by calculating a density for clusters and expected cluster size. However, difficulty is encountered in determining what constitutes a cluster, what is the appropriate cluster width, and what distance to use for the distance from the cluster to the transect. For example, female coatis travel in loose bands but males are solitary; with spider monkeys, individuals travel in large troops, but break into smaller groups to forage (Emmons 1990).

Other sources of bias can result from observer presence, secretive animals, and habituation to humans. The presence of the observer has an effect on the animals which may be translated into the results. It may trigger the human-induced response that is being measured. Secretive animals may be missed using these methods. They may flee unnoticed or hide until the observer passes. In addition, the animals found in the ruins are habituated to humans. This decreases their propensity to flee and increases their probability of being observed, thus skewing the density estimates.

Visual line transect surveys and distance sampling methods were used to estimate animal population densities in areas of Tikal National Park with and without tourism to identify variations possibly explained by tourist pressure.

Prior to and at the start of the project, the Petén experienced an unusually lengthy and arid dry season. Water troughs located in the ruins may have been a source of water for many animals during this time, artificially increasing their densities in the ruins. Density estimates in both areas also may be inflated due to the tendency of some animals to travel along paths, such as those used as transects.

The study may have been further confounded by the fact that the control was not completely free from human traffic. Two men from the village of Uaxactun, located approximately 24 km north of the ruins, were observed one morning in the control area collecting xate palm. How frequently the Xataneros entered the area is unknown, nor is it known whether they were poaching. This presents a problem in that the control site may not accurately represent an “untreated” reference plot.

Finally, the small number of observations for most of the species analyzed in this study resulted in density estimates with large coefficients of variation. Pooling the replicates and stratifying the data reduced the variation slightly but larger sample sizes would have provided a better estimate.

CONCLUSIONS

Biases in visual survey and distance sampling methods may confound results. The increased presence of some species in the ruins may be an artifact of their habituation to humans and may have increased the likelihood of their being observed. Because of the bias due to the effect of the observer’s presence and limitations of using transect surveys, non-invasive methods such as infrared tripped cameras could provide a better estimate of animal densities and thus tourist impact. Remote camera trapping in Tikal has been demonstrated to detect more species, especially those likely to be sensitive to human traffic (Kawanishi 1995). These methods are usually more expensive than using visual line transect surveys. To avoid the problem of pseudo-replication, multiple control sites should be surveyed, especially in areas where humans may be encroaching on the “undisturbed” areas of a park.

However, trends do show that the effect of tourists on animal densities appears to be species specific. Some populations increase in areas with tourist activity, some decrease, and some show no apparent difference. Habituation of animals in the ruins due to human presence and a probable decrease in predation pressure on these animals are likely causes of their increased densities. This in turn may have secondary effects on the species composition of the ecosystem, including the flora, due to changes in distributions of herbivores and of seed dispersers.

Protected areas with increasing numbers of tourists interested in going “off the beaten path” should develop management strategies to minimize impacts of tourists on animal populations, such as concentrating tourists in already disturbed areas.

National parks, which are attracting increasing numbers of tourists interested in going “off the beaten path” should develop management strategies to minimize the impacts of tourists on animal populations. This could include concentrating tourists in already disturbed areas, such as around the Mayan ruins of Tikal. However, as birders and other wildlife observers set off into the rainforest, they will be increasing the area of the park that they are affecting. This demonstrates the need for more comprehensive and long-term research on the issue, as well as the investigation of other sites experiencing tourist pressure. Research is also needed to determine what levels and rates of tourist traffic trigger negative impacts on wildlife. This will enable park managers to set levels that will minimize the impacts on the biodiversity the parks are established to protect.

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Distance sampling provides a broad method for estimating population densities that allows for the fact that many animals are not seen for various reasons. However, both distance sampling and line transect surveys have limitations which may introduce bias to the results.

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Ecotourism Impact on Independently Owned Nature Reserves in Latin America and Sub-Saharan Africa

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ABSTRACT

Independently owned nature reserves are proliferating across the developing world. Nevertheless, the conservation community knows practically nothing about them. This paper examines the economic, ecological, and social impacts of ecotourism, as evidenced at thirty-two of these reserves. Ecotourism is shown to be the primary means through which reserves survive financially. This reliance provides a direct link between ecotourism and the conservation and development accomplishments of the reserves. While independently owned nature reserves are no panacea for the world's biodiversity woes, they are a viable tool for supplementing larger government conservation and development efforts and shifting control of natural resources to rural peoples.

An important trend in conservation is toward community-based conservation. Community-based conservation incorporates a variety of bottom-up approaches in which the locus of control lies with local people rather than a federal government (Western, Wright, and Strum 1994). The unifying theme across the diversity of community-based conservation approaches is that benefits, power, and decision-making lie in the hands of local residents. Additionally, humans are considered to be a permanent part of the landscape, rather than removed from it (Western 1989, McNeely 1988, Western 1984). This final point is important given that the majority of the world's biodiversity is located on lands outside of governmentally protected areas (Little 1994, Western 1994, Western 1988).

A concurrent trend in development is toward exploration of land uses that can be ecologically as well as economically viable. "Sustainable development," as defined and promoted by the World Commission on Environment and Development (1987), is the umbrella under which these efforts occur. Although experts have written volumes on the subject of sustainability (Cernea 1993, Ludwig et al. 1993, Robinson 1993, Pickett et al. 1992, Redclift 1992, Dixon and Fallon 1989, Ledec and Goodland 1988), few undeniably successful examples have emerged. Among the most promising tools are agroforestry (Nair 1993, Alcorn 1990, Stepler and Nair 1987), non-timber forest products (Grimes et al. 1994, Balick and Mendelsohn 1992, Allegretti 1990, Salafsky et al. 1993), natural forest management (Buschbaker 1990, Hartshorn 1989), and ecotourism (Lindbergh 1993, Giannecchini 1993, Boo 1990, Healy 1989).

This article taps into both of these important trends. Its overall goal is to examine a land use option that addresses the ecological and economic requirements of sustainable development, as well as the local control of natural resources embodied in community-based conservation. The specific objective is to analyze economic, social, and ecological impacts of ecotourism, as evidenced at independently owned nature reserves.

BACKGROUND

Many countries are turning their attention to conservation and development options on the privately owned lands that lie outside of public protected areas. In the United States, land trusts and organizations such as The Nature Conservancy specialize in purchasing or otherwise protecting privately owned land. Internationally, Colombia has recently established a sophisticated legal and organizational framework for supporting independently owned nature reserves (Cardenas 1994, Government of Colombia 1993). Likewise, the Costa Rican government recently issued a decree that officially sanctions and promotes privately owned wildlife refuges as a valued conservation vehicle (Government of Costa Rica 1993). Ecuadorians are in the process of creating a network of independent reserve operators. At least nineteen other tropical nations currently have similar reserves, and the number is rising. While there is still debate about the link between conservation and various property regimes (Hodson, Englander, and O'Keefe 1995, Mendelsohn and Balick 1995, Lynch and Alcorn 1994, Larson and Bromley 1990, Berkes 1989, Hardin 1968), the fact remains that conservation is occurring on private lands.

The initial ground breaking investigation of conservation and ecotourism on privately owned lands was conducted by Claudia Alderman at Yale University in 1989 (Alderman 1991). Alderman demonstrated that independently owned nature reserves can be a flexible and substantial complement to the conservation strategies of national governments. A follow-up study in 1993 confirmed many of Alderman's findings, and gleaned new information about these unique reserves (Langholz 1996).

Both studies focused on lands meeting the following four criteria: 1) larger than five hectares 2) not owned by a government entity 3) allow visitors, either as tourists or students and 4) managed with the intent of preserving the land in a mostly undeveloped, pristine state. The studies utilized a mail survey of ninety-seven independently owned reserves believed to exist in Latin America and Sub-Saharan Africa. This article draws from and expands upon these two studies. Its purpose is to focus on the impacts of ecotourism at

Independently owned nature reserves can be a flexible and substantial complement to the conservation strategies of national governments.

thirty-two independently owned nature reserves (Figure 1). It relies heavily on data collected from those reserves that participated in the 1993 study. Although the word “private” has been used previously to describe these reserves, it has been replaced in this article with “independent.” The change reflects the fact that each of these reserves is completely independent of government ownership and management, yet still accessible by a broad public in most cases.

Figure 1: List of Reserves Analyzed

Chaa Creek	Belize	
Chan Creek / Gallon Jug	Belize	
Community Baboon Sanctuary	Belize	
Monkey Bay Wildlife Sanctuary	Belize	
Rara Avis	Costa Rica	<i>Many reserves depend entirely on ecotourism revenues in order to survive.</i>
Genesis II Cloudforest Reserve	Costa Rica	
La Selva Biological Station	Costa Rica	
Reserva de El Gavilan Lodge	Costa Rica	
Hacienda Baru	Costa Rica	
Observatorio Biologica la Leona (Corcovado Lodge Tent Camp)	Costa Rica	
Selva Verde Lodge	Costa Rica	
Monteverde Cloudforest Reserve	Costa Rica	
Estacao Biologica de Caratinga	Brazil	
Santuario de Vida Silvestre	Brazil	
La Planada	Colombia	
Reserva Natural Del Alto Quindio “Acaime”	Colombia	
Bosque Protector La Perla	Ecuador	
Estacion Biologica Jatun Sacha	Ecuador	
Bosque Protector Pasochoa	Ecuador	
Explorama Inn Reserve	Peru	
Peruvian Safaris (Explorers Inn; Tambopata Reserve)	Peru	
Papillote Wilderness Retreat and Nature Sanctuary	Dominica	
Point-a-Pierre Wildfowl Trust	Trinidad	
Hato Pinero Reserva and Estacion Biologica	Venezuela	
Solio Game Reserve	Kenya	
Ngare Sergoi Rhino Sanctuary	Kenya	
Taita Hills Wildlife Sanctuary	Kenya	
Greater Kuduand Safaris	South Africa	
Ilanga Nature Reserve	South Africa	
Motswari Private Game Reserve	South Africa	
Tshukudu Game Lodge	South Africa	
Iwaba Wildlife Estate	Zimbabwe	

TOTAL = 32 Reserves in 12 Countries

ECONOMIC IMPACTS OF ECOTOURISM

First, ecotourism provides a source of livelihood for numerous individuals associated with independently owned reserves. Put simply, the ecotourists make it possible for people to earn a living while protecting a natural area. Alderman (1991) concluded that 42 independent reserves in Latin America and Africa provide permanent and temporary employment for over 1600 individuals. In 1993, 81% (N=641) of the individuals employed by the 32 reserves in our study originated from communities near the reserve (Langholz 1996). This figure closely resembles the 84% level generated by Alderman. The combined average number of employee months was 345.2 for both Latin American and African reserves in 1993. This figure corroborates the level of employment calculated by Alderman (350.6) four years earlier.

Second, ecotourism was an important revenue source for the thirty-two reserves in the 1993 study. By design, all of the reserves included in the study allow visitors. The results, however, show the large degree of dependence on ecotourism. Only one manager said that ecotourism is “not important” to the financial viability of the reserve, and 73% (N=22) rated ecotourism as being “very important.” In fact, reserves depend on ecotourism more than any other revenue source. This dependency appears to be increasing. Alderman showed that in 1989 tourism provided 40% of the operating income for reserves. Another 19% came from private grants, and 17% came from cattle ranching or agriculture. By 1993, however, reserves had become dependent on tourism for 67% of their operating income. Grants from private sources were again in second place, with an average of 13%. Cattle or agriculture again placed third, this time with 6%. A note from a reserve in Costa Rica reflects the increased emphasis on tourism. According to the manager, “[tourism] wasn’t a reason for creation. But it happened, and later was developed as an income producer.” Extraction of forest products, loans from the private and public sector, and membership dues ranked among the least important sources of revenue.

Third, many reserves depend *entirely* on ecotourism revenues in order to survive. Sixty-six percent (N=21) rely on ecotourism revenues for 50% or more of their operating income. Nearly half (N=15) said they depend on tourism for 90% or more of their revenues, and slightly over one third (N=12) said they are 100% dependent on tourism. By cross referencing those reserves that depend 100% on ecotourism with those that were profitable during the previous year, we see that seven reserves were both profitable and completely reliant on ecotourism. The seven reserves do not appear to be distinctive from others in the study group with respect to size,

For the record, both Claudia Alderman and I grossly underestimated the total number of reserves. I'm now convinced that Costa Rica and South Africa, for example, each have over a hundred privately owned reserves! The actual number of reserves is probably close to a thousand and growing every week.

location, lodging capacity, prices charged, or any other discernable attribute. This complete dependence on ecotourism demonstrates that some protected areas can survive exclusively on ecotourism revenues. Although reserves can survive without government support, the question of whether or not any protected area should be required to be financially self-sufficient may have a different answer, and is beyond the scope of this study. Additionally, fluctuations and limitations in the tourism industry in Latin America and Africa undoubtedly limit applications of the independent reserve model.

SOCIAL IMPACTS OF ECOTOURISM

Social issues surrounding any type of protected area are often the most complex and important issues to address (Little 1994, Brandon and Wells 1992, Wells and Brandon 1992, West and Brechin 1990, Rao and Geisler 1988). Likewise, tourism itself has social implications (see earlier citations). The independently owned nature reserves in the 1993 study were no exception. Although the social impact of ecotourism and independent reserves was not a focus of the research, the data reveal six important social attributes to consider.

The first social attribute is that roughly one fourth of the reserves are operated by local community groups or non-government organizations. This type of arrangement has the potential to build community and fits well with the idea of community-based conservation. Despite its ambiguous definition, community-based conservation typically requires involvement of a minimum of several households, and sometimes many communities (Little 1994). Independent reserves operated by community groups and non-government organizations fit the community-based conservation model.

Second, many of the reserves are non-profit organizations. By design, they have never earned a profit and never expect to. This may keep greed and other adverse impacts of capitalism in check. It may keep the reserves from placing more importance on money than on people and place.

Third, roughly half of the reserves are owned and operated at the family level. The foundation for community is the family unit. In an increasingly transient and urban world, a land use option that allows families to remain together, acting as stewards of their land should not be overlooked. Although the community-based conservation literature acknowledges that not all conservation should be community-based, reserves operated by families or individuals represent a variation from the normal community-based conservation model (Strum 1994).

Fourth, the reserves conduct many activities designed to provide

The data demonstrate that it is possible for reserves to be both profitable and completely dependent on ecotourism revenues.

integration with local communities. These activities range from charging reduced rates to local residents to providing free meals and tours to encourage visitation by community members. The reserves also hire nearly all staff from neighboring communities and purchase many of their supplies locally. One reserve maintains a profit-sharing plan with employees to increase their sense of personal investment in the reserve.

A fifth social issue is foreign ownership. Alderman showed that 67% of African reserves and 77% of Latin American reserves are owned either by nationals of the country, or combinations of nationals with foreigners (sometimes by marriage). But for the 23% (Latin America) to 33% (Africa) of reserves that are owned exclusively by foreigners, the issues are complex. The reserves can be enclaves of elites—places owned and visited only by wealthy foreigners. This can lead to resentment at the local community level and inequitable income distribution (IUCN 1993).

Related to this is the sixth social issue: displacement of rural peoples through land acquisition by the larger reserve operators. Unlike the colonialist past, or even parts of the conservation present, in which governments expel residents from newly created parks, the original land owners leave their land on their own accord and are fully compensated. Nevertheless, the social implications of these displacements warrant examination. The fact that farmers appear to have sold willingly and been given a fair price may cloud deeper social repercussions that offset conservation-related benefits. Issues of power imbalances, inequitable income distribution, and unequal access to legal processes are important to consider.

The reserves are far from perfect. Compared to the most likely alternative land uses, however, they appear to be a worthwhile conservation and development option.

ECOLOGICAL IMPACTS OF ECOTOURISM

Ecological impacts, like social ones, are evident in the results even though they were not a primary focus of the study. For example, it is clear that ecotourism, more than any other force, is directly responsible for keeping these reserves operational. This, in turn, translates into protection of numerous threatened and endangered plant and animal species in a variety of habitat types. This protection of biodiversity is an important ecological impact of ecotourism.

Furthermore, it is biologically significant that over half of the reserves are adjacent to larger public protected areas. According to island biogeography theory, this extension of the amount of contiguous land under protection should help maintain biodiversity (MacArthur and Wilson 1967, Diamond 1976). Independent reserves may also act as buffer zones for public parks. Buffer zones provide

an area that reconciles protection of biodiversity with human use (Imbach and Godoy 1992, Sayer 1991). While the theoretical debate rages over the utility of buffer zones, independent reserves are quietly acting as buffer zones in many locations. In Costa Rica, the government has gone so far as to promote establishment of privately owned nature reserves as buffer zones for national parks (Boza 1993). Once again, the contributions would not be possible were it not for ecotourism.

It is possible that many of the lands currently protected by independent reserves would suffer in the absence of the reserve. Many of the reserves in this study are adjacent to vast expanses of pastures, plantations, and other human-dominated land uses. Even those reserves partially connected to a larger protected area often share borders with areas of human-dominated land use. Many of the reserves seem to demonstrate that a rainforest can provide returns to land equal to or better than more destructive and common land uses. When evaluating the advantages and disadvantages of independent reserves, it is useful to keep in mind alternative uses of the land, as evidenced by the dominant land use near the reserve.

It is also possible that ecotourism provides incentives for reserve managers to maintain the ecological integrity of the land. Reserves will remain viable only to the extent that they can attract ecotourists. It follows that the only way to draw ecotourists is to protect the ecological resources that attract them. Reserve managers stated that having "interesting ecological attractions" was more important than any other factor in accomplishing their objectives (Langholz 1996). This awareness may translate into long-term protection of such ecological attractions. A possible danger, however, is the temptation to maintain captive specimens in a zoo-like setting in order to ensure their visibility to tourists.

CONCLUSIONS

The results point to five main conclusions. First, ecotourism makes possible the existence of numerous independently owned nature reserves in the tropics. These reserves depend on ecotourism more than on any other revenue source, and some are completely dependent on ecotourism. Second, the role of ecotourism as a driving force behind the existence of these parks demonstrates a direct link between ecotourism and biodiversity conservation. Third, the social, ecological, and economic issues surrounding independently owned nature reserves are beginning to emerge, but remain largely unexamined. Aside from basic descriptive information about size, habitat type, and job creation, we know little about their impacts. Fourth, it is possible for a reserve to exist solely on ecotourism rev-

The number of independent nature reserves, like ecotourism in general, will continue to grow, regardless of what the conservation community thinks or does. Our challenge, then, is to channel that growth in a way that safeguards both biological integrity and human dignity.

enues, as evidenced by reserves in this study. Although reserves can survive without government support, the question of whether or not any protected area should be required to be financially self-sufficient is likely to have a different answer, and is beyond the scope of this study. Finally, independent reserves and the ecotourists that support them are no panacea for the world's conservation and development woes. They are but one small way of supplementing larger government conservation efforts, and shifting control of natural resources to rural people. The number of independent nature reserves, like ecotourism in general, will continue to grow, regardless of what the conservation community thinks or does. Our challenge, then, is to channel that growth in a way that safeguards both biological integrity and human dignity.

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Jeff Langholz spent five years developing environmental policy at EPA Headquarters in Washington D.C. Most of the eleven national policy directives he authored address ways of increasing levels of community involvement in EPA decision-making. For his efforts to empower local communities, Jeff received one of the agency's highest awards—the Bronze Medal for Superior Achievement. Internationally, he has joined the search for conservation approaches that reconcile ecological, economic, and social viability. While pursuing a master's degree in conservation biology at the University of Maryland, Langholz formally examined ecotourism's role at thirty-two independently owned nature reserves in twelve developing nations. The results of that study appeared in a recent (1996) issue of *Conservation Biology*. He was a rice farmer with the Peace Corps in Sierra Leone, West Africa, and a salmon rancher with a non-profit fishermen's organization in Prince William Sound, Alaska. He is currently pursuing a Ph.D. in Natural Resource Management at Cornell University.

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Tourism and the Environment—Out on a Limb and Sawing

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ABSTRACT

Ecotourism, a vague concept susceptible to interpretation, should not be evaluated as if it were a phenomenon isolated from the pressures of development and the constraints of environmental protection. The ecotourism concept could be a means for improving our domestic environment and for protecting the biological diversity and environmental quality of the world's last wild places. Evidence that tourism of any kind, including nature-based tourism, can withstand the onslaught of pollution, the excesses of consumption, and the corrupting influence of its own perceived needs has been mixed. Even more mixed is the record of ecotourism in empowering local people and changing attitudes about involvement with public environmental policy. Still, there is no escaping the necessity of improving on this.

Of the making of catchwords there is no end. Despite their marketing success, terms such as “ecotourism,” “nature-based tourism,” “heritage tourism,” “responsible tourism,” “ethical tourism,” and “sustainable tourism,” are a sign to many environmentalists that unspoiled natural areas are about to be opened up to the public. Almost as often it is a signal that communities in economic decline will be redeveloped and commercialized. Do such endeavors really lead to incorporating environmental protection and social responsibility? Or does the notion of altruistic tourism define a tiny minority of the privileged class, who like the Knights of the Crusades are seeking what they cannot find?

ECOTOURISM IN THE EYE OF THE BEHOLDER

The term “ecotourism,” like “sustainable development,” and “no net loss of wetlands,” has beguiled both idealists and industry opportunists with its ambiguity. Like the Delphic Oracle's pronouncements, these terms are open to highly subjective interpretation. Because they vaguely imply—but carefully leave undefined—voluntary moderation and restraint, some have seized on the notion of ecotourism in the hope that they could promote conservation by making it pay. By offering economic incentives to local inhabitants, they hope to protect the world's last wild places and motivate everyone concerned to defend environmental values. Others simply borrow these terms as window dressing for business as usual. Comprehensive action to deal with environmental problems has been the main casualty on this semantic battlefield.

THE MOTE AND THE BEAM

“And why beholdest thou the mote that is in thy brother’s eye, but considerest not the beam that is in thine own eye?” Matthew 7: 2-3

This conference poses the question “How can ecotourism be successfully designed and implemented by effective policymaking and management?” We would like to turn this question around and ask “How can ecotourism exert economic and political influence on corporate behavior and public policy for conservation?” We will not discuss specific technical methods to measure the impacts through the design and operation of ecotourism facilities, since they are the shared impacts of the biological, physical, and chemical destruction that accompany human activity. Environmental impacts are not uniquely immune to the entire cycle of infrastructure development and use for ecotourism. However, they may be controllable because they are still in the early stages. Basic principles for living within our environmental means apply. Ecotourism should not be considered as an isolated, even quaint phenomenon, as if it were immune to the universal ailments of pollution, patterns of excessive consumption, social inequity, and the economic pressures to wheedle “just a little bit more” expansion to meet market demand. To devote all our attention to refining and measuring the limited impacts of ecotourism is to indulge in an idle parlor game of “Let’s Pretend,” while the environmental assets that support ecotourism remain at ever-increasing risk.

Ecotourism should not be considered as an isolated, even quaint phenomenon, as if it were immune to the universal ailments of pollution, patterns of excessive consumption, social inequity, and the economic pressures to wheedle “just a little bit more” expansion to meet market demand.

THERE IS NO AWAY—ECOTOURISM BENEFITS MUST BEGIN AT HOME

Some economists tell us that tourism is increasingly the number one industry in many parts of the world. If you concede that sprawl and consumption are devouring the good green Earth, tourism can then take more and more credit for environmental problems and cultural decline around the world. We should continuously remind ourselves that many of today’s least natural tourist destinations would once have qualified as “ecotourism” destinations, before they succumbed to over-building. Buried beneath the steel and concrete of many of the world’s population centers are sites once noted for their remarkable natural features.

One of the authors started thinking about ecotourism from experiences gained working in Puerto Rico. Atlantic States Legal Foundation is primarily involved in dealing with toxic chemicals and water pollution. Puerto Rico has plenty of that, and we have had a long and active program working to clean up this jewel of an island in the Caribbean. In the course of that anti-pollution work, we

began to see that despite the abuses, there was still lots of natural beauty in the diverse ecosystems on the island. Here is an island where millions have been coming for years—mainly for the sun, the resorts, and the casinos—and missing some of the best parts. In recent years the Old City of San Juan has been restored and has become a very civilized urban environment. Now more and more travelers are visiting the mountains and caves that make up the natural Puerto Rico. The infrastructure is here. Let's take some of these tourists and show them the natural areas and build a constituency for restoring more of the island to what it once was.

REDISCOVERING THE NEW WORLD

Nowhere is the destructive effect of tourism more evident than in Florida, but there are indications that the environmental ethic of ecotourism may be gaining recognition. Growth in the state's tourism industry is mainly associated with "niche" markets that stress a "sense of place" incompatible with urban sprawl and environmental degradation. A recent issue of a business magazine declared that the views of Florida residents and small, local interests are in tune with emerging trends of the global tourist market. The state receives over 600 requests a week for literature about nature trails. Ethnic heritage maps and wildlife viewing guides are selling like hotcakes, while the number of visitors to theme parks and non-place attractions has been declining in the 1990s. The writer concludes that this pattern of consumer preferences suggests that the only way to save Florida tourism is to save or restore Florida itself.

Like many Caribbean countries, Florida is learning that tourists may choose destinations based on cost considerations alone. Tourists are not aware of the obliteration of natural beaches and vegetation by resort structures interchangeable with those anywhere else in the world. Business and government must take strong stands on issues like urban sprawl and environmental degradation if they are to cash in on the ecotourism trend. While all this points to the possibility of major positive impacts from ecotourism, Florida is simultaneously caught up in the costly and prolonged nation-wide struggle over property rights on both private and public lands. One manifestation of this is that land use planning and coastal zone management were hastily jettisoned in the panic to rebuild after Hurricane Opal.

Let us make it an ecotourism goal to travel to the wonders near home, and to make those wonders deserving of our scarce recreation and recovery time.

THE TYRANNY OF SMALL DECISIONS

What an earlier generation may have regarded as annoying but gradual encroachments, can now be quantified under the heading “cumulative impact.” The transformation of dynamic barrier islands into Fire Island, Atlantic City, Ocean City, Maryland, and Miami Beach all began with a handful of summer cottages. Key West was a fishing village only decades ago. Seafood and beach sand can no longer be taken for granted at any of these locations. Coastal water pollution from non-point sources diminishes coral reefs and estuarine productivity. Coastal erosion and hazards are exacerbated by shoreline armor.

If we keep repeating the destructive history of the New York Estuary or San Francisco Bay, vicarious ecotourism may be the wave of the future. Bits and pieces which now make up the Gateway National Recreation Area or the San Francisco National Wildlife Refuge are but vestiges of these once-great natural wonders. Modern visitors may glimpse past glories only through historical accounts and interpretive exhibits—a form of nostalgic, retrospective ecotourism, long after the tradeoffs have been made irreversible.

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REINVENTING ECOTOURISM

Niagara Falls offers important lessons in ecotourism. At this site, the waters of the Upper Great Lakes hurl down the Niagara Escarpment on their way to Lake Ontario, creating one of the grandest waterfalls on the planet. People visit waterfalls (Victoria Falls in Africa, Iguazu and Angel Falls in South America, and the numerous falls of the Yosemite) because they instill a sense of wonderment. Alas, a visitor to Niagara now carries away a vision not of the Falls but of the ravages of ill-planned industrialization and abandonment. In recent years, New York State has begun drawing up a master plan for the Niagara Reservation. The new planners have recognized that the parkways are a detriment and have begun to remove them. Still, the overall impression of the area can only be described as honky-tonk. A place where the lover of nature and the natural will not wish to linger. Perhaps Niagara can again become a major ecotourism destination if people visit while conscientiously reducing their consumption of fuel and other diminishing resources. A major ecotourism goal should be to make visiting the wonders near home worthy of our scarce recreation and recovery time.

COMMUNITY-BASED SOLUTIONS

It would seem too late for similar places all around North America, but the scraps and leftovers of nature inspire environmental advocates to keep trying. Last month, 300 people attended a conference in Ocean City, Maryland, to launch the Coastal Bays Program, one of EPA's newest additions to the National Estuary Program. There are now 28 of these officially threatened estuaries where communities are developing comprehensive management plans to restore living resources and quality of life.

The centerpiece of the Maryland Coastal Bays meeting was a report on three years of studies that revealed serious declines in water quality and living resources at this estuary. This confirmed the unease of many long-time residents about the changes in their environment and quality of life. Conferees (local officials, state and federal agency representatives, scientists, and a sprinkling of ordinary citizens) spent two days wrestling with the conflicting demands of an ever-increasing population, including large numbers of seasonal vacationers and transitory retirees. Breakout discussions dealt with the need to balance amenities and improvements, residences, golf courses, and marinas—with the costs of failing septic systems, cleanup of pesticide-laden sediments, and congestion. Repeatedly participants invoked ecotourism or heritage tourism as a means to fend off permanent urbanism. Self-inflicted wounds have brought this community to a realization that it must collectively change course, and the vision that ecotourism conjures up appears to offer salvation. This is only the first step, however, in the arduous process of reaching agreement on new environmental ground rules.

This example from the United States illustrates how the ecotourism concept can effect positive change in a democratic system that can also afford to underwrite research, public education, and consensus building. Yet without these luxuries, the most successful tourism projects have been those in which local people have been the initiators, entrepreneurs, and beneficiaries. They are also the projects where the local economy has been transformed from resource exploitation to one of sustainability. Examples often cited are villages in Trinidad or on the Yucatan Peninsula of Mexico. In the Yucatan, poachers nearly extirpated the nesting sea turtle population. When this destructive activity was ended by an international ban on turtle capture, visitors began coming to observe the turtles and enjoy the lifestyle of the village, including eating in locally owned restaurants and purchasing locally made goods. Poachers, who knew the habits of turtles most intimately, have been converted to stewards of this creature now that the foundation of the local economy had been transformed.

A less uplifting example comes from Ecuador. A few years ago European biological researchers and investors combined their resources to establish a lodge and base for natural history expeditions into Indian lands formerly set aside as the Cuyabeno Faunistic Reserve. Government permits were obtained and construction began. Building materials and workmen were brought in by boat. To the local inhabitants this amounted to no less than an invasion of their territory and hunting grounds—deforestation without representation or jobs. The bitterness and hostility of the indigenous people finally forced a renegotiation. Ironically, trip descriptions from U.S.-based companies now place great emphasis on friendly relations with the Indians employed at the facility (not so much emphasis on the fact that this was rightfully their territory anyway and that their hostility could cause problems).

ECOTOURISM AS A WEAPON OF DEFENSE

Should success be measured by comparing what has happened to a particular environment and rejoicing because something worse has not happened? We live in a world where Yellowstone Park is threatened by a giant gold mine, and the Galapagos National Park has been held hostage to international fish processors. The question is whether the economic power and political will generated by ecotourism can withstand these forces. Cuyabeno's ecotourism facilities are surrounded by large tracts of the Reserve undergoing oil exploration and development. The lodge has been expanded, more trails have been cleared, and additional overnight huts have eaten still more into the forest. But how much does that matter so long as oil exploitation so far has been restricted to areas out of sight and sound? And just how precarious is the future of this comparatively small piece of flooded forest set aside for tourism?

RADICAL ENVIRONMENTALISM OR ENLIGHTENED SELF-INTEREST

Care and attention to construction and operation of tourist facilities, management of tourists, and provision of interpretive services are all essential, but to focus on these alone as the mainstay of a successful ecotourism venture is to court disaster. A sizable tourism industry has grown up in Patagonia and other locations in the Southern Hemisphere. This industry is based on penguin nesting grounds. In recent years, the numbers of penguins arriving to breed at Punta Tombo in Argentina has dropped dramatically, due to oil spills, entrapment in fishing nets, and other causes unrelated to the tourism industry's disruptions of the colonies. Many Argentine ecotourism operators have not adequately addressed their own

Travel as an escape from the pressures of life at home and at the workplace may only spread environmental and social discontents.

impacts, much less the larger environmental problems. Similarly the coastal ecotourism industry in Delaware Bay, which relies on massive spring migrations of shorebirds, must pay heed to over-fishing of horseshoe crabs by Maryland-based travelers as well as its own state dredging projects. The crabs lay their eggs at a critical time when the birds are making their first stopover from South America.

An industry dependent on natural cycles and healthy ecosystems surely cannot afford to remain aloof from environmental activism, but it can take many forms. Engagement paid off for innkeepers in California's Mendocino County, who waged and won a massive political campaign by enlisting their guests to flood Congress with cards and letters calling for a ban on offshore oil. Likewise, swamp tour operators in Louisiana have sued the federal government to prevent a proposed channelization of the West Pearl River that threatened to disrupt the aquatic ecosystem on which their business depends. In another example, violent confrontations about migration policy, over-fishing, and pollution in the Galapagos, have brought about an alliance of outbound and inbound tour operators, along with scientists and conservationists, to begin a constructive policy discussion with the Government of Ecuador. The goal is to reach consensus on a new public policy for the management of the Islands that will address migration control, fisheries management, tourism limits, and administrative reform. The challenges vary and the solutions must arise locally.

The potential impacts of genuine ecotourism go far beyond its ability to titillate the adventurous bourgeoisie with remote destinations and rarefied environmental perfectionism.

CONCLUSION

1. JUST AS LIVING THE SIMPLE LIFE IS NOT THAT SIMPLE ANYMORE, THE WORLD NOW OFFERS FEW "REMOTE" PLACES. APPLICATION OF ECOTOURISM PRINCIPLES MUST BEGIN AT HOME.

Disposable wealth, increased education levels, and an older population may mean more tourist travelers, but it need not mean that they all descend on the remaining wilderness. Travel in search of new scenes and experiences can be directed toward natural areas that already have some infrastructure if those areas have been adequately protected so that they retain their distinctiveness and are given the recognition they are due. Travel as an escape from the pressures of life at home and at the workplace may only spread environmental and social discontents. We would probably greatly improve our overall quality of life if all our communities would undertake a citizen-led debate about what they want their part of the world to be like in the year 2000 or 2020, and decide what would best fit their own distinctive geography. Positive impacts from

ecotourism can only occur in the context of coming to grips with environmental constraints and not by disregarding them in an “exotic” setting.

2. POLLUTION PREVENTION MUST BE THE MANTRA FOR DEVELOPING NEW DESTINATIONS WITHOUT DESTROYING WHAT WE ARE TRYING TO PRESERVE.

There are really no new destinations. The globe is overrun with human activities and the remotest locations get additional footprints every year. Still there are ways to minimize impact and there are positive steps that can be taken to make visitation less threatening to the environment. Some of these are obvious and have been stated and restated in the many lists of do’s and don’ts that professional organizations dispense. Not all are applicable to all situations and none is all-encompassing but environmental and social: responsibility requires experimentation. Show some restraint and do not build the hotel right on top of the scenic feature. Remember that the lure of visible profit draws in impoverished populations from other locales, so that as tourist centers grow they attract squatter communities and slums grow. Approach the natural area from a central locale that may be a small town with a ready-made work force. If the water is unsafe, resist the idea of abandonment for new ground—correct the problem if at all possible. Do not be seduced by economies of scale.

Remember that the lure of visible profit draws in impoverished populations from other locales, so that as tourist centers grow they attract squatter communities and slums grow.

3. THE RIGHTS OF LOCAL RESIDENTS INCLUDING INDIGENOUS PEOPLES’ RIGHTS AND CULTURE MUST BE THE NUMBER ONE CONCERN.

No one should be creating openings for outsiders without their early participation and agreement, preferably as initiators and definitely as beneficiaries. This can be extremely difficult, as it is usually not a simple matter to determine legal rights and even community consensus.

4. ABOVE ALL, THE TOURISM INDUSTRY AND ITS CLIENTS MUST EXERT THEIR POLITICAL AND ECONOMIC STRENGTH ON BEHALF OF A HEALTHY ENVIRONMENT.

All of us must be aware of the connections linking corporate behavior, public environmental policy, and our own direct interests. We cannot ignore the mobility of pollution, and the futility of drawing an imaginary line around a special place. The interdependence of tourism and the environment does not permit us the luxury of shrinking into secure enclaves, isolated from global problems. The potential impacts of genuine ecotourism go far beyond its ability to titillate the adventurous bourgeoisie with remote destinations and rarefied environmental perfectionism.

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Ecotourism's Identity Crisis: How Green is My Vacation?

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ABSTRACT

Ecotourism is a term broadly applied to a range of tourist activities, based on type of activity. It conveys positive connotations and implies careful considerations of tourist impact. If ecotourism is to be a positive force, considerations of impact will define it. The issue becomes whether ecotourism can be planned by a structure of actions or whether case-by-case, anticipation and evaluation of impact is necessary. Individual evaluation seems the only functional approach. Issues that are critical to the creation of ecotourism are realistic expectations, restraint, and an understanding of what constitutes success.

JUST WHAT IS ECOTOURISM?:

WHAT WE DON'T KNOW CAN HURT

Ecotourism is a word that has not been defined. It is, however, used with increasing frequency, and clearly with the intent of conveying some sort of message. Before a definition can be attempted, it is necessary to understand how *ecotourism* is being used, what it *seems* to mean, what it implies. Ultimately, it will be necessary to decide if ecotourism can be defined by activity (e.g. going to a rain forest to see parrots) or by impact (e.g. parrot nesting is disturbed). When impact determines activity, each situation becomes individual. What is good in one place could be damaging elsewhere, and this needs to be determined in each case.

At present, the greatest danger inherent in ecotourism may be that, undefined, it is easily used as a label in response to it having a positive connotation. This surely has contributed to the negative reaction of those biologists and conservationists who disparage ecotourism. Using buzzwords to imply environmental soundness is not new. Paper manufacturers have long used waste materials such as sawdust in the manufacture of certain papers. When public demand and political correctness made this a marketable fact, products manufactured this way were labeled "recycled." The term was not incorrect. Use was being made of waste products. At the same time, the issue of recycling used paper was in no way being addressed. The public, unaware of the specifics of just what was being recycled, often assumed it was. Criticism led to the creation of the more specific term *post-consumer waste materials*. *Recyclable* and *organic* are two other terms that have been easily used as marketing tools, often in ambiguous ways.

At best, current usage of the term “ecotourism” is ambiguous, and some applications are deceptive. This has led to deception of consumers, failure to address real issues, and mistrust and cynicism among scientists and the lay public. Until there is clarification of the term and its usage, the criticism is valid.

If the prefix *eco* attached to *tourism* simply connotes travel that includes the observation and appreciation of nature (defined by the *act*) as it often is used, then it really is nothing new. Travelers have long been visiting places such as East Africa and the Galapagos Islands to view wildlife. Whale watching has been a growing industry for decades. Scuba divers, in ever greater numbers, have been spending big bucks to dive to see pristine and remote coral reefs. Even the people who gather for the return of swallows to San Juan Capistrano in California are, by this simple definition, *ecotourists*.

A definition that includes any visits to a natural area or observations of nature would include all visitation to parks, all scuba divers, casual snorkelers, hikers, walkers, and boaters, among others. This definition applies to components of traditional tourism, such as the tropical resort vacationer who goes snorkeling or takes an organized half-day rain forest walk. This greatly expands the scope of what must be considered and worsens ecotourism’s identity crisis. If ecotourism is going to have any identity then we must begin by eliminating its blanket use as a term to describe these other activities. It should be kept in mind that, while ecotourism is inappropriate as a general description of this broad range, when defined by impact, any of these activities could qualify.

Thus, impact becomes the preeminent issue. It is clear that ecotourism is used to connote something positive—at a minimum, sensitivity to the environment. The end result of acts, rather than the nature of the acts themselves, are what counts. The acts, therefore, must be structured around the needs of the end.

TOURISM’S REACH AND EFFECTS: CAN IT HAPPEN HERE?

My observations of traveling and travelers—from my position as a photojournalist, conservation program administrator, and inveterate traveler—have led to questions I feel need to be asked in order to evaluate the “goodness” or “badness” of ecotourism and to plan ecotourism ventures.

First, it must be realized that outsiders have an impact. The more remote the place (insular, less in contact with the outside world), the more profound the effect. The simple presence of people adds to the use of local resources; outsiders influence economic and social

Among some conservationists and scientists there is suspicion that ecotourism is just a way to “get into” a place under the guise of doing good. Like anything else, the word “ecotourism” is, and will continue to be, abused. For it to have credibility, however, there must be ideals to which those who use the term must be held.

dynamics. This is not inherently negative, but these issues must be considered to avoid damage. Ecotourism, if it is to be a positive force, therefore requires forethought and restraint. This may mean restraints on the numbers and types of visitors, limitations on services made available to visitors, limitations on visitors' activities, or even restraint on access to some places.

Another crucial consideration is the speed at which impact can occur. Here history is a valid teacher in showing that the past cannot be used as a model for the future. Tour operators interested in bringing tourists to "new" far-flung places face many logistical difficulties. Modern technology and greater demand have expedited the "opening up" of "new" places. Today, political and legal obstacles are usually more significant than logistical ones. When I first visited Ambergris Cay, an island off Belize, in 1977, the only developed part of the island was the fishing village of San Pedro. It had just a few, locally run hotels and one "tourist" hotel, which consisted of several thatched huts. This latter catered largely to boaters from Texas and a few off-the-beaten-path travelers who wanted a level of comfort above the local establishments. Some of the visitors were intrepid scuba divers looking for new places to explore. San Pedro, then, was a low-key place, home to local fishermen and a tiny tourist industry.

For the most part, San Pedro existed in harmony with its tropical barrier reef island environment. While several facets of life there were not ideal from an environmentalist point of view they were understandable, and possibly acceptable, because of their small scale. Looking at wildlife: black coral was harvested and sold; turtles and manatees were hunted for food. These all are species that most conservationists seek to protect. In 1977, San Pedro fishermen argued that they caught just one or two manatees a year, and that turtles, long a part of their diet, were only hunted for local consumption. As for black coral, only one person was licensed to harvest, carve, and sell it, all of which he did himself, and they believed this was a sustainable use of a resource. At the time I felt that if these were, in fact, sustainable harvests, and if the current balance was maintained, these could be acceptable arguments. Considering just how off-the-beaten-path Belize was in the late 1970s (I had difficulty getting a flight there as reservation agents in New York had never heard of Belize and kept trying to send me to Brazil) this seemed possible.

In the 1980s, Belize became widely recognized for its spectacular coral reefs and grew to be one of the Caribbean's top diving destinations. Ambergris Cay is one of the places that has grown most dramatically. San Pedro is now a popular resort with numerous hotels

that cater heavily to upper-income travelers. Along with this growth has come expanded demand on resources. For example, there are now many more customers for black coral products, which has resulted in much greater, and unacceptable, levels of exploitation of this resource.

This is not to say that tourism has had a negative impact *overall*. In order to make that determination, a careful analysis of all changes and impacts would be necessary. On the heels of the dive travel boom came the public's interest in rain forests, and Belize fit the profile of a "developable destination"—reasonably healthy forests, low industrial development, and good potential accessibility. The country went from being a remote destination for intrepid fishermen and divers to becoming one of the world's prime "eco" destinations. Tourists and the money they bring have given immediate, tangible value to the preservation of forests. This demonstrates an alternative to lumber board-feet as the economic basis for assessing a forest's value—a poignant contrast to earlier in this century, when Belizean mahogany was virtually extirpated from over-logging.

The above in no way quantifies or passes ultimate judgment on the impact of two decades of exponential growth, understood, for the most part, to be ecotourism. The example illustrates the critical need for micro as well as macro analysis: an assessment of overall impact along with a weighing of specific negatives against positives. This latter calculation leads to the question of what effects are unacceptable no matter what benefits are achieved. For example, in the above case, could a system that accelerates the depletion of a fragile species such as black coral ever be deemed ecologically positive?

Clearly, places that seem to be remote and immune to tourism development, even if they have not materially changed over long periods, can be "discovered" and quickly altered. Furthermore, small numbers of outside visitors can become the tip of the wedge that can lead to sudden, unplanned changes and impacts. Increasing demand and advancing technology make it ever more possible to rapidly "open up" new destinations. The risk grows that such haste may not allow for thorough investigation of all factors, especially those which cause delays, create restrictions, or increase costs.

WATCH WORDS—CAN THE MONSTER BE TAMED?

Determining the impact or range of impacts will be the basis for making ecotourism a meaningful word. Assuming ecotourism means activities that are at least benign and possibly beneficial to those visited (i.e., indigenous peoples and their cultures, ecosystems, wildlife), and possibly enlightening for visitors, then the issues that

Technology has made the establishment of tourism to very remote places possible. Adventurous travelers can stay at a basic lodge in a remote part of the Amazon, making reservations, and arranging transportation via their only source of communication with the outside world—a fax machine connected to a cellular phone.

could make ecotourism possible must be identified. Three such critical issues are expectation, restraint, and success.

EXPECTATION

Expectation is a serious issue in the development of ecotourism. For those who have been to ecotourist sites such as East Africa and the Galapagos Islands, a visit to a rain forest could be a great disappointment. East Africa and the Galapagos Islands offer easy opportunities to see wildlife at close range. A rain forest is a very different experience. Its animals are less readily viewable. Rain forest promotional brochures often will show some of the attractive species found there, such as toucans and macaws. It is possible to see them, sometimes in spectacular numbers. But it is also likely that just a few individuals will be spotted. Visitors must be prepared for the experience—and visiting a rain forest is a great experience—so that expectations are realistic. It is incumbent upon tour operators to accurately portray the nature of a trip. This provides an opportunity to sensitize visitors and make the experience more rewarding. The consequences of disappointment, beyond dissatisfied clients, are bolder attempts to satisfy visitors with less regard to impact.

This situation, in fact, can be clearly illustrated by a situation that has taken place in the United States. Whale watching has grown to become such a large activity that there are entire books listing places it occurs in the U.S. At Cape Cod, Massachusetts, and Baja, Mexico, it has become a mainstay of local tourist industries. In such areas, questions have arisen as to the impact of growing numbers of boats spending ever greater cumulative amounts of time among whales, often in their calving grounds. Further, the pressure to produce a successful trip, which usually means several close encounters with whales, can motivate operators to do things that are potentially damaging.

Years ago I observed a growing, and ultimately financially successful, whale watching operation. The boat's naturalist/scientist always dutifully lectured visitors on the protocols of whale watching, admonishing that he would not pursue whales to get close, but that we would move into likely areas and hope they came near us. Whenever spotters sighted a blow spout, however, I repeatedly heard the same naturalist/scientist order the captain to move towards it at full speed. The boat was maneuvered to get closer or to be where a sighted whale would surface to breathe. At times I saw whales react by suddenly, sharply changing direction to get away from the boat. These were clear violations of the Marine Mammal Protection Act's prohibition on the harassment of whales. Among other things, harassment is defined as causing changes in behavior or swimming

Preparing the traveler is essential, even in East Africa. While a park ranger, my wife, and I were watching a pair of lions feed on a cape buffalo in a Kenyan national park, a car with two tourists came along, spotted the action and "pulled in" between my vehicle and the lions. To our amazement the doors were flung open and a couple started to get out. The park ranger screamed and convinced them to quickly get back in their car. These tourists had arrived from Europe, rented a car, and it never occurred to them that they might encounter any danger. They were lucky that the male lion had finished eating and the lioness was almost done.

direction. This illustrates that legislation alone cannot ensure ethical behavior. It also shows the need to scrutinize what seems to be ecotourism.

One reason for the actions of this boat's naturalist/scientist was to keep up with the expectations of passengers who had been, or heard about, whale watching at places where the whales usually are seen in spectacular displays. The species we were observing rarely breached like Cape Cod's humpbacks or surfaced next to boats like Baja's gray whales.

RESTRAINT

This leads to the matter of restraint. Restraint could refer to refraining from activities that might create a more exciting experience (e.g., pursuing whales) or limiting visitor numbers, which only can be evaluated when placed in context. One hundred additional visitors to a remote place could impact more greatly than, say, 10,000 more people arriving in Miami. Sewage generated in places without the infrastructure to handle it has had a particularly detrimental effect. Restraint also refers to the introduction of incongruous services or facilities for visitors that cause damaging effects to local cultures or ecosystems.

In ecotourism, restraint is an integral element of success. For ecotourism to succeed, it needs to be sustainable. It cannot be sustained if it destroys that which brought it into existence (e.g., damage to a coral reef by overdiving). So, by definition, ecotourism is an endeavor that seeks to find a sustainable level of exploitation (defined as "making use of" rather than "abusing"). It must sustain what it needs to for itself while maintaining the integrity of the people and place being visited.

SUCCESS

Traditionally, success in an endeavor is associated with profit, while economic profit is an issue that has caused some controversy. Purists contend that a business will inevitably put profits before conservation. Others contend that only when an environment has economic value will there be incentive to preserve it. There needs to be a reconciliation between the purist and profits camps.

The purist concerns are fair warnings that certain priorities must be maintained. They underscore that restraint, limitations, and realistic expectations—which at times might seem contrary to the function of a profit making enterprise—are critical to success.

On the other hand, people need to make use of resources. The more remote or poorer the area, the greater the need to exploit that which is available in nature. What needs to happen is that ventures

exploit resources in ways and to degrees that maintain the tenets of ecotourism and at the same time create a marketable experience for the tourist. Profit is not contradictory to the goal; it simply must be kept in proportion.

In fact, profit may be one of the most desirable results. It can offer security and a better standard of living for indigenous peoples, as well as providing incentive for preservation. It is essential, though, that involvement and benefits stay at the community level. If that is achieved, sustainable profits could be a sustainable motive for preservation.

NOT SEEING THE FOREST FOR THE TREES: THINGS AREN'T ALWAYS WHAT THEY SEEM

Positive benefits and actions from tourism in one area do not rule out negative impacts in another. The Cayman Islands is a case of what can only be called hypocritical conservation and illustrates why some people fear that the profit motive is inherently irreconcilable with conservation.

The Cayman Islands is one of the top Caribbean diving and beach resort destinations. Its major attractions are miles of beautiful beaches and scrupulously protected coral reefs. The Islands' strict reef protection regulations are prominently proclaimed both to warn visitors and to trumpet proudly the preservation of this most fragile of ecosystems. Corals and fishes are totally protected and may not be touched or taken.

This clearly is admirable and has been effective. It does not even matter if the motivation was financial (tourism industry) and not scientific or altruistic. However, at the same time that it staunchly protects its income-generating coral resources, the Cayman Islands aggressively promote the sale of black coral products—made from coral harvested elsewhere. Cayman Islands tourist literature boasts of the many coral artisans and the great availability of black coral products. All this black coral is harvested from reefs elsewhere, predominately those along the Caribbean coast of Central America, where reefs are being damaged and the species is being decimated. Black coral is very slow-growing. Pieces thick enough to be used for jewelry may be a century or more old and usually are found in very deep water. This is not a renewable resource. Shops in the Caymans not only sell great quantities of black coral jewelry, but one can also buy objects such as sculptures, flatware with coral handles, and candlesticks made from thick, ancient corals.

So here we have a situation where legislation clearly protects a fragile ecosystem and the protection is effectively enforced—a rare

Local communities have the most to gain and the most to lose. Ecotourism can provide opportunities for communities to materially profit by providing accommodations, food, guide services, while protecting their "backyards." But they must participate in the process at all levels.

and noble combination. Yet visitors are offered products that promote the decimation of ecosystems elsewhere in an atmosphere that implies the presence of a conservation ethic. Therefore, can a visit to the Cayman Islands constitute ecotourism?

Most importantly, this illustrates the difficulty of determining the ramifications of tourism and the importance of delving beyond the obvious. It also underscores the power of tourism-generated income as a motivation for conservation as well as the collateral negative impacts that can be enabled.

These examples by no means demonstrate all the types of questions that need to be asked of a tourism venture. What I do conclude is that if ecotourism is to be a term that indicates visitation that impacts benignly or beneficially upon an ecosystem or society, impact assessment will dictate the nature and limits of such ventures. This will require a great effort to identify the questions that need to be asked and careful "what if..." extrapolation (what if a demand for XXX is created? What if 35 outsiders per week are provided with hot showers?) Ecotourism can be a powerful force for conservation as well as linking preservationist concerns with the real economic issues of indigenous peoples. The structure of such ventures cannot be predefined but must be individually constructed in response to the specific needs and sensitivities of each situation, making ecotourism more complex to establish than traditional tourism.

Self-interest can be a positive motive for environmental preservation but for ecotourism to be a valid force, its impacts, beyond the nearby and obvious, must be evaluated.

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Sustainable Ecotourism: The Galapagos Balance

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ABSTRACT

Ecotourism is discussed as an outgrowth of a conservation ethic that is interwoven in all fibers of modern life. Revenues from ecotourism are substantial and form an integral part of sustainable use of natural resources. The development of a management plan which is based on scientific monitoring and conservation measures is key for successful use of an environment. Galapagos is used as an example of long-term management and to demonstrate the positive and negative aspects of ecotourism.

The 1960s and 1970s saw the beginning of the popularization of the conservation ethic. Early catalysts for the conservation movement were the International Union for Conservation of Nature and Natural Resources and the World Wildlife Fund. Today the National Wildlife Federation lists 2,391 national, international, and regional conservation organizations and more are created every day. During the same period, charitable giving, a good indicator of current social trends, grew significantly for non-profit conservation organizations. The World Wildlife Fund, one of the leading conservation organizations worldwide, reports that in the ten years preceding 1995 its revenues grew from \$15 to \$68 million.

The conservation ethic has permeated every aspect of politically correct life. Clothing from natural fibers, foods grown organically, and non-polluting human-powered transportation are signs of our times. Seventy-six per cent of Americans regard themselves as "environmentalists" according to a Gallup poll reported by *E Magazine* in August 1990.

In 1992, worldwide nature tourism generated \$12 billion. In a prime example of supply and demand, the travel industry has changed drastically to capture the revenue from this fastest-growing segment of the industry, estimated in 1987 by the World Tourism Organization to be growing at 30 percent annually. While continuing to offer traditional beach and ski resort vacations, tour agencies are responding to the pressure of new consumer groups. Young professionals between thirty and forty years of age with substantial incomes, an interest in seeing the world, and a concern for the future seek travel to destinations that offer an ecological experience. Travel agencies report that high on their list of "hot spots" are places where endangered or vanishing species can be found. Jerry Mallett, president of the Adventure Travel Society which represents nature-

based tourism, reported there are 9,000 adventure-travel organizations in the U.S. specializing in activities such as horseback trips, bungee-jumping, whale-watching, swimming with dolphins, catch-and-release fishing, llama trekking, and rain forest canoe trips. In 1992, the Travel Industry Association of America, the largest tourism trade group in the U.S., estimated the market for ecotourism at 43 million Americans.

The demand for ecotours has changed the travel industry—not only in the destinations it offers, but also in the way it packages tours. Clientele want to do more than relax by the pool in a sunny location; they want to contribute something to a place, take away a special memory, or enhance their education. Ecotours provide reading lists, lecturers, opportunities to work side by side with a naturalist in a field setting. By adding ecotours to its agenda, the travel industry has been able to include a segment of society that is willing to live in moderate accommodations and travel in difficult areas to achieve a certain experience. The benefits to the industry are enormous in terms of broadening its scope of services, especially when compared with industry standards before Earth Day 1970.

Tour providers and hotels are responding to pressure to be environmentally conscientious in many ways. The Intercontinental Hotels Group published a 220-page operating manual for eco-correct hotels that has resulted in a recycling and a CFC-use reduction campaign. Some tour operators give a portion of their profits to local conservation organizations. Tour companies organizing travel in the Galapagos provide information on the Charles Darwin Foundation and help solicit contributions for science and conservation in the Islands.

Ecotourism is an integral part of a sustainable-use approach to the environment and is at the root of many international efforts to set aside protected areas in the form of national parks and reserves. In Ecuador, managed use of the Galapagos National Park led to an agreement between the Charles Darwin Foundation for the Galapagos and the Republic of Ecuador to establish a research station in the Islands that provides a scientific basis for conservation by the Servicio Parque Nacional Galapagos.

Education of the local population and visitors in the natural history of the Galapagos is a goal of the Station and the Park and programs are conducted in the Islands and on the mainland. An intensive course for naturalist guides, which is required to supervise visitors to Park sites, is conducted annually. Guides in the Galapagos are on every ship. They keep visitors on defined paths, give daily briefings, and accompany them on-site to explain and expand the experience. The ecotourist, in Galapagos as elsewhere, comes away

Travel to exotic places to experience nature has followed on a burgeoning interest in and concern for the environment.

from the visit with a greater grasp of environmental issues and dedication to conservation.

The advent of ecotourism has fostered international cooperation. Working toward the common goal of preserving the environment and sustaining ecotourism brings countries together and fosters technology transfer. Planning for such efforts as Debt-for-Nature swaps, particularly in Ecuador, has included detailed exchanges on natural resource management and analysis of national readiness in the sciences.

Finally, ecotourism benefits the local country with increased revenues. The nature traveler spends more money (\$1,000 in two weeks) in a country than the recreational traveler. While many ecotourist ventures have received criticism for not providing appropriate revenues to local people, most return a significant profit to the host country. Comparing local Ecuadorian and foreign profits from a typical tour to the Galapagos the U.S.-owned operators and the in-country service providers fare about equally. Revenues are shared by the U.S.-owned tour company and the Ecuadorian one; the international airfare benefits a U.S.-owned company; the hotel profits are Ecuadorian as are the profits from ship-based accommodations, meals, and souvenirs purchased in the Islands. Though the average ecotourist sees himself or herself as an environmentalist, it is not possible to visit any site on earth without some impact.

Besides being "big business," ecotourism fosters managed care for the environments on which it depends.

THE GALAPAGOS SITUATION

Tourism in Galapagos has developed under a management plan that allows limited numbers of tourists at selected sites in the National Park. The Park makes up 97 per cent of the land area of the archipelago. Since the advent of organized tourism in the mid-1960s, the number of tourists has increased from 4,500 in 1970 to 26,000 in 1987 and to 41,000 in 1991. Methods for handling tourists include ship-based accommodations and controlled landings supervised by trained guides.

By and large the main impact of tourists to the almost sixty visitor sites in the Islands is some damage to geological features, trail wear at most of the sites, and some erosion. While there are worries that nesting birds in proximity to tourist areas have increased heart rates and elevated temperatures (in the birds), there are no studies that show nesting success has significantly changed (Coulter, M. personal communication 1995). There are reports of floating trash from tour ships and plastics which have strangled sea lions and seabirds. Indigenous culture was impacted. Traditional uses of the land and sea gave way to tourist-related work, such as supplying

small boat travel in the islands and selling food, goods, and services to tourists.

The indirect impacts of the industry have been enormous. Ecotourism has brought with it increasing damage and threats from exotic species introductions, human population growth, and extraction of resources for export markets—all of which can lead to reduced biodiversity and species loss.

The delicate balance of island ecosystems in the Galapagos was assaulted by introduced animals and plants from long before Darwin visited in 1835. The literature is replete with discoveries of exotic species of vertebrates, invertebrates, and plants, often from the activities of the local populations. Ship traffic, for tourism or otherwise, has resulted in the introduction and spread of exotic species from island to island.

Immigration from the mainland of Ecuador has increased as the tourism-based economy has grown and outstripped even the capital city of Quito as a high income area. The impact on towns such as Puerto Ayora on Santa Cruz Island was significant. City services were strained by the quadrupling of the Galapagos population to 14,000 in 1995. Crime increased. New immigrants from Guayaquil and other towns on the mainland do not share the conservation ethic of the Galapaguenos in respecting native fauna and flora.

These new immigrants are attracted to the Galapagos to exploit its marine resources for export to the mainland and to the Asian food and aphrodisiac markets. They pose the single greatest threat to the marine environment of Galapagos, extracting shark, lobster, groupers, sea cucumbers, sea horses, black coral, sea urchins, and sea lions at the industrial level in sharp contrast to artisanal fisheries. Such species-specific fisheries run the risk of overharvesting and causing the populations of these significant marine species to crash. Such losses can alter marine food webs and even affect the marine-dependent terrestrial fauna, e.g., marine iguanas, cormorants, and penguins.

Recently, the Charles Darwin Research Station and Galapagos National Park Service advised the government of Ecuador to close the harvest of sea cucumbers to protect the population from depletion. The “pepineros” (sea cucumber fishers) rioted and in January 1995 the Director of the Station was taken hostage along with other Station and Park workers for a brief period.

With tourism comes development. In the Galapagos, every possible effort is made to limit development, but the growth of tourism has necessitated the expansion of an airport on two islands and the extension of road systems. The effect of such fragmentation on species is well documented at the Biological Dynamics of Forest

Environmental education and global cooperation are important spin-offs from ecotourism.

Fragments program site in Manaus, Brazil. According to the WCMC's 1992 Global Biodiversity report, habitat destruction impacts 50 per cent of threatened island species, and Galapagos is no exception. If it were not for giant efforts on the part of the Darwin Foundation and the Galapagos National Park to thwart attempts at development, there is little doubt that the fragile ecosystem of the Galapagos would long since have been converted to other uses.

Sustainable ecotourism has been practiced for more than twenty years in the Galapagos with relative success. A recent appeal by Craig MacFarland, President of the Charles Darwin Foundation for the Galapagos, provides insights into the need for constant scientific monitoring of animal and plant populations and habitats and attentive management of ecotourist sites. He warns about:

- the need to improve zoning for the Park;
- impacts of new kinds of tourism, such as day tours;
- expansion of tourism to include larger-capacity boats;
- decline in conservation ethics among new boat operators and guides;
- limiting numbers of tourists;
- competition between tourists and natives for basic services;
- the need for adequate monitoring and evaluation of tourism impacts and adjustment of visitor management.

With tourism comes development. In the Galapagos, every possible effort is made to limit development, but the growth of tourism has necessitated the expansion of an airport on two islands and the extension of road systems. The effect of such fragmentation on species is well-documented.

It is clear from the Galapagos example that sustainable ecotourism requires a balance between conservation and development. The maintenance of this balance through informed natural resource management and visitor control requires sustained observation and monitoring of natural and human populations and impacts. All of this must function within a context of cooperation between the local, national, and international interests that come together in an ecotourist venture. All must function with a clear vision of the importance of maintaining the beauty and integrity of the natural system that is the focal attraction.

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Emerging Participatory Monitoring and Evaluation Programs in Two Ecotourism Projects in Petén, Guatemala

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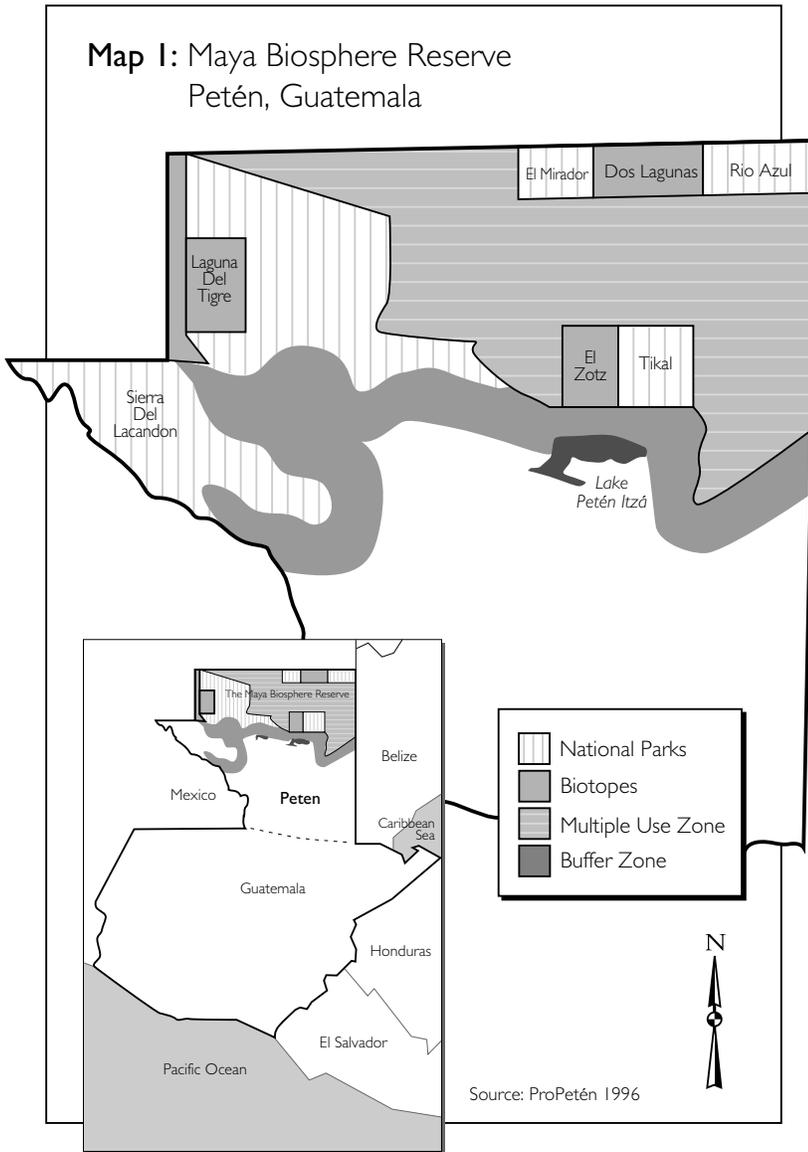
ABSTRACT

In the Maya Biosphere Reserve of Petén, Guatemala, several rural communities are implementing local ecotourism projects with the assistance of ProPetén/Conservation International. These projects are designed to provide sustainable economic alternatives to participants who would otherwise be engaged in slash and burn agriculture or other ecologically unsustainable activities. To help document the ecological changes associated with the tourism routes, a participatory monitoring and evaluation program is being designed and tested with the help of ProPetén staff, community-based tour guides, and tourists. Although the monitoring program is still in its early stages, a few lessons have emerged which could be useful to other ecotourism projects: 1) Participatory monitoring that includes tourists not only provides valuable information, but also can be used as a selling point for tourism routes, and 2) The monitoring program should be low cost, involve local guides, and require a minimum of time, equipment, and technical support.

PROPETÉN/CONSERVATION INTERNATIONAL

Since 1991, Conservation International (CI) has been working in the northern department of Petén, Guatemala to help conserve one of Central America's largest remaining tracts of tropical forest, the Maya Biosphere Reserve (MBR) (See Map 1). Through its *Proyecto Petenéro por un Bosque Sostenible* (ProPetén) project, CI has implemented an integrated conservation and community development initiative which includes community organization and training, environmental education, natural forest management, scientific investigations, eco-enterprises, and policy formulation. ProPetén/CI's primary focus is to create economically and ecologically sustainable alternatives for people living in rural communities within the MBR. Ecotourism is one of the most promising of these alternatives because the MBR has such a wealth of archeological ruins and tropical forests.

The tourism routes, which are being developed by several rural communities and by ProPetén/CI, pass through core zones of the MBR. Although core zones are designated as untouchable wilderness areas within the MBR, the reality is that small-scale farmers, cattle ranchers, and contraband loggers are causing significant impacts throughout these areas. ProPetén/CI is in the process of implementing a participatory monitoring program to document the ecological changes that are taking place along these routes. Eventually, the



In the Maya Biosphere Reserve of Petén, Guatemala, several rural communities are implementing local ecotourism projects with the assistance of ProPetén/Conservation International. These projects are designed to provide sustainable economic alternatives to participants who would otherwise be engaged in slash and burn agriculture or other ecologically unsustainable activities.

monitoring program will also document socio-economic changes in communities along the routes, and both the ecological and socio-economic impacts of the tourists themselves. Before the specifics of the monitoring program are explored, a brief introduction to Petén and to the current state of tourism in the region is provided.

PETÉN: GUATEMALA’S LAST FRONTIER

The majority of people living in Petén are not original inhabitants, but rather have migrated to Petén from other regions of Guatemala and neighboring countries. Many immigrants from southern Guatemala came to Petén searching for farmland or fleeing the

violence of the civil war. In 1964, the population of Petén was a mere 26,000 people occupying over 36,000 square kilometers of 90 per cent forested land. In contrast, 30 years later, over 360,000 people now reside in Petén, and only 50 per cent of the land remains forested (Conservation International/ProPetén 1996).

As it has been for centuries, small scale agriculture remains the primary subsistence activity in Petén. However, the area's thin tropical soils do not support the intensive farming to which the *milperos* (subsistence farmers) have grown accustomed in other regions of the country. Newly cleared lands yield just a few years of productivity before soils become nutrient depleted, forcing the *milpero* to clear a new patch of forest for cultivation.

In addition to subsistence farming, some Peteneros also engage in the collection and processing of non-timber forest products (NTFPs). "Chicle," a tree resin which forms the base for natural chewing gum, "Xate," a decorative palm frond, and "Pimienta Gorda," (allspice) are the principal NTFPs from the region. Collectively, export revenues of these NTFPs total between \$4-7 million, and provide full-time employment for approximately 7,000 people (Nations et al. 1988). Conservationists have attempted to create other products which, like NTFPs, make use of the forest without destroying it. Tourism is one of the alternatives which conservation and development organizations are promoting as an ecologically and economically sustainable alternative to subsistence agriculture.

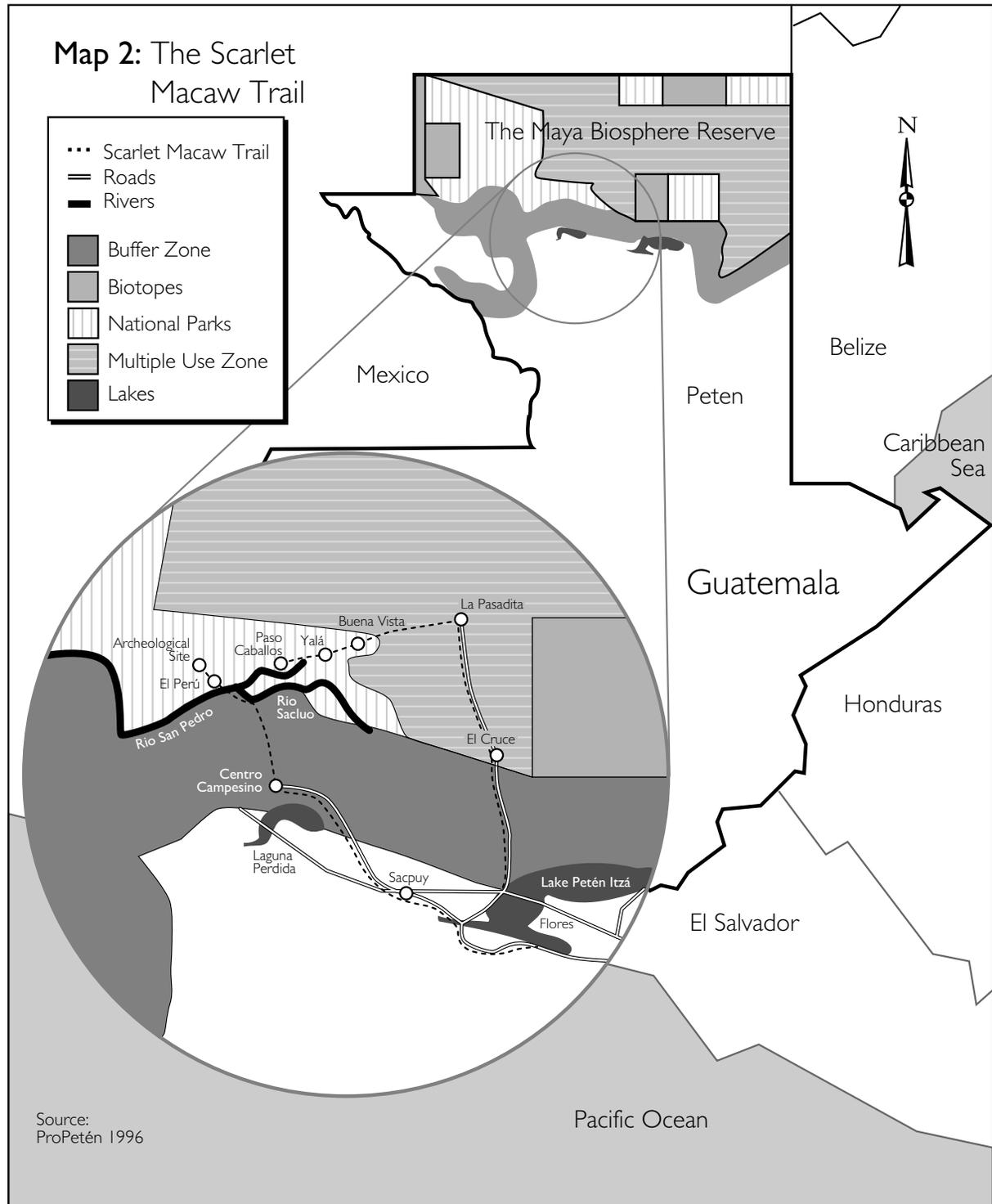
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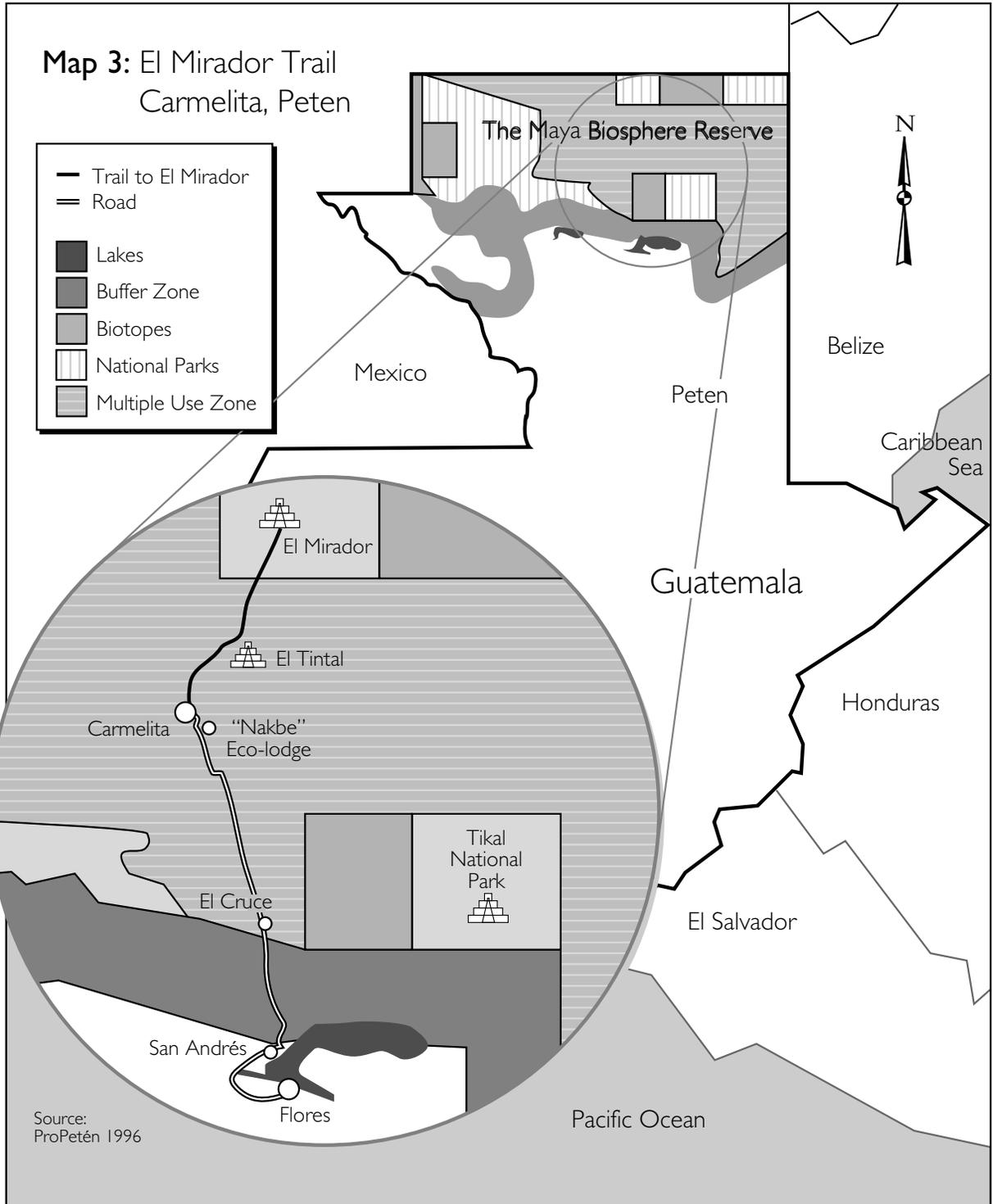
TOURISM IN PETÉN

Petén is well-suited for low impact tourism because it holds a wealth of attractions for adventurous travelers. Petén is far and away the fastest growing nature tourism destination in Guatemala (INGUAT 1995a). The region receives a steady flow of tourism, mainly attributable to the impressive ruins of Tikal National Park. In 1981, only 14,500 tourists visited Tikal, while in 1995, there were over 120,000—an increase of over 800 per cent (INGUAT 1995b). Although Petén boasts many other beautiful archeological sites such as Ceibal, Uaxactún, and Yaxilan, these sites draw only a minimum number of tourists compared to Tikal. Unfortunately for the people of Petén, few benefits of tourism are captured at the local level. National and international tour companies compete vigorously for market share, and retain the majority of the profits derived from tourism to Tikal.

PROPÉTÉN'S ECOTOURISM PROGRAM

ProPetén/CI is currently working toward the development of community-based ecotourism projects in five communities including Centro Campesino, El Cruce Dos Aguadas, Carmelita, San





Andrés, and San José (See Maps 2 and 3, pages 98-99). Currently, efforts are being focused primarily on the development of two major tourism routes. The communities of Centro Campesino and El Cruce Dos Aguadas are jointly managing the development of the Scarlet Macaw Trail, while the community of Carmelita oversees the Route to El Mirador (See Maps 2 and 3). The Route to El Mirador is a five day jungle hike where the ecotourist explores the highest known Mayan temples. The Scarlet Macaw Trail provides a chance to visit remote areas of Central America's largest national park, *Laguna Del Tigre*, and to view tropical wildlife including the highly endangered scarlet macaw.

Both routes are integral components of regional conservation programs. The Route to El Mirador is just one part of the Carmelita Community Forestry Concession which will also include managed extraction of timber and non-timber forest products. Similarly, the Scarlet Macaw Trail is one element in the management plan of 82,400 hectares within the *Laguna del Tigre* National Park. Tourism alone will not guarantee the conservation of a wilderness area, but it can be an important ingredient of an integrated conservation program.

The two routes are in different stages of growth. The Route to El Mirador is still in the product development phase. Tourism committee members are being trained for tourism management and the last of the necessary infrastructure is being built. The Scarlet Macaw Trail, on the other hand, is now being marketed to national and international tour operators in hopes of securing a steady, yet manageable, flow of ecotourists to the route.

DEVELOPING THE SCARLET MACAW TRAIL IN CENTRO CAMPESINO

The development of the ecotourism program in Centro Campesino provides an example of the method that ProPetén/CI is using to start up tourism programs in other communities. Initially, meetings were held between the ProPetén/CI tourism department and the Centro Campesino community in order to determine whether there was local interest in creating a tourism program. After Centro Campesino showed interest in tourism, a community tourism committee was formed. The committee's first challenge was to collaborate with ProPetén's personnel to define a likely route. The ProPetén/CI team, accompanied by a few members of the community, explored the areas with greatest tourist potential, including the archeological ruins of El Perú and a series of cliffs which are home to a flock of scarlet macaws. The team decided that the route could be best explored by mule or on foot and began designing the neces-

sary tourist facilities to make the five day hike both memorable and comfortable. Whenever possible, existing infrastructure—such as pre-existing trails and buildings—were converted to tourist facilities. Local materials and resources were employed in all construction projects along the route.

During the two years that the route was being developed, ProPetén/CI began arranging training sessions to teach community members the basics of tourism including guiding, food preparation, and human relations. After this first phase of route development, ProPetén/CI arranged familiarization trips for national and international tour operators to explore the route and assess its potential for marketing it to their clientele.

The operators responded enthusiastically and are currently advertising the route to their customers. The guides of Centro Campesino are optimistic that in the coming year the number of ecotourists on the Scarlet Macaw Trail will dramatically increase. Each year community members are asked both to contribute more of their resources to the tourism activities and to participate in training courses. ProPetén plans to pass control of the routes to the communities by the end of 1997 while still providing technical and marketing support.

Tourism alone will not guarantee the conservation of a wilderness area, but it can be an important ingredient of an integrated conservation program.

THE NEED FOR MONITORING AND EVALUATION

A ProPetén/CI task force was established in the fall of 1995 to formulate a monitoring and evaluation plan for the tourism routes. The task force was composed of ProPetén's ecotourism director, the technicians for the two routes, and a staff biologist. Although none of the community guides were included in the task force, the technicians spent extended periods in the field and were therefore able to express the views of the guides in these planning sessions.

The task force's first challenge was to decide whether a monitoring program was even necessary. In the case of the route to El Mirador and the Scarlet Macaw Trail, visitation levels are still relatively low (250 tourists/year). However, the routes are used extensively by hunters, subsistence farmers, and collectors of NTFPs. In fact, at this stage, tourist impacts would be extremely difficult to isolate in the context of trail use by the other groups. The task force concluded that there is a need to monitor the changing condition of the routes caused by the hunters, collectors, and farmers. Monitoring the condition of the routes, the task force believes, could help the guides decide which areas are in need of improvement or intervention. The task force also reasoned that monitoring the condition of the routes will provide excellent baseline data for future monitoring efforts as tourism increases over time. Finally, the guides will be

able to use the monitoring data to establish carrying capacities for the routes based upon community goals and ecological considerations.

An additional motivation for the development of a monitoring program was the opportunity to test the hypothesis upon which many ProPetén/CI activities are founded: Local sustainable economic development and biodiversity conservation are highly compatible, and rural communities that gain economic benefit from forest products (or in this case, ecotourism) will be more inclined to protect the forest and the biodiversity within it (Thomsen and Ortiz 1996).

Having justified the need for this new program, task force members next set out to define the priorities and methodologies to be used. The decision was made to focus solely on the ecological impacts of tourism during the monitoring program's initial phase. An anthropologist with 30 years of experience in Petén will be contracted on a short-term basis in 1996 to develop a framework and methodology for socio-economic monitoring and evaluation. This framework will then be implemented by the tourism committee and community members, with the technical assistance of ProPetén staff.

PRIORITIES AND METHODOLOGIES FOR MONITORING AND EVALUATION

Topics for monitoring were chosen to reflect both the interests of ecotourists and key conservation priorities. Task force members decided early on that a successful ecotourism monitoring and evaluation program should meet a number of criteria:

- low cost
- minimal time requirement
- local level participation and management
- minimal technical, training, and supervision requirements

The following is a compilation of the priority areas and methodologies determined by task force members for the initial phase of ecological monitoring and evaluation.

MACROFAUNA

Task force members felt that monitoring large vertebrates along the routes is of primary importance because wildlife viewing has consistently been ranked as one of the highest attractions for visitors. During the days on the trail, the guides and tourists identify all kinds of wildlife by sight, sound, and spore. When the group gets together in the evening to discuss plans and tell stories, the guide brings out the monitoring worksheets and all animals encountered during the day are recorded. The species name, the location of the sighting, the time and the quantity of animals are all recorded on the

worksheet. This simple activity often leads to interesting discussions of the natural history and legends associated with the various animals.

It is hoped that collection of data on the presence of macro-fauna along the routes will yield significant clues in determining the distribution and natural history of certain animals. Species deemed of primary importance to monitor include the scarlet macaw (*Ara macao*), howler monkey (*Alouatta pigra*), spider monkey (*Ateles geoffroyi*), white lipped peccary (*Tayassu pecari*), collared peccary (*Tayassu tajacu*), white tailed deer (*Odocoileus virginianus*), red brocket deer (*Mazama americana*), tapir (*Tapirus bairdii*), puma (*Felis concolor*), jaguar (*Panthera onca*), and agouti (*Dasyprocta sp.*) (Emmons 1990). More species of birds will eventually be added to the monitoring list. Since the Scarlet Macaw Trail passes through the territory of a new biological station established by ProPetén/CI, it is likely that the baseline data collected by tourists and guides will be used by biologists to make more detailed studies of fauna.

The guides will be able to use the monitoring data to establish carrying capacities for the routes based upon community goals and ecological considerations.

VISITATION LEVELS

As mentioned previously, the ecotourism routes are utilized extensively by NTFP collectors, subsistence farmers, and hunters. These individuals impact the ecological integrity of the routes. A monitoring team, composed of guides and ProPetén/CI technicians, will use informal interviews and simple observations to estimate the number of people living along the route. This information will help the guides predict where the route will most likely deteriorate and will assist them in forming strategies for intervention.

MEASURING HUMAN IMPACTS

Along with wildlife and archeological sites, the greatest selling point for the tourism routes is the forest itself. The integrity of the forest is also the highest priority for conservation. The task force has proposed that a team of community members and ProPetén staff survey the routes and map all deforested areas and areas of secondary growth less than ten years of age. The team will use a Global Positioning System (GPS) to determine the locations of these areas. ProPetén staff will create the maps showing the human impact data along the routes in the context of regional patterns of deforestation shown in recent satellite images. Each year after the base maps are created, the monitoring team will add new GPS points to the maps corresponding to any newly deforested areas along the routes. ProPetén will provide salaries for the guides who assist with the mapping work. ProPetén technicians will attempt to involve as many community participants as possible in order to maximize the educational impact of the monitoring activity.

TOURIST REGISTRATION

In the past, local guides have conducted tourist excursions of El Mirador in a rather informal manner and no data were ever captured about the visitors. To remedy this, task force members have designed a formal system for registering tourists. Meetings were held to determine the level of visitation that tourism committee and community members could effectively manage. Registration books were developed where visitors' personal and demographic data can be recorded, including name, address, occupation, nationality, age, sex, length of stay in region or country, and the means by which they learned of the ecotourism activities.

EXIT SURVEYS

Visitor surveys have been developed to measure quality of service and experience. Although surveys are often written in English, the tourists frequently talk over their answers with the guides.

ARCHEOLOGICAL RUINS

One of the principal attractions along the routes are the archeological remains of ancient Maya civilization. These ruins are constantly threatened by looters seeking valuable artifacts to sell on the black market and, as a result, very few sites remain that have not been disturbed. However, for various reasons the task force rejected the idea of monitoring the Mirador and Perú archeological sites. One objection was that the Mirador site is just too vast to monitor effectively with sporadic groups of tourists. A second objection was that the Guatemalan Institute of Anthropology and History (IDAEH) is formally responsible for monitoring these sites. Finally, task force members were uncomfortable with even the remote possibility of offending looters who live in the same communities as the guides. However, it was agreed that ProPetén/CI technicians could provide support to IDAEH to process data that has been collected on the changing conditions of the Perú and Mirador sites.

The participatory nature of the monitoring program is one of its greatest strengths. Although not formally trained as such, the guides are superb naturalists due to their dependence on the forest. They are especially good observers of the fauna because they know the habits and habitats of the animals.

STATUS OF MONITORING PROGRAM

Approximately eight months has been required to build consensus around the priorities and methodologies of this project. Training and testing of methodologies have progressed hand-in-hand as ProPetén staff work with local guides and community members to implement strategies which can be replicated and managed over time. To date, these efforts have been focused in three areas: visitor registration and tourist surveys on both routes, and macrofauna monitoring on the Scarlet Macaw Trail. The macrofauna monitoring has already begun to reveal the hot spots for sighting monkeys,

scarlet macaws, and tapirs (tracks). The other monitoring activities have been approved by the task force but have not yet been presented to the guides.

STRENGTHS AND WEAKNESSES OF THE MONITORING PROGRAM

Although the ecotourism monitoring and evaluation program is still in its initial stages, preliminary feedback has been encouraging. Exit interviews indicate that tourists who have participated in the monitoring of macrofauna have a sense that they have made a contribution to the conservation of Petén's forests. The collaboration between guides and tourists to fill out the macro-fauna work sheets has also helped to improve communications between guides and tourists. Increased communication is especially important because there is usually a partial language/cultural barrier between guides and their tour groups. Ultimately, the chance to participate in conservation monitoring while exploring the forests of Petén will become a selling point for both the Scarlet Macaw Trail and the Route to El Mirador.

The participatory nature of the monitoring program is one of its greatest strengths. Although not formally trained as such, the guides are superb naturalists due to their dependence on the forest. They are especially good observers of the fauna because they know the habits and habitats of the animals. Similarly, the guides' knowledge of farming and of land tenure around their communities will be invaluable as the monitoring team maps human impacts. In retrospect, a few of the guides should have been included in the initial meetings where the monitoring and evaluation priorities were defined. The guides will, on the other hand, have input into which monitoring strategies are actually implemented, and they will certainly make methodological changes to improve the monitoring techniques.

This emerging monitoring and evaluation program has had no shortage of challenges. Within ProPetén/CI, the monitoring program has required an integration process because monitoring was added as an extra responsibility on top of full workloads. In the field, it has been a challenge to explain the reasons for conducting monitoring. Tourism is a foreign idea that has taken several years to teach in the rural communities. It will take still more time for monitoring to become an integrated part of the community tourism program. Despite these obstacles, there is a commitment at ProPetén to implement the monitoring program.

The monitoring of human impacts has some additional challenges associated with it. The extended field time required to com-

plete the human impact monitoring will undoubtedly require the guides to do some monitoring work when no tourists are present. Guides will be compensated for this extra work by ProPetén/CI. A second weakness of the human impacts mapping is that it will require high technology and trained technicians. Nevertheless, ProPetén/CI believes that these maps can play an important part in bringing home the reality of deforestation to ecotourism guides and to their communities.

Ideally, socio-economic monitoring would have been planned and implemented in parallel with ecological monitoring. Because of the lack of trained personnel, the decision was made to implement socio-economic monitoring as a second phase. The following is a list of questions which have been proposed as the core of the socio-economic monitoring program: What percentage of a community tour guides' income comes from tourism and what are his/her other sources of income? Where do the tour guides invest the profits that they earn from their tourism activities?, for example, medical supplies, food, alcohol, chainsaws, education, land, etc. How do the community participants make the cultural transition from subsistence farmer to tour guide, and how do their values change with regard to conservation? How are guides viewed by non-participants within the community and from other communities? (Schwartz 1996). Based on an analysis of these questions, a report will be produced describing the socio-economic effects of the tourism activities on the community members and their environment.

Exit interviews indicate that tourists who have participated in the monitoring of macrofauna have a sense that they have made a contribution to the conservation of Petén's forests.

IMPLICATIONS FOR THE FUTURE

It is still too early to predict how these monitoring programs and plans will affect future ecotourism policies. Lessons learned from the monitoring of the Scarlet Macaw Trail and the Route to El Mirador could be multiplied through a recently formed *Gremial de Ecoturismo* (Ecotourism Council). This council consists of community representatives from seven ecotourism projects within Petén. The group was initially formed by The Nature Conservancy in order to help the various groups pull scant resources together to mount a collaborative marketing and publicity campaign. However, new monitoring and evaluation techniques and seed money to initiate them could also be coordinated through this council.

ProPetén/CI is also working closely with Guatemala's governmental tourism agency, INGUAT, in the formulation of policy guidelines for national ecotourism development. An effective monitoring and evaluation program tested and proven at the local level could be integrated into this national policy. International ecotourism operators are increasingly searching for reputable

projects which can meet high standards of ecological sustainability. If Guatemalan ecotourism ventures adopt monitoring programs, there will be added incentive for international operators to develop their programs preferentially in Guatemala.

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Ecotourism: Change, Impacts, and Opportunities

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ABSTRACT

Ecotourism is an agent of change. Measurement of the impacts of tourism is fraught with similar challenges to those involved in assessing impacts in general and tourism in particular. Research on the impacts of tourism has not been cumulative because of the adoption of an inappropriate paradigm and inadequate attention to the contexts in which impacts occur. It is suggested that aggregated information is more useful than summary measures and the characteristics of useful indicators for measuring impacts and monitoring change are described.

INTRODUCTION

Ecotourism, under whatever definition, is an instigator of change. It is inevitable that the introduction of tourists to areas seldom visited by outsiders will place demands upon the environment associated with new actors, activities, and facilities. Ecotourism will forge new relationships between people and environment, and between peoples with different lifestyles. It will create forces for both change and stability. These forces act at a diversity of scales from global to local.

Change is desired by most of the players involved in ecotourism, many of whom would like to see what they regard as an improvement of the existing situation. Tourists want a change from their everyday existence and wish to acquire special experiences, which are only available in special places. Entrepreneurs wish to gain a livelihood and encourage tourists to visit before it is too late. They are often abetted by governments who strive to "develop" peripheral regions and to increase foreign exchange and tax revenues. Other commercial interests may see the opportunity to sell transportation, hiking boots, binoculars, diving equipment, experiences, and memories. Permanent residents living in or adjacent to potential ecotourism destinations may desire to improve life opportunities for themselves and their children and may see ecotourism as generating jobs, stimulating incomes, diversifying economies, and enhancing standards of living. Even the conservationists, who would like to see endangered ecosystems and species perpetuated, seek change in order to ensure their sustenance: changes in resource allocation and utilization, and changes in management regimes.

Although most of the players involved in ecotourism desire change, there is usually considerable disagreement concerning

which changes are desirable. In fact, there are likely to be tensions and contradictions between the outcomes desired by the various participants in ecotourism, as between those directly involved and those indirectly affected by its introduction and operation. Thus, compromise and trade-offs must be sought among the legitimate aspirations of different people.

CHALLENGES FOR TOURISM IMPACT ASSESSMENTS

There are several challenges to measuring the impacts of tourism. They have been discussed in more detail elsewhere (Wall and Wright 1977), but some of them apply to all forms of impact assessment and include:

- the difficulty of establishing a base level against which to measure change;
- the difficulty of disentangling human-induced change from natural change;
- spatial and temporal continuities between cause and effect;
- the complexity of environmental interactions—primary impacts induce secondary impacts and tertiary impacts and so on.

Other challenges are more specific to tourism and include:

- the diversity of activities involved;
- the diversity of environments in which tourism occurs;
- the mobility of tourists so that impacts occur en route as well as on-site;
- Cumulative impacts.

Furthermore, there are three main methods by which impact assessments are undertaken:

- after-the-fact analyses
- monitoring of change through time
- simulation

Each of these three requirements differ with respect to costs of time and money, produce results with differing characteristics and, consequently, different degrees of managerial utility.

CRITICISMS OF EXISTING APPROACHES

Much work on the impacts of tourism is simplistic. If understanding is to be advanced, a more sophisticated perspective is required. Much of the criticism here focuses on inadequate specification of the contexts in which impacts occur. This has two aspects: the adoption of an inappropriate paradigm for impact analysis and incomplete consideration of the factors involved. Each will be considered in turn.

AN INAPPROPRIATE PARADIGM

Either explicitly or, more often, implicitly, tourism is viewed as an external force imposed upon a static community, causing change in that community and leading ultimately to the establishment of a new equilibrium. This is what Wood (1980) has termed the billiard ball assumption. In fact, none of the components of the billiard ball assumption is usually tenable. First, tourism is not simply an external force and may in fact be sought and welcomed by members of destination areas. In practice, it is extremely difficult to distinguish between internal and external forces of change. Secondly, few communities are static. Vibrant cultures are likely to be in a continual state of flux for a diversity of reasons—not simply because of the onset of tourism. It is virtually impossible, and perhaps unrealistic, to separate the consequences of tourism from other causes of change which may be occurring in the same place at the same time. However, since it is usually impracticable to study everything at the same time, it is often pragmatic to abstract tourism from the broader context of change to make investigation more manageable. However, the milieu in which those changes occur should not be forgotten and, ideally, should be incorporated into the analyses. Thirdly, residents of destination areas are not simply acted upon: some respond to opportunities and thus play an active role in contributing to and directing change. Thus, in this post-modern world, destination areas are exposed to global and local forces of change as well as factors operating at intermediate scales making the attribution of cause and effect a particularly difficult challenge.

It is virtually impossible, and perhaps unrealistic, to separate the consequences of tourism from other causes of change which may be occurring in the same place at the same time.

FACTORS CONTRIBUTING TO AND MEDIATING IMPACTS

The impacts of tourism can be viewed as arising from the type or types of tourism involved, the characteristics of the communities in which tourism is taking place, and the nature of resident-visitor encounters. Furthermore, investigations of tourism cycles suggest that impacts in a destination area are likely to change with time as the nature of tourists, the community and resident-visitor interactions also change (Butler 1980). Furthermore, much change associ-

ated with tourism may be cumulative as a number of small enterprises develop in sequence and in close proximity, each having a minor impact when viewed alone, but together having far-reaching consequences. Cumulative impact assessment is a challenging topic which is beginning to attract the attention of those charged with conducting and evaluating impact assessments, although it has yet to receive much recognition in the tourism literature (Shoemaker 1994).

While much work has documented the impacts of tourism, often under economic, environmental and socio-cultural headings (Mathieson and Wall 1982), few authors have taken the trouble to document adequately the types of tourism, the community characteristics, or the nature of host-guest encounters which give rise to these impacts. In fact, it would be worthwhile to review the tourism impacts literature in an attempt to establish more precisely the contexts in which authors have documented specific impacts. Failure to provide such information or to take note of it adequately has resulted in:

1. Communication failures. If one person is thinking of impacts of downhill skiing, while a second is concerned about sunbathing on a beach, and a third is contemplating visiting a natural area, is it any wonder that they come up with differing evaluations of impacts and talk past each other?
2. Contradictory findings. The findings in the literature are not consistent. Thus, for example, some authors lament the destruction of natural areas through tourism whereas others promote the potential of ecotourism to protect such areas. Who is correct? Of course, both perspectives may be correct but in different circumstances and to varying degrees. However, as suggested above, little attempt appears to have been made to ascertain what types of tourism in what type of community and in what type of host-guest interaction give rise to specific impacts.
3. Limited policy relevance. The general failure to specify adequately the contexts in which impacts occur means that the impacts literature provides limited guidance to decision-makers. In general, it fails to indicate how many people, of what type, doing which activities, in communities with specified characteristics, in specific forms of host-guest interaction result in particular consequences. This is not the same as calculating carrying capacities, which has its own problems (Wall 1982). An understanding of use-impact relationships is essential for establishing carrying capacities

Ecotourism, under whatever definition, is an instigator of change.

(if you believe they exist!) and limits of acceptable change (Stankey and McCool 1984), or for implementing concepts such as the tourism or recreation opportunity spectrum (Driver et al. 1987).

While this is not the place to review the carrying capacity literature, it is worth pointing out that the determination of appropriate levels of use is as much a value judgment, related to the goals set for the site, as a technical problem. Many researchers have eschewed the search for a magic number which can be approached with impunity and exceeded at peril, recognizing that management is required from the time that the first tourists arrive, if not before, and that trade-offs will be required. However, many managers still seek a simple solution to a complex problem through belief that a single inherent capacity exists and that this number can be determined by technical means. Such a perspective puts power in the hands of consultants who are hired as experts to determine the non-existent number. On the other hand, perspectives such as limits of acceptable change have the potential to empower local people if they are permitted to provide input on the acceptability of possible trade-offs.

4. Culture brokers. Resident-visitor interactions may be mediated by culture brokers with implications for social, environmental, and economic impacts. While a literature on culture brokers is emerging slowly (Lew 1992) and an extensive literature on interpretation exists (Machlis and Field 1984), very little of this deals explicitly with the role of culture brokers in influencing impacts of tourism in destination areas.
5. Saliency. The saliency of impacts refers to the importance of impacts, usually according to the views of residents of destination areas and usually ascertained through public opinion surveys. The interpretation of survey results is often facile. For example, because most people acknowledge that increased tourism is likely to be associated with increased litter and few people spontaneously identify changing land values, it does not follow that litter is a more important problem than land values. Furthermore, the litter problem is not difficult to resolve (for people can be paid to pick it up) when compared with land values which may be expected to increase or decline depending upon one's perspective and are very difficult to manage.

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Thus, it is suggested that the existing impacts literature has a number of deficiencies and, as a minimum, there is a need to:

1. Verify the tourist typologies which exist, most of which have not been based upon detailed empirical investigations (Murphy 1985);
2. Develop classifications of destination area communities;
3. Examine the nature of resident-visitor interactions including the extent to which they are mediated by culture brokers;
4. Place the recording and monitoring of impacts in the context of all of the above;
5. Assess the utility of widely-discussed related planning and management concepts.

If such steps were taken, the quality of impact analyses and their comparability would be greatly improved and the body of knowledge might be cumulative rather than a series of case studies as is presently largely the case. The resulting investigations might also be more useful to planners and managers.

Change is desired by most of the players involved in ecotourism, many of whom would like to see what they regard as an improvement of the existing situation.

A MULTI-DISCIPLINARY PERSPECTIVE

In addition to providing positive experiences for tourists, ecotourism, if it is to be sustained, must be economically viable, environmentally appropriate, and socio-culturally acceptable. If positive experiences are not available, then tourists will cease to come—there will be no tourism! If ecotourism is not economically viable, then the facilities and services required by most ecotourists will not be provided and the potential economic benefits of ecotourism for both industry providers and local residents will not be achieved. If the environment and its treasures are not maintained then the resource base for ecotourism is destroyed—if tourism continues, it is unlikely to be ecotourism unless one can persuade visitors to come to restore a severely degraded environment. If the ecotourism is not culturally acceptable and local people do not benefit from its existence, they will be hostile towards and may work to undermine it. Thus, economy, environment and culture are all involved. One is not more important than the other—they are all vital to the successful introduction, operation and perpetuation of ecotourism.

The three-fold division of change domains or impact types into economic, environmental and socio-cultural categories is artificial but convenient. It is artificial because they are interrelated. For example, money can be spent to protect, manage and restore the

environment; the acquisition of new forms of employment can have implications for family relationships and community structure; and aspects of the environment may have particular cultural values. Thus, conflict and the potential for trade-offs may exist between, as well as within, these broad categories of phenomena. Furthermore, it follows that the impacts of ecotourism span all three areas and measures should be sought from each.

THE INADEQUACIES OF COST-BENEFIT ANALYSIS

The logo for this meeting highlights costs and benefits. Of course, one person's costs may be another person's benefit and this directs attention to the problems of equity (who gains and who loses?), which, along with intangibles and incommensurable, are among the more challenging problems with which cost-benefit analysis is not well-equipped to deal. However, it is worthwhile to consider ecotourism briefly in the context of cost-benefit analysis and not only because the importance of intangibles and incommensurable is particularly large in most ecotourism situations.

Cost-benefit analysis is essentially an accounting procedure in which the costs and benefits of an initiative are compared for a specified time period and weighted partially through the application of selected discount rates. If the benefits exceed the costs, then the initiative *may* be worth undertaking.

In the case of ecotourism, as indeed in many other areas of endeavor, the adding up and comparison of costs and benefits is confounded by the diversity of phenomena to be considered and different ways each is measured. Thus, economic impacts are usually measured in units of currency or jobs. Environmental attributes may be measured through population counts, species diversity, production of biomass, coliform counts, biochemical oxygen demand, the presence or absence of indicator species or using a host of other variables which do not vary together in a linear fashion and whose significance may be debated by lay persons and experts alike. Furthermore, there is no widely-accepted way of converting these into dollars or jobs or, of course, vice versa. Socio-cultural change, similarly, has a diversity of measures, potentially including such items as infant mortality rates, proportion of women in the workforce, or the percentage of respondents answering "perhaps" to a question on a survey. In such situations it is virtually impossible to come up with a single summary measure and to determine whether the benefits exceed the costs.

Fortunately, the above observation, while clearly correct, is, in most circumstances, a red herring (which is not an endangered

Economy, environment and culture are all involved. One is not more important than the other—they are all vital to the successful introduction, operation and perpetuation of ecotourism.

species!). There are several reasons for this. One is that in most ecotourism situations, the decision to proceed or desist is not made on the basis of a global evaluation of benefits and costs. Rather, it is more likely to be a reflection of access to power, authority, resources and information. Even if it were possible to aggregate the information to arrive at a single measure, such a measure would not be helpful in informing most ecotourism decisions which, as suggested above, involve compromise and trade-offs. To make such decisions, disaggregated information is required. Managers need to know whether the populations of particular species are changing, whether occupancy rates in accommodation for visitors are rising or falling, whether local residents are supportive of the directions which management is taking, and whether tourists are having a good time, as well as many other things, if they are to make wise decisions. Only with such information can the trade-offs and compromises required of decision-makers be made in an informed manner.

CHARACTERISTICS OF DESIRABLE INDICATORS

Given that disaggregated information is required for management purposes and a myriad of factors and interrelationships are involved in ecotourism, it will be impossible to measure or monitor everything. Information will never be comprehensive or complete. In such situations it is necessary to select a limited number of indicators of change. It is not possible to suggest exactly what these indicators should be. They are likely to vary with the character of the area, the goals set for the area by the management agency, and the resources and technical expertise available. However, useful indicators are likely to have the following characteristics: they must be sensitive to temporal change and variation, they should have a predictive or anticipatory capability, and they should have conceptual validity and relevance to management problems (Kreutzwiser 1993). Often relative measures may be more useful than absolute measures. For example, rather than population numbers or habitat area, a measure of population per unit area of habitat may be more relevant. They will also be more useful if references or threshold values for that indicator are established. Furthermore, the range of indicators which are selected should encompass economic, environmental and socio-cultural domains and, if the goals of the management agency are narrow, it may be necessary to extend the indicators beyond their narrow interests to encompass the interests of the neighboring communities and, possibly, other interests as well.

CONCLUSIONS

This paper has argued that to endorse ecotourism is to advocate change. However, the changes which are desired are controversial, vary between actors, and necessitate the search for trade-offs and compromises. Assessments of the impacts of ecotourism are not immune from the difficulties associated with measuring impacts in general, as well as those pertaining to tourism in particular. Much research on the impacts of tourism is not cumulative because of the adoption of an inappropriate research paradigm and an inadequate attention to the contexts in which impacts occur. A broad perspective involving economic, environmental, and social indicators is required, and for most purposes, disaggregated information is much more useful than single, summary measures which purport to indicate carrying capacity or whether benefits exceed costs.

The general failure to specify adequately the contexts in which impacts occur means that the impacts literature provides limited guidance to decision-makers.

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Opening Address

Toward a Principled Evaluation of Ecotourism Ventures

George N. Wallace
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ABSTRACT

This paper discusses a systematic approach to evaluating ecotourism operations in a given locale. It employs a set of six principles as the basis for evaluation. Indicators and standards are site-specific and agreed upon by managers and stakeholders. When possible, tour operators, protected area managers (public and private), visitors, and local people participate in the evaluation. The paper gives its definition of ecotourism, discusses how the principles and valiative methods were derived, and describes the evolution of the methodology by looking at ecotour operations in both the Brazilian and Ecuadorian portions of the Amazon Basin. Suggestions are then offered for improving the approach.

BACKGROUND LEADING TO METHODOLOGY

Any evaluation of ecotourism first requires a working definition that distinguishes it from other types of tourism. Much discussion has been given to the conceptualization and definition of the term and to whether or not this term should apply to nature tourism in general or to a more specific type of nature tourism (Ceballos-Lascuráin 1993, Fennel and Eagles 1990). According to Wight, Western, Valentine, Hawkes and Williams (all 1993) and McAvoy (1990), what distinguishes ecotourism from nature, cultural, or adventure tourism is not its degree of specialization or how hard or soft the mode of experiencing a place is (Ruschmann 1992), as much as emphasis on its ethical values and principles. The Ecotourism Society's definition, "Ecotourism is responsible travel to natural areas which conserves the environment and improves the welfare of local people," is simple, elegant, can be applied to subsets of nature, cultural, or adventure tourism, and reflects the evolution of an ethical overlay. McCool (1994), and Wight (1993) go on to explain the close ties that ecotourism has to sustainable development and how that often means favoring supply (resource constraints and the needs of local people) over demand. Kusler (1991) and Kutay (1989) point out that ecotourism should occur in conjunction with managed protected areas. Norris (1992) and Wallace (1992, 1993b) have pointed out that ecotourism is not ecological unless it improves both protected area management (public or private as long as they are managed to protect natural processes) and provides economic benefits to local people asked to forego resource utilization. Stewart

and Sekartjakrarini (1994) concur that any description of ecotourism must integrate appropriate activities and behavioral norms and embrace a community development/conservation model of one sort or another.

It is precisely in the relatively remote and undisturbed natural areas and rural communities increasingly sought by many ecotourists and tour operators (Cater and Lowman 1994) that the potential to negatively impact *or* to protect natural and cultural systems is the greatest. While this gestalt view of ecotourism may not be the only type, it is a distinct focus in the literature, and it merits this special consideration because of its catalytic nature. Without disputing the desire of many for a broader or more inclusive notion of ecotourism, the studies described in this paper will build on the Ecotourism Society's definition. They will describe a set of principles that clarifies and supports the definition and has enabled the authors to conduct an evaluation of ecotourism operations in the Brazilian and Ecuadorian Amazon.

In developing the criteria against which ecotourism can be judged, current conditions can be compared to an ideal or desired form of ecotourism derived from agreed-upon principles. A distinction must first be made between site-specific regulations, general codes or guidelines, and principles. Regulations are developed by managers at each attraction site—usually public or private protected areas or reserves—to fit specific environmental and social conditions that are in accord with management objectives and desired conditions. Most guidelines or codes like those compiled by the Ecotourism Society (1993) and the United Nations Environment Programme (UNEP 1995), are suggestions for behaviors that address general biophysical and social impacts that can be caused by tourism (Blangy and Wood 1993). Behind regulations and guidelines or codes, however, are the principles from which they were deduced. Principles provide the over-arching ethical frame that can be applied in most circumstances.

Once principles like “entails a type of use that minimizes negative impacts to the environment and to local people” are developed, indicators of and standards for compliance with the principle can be chosen that are relevant to a given location. Sometimes, this takes the form of compliance with regulations or guidelines, but often regulations do not exist for important principles. Sometimes regulatory agencies were present but not quite effective.

Previous efforts at developing principles for nature tourism have been made (Eber 1993, World Tourism Organization 1985, World Wildlife Fund—United Kingdom 1988, etc.) but none of them could be used to evaluate a given tour operation. Cronin (1990)

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described principles guiding tourism planning and management in the direction of sustainable development. These principles are directed primarily at national or regional tourism planning. Though one of the principles does define sustainable development and contains criteria that would allow the evaluation of specific ecotour operations, the principles have apparently not yet been used for that end. Wallace (1992) synthesized and elaborated upon existing guidelines and documents containing the word *principles* and descriptions of ecotourism in the literature to develop a set of principles that were presented at the IV World Congress on Parks and Protected Areas. It is also reaffirming to note that Wight (1993) subsequently presented a similar set of principles, which she considered basic to an ethics-based perspective of ecotourism.

Lee and Snepenger (1992) offered one of the first assessment procedures for evaluating ecotourism. They compared ecotourism development with an ideal ecotourism development strategy. Their ideal ecotourism, like that of McCool, Cronin and others mentioned above, is part of sustainable development. Natural resources, local community, and visitors all benefit from ecotourism activity, along with commercial interests. Positive and negative elements of ecotourism activity were described in relation to an ideal scenario and used to evaluate ecotourism in Tortuguero, Costa Rica. Botrill and Pearce (1995) have described "key elements" that distinguish ecotourism from other forms of tourism. Utilizing key elements and data gathered from interviews with tour operators, they evaluated twenty-two nature based tourism ventures in British Columbia in 1992. Results were based on the judgement of researchers, who were looking at the data with the key elements in mind, and reported using perspectives of participants, operators, and natural resource managers.

In 1993, Wallace and Pierce (1996) began to apply the principles described earlier by Wallace to evaluate all registered ecotour operations in the Brazilian state of Amazonas. They used site-specific indicators for each principle in order to analyze surveys and interviews that had been conducted on-site with visitors, local people, and tour operators. Lincango and Wallace (1995) carried out a similar evaluation of all ecotourism operations in the Cuyabeno Wildlife Reserve in the Ecuadorian Amazon Basin. They improved on the approach used in Brazil by using the principles of pre-established, site-specific indicators, and valuative standards. All were selected after discussions with reserve managers and a review of desired future conditions that were expressed in the protected area's management plans and literature on Cuyabeno and its local inhabitants. Because these evaluations are based on the degree to which a set of key elements or principles are followed, ecotourism can be

One of the things I feel strongly about is that we can't just show intact pristine ecosystems. There's a great deal of discussion about what's sustainable in tropical forests in terms of humans living inside these environments. We need also to show ecotourists disturbed areas, we need to talk about the changes that are going on, and not shy away from these kind of issues.

ranked and placed on a continuum from “unsatisfactory” to “very satisfactory.”

Use of indicators and standards is increasingly common among managers who monitor social and biophysical changes in natural settings. Many are using techniques like Limits of Acceptable Change (LAC), Visitor Impact Management (VIM) and Visitor Experience and Resource Protection Process (VERP) to see whether they are achieving desired future conditions (National Park Service 1994, Graefe et al. 1992, Stokes 1990, Hendee et al. 1990). This paper may be the first description of how such an approach has been used to evaluate ecotourism operations and the first time that desired future conditions are defined, in part, by a set of general principles as well as standards. It should be noted that indicators and standards are almost always intended to be site-specific. In an ideal ecotourism evaluation or monitoring procedure, indicators, and standards should be selected and delphi-tested by people who know the area and setting being evaluated, who agree on guiding principles, and who have come to some degree of consensus about existing problems and desired future conditions (USDA 1990).

DEFINITION AND PRINCIPLES

The Wallace/Pierce and Lincango/Wallace studies employ the definition of ecotourism and set of valuative principles that follow. Each principle is briefly discussed, and some generic indicators that evaluate adherence to each principle will be given. The principles will be described in a way that references the work of authors who have spoken to the concepts embodied in a given principle.

Ecotourism is travel to relatively undisturbed natural areas for study, enjoyment or volunteer assistance. It is travel that concerns itself with the flora, fauna, geology, and ecosystems of an area as well as the people (caretakers) who live nearby, their needs, their culture and their relationship to the land. It views natural areas both as “home to all of us” in a global sense (“eco” meaning home) but “home to nearby residents” specifically. It is envisioned as a tool for both conservation and sustainable development, especially in areas where local people are asked to forgo the consumptive use of resources for other uses. Such tourism may be said to be true ecotourism when it:

1. ENTAILS A TYPE OF USE THAT MINIMIZES NEGATIVE IMPACTS TO THE ENVIRONMENT AND TO LOCAL PEOPLE.

Historically, the term “ecotourism” was adopted by writers who were documenting the phenomenon of nature tourism, but later focused on attempts to mitigate negative impacts. There is consen-

sus that ecotourism should minimize impacts to wildlife, soil, vegetation, water, and air quality, and emphasize respect for the cultural traditions and activities of local people. Efforts are made to be less consumptive, travel lighter, produce less waste, and be conscious of one's effect on the environment and on the lives of those living nearby. Both general guidelines and more site-specific norms should be developed and utilized. (The Ecotourism Society 1993, Hawkes and Williams 1993, Blangy and Nielson 1993, Passoff 1991, Williams 1991, Kutay 1989, Boo 1990).

Indicators include: group size; mode of transport; equipment; methods of waste disposal; use of "leave no trace" procedures; type and amount of training given to guides; type of information given visitors before and during field visits; level of cultural sensitivity of interpretive materials and activities pursued; resulting attitude of locals towards tourism; architectural style and types of building materials and decor; measures of biophysical change, such as site spreading, vegetative composition, erosion, water quality, wildlife behavior; and other site-specific measures. All of these imply some form of impact monitoring.

2. INCREASES THE AWARENESS AND UNDERSTANDING OF AN AREA'S NATURAL AND CULTURAL SYSTEMS AND THE SUBSEQUENT INVOLVEMENT OF VISITORS IN ISSUES AFFECTING THOSE SYSTEMS.

Learning about nature and other cultures is a primary motivator for ecotourists (Bottrill and Pearce 1995). Visitors should be able to experience truly representative and intact ecosystems and compare them with areas that have been disturbed (Ceballos-Lascuráin 1988). They should also be able to experience authentic two-way interaction with local residents (Wildland Adventures 1994, Wallace 1991, Williams 1991). Other awareness activities could focus on sustainable development (Wight, 1993), or conservation and wildland protection issues in the host and home country (Dubov 1993, Wallace 1991, Ceballos-Lascurain 1988, Janzen 1986).

Indicators, though sometimes difficult to document, include: Donations to local projects or NGOs; continued correspondence between locals and visitors; increased support for conservation/development projects and an increased level of commitment and activism (an untapped area for researchers). An indirect indicator would be educational and interpretive experiences for visitors, especially those that permit interaction with local people and their issues and that reveal how ecosystems function.

3. CONTRIBUTES TO THE CONSERVATION AND MANAGEMENT OF LEGALLY PROTECTED AND OTHER NATURAL AREAS.

Where possible this should mean strengthening the management capability, personnel, and stature of units that are part of a national, state, and local system of parks and protected areas (Norris 1992, Wallace 1993b, Kaus 1993, Barborak 1992, Whelan 1991, Kutay 1989) or similar management of private reserves or attraction sites (Ceballos Lascurain 1993).

Indicators include: Collaborative efforts between operators and protected area managers; payment of established entrance fees and additional donations; tours that encourage visitor interaction with protected area personnel and incorporate management issues into tour interpretive activities; adherence to area regulations; cooperation with infrastructure maintenance and improvements (volunteer work days, trail, dock, visitor center maintenance, etc.); research results that benefit a protected area in the case of “scientific tourism”; or development of management plans and subsequent actions on private reserves.

In developing the criteria against which ecotourism can be judged, current conditions can be compared to an ideal or desired form of ecotourism derived from agreed-upon principles.

4. MAXIMIZES THE EARLY AND LONG-TERM PARTICIPATION OF LOCAL PEOPLE IN THE DECISION-MAKING PROCESS THAT DETERMINES THE KIND AND AMOUNT OF TOURISM THAT SHOULD OCCUR.

The key here is the early establishment and continued functioning of committees, partnerships, and other mechanisms that provide local input to public (protected area managers, etc.) and private (outside concessionaires, conservation groups, etc.) interests that operate in the area. Ideally, locals will also belong to those interests groups (Brandon 1993, Horwitch et al. 1993, IUCN/UNEP/WWF 1991, Healy and Zorn 1988, Peters 1990, Drake 1991, Budowski 1985).

Indicators include: Strength and duration of local advisory and planning groups; incorporation and implementation of local ideas in area management plans and tour activities, development of local ecotourism ventures and tour itineraries that conform to local needs and schedules; the presence of staff delegated to community relations tasks; and the attitude that local people have toward ecotourism.

5. DIRECTS ECONOMIC AND OTHER BENEFITS TO LOCAL PEOPLE THAT COMPLEMENT RATHER THAN OVERWHELM OR REPLACE TRADITIONAL PRACTICES (FARMING, FISHING, SOCIAL SYSTEMS, ETC.)

Ecotourism often depends on natural areas where resource protection requires low visitor density and small group size. Ecotour operations are of smaller scale, and more susceptible to changes in season, weather, access, economic, and political events. Therefore, these operations yield irregular and modest returns when compared to mass tourism. Local economies will be more robust if they are diverse and if local people are not asked to make wholesale changes away from traditional activities (not to be construed as retarding the desire for increases in income and standard of living). Benefits should be diverse and should contribute to various aspects of the quality of life (Wilson 1994, Wildland Adventures 1994, Horwitch et al. 1993, Boo 1990, Kaus 1993, Hill 1992, Lindberg 1991, Wallace 1991, Adams 1990).

Indicators include: Increases or decreases in the diversity of economic activity, the variety and value of items produced and purchased locally; services provided by concessionaires to locals; the number and level of local park/ecotour employees; the relative distribution of benefits among community members; the number of programs that train or assist with the development of locally owned enterprises; existence of an adequate fee structure and evidence that some portion of park/protected area and concessionaire revenues are being reinvested in community development projects, and reserve or protected area infrastructure and management; and management zones for limited harvesting and other sustainable uses of an area's resources by locals that complement traditional activities.

6. PROVIDES SPECIAL OPPORTUNITIES FOR LOCAL PEOPLE AND NATURE TOURISM EMPLOYEES TO VISIT NATURAL AREAS AND LEARN MORE ABOUT THE WONDERS THAT OTHER VISITORS COME TO SEE.

This is similar to principle number 2, but emphasizes making *both* foreign visitors and local people feel comfortable as visitors to any given natural area. Some authors specifically point out the need for "biocultural restoration" via educational and recreational activities for locals and employees (Janzen 1993, Wallace 1992, 1993a, WTO 1985).

Indicators include: Number and percentage of the local population that uses the park/protected area; number of special days, events, transportation arrangements for locals each year; use of multi-tiered fee structures; use of the area for environmental education

by local schools; number of opportunities for employees (cooks, maintenance personnel, etc.) to occasionally accompany visitors on field tours.

METHODS FOR STUDYING REGISTERED ECOTOURISM LODGES IN AMAZONAS BRAZIL AND THE ECOTOUR OPERATIONS IN CUYABENO WILDLIFE REFUGE, ECUADOR

METHODS USED IN AMAZONAS IN 1994

Evaluating ecotour operations like those in the Amazonas, which are few, small, and dispersed, requires a methodology that can cope with logistical difficulties, small sample sizes, and the impracticality and expense of replication or sampling over a long time period. To do this first study in Brazil, researchers used a hybrid case study approach with both quantitative and qualitative analysis. Study sponsors asked that it be an applied study emphasizing practical methods. Interviews were conducted using separate survey instruments with visitors, operators and employees, and local people. Researcher observations were also systematically recorded and documents were content-analyzed to collect the data needed to compensate for the small sample size, narrow sampling frame, and possible diversity of viewpoints (Babbie 1995, Patton 1990). Between January and April 1992, interviews and observations were conducted at all eight registered “jungle lodges,” and the communities near each lodge. All operators referred to themselves as “ecotourism” ventures. Questionnaires were developed, peer reviewed, and piloted with staff from the sponsoring agencies—the state tourism agency (EMMAMTUR) and the principal environmental group concerned with ecotourism in Amazonas (Fundacion Vitoria Amazonica). Initially, survey instruments were not designed to test the six principles but were focused on the information sought by the sponsoring agencies.

Survey/Interview items dealt with: positive and negative impacts of ecotourism on people living near each lodge; the socioeconomic characteristics of each interview group; local community needs and attitudes about tourism; visitor expectations, attitudes, and level of satisfaction; visitor definitions of ecotourism; perceptions of undeveloped tourism potential; and willingness of visitors to make donations to rural development or community projects. Additionally, on-site observations regarding environmental and cultural impacts (waste disposal, fuel management, activities sensitive to needs of wildlife, interactions with locals, etc.) were recorded by interviewers. All responses were recorded by three researchers trained in interview techniques and the administration of survey instruments. Due to

When you go into a reserve or a protected area, whether it be private or public, take the time for your people to meet protected area personnel to hear about their management issues and concerns, to give them the presence and stature that they deserve so that we can continue to elevate that management.

varying degrees of literacy among subjects, surveys were read to each subject and responses recorded by the interviewer.

The sampling strategy was purposeful and stratified. The aim was to include: 1) most tourists at each site (total n=80), 2) all employees at each site (total n=89), 3) approximately 10 per cent of the local inhabitants, including known leaders and opinion makers, (total n=75). And, 4) two owners and/or managers for each site (total n = 18). The final sample was composed of approximately 10 per cent leaders. These influential community members were mainly teachers (usually female) and males who were either leaders by election or common consensus. The aggregate n (270) represents almost the entire population of tourists, employees and managers, and 10 per cent of the local people present during the sampling period of at each site. To obtain this sample required approximately 68 person days and hundreds of kilometers of river boat and off-road vehicle travel.

Descriptive statistics (frequency and means) were manually computed in the field for quantifiable survey items, which formed the majority of inquiries. Because of a series of logistical problems, no computerized statistical package was available in the area during the study. Content analysis (Babbie 1995) was utilized to categorize all responses to open-ended questions. These questions concerned: subjects not covered that tourists would like to know more about; tourist perceptions of community visits; gifts and services that tourists would like; tourist expectations; suggestions on how visits could be improved; tourist definitions of ecotourism; and quality-of-life questions directed at local people.

A subsequent evaluation of these results was made using the principles described previously. Site-specific indicators (which measure environmental impacts, benefits to locals, etc.) relevant for Amazonas, were selected by researchers using an approach from a standardized list of indicators that accompany each principle. These indicators were scaled using a four-point scaling system: satisfactory, mostly satisfactory, partially satisfactory, and unsatisfactory. A simple matrix and scoring system summarizes the aggregate performance of the Amazon lodges and tour boat sampled. Although the matrix and aggregate scores will be useful for obtaining an overall picture of ecotour operations in Amazonas, it is expected that the greatest value for planners, managers, and owners would come from the scores given to individual indicators for each operator.

SAMPLING OF THE RESULTS OBTAINED IN AMAZONAS

Table 1 summarizes the indicators used for each principle and the overall evaluation obtained by combining the results from

If you have rural communities with rural community projects, such as this iguana farm, or such as this, what I consider to be a sustainable, logging operation, what we've found out is that most ecotourists are very interested in these types of projects, but these kinds of projects are seldom featured as attractions or part of the ecotourism package.

visitor, operator/staff, and community survey items that tested. In this first study summary scores were assigned utilizing standards established by those who developed the study. That was to improve in the second (Ecuadorian) study. Looking at Principle 2, for example, "Ecotourism increases the visitor awareness and understanding of natural and cultural systems as well as their subsequent involvement," the first indicator is "visitor exposure to the local community during the tour." Results from the visitor survey showed that 66 per cent reported having been provided an opportunity to visit a local village and that 79 per cent of those visiting rated that visit as good or excellent. Researchers had discussed a standard for this indicator and agreed that in cases where a simple majority of the visitors were provided with a satisfactory visit to a local village, that the tour would be evaluated as satisfactory. If 75 per cent had reported such an experience, the tour would have been given a four (very satisfactory) for that indicator.

METHODS USED IN CUYABENO, ECUADOR

The second study included all visitors arriving at the Cuyabeno Wildlife Reserve between November 1994 and January 1995 as well as reserve managers, tour operators, and local people. Questionnaires formatted for interviews and focus groups were designed this time to include items that tested a number of site-specific indicators for each ecotourism principle. A single indicator often had multiple items, if it was judged as especially important for Cuyabeno. Additional items addressed demographics, visitors' motivations, visitation frequency, etc. Visitors were asked to complete their survey at the end of their tour, while they were still in the Reserve, so that perceptions were minimally distorted by time. The major difference or improvement in the second study was that indicators, and more importantly, standards for those indicators were discussed among researchers, operator guides, local people, and reserve managers prior to defining analytical procedures. In some cases, standards could be derived from existing Reserve regulations, which was not possible in Brazil.

Focus groups were conducted in November of 1994 with indigenous people in Siona-Secoya, Cofán, and Quechua villages, who receive the most visitation inside the Reserve. An attempt was made to include people involved in tourism activities as well as those who were not. At least one person representing each family was present during the focus groups. Managers of the four ecotour operations in Cuyabeno were interviewed utilizing a format similar to the visitors' survey. For one week researchers observed and recorded nuances of attitude and behavior not accessible when using other methods of research.

TABLE 1: Summary of Principles

PRINCIPLE 1:	Entails a type of use that minimizes negative impacts to the environment and to local people.	
	Group Size	3
	Mode of transport/equipment	2
	Waste disposal	2
	Architectural style/materials	4
	Soil, water, vegetation impact	2
	Information given to visitors	1
	Sensitivity of activities	2
	Attitudes of local people	3
	OVERALL	2.375
PRINCIPLE 2:	Increases the awareness and understanding of an area's natural and cultural systems and the subsequent involvement in issues that affect them.	
	Exposure to community	3
	Perceptions of visitors about the activities	2
	Interpretive activities	1
	Guide training/abilities	2
	Opportunities to contribute	1
	OVERALL	1.8
PRINCIPLE 3:	Contributes to the conservation and management of legally protected areas and other natural areas.	
	Information about protected areas	1
	Trips to protected areas	1
	Management plans for lodge property	1
	OVERALL	1
PRINCIPLE 4:	Maximizes the early and long term participation of local people in the decision process that determines the kind and amount of tourism that should occur.	
	Ownership of ET ventures/services	1
	Local committees/training programs	1
	Staff assigned to local relations	1
	Local attitude towards tourism	3
	OVERALL	1.5
PRINCIPLE 5:	Directs economic and other benefits to local people, which complement rather than overwhelm or replace traditional practices (farming, fishing, social systems).	
	Local perceptions of changes caused by tourism	3
	Local employment level	2
	Continuance of traditional activities	2
	Purchase of local products/value & variety	2
	Services provided to community	3
	Utilization of natural resources	1
	OVERALL	2.166667
PRINCIPLE 6:	Provides special opportunities for local people or nature tourism employees to also utilize natural areas and learn more about the wonders that other visitors come to see.	
	Local participation in nature tour activities	1
	Use of area by schools/teachers	1
	Special days of events for locals	1
	OVERALL	1
	CUMULATIVE	1.640278

Standards were developed by a creating four-point Likert scale that corresponds to the mean scores or to a descriptive statistic yielded by a given survey item (Table 2).

Table 2. Relating mean visitor responses to the question: "How often did you receive information on how to avoid disturbing wildlife?"

SCALE	1 Never	2 Rarely	3 Sometimes	4 Frequently
STANDARD				
Very Satisfactory			>3.5	
Satisfactory		2.5	3.4	
Partially Satisfactory	1.5	2.4		
Unsatisfactory	<1.4			

The site specific nature of indicators should be emphasized. For example, in Cuyabeno, most travel is done by boat along rivers and streams. In relation to the first principle, "Ecotourism should minimize impacts to the environment and to local people," managers felt that boat size, engine size, and appropriate speed and handling, were all important indicators of negative impacts to both the environment and local people. As a result, visitor and operator surveys included scaled items about each of these indicators. One survey item asked visitors to state to what extent they agreed with the statement "The speed and way the boats were handled were appropriate for the setting." Choices were distributed along a Likert five-point scale ranging from "strongly agree" to "strongly disagree." The reserve set standards for the size of boats (less than 12 meters and no wider than 1.2 meters) and boat engine size (25 HP), so researchers were able to observe compliance or non-compliance. Interviews with operators and guides provided a third perspective on these items.

SAMPLING OF THE RESULTS FROM CUYABENO

Indicators or sets of indicator scores were tabulated. The following short excerpt from results reported by Lincango gives an idea of how three indicators (of twelve indicators used for Principle 1) and standards were employed. These results illustrate the method and also refinements that will be necessary. Bear in mind that we will only look at three of the thirty-three indicators employed for the six principles.

Appropriate Boat Size

Evidence from Visitor Survey

As shown in Table 3, the majority of visitors (66%) agreed that their tour operators used an appropriate boat size for tourism in Cuyabeno (mean=3.9). About 45 per cent “strongly” agreed and 21 per cent “somewhat” agreed with this statement. Based on visitor perceptions, this indicator is rated as “satisfactory.” A one-way analysis of variance on the visitor data showed no significant differences ($F=0.5$) among visitors using the four tour operators.

Evidence from Local People

Local community members were not questioned about boat size.

Evidence from Tour Operators

Reserve standards for boat size, engine size and speed are clearly established. While operators were not surveyed about compliance, researchers were able to use the standards during their observations.

Evidence from Researcher Observation

Researchers noted that several boats were larger than legally permitted and gave this indicator a score of two or “partially unsatisfactory.”

Appropriate Boat Type

Evidence from Visitor Survey

A majority of visitors agreed “strongly” (39%) and “somewhat” (24%) that the boats used by their tour operator were appropriate for the natural environment (mean=3.8). Given the agreed upon standard, this indicator was also given a score of three or “satisfactory.” There were no significant differences ($F=0.5$) among the visitors to the four tour operations for this indicator.

Appropriate Size of Boat Engine

Evidence from Tour Operators

Tour operators reported using engines of 25 HP, 50 HP, and 65 HP. Two of the tour operators described their compliance with established regulations, while one tour operator admitted the use of 65 HP engines in boats. The other tour manager reported the use of two 65 HP outboard engines for two big boats (24 passengers capacity each) utilized for transfers in and out. However, this tour operator specified that they use paddle boats, canoes, or catamarans for

Table 3. Agreement or disagreement among visitors regarding the appropriate boat size, boat type, and boat handling in Cuyabeno^a (per cent)

Statements	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Mean
1. The size of the boats used by the tour operator were appropriate for the natural environment	4.6	12.8	16.4	21.4	44.8	3.9
2. The type of boats used on your tour were appropriate for the natural environment	4.6	17.4	14.9	23.7	39.4	3.8
3. The speed and the way in which the boats were handled were appropriate for the setting	9.7	9.7	21.8	23.9	34.9	3.6

^a "To what extent do you agree or disagree with the following statements?"

field trips in the Reserve. In addition, a "Flotel" (boat) with a capacity of 48 people was reported to be used during the operation. The "Flotel" navigates short distances using three 100 HP engines, and moves at an average speed of five knots along the Aguarico River located in the Reserve. This indicator is rated as "partially unsatisfactory," given the results from interviews with tour managers.

Appropriate Boat Handling

Evidence from Visitor Surveys

A majority of visitors agreed "strongly" (35%) and "somewhat" (24%) that speed and handling was appropriate for the setting. Given the agreed upon standard, this indicator was given a score of three.

Evidence from Researcher Observation

Observers noted speeds in excess of the Reserve standard on several occasions, however, and gave a score of two or "partially satisfactory."

These are only three of eleven indicators for Principle 1. As was done in the Amazonas study, Lincango goes on to sum and average the scores for all indicators for each principle and the scores for each principle are summed and averaged for an overall score along the continuum of unsatisfactory to very satisfactory. More informative than the aggregate score, however, are the scores for each principle and most importantly, for the individual indicators. These are the most useful for managers and operators who wish to offer what might be called, "real ecotourism."

ADDITIONAL IMPROVEMENTS NECESSARY

Although the use of principles, indicators, and standards continues to evolve and is, perhaps, more sophisticated in its second version than in its first, much remains to be done. Indicators must capture the essence of each principle. Principles IV and V (Participation of and Benefits to locals), for example, need careful evaluation. Critics recognize that ecotourism may only reinforce existing power structures and inequities if it simply involves and rewards those who step forward first (Gonsalves 1991, Johnston 1990). Indicators for these principles must go beyond dollars spent locally by visitors and look at the distribution of economic benefits, training programs, and other measures of equity. This will be easier to do in some cases than in others.

Quantifying results of indicator items must continue to improve. To fairly calculate an overall score for indicators, like those described above for boat size and handling in Cuyabeno, may require weighing the evidence from various sources within a case study. In this example, visitor perceptions about boat size and handling are probably not as important as those of researchers observing and operators testifying about sizes and speeds that violated a pre-existing standard. Balance can be achieved by either weighing some scores or by using more indicators from the sources that are most important in order to achieve the same effect. Indicators items for Principle V, for example, which would probe benefits to local people and examine whether traditional practices were being overwhelmed by tourist activity, should largely be evaluated using evidence from interviews with local people. This is not to say that items from the visitor or operator surveys that test this principle should be omitted. If nothing else, they serve to demonstrate the significant differences of opinion among the stakeholders of any ecotourism setting.

Another important methodological step is to reduce the arbitrary judgements of impact described by Botrill and Pearce (1995). Consensus must be achieved among stakeholders about the selection of site-specific indicators before the field survey instruments are produced. If there is a sense of ownership among operators, protected area managers, local people, and researchers, the results will have a better chance of being utilized. This is important for protected area managers, who will manage existing and future concessions, and who wish to achieve a partnership approach with operators and local people. During the two studies described here, there has been an over-reliance on researcher judgement in developing both indicators and standards.

Scales and statistical analysis can be improved. A finer degree of quantitative analysis is possible if six or seven point scales are used.

Researchers in the Amazonas and Cuyabeno studies kept scales simple at the request of sponsor. They were more appropriate for the nominal or categorical information derived from open-ended responses from local people, and researcher observations. In the future, studies that win the confidence of stakeholders will have to provide results by which tours and operators can be evaluated. The six principles all seem necessary to this author but may not be sufficient. The author welcomes a discussion of the principles, and other suggestions for improving this type of evaluation.

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Evaluating Ecotourism Lodgings in *The New Key to Costa Rica*

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The New Key to Costa Rica

ABSTRACT

Since 1991, the co-authors of the popular guidebook, *The New Key to Costa Rica*, have been developing a rating system for ecotourism lodgings based on three factors: environmental protection, fostering local economic and social well-being, and preservation of local culture. They have conducted three versions of this survey, which have appeared in the 11th, 12th, and 13th editions of *The New Key*. This paper presents some of the issues they have confronted during five years of evaluating lodgings for their sustainability.

Many ecotourism lodgings are truly green. Their practices support local conservation efforts, cause minimal environmental impact, contribute to the health of the local economy, and promote traditional culture. Others, however, do very little of this, but try to take advantage of the ecotourism boom anyway. “Greenwashing” is common in an ecotourism mecca like Costa Rica. Even hotels and resorts that have been publicly denounced for damaging the environment use the concepts of ecotourism and nature in their advertising. Everyone involved in the field knows that many tourists want to spend their vacations, and their dollars, doing “ecotourism.”

THE MEASURE OF A HOTEL’S SUSTAINABILITY

In 1991, Beatrice Blake and researchers Ronnie Cummins and Rose Welch took a hard look at Costa Rica’s tourism boom. Tourism had the potential to preserve or destroy the environment and culture of this small, vulnerable country. As travel writers, they wanted their efforts to contribute to environmental conservation and to sustaining the local culture and economy. Since *The New Key to Costa Rica* had always aspired to accommodate conscientious travelers, they thought they might have something to offer in helping promote what they began calling “sustainable tourism.” The result was a travel book that measured a hotel’s “sustainability,” based on three factors: its impact on the environment, its support of the local economy, and its promotion of local cultures.

The New Key to Costa Rica has carried out three evaluations of lodgings. The 1992 (11th) edition of the book listed 24 hotels and lodges that were practicing sustainable tourism. The 1994 (12th) edition contained the results of a more in-depth survey that was undertaken by co-author Anne Becher with the collaboration of Jane Segleau Earle, who was then a Master’s degree candidate at a

Costa Rican university's Ecotourism program. The third version of the survey will be published in the 13th edition of *The New Key*.

At the 1996 ISTF Ecotourism Conference at Yale, Barry Roberts of the Costa Rican Tourism Institute (ICT) announced that the ICT will begin evaluating lodgings in the fall of 1996. He expressed interest in basing the evaluation system, in part, on the survey of *The New Key* and said that Costa Rica would encourage other countries to do the same. He invited the survey's authors to participate in the planning and implementation of the Tourism Institutes's rating system. Following are some of the issues the authors have confronted during five years of evaluating lodgings for their sustainability.

For hotels that are already practicing sustainable tourism, this survey gives:

- Recognition and positive reinforcement
- A free marketing boost which will draw tourists to them and encourage their neighbors to adopt similar practices
- Networking and connection with resources

For those not practicing sustainable tourism, the survey provides:

- Education
- Connection with resources
- Incentives for adopting better environmental practices

The surveys are taken seriously. Many hotels are concerned that not being on the list will negatively impact their business. They want to do whatever they can to make it onto the next list. Hotel owners will see that it is in their business interest to practice sustainable tourism. The intention of evaluations is not to "punish" hotels that do not meet sustainability with negative publicity. The list of all lodgings surveyed in *The New Key* is confidential. Readers do not know whether hotels that are not listed failed to meet criteria or simply were not evaluated.

WHICH HOTELS SHOULD BE EVALUATED?

In Costa Rica, almost any non-urban hotel tries to bill itself as an "eco" destination. The authors could not survey every one of these hotels. The criteria for "ecotourism lodgings" was narrowed down to hotels that either have their own nature reserve, take people to natural areas (private or public), or use the concept of ecotourism in their publicity. Later, this last item was judged not sufficient by itself to make a hotel an ecotourism destination. One practice that would save time in a survey effort would be to establish minimum criteria for participating hotels. They would have to adequately treat sewage and garbage, or use local producers when available. These criteria

If the goal of the survey is to provide hotels with as much feedback as possible, the survey should not adopt minimum criteria.

could be checked out before or at the beginning of the visit, so time is not lost in filling out the questionnaire when it is clear that the hotel will not receive recognition. But if the goal of the survey is to provide hotels with as much feedback as possible, the survey should not adopt minimum criteria.

There are good reasons for evaluating all hotels, not just ecotourism destinations. Beach hotels are proliferating along Costa Rica's coastline, and hold enormous potential for contamination of sewage systems, in particular, are not well-designed. City hotels can make their own contributions to sustainable development, especially in sociocultural and economic respects. Fishing lodges are grappling with serious conservation issues surrounding depletion of marine life, making them good candidates for this type of evaluation. These types of hotels, and probably others as well, could be evaluated for their sustainable practices, but questionnaires specific to each type of hotel would have to be designed. An advantage of having a larger entity like the ICT carry out this type of evaluation is that it would have the resources to cover more types of hotels.

Figure 1 details the criteria in our survey and their hierarchy of importance.

Scoring systems are perhaps the most technical aspect of the survey. Environmental variables were about equal in weight to the sum of the sociocultural and economic variables. Depending upon the situation, this might change from country to country, or even region to region. One aspect of scoring will change in the next edition of *The New Key*. In the first two editions, hotels were simply recognized. From now on hotels will receive one, two, or three sun symbols to differentiate between those meeting minimum requirements and those with truly outstanding efforts. Single-sun hotels will have incentive to improve and get two or three suns.

WHO SHOULD DO THE EVALUATING?

If the evaluation is to be performed by an outside entity—a certification program run by a non-governmental organization or an independent company, i.e., a guidebook local researchers should be involved. They have greater knowledge of local conditions and can help design appropriate questionnaires and methodologies.

Each country's or region's evaluation will be based on different criteria, and the person's delineating the criteria should have an in-depth familiarity with the place. At the same time, they should do research on work in other countries, in order to make their evaluation consistent with others throughout the world. Local field assistants, familiar with the culture and language, are usually the most appropriate interviewers.

Each country's or region's evaluation will be based on different criteria, and the persons delineating the criteria should have an in-depth familiarity with the place.

Figure 1: Hierarchy of Variables

HIERARCHY OF IMPORTANCE OF VARIABLES

ENVIRONMENTAL VARIABLES

- I. Trash Sewage Own Reserve Protection of Resources Participation in Conservation Project
- II. Real Impact per Tour # Persons Erosion of Trails Biodegradable Cleaning Products Energy Conservation
- Construction Materials Information for Visitors Wild Animals in Captivity Employee Training on Environmental Topics
- III. Introduction of Exotic Species Water Conservation Impact Studies

ECONOMIC VARIABLES

- I. Origin of Employees Origin/Residence of Owners
- II. Local Contracts Employee Purchases Sales of Handicrafts Off-season Lay-offs Incentives
- III. Imports

SOCIOCULTURAL VARIABLES

- I. Takes Action on Cultural Questions Participates in Community Organizations
- II. Makes Donations (Financial, Resources, Time)
- III. Identifies Positive and Negative Cultural Aspects

If guidebook authors do the survey, they might be resented by hotel owners whose places were not recognized. This is especially difficult for travel writers when hotels they like and praise in the text of a guidebook receive low scores on the evaluation. If the survey is administered by another organization, it is easier to separate “subjective” description in the guidebook from the evaluation’s “objective” rating. What is inappropriate is when for-profit corporations offer a “green seal” of approval if a hotel “joins,” i.e., buys membership.

Conceivably, evaluations can be carried out by local organizations. However, a challenge to the locally-driven approach would be to standardize efforts. Local tourism chambers or conservation groups would have to work together to come up with consistent criteria. If this is the path chosen for a country or region, there would no doubt have to be a supervisory organization (national tourism institute or NGO) with enough field staff to assist and advise local bodies undertaking the evaluations. Coordinating local survey efforts would be one way that the Costa Rican Tourism Institute could come up with a laudable country-wide evaluation.

What is inappropriate is when for-profit corporations offer a “green seal” of approval if a hotel “joins,” i.e., buys membership.

QUESTIONNAIRES

The first survey was mailed or faxed to hotels where researchers had visited and had spoken at length with the owners and managers. Despite this initial contact, only 25 per cent of the hotels responded. Many of the responses reflected misunderstanding of the questions. Some of the non-response may be traced to the survey form itself, since it is not a familiar medium in Costa Rica. These problems led the authors to carry out the second survey in person. This encouraged a higher response rate, because the authors could explain the questions in detail and put the owner or manager at ease. The survey should be carried out by a very small team, to ensure consistency. This is a major strength of the survey, but also what makes it such a large project.

Those who have relevant input for this type of survey include the following: managers/owners, employees, tourists, and project neighbors—especially community leaders in development and environmental organizations. We spoke with owners/managers and community leaders, including National Park Service employees. Owners/managers answered the questions on the form (Appendix A), and community leaders were interviewed about hotels’ involvement in local conservation efforts and community affairs.

The authors did not talk to employees. There was concern that employees would fear retribution from employers if negative information was divulged or if the hotel did not make the grade. We were also concerned about how to approach employees. Time being limited,

we could only speak to a few. If the manger/owner picked them we could be misled; if we chose them, we might miss important information. Although tourists were not approached for the survey, they are an important source of information. Tourists catch hotels “off guard.” They know how effective a hotel is—when it is not doing what it says it is doing—especially in guest education programs. *The New Key* included a form to be filled out by readers, so they could recommend hotels that seemed to be practicing sustainable tourism or report on practices of recognized hotels. We have received no more than ten responses. A more effective approach might be to provide the hotel with blank forms and envelopes addressed to us. But we would not know if the forms were made available to all guests or just offered to those who were likely to provide a positive response.

DISSEMINATING RESULTS AND FOLLOWING UP

At a ceremony coinciding with publication of *The New Key to Costa Rica* in 1994, certificates of recognition were given to all hotels on our list. Ex-president Rodrigo Carazo, whose Hotel Villablanca also happened to be recognized, made a speech, as did Bary Roberts of the Costa Rican Tourism Institute. The press was invited and given a list of all the hotels in our book, with a short explanation of their most “sustainable” practices. Both English-language newspapers in Costa Rica, and one other guidebook (without asking permission) printed our list of hotels. Again, wider dissemination of results gives the survey greater impact. Other means of dissemination could include:

- distributing the list, either for free or for a price, to tour operators;
- writing itineraries that include visits to these hotels and either organizing tours with a branch of the evaluation; organization or working with an interested tour operator;
- making a concerted effort to send journalists the final results.

After each survey, a letter is written to each hotel with praise for positive practices and suggestions for improvement. Follow up observations have revealed that some hotels have put certain of these suggestions into practice. A detailed report card could be substituted for the letters—sort of an annotated check list. This would offer more complete information and would be appropriate if a non-profit or governmental certification organization were doing the evaluation.

Depending upon the medium in which the survey results are published, the list might need to be updated annually or more often. We follow up our survey every two years, when *The New Key* is published. Hotels already on the list are revisited. New hotels are surveyed by questionnaire. Hotels that did not make a previous list are invited to be re-surveyed if they have made significant improvements. If a survey is published on-line or in some other similar medium, new hotels can be added as they are visited and evaluated. Currently the authors are deciding whether it is enough for a hotel to maintain its level of sustainability or if it should show some improvement. The move into the three-sun structure is one way of encouraging progress.

FINANCING EVALUATIONS

We do not ask for a fee from the hotels being evaluated and get only minimal support from the publisher. Financial restraints are making it more difficult to carry out the survey.

To finance future versions of the survey, Jane Segleau is at work on a directory listing the types of services, products and technologies that contribute to sustainable development. The directory will be sold to hotels and interested individuals. It responds to the information needs of many hotel owners/managers who have no idea where to purchase biodegradable soaps or solar energy systems. The directory may be financed by advertisements from the service providers. Finally, the National Tourism Chamber of Costa Rica has offered to help sell the directory. The results of the survey could be sold to other guidebooks, newspapers, and magazines.

There are several existing evaluation programs, but little or no coordination or communication between them. The ISTF Ecotourism Equation Conference at Yale was a great attempt to foster this type of interaction. Some evaluation programs are models of careful and conscientious efforts. Others use sloppy methodology or are fronts for money-making schemes and threaten the public image of the entire concept. If evaluators want their efforts to last beyond the current ecotourism boom, they need to coordinate their efforts. There should be an internationally recognized body that certifies evaluation and certification programs.

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Appendix A

THE NEW KEY TO COSTA RICA SUSTAINABLE TOURISM SURVEY

Copyright 1994, Anne Becher & Jane Segleau Earle

Name of Hotel

Address

Postal Address

Telephone/Fax

Name of Person Interviewed

Position at Hotel

Introduction: The objective of this interview is to find out in the most objective way possible about all the efforts being made in this business to practice a type of ecotourism based on sustainable development. Businesses which are making outstanding efforts to practice "sustainable tourism," according to this survey, will be recognized in the next edition of *The New Key to Costa Rica*. This is a guide for the discussion, but the participants should feel free to mention anything they feel is important.

I. GENERAL DESCRIPTION OF PROJECT

1.1 Number of rooms _____ Total capacity _____

1.2 How much for double per night? _____ Food included? _____

1.3 Amenities in rooms/project:

private/shared bath

cold/heated/hot water

ceiling/standing/wall fan; air-conditioning

television

phone

pool

others:

1.4 Which ecotourist attractions are nearby?

area

name/location

public protected area

private reserve (own/neighbor's)

beach

farm

nearby town

river/lake/ocean

indigenous reserve

1.5 Tours: yes no

Where:

Maximum number of tourists:

Type of guide:

II. ENVIRONMENTAL CONSERVATION

2.1 What type of environmental impact do you think this hotel had during construction? None___ some degree___ a large impact___. Why?

2.2 What studies have been done before or during construction, or during operation? Why?

2.3 What materials were used in construction?

area material (including species, if wood)

floor

posts/beams

walls

ceiling/roof

other

Where were they obtained?_____

If you used wood, did you find out if it was an endangered species?_____

If endangered species were used, were they replenished in any way?_____

2.5 Do you participate in any private or community projects to conserve the environment? What are the accomplishments of these projects?

2.6 If you depend upon a protected area that is not your own property, how do you help protect it?

2.7 If you have your own reserve, describe it: Total area of property____ Area of reserve____
(primary forest____ secondary forest____ area in regeneration____
other_____)

2.8 If you have your own reserve, how is it managed? Management plan____ Monitoring plan____
Carrying Capacity studies____ Leave it untouched____ Guard against hunters____
Explain:

2.9 How do you avoid erosion problems on trails?

2.10 How is sewage treated?

Flows to body of water without treatment___ Outhouse___ Septic tank___ (what is done with sludge?_____
Less than 30 meters between leach fields and wells___) Treatment Ponds___ Treatment Plant___ Biodigestor___

2.11 How are grey waters treated? Flow to a body of water without treatment___ Filter into soil without treatment___ Septic Tank___ (Separated from sewage___ Same tank as sewage___)

2.12 What type of garbage disposal methods do you use?
compost bury burn recycle reduction reuse animals municipal other
organic
steel cans
aluminium
bottles
plastic
paper

2.13 Are biodegradable soaps used? yes no

2.14 Do you have any systems to conserve water?
Average water consumption in high season according to bill _____

2.15 Do you do anything to conserve energy?
Average electricity consumption in high season according to bill _____
Style of architecture helps with energy conservation_____
(light, natural ventilation, other_____)
No electricity used___
Use alternative sources of energy___ (solar, wind, hydroelectric mini-plants, firewood collected where?_____)
Management implements some type of conservation (energy saving technology, energy-saving practices, employee training, request that tourists conserve _____)
No efforts made in this area_____
Architectural style promotes over-use of energy
(How?_____)

2.16 Are there any captive, caged animals on your grounds? (explain)

2.17 Do you offer any type of training for your employees on environmental topics?

2.18 What additional information is offered to tourists?
specialized guides___ Library with environmentally/culturally-oriented collection___
presentations/talks___ own publications ___

III. ECONOMY

3.1 Has this area traditionally benefited from tourism?
What benefit does your business offer the local economy?

- 3.2 Where do you buy: local community nearby city Central Valley imported
 food
 materials and supplies
 furnishings
 Comments:
- 3.3 Do you contract or send tourists to any local service? (indicate contract or send)
 guides
 tours
 laundry
 rental (horse, bicycle, other)
 transportation (boat, car, etc.)
 restaurant
 others:
 Comments:
- 3.4 Sales of Souvenirs yes no; Local artisans' work ___100% ___+50% ___-50% ___none
 send tourists to artisans___
 Comments:
- 3.6 Owners:
 Is the business a company w/partners___ family business___ community business___
 association___ other:
 Owners' Names:
 Where are they from originally? Current residence
- 3.7 Employees
 Total number of employees_____
 Where lived before working here
- 3.8 What incentives do you offer your employees?
 Training___ (describe:_____)
 Stock in the business___ profit-sharing___ Opportunities for advancement in the company___
 Solidarity organization___ Union___ Recognition and appreciation of good service___
 (How?_____) Other_____
- 3.9 Do you have to let people go during the low season? yes no How many?
- 3.10 What are your major marketing challenges?
- 3.11 Does the hotel promote sales of land to foreigners?
- 3.12 Are there special offers for Costa Rican tourists?

IV. SOCIOCULTURAL ASPECTS

- 4.1 What type of relations do you have with the local community?
- 4.2 Do you participate in local organizations? (Which ones? What do you do?)
- 4.3 Do you donate resources to local organizations? (Which ones? What resources? Why?)
- 4.4 What do you know about the history of this area?
- 4.5 What do you know about the organizations in this area?
- 4.6 What do you know about the customs and values of this area?
- 4.7 Do you support and strengthen local culture? (reinforcing positive aspects.combating negative aspects)

ANNE BECHER AND JANE SEGLEAU EARLE

Anne Becher received a B.A. in Latin American Studies from Carleton College in 1987 and an M.A. in Hispanic Linguistics from the University of Colorado-Boulder in 1992. She is co-author of *The New Key to Costa Rica*. When she moved to Costa Rica in 1993, she began to collaborate with JANE SEGLEAU EARLE, a Forestry Engineer (Instituto Tecnológico de Costa Rica) who had spent many years in field offices of the Forestry Department of the Ministry of Energy, Natural Resources and Mines, and has a Master's Degree in Ecotourism (Latin American University of Science and Technology ULACIT). Together they re-designed the sustainable tourism survey and took it to over 100 ecotourism-oriented lodgings throughout the country between March 1993 and February 1994. Their list of 45 lodgings deemed to be "Practicing Sustainable Tourism" was published in the 1994 (12th) edition of *The New Key*. They, along with Beatrice Blake, are currently at work on the next version of the survey, whose results will be published in the 1996 (13th) edition of the book.

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The Use of Client Evaluations in the Ecotourism Process: An Example from Costa Rica

Carol Holtzman Cespedes
Halintours

ABSTRACT

A need has emerged for both standards and procedures to monitor compliance with these standards. The client evaluation is a simple procedure available to all ecotourism operations that can serve to both enhance tourist education and provide a simple system of monitoring. As an educational tool it can be used to focus the tourists' attention upon ecotourism criteria. As a monitoring system it has an advantage over either surveys or on-site investigation because it provides information by observers supplied over an extended period of time. This paper presents a new instrument for client evaluation with results received from a group of ecotourists recently returned from a lodge in Costa Rica. It argues that these results may not only monitor compliance with the environmental code, but gauge the success of the operation in building a constituency for ecotourism through involving the tourists in an on-going process.

As the concept of ecotourism becomes increasingly popular, a need has emerged for both standards and procedures of monitoring compliance with these standards. Such standards and monitoring procedures can distinguish valid ecotourism projects from the many enterprises that have appropriated the ecotourism label without real commitment to its principles. They are also necessary to help honest ecotourism projects critique their performance and move closer to the ideal of sustainability.

Beatrice Blake and Anne Becher addressed the need for standards in their survey of sustainable tourism in Costa Rica. They identified the criteria of sustainable tourism as three fold: "low impact on the environment, supporting the local economy, and promoting the best of local culture."¹ To these criteria I propose adding one more component as essential to the success of ecotourism: the education of the tourist.

Tourist education is more than an addition to the list of criteria. It is so essential to the success of any ecotourism enterprise that it can be regarded as the essential keystone without which the other objectives will collapse. Ecotourism is a market-driven activity based upon satisfaction of the tourist. Competition to attract clients and keep prices low can lead to all manner of environmentally destructive activity unless an enlightened clientele demands quality and objects when standards are compromised. The client must be educated, not simply on the facts of natural history, but on the theory and practical realities of ecotourism as well. Fortunately, there is a method that combines education and monitoring yet is so easy and available that it can be used routinely in every ecotourism operation. That is the client evaluation form.

¹ Beatrice Blake and Anne Becher. *The New Key to Costa Rica*. 12th Edition. Ulysses Press, Berkeley, 1994, p. vii.

The decision-makers in ecotourism are generally educated individuals motivated by a desire for more education. They are pleased to participate in an evaluation that asks them to provide intelligent and critical observations on the performance of the tourist operation. Typically, the ecotourist is accompanied by family members or companions who may not have the same level of ecological interest or awareness. Part of the practical challenge of ecotourism guides and operators is to inspire these less motivated travelers to a commitment to environmentalism. If they succeed, travelers will return to their home community with an enthusiasm that makes them ongoing supporters of the ecotourism movement. They will tell their friends about it, plan to take another vacation, and perhaps even become a contributor to environmental organizations. If we are successful in educating the tourist, we have also sowed seeds for the future success of the ecotourism movement.

Over the years, my company has followed the practice of including client evaluations with every set of preparation materials and travel documents sent to our clients. We have found client feedback to be invaluable as a source of information about conditions at hotels and nature lodges. It has become an important factor in the selection of accommodations and has frequently lead to suggestions for improvements in our services. These first-hand reports of customers often seem a more reliable source of information than the ratings of guidebooks or even independent researchers because they comprise a set of independent personal experiences. By contrast much evaluation of sustainable tourism is based upon surveys and therefore depends upon what project owners and managers report about their own operations. Even on site investigation is rarely done over the extended period of time that is possible through a consistent system of client evaluations. Client evaluations contain such valuable information that they ought to be maintained systematically in the files of every well managed ecotourism operation and shared with suppliers and investigators.

In the past, evaluation forms supplied to our clients covered standard criteria of traditional tourism: comfort of lodging, convenience of flights, quality of guide service. Yet they also included an invitation to clients to “help us with criticism, compliments, or suggestions for improvement,” which resulted in some travelers writing extensive comments, frequently continued on the reverse of the evaluation page. These unstructured commentaries afforded valuable insight into the context of ecotourism—how authentic were the rain forest experiences, how effective were the guides in inspiring the clients as well as providing information, how well did each nature lodge measure up to standards of environmental friend-

Tourist education is so essential to the success of any ecotourism enterprise that it can be regarded as the essential keystone without which the other objectives will collapse.

liness that ecotourism clients had acquired at home?

One persistent problem with the systematic use of these evaluations is the very small percentage of forms returned (ten per cent would be a high estimate). Enclosing a stamped, addressed envelope with evaluation forms in the packets of materials sent to each client before their trip brought some small increase in the percentage of forms returned. Follow up telephone calls also elicited information similar to that included on forms, but tended to replace rather than augment the written response. Yet these observations were of such value that we focused on finding ways in which feedback might be improved. We decided to focus on two improvements. First, we attempted to increase the percentage of responses, and second we improved the instrument itself, so as to involve the client as an active participant in ecotourism research.

In the spring of 1996 we experimented with a new instrument for evaluation intended to focus the client's attention specifically upon ecotourism criteria, thus enforcing the circle of client education-client feedback. This paper will present this instrument as it was tested with one group of ecotourists traveling to Marengo, a well known ecotourism lodge in Costa Rica. Results are not presented as a scientific method of determining impact. The numbers were too small to be of statistical value. However they do give us important information on the quality of operations at this lodge and even more valuable insight into how management of the program might be improved. Questions were deliberately framed in a manner that invited comments.

In framing the questionnaire, we began with those elements of ecotourism that involve the tourists' behavior: Were they good conservationists who refrained from disturbing wildlife, collecting plants, or leaving trash behind? Upon the advice of Anne Becher, we took this as an opportunity to remind travelers of the ethics of ecotourism. I personally introduced an environmental code at the group's orientation meeting in San Jose. I also explained the importance of the questionnaire and my intention to present the results in an ecotourism conference.

The questionnaire started with a statement of our environmental code and asked tourists to check whether it had been observed. The list of principles we used was adapted from a Code of Environmental Ethics promulgated by the Department of Responsible Tourism as reported in *The New Key to Costa Rica*.² The list was modified to include only those principles that resulted in easily observed behavior. Not surprisingly, all of the forms returned with check marks after each principle. The question had succeeded in its primary objective of enforcing the tourist's awareness of environmental ethics.

Fortunately, there is a method that combines education and monitoring yet is so easy and available that it can be used routinely in every ecotourism operation.

² Ibid., pp. 27-28

Next we asked whether travelers had received enough advance information. This was a test of our own performance in preparing clients to get the most from their experience. In addition to conducting the orientation meeting in San Jose, we had supplied the group with a detailed itinerary and a packet of information both on Costa Rica and on Marengo. The only negative responses to this preparation question came from two clients who commented that they wished they had known about the steep steps leading to the lodge, an important reminder to us that we must be very careful to present information about the physical demands of the experience to each individual before he or she commits to the trip.

Our next questions concerned the quality of the personnel employed by the lodge or tour operation. We are convinced that the performance of the naturalist guide is the single most important factor in determining the success of the tour experience. A good guide can turn a trip full of hardship and mishaps into a grand adventure. He stands before his group as the embodiment of the ecotourism ideal. His observance of the ecotourism code is a model and inspiration to the members of his group. Any infractions by him can put the integrity of the project and even the ecotourism philosophy into question. A good guide not only knows his subject, but projects enthusiasm for it. We have seen guides who transform a simple nature walk into a near religious experience. On the other hand, we have a few who either do not know enough or care enough to communicate their expertise. We have even heard of guides who compromise environmental principles in order to please their clients. The preliminary statement of principles thus did the guides a service in calling attention to sound ecological practices and rewarding them for behaving responsibly. If a guide knows that he is being evaluated by environmental criteria, he will almost certainly perform better.

Also important is the attitude and performance of other personnel at the hotel or nature lodge, generally referred to as service staff. Staff attitude not only impacts the tourist's experience, but reveals the character and competence of the lodge management. Ideally the guides and service staff should come from the local community. They may be the only community members that tourists interact with. Even if they are drawn from outside the area, because of a shortage of labor or skills in the local community, their attitude to the tourist tends to reflect the management's attitude toward the people they employ. Hostility, dishonesty, or apathy all indicate that something is amiss in the relationship that this lodge has with the local human environment. We were pleased to find that the responses of our clients were enthusiastic to all questions regarding the quality of guides and service staff. Even though they had been

If we are successful in educating the tourist, we have also sowed seeds for the future success of the ecotourism movement.

exposed to several guides in the course of their tour, they wrote comments such as “Great!” and “Excellent.” One conscientious respondent wrote “All were very knowledgeable and if asked a question they didn’t know (rarely), they found out.”

Enforcing the principle that tourism should benefit the local community as directly as possible, we asked whether our travelers had interacted with local people and whether there was any barrier that might prevent them from doing so. As expected, clients reported that language was the chief obstacle. The one member of the group who was fluent in Spanish had more interaction with locals. Her response indicates that the atmosphere was one of friendliness and that there were no social barriers other than language. She reported:

I joined the workers when they were dancing. I spoke and took pictures with several workers. I spoke to all in their own language.

While responses from other group members indicated little interaction, they did specify products and services purchased directly from local people such as crafts, T-shirts, and a horseback ride “with a super nice guide.” The minimal responses received from this question suggest that we need to examine this area a bit more closely. Perhaps more information on local culture, particularly the interaction between man and environment, would increase the tourists’ interest in seeking local contacts. The lodge may also need to be reminded of the importance of involving local people.

Our next question returned to more traditional criteria of tourism evaluation, namely, level of comfort. While this may seem to be a low priority in ecotourism, it must be satisfied if we are to build a sustainable enterprise. Clients who feel they have suffered undue hardship will never return or send their friends. On the other hand, clients who have been made aware of the importance of sustainability will be more likely to accept “rustic” lodging if it is in keeping with the environment. Our group had been forewarned of inconveniences such as lack of hot water or round the clock electricity. They had been given explanations of the problems of generating energy in such a remote location. Their responses to this question indicated that they accepted and enjoyed the accommodations, even though one respondent went so far as to make some recommendations for improvement that included “hot (or warm water) solar heated tank.”

We also included a question on safety concerns. Our group orientation in San Jose included safety issues both in the wilderness and in walking city streets. Only two comments were offered here—

We are convinced that the performance of the naturalist guide is the single most important factor in determining the success of the tour experience. A good guide can turn a trip full of hardship and mishaps into a grand adventure.

one regarding the real hazards on the streets of San Jose, the other suggesting that steps to the lodge were “very unsafe.” This comment seems related to concerns that the steep stairs from dock to lodge at Marengo are too strenuous for most older people and again underscores the importance of informing all clients of the physical demands that will be made from them.

With the final questions we arrive at the true measure of success, whether individual clients had added to their knowledge of natural history, culture, and ecology, and whether they would continue to participate in environmental causes and recommend similar experiences to their friends. “Yes” was the uniform response to the question regarding knowledge. The majority also replied that they would support or participate more actively in environmental causes and that they would do the trip again and/or recommend it to their friends. Two respondents, however, expressed some reservations. One replied, “Costa Rica, yes - Marengo, no.” The other, the one with the suggestions for improvement of physical comfort, noted, “Would tell them it is very primitive.” These were the same clients who had objected to the steep steps at Marengo, underscoring how important it is to match the client with the physical demands presented by each tour.

The testing of this evaluation instrument had one major disappointment. Responses were mailed to us from only five of eleven households represented on the trip. We had not yet overcome the problem of a low rate of return. Still, the effort was worthwhile. Every person who replied became involved in the ecotourism process. This is a process that does not stop when the tour ends, but continues in the commitment and interest of each traveler in ecotourism. Follow up through telephone calls, notes of appreciation, and informative mailings can help to seal this commitment and to establish a constituency for our tour programs, and more important yet, for the cause of environmentalism. That constituency will determine the future viability of ecotourism.

This is a process that does not stop when the tour ends, but continues in the commitment and interest of each traveler in ecotourism.

EVALUATION FORM

A. Please make a check mark to indicate whether each of these principles of environmental tourism was observed by the nature lodge/lodges that you visited. If you believe that a principle WAS NOT observed, please explain on the reverse.

Principles:

1. Wildlife and natural habitats must not be needlessly disturbed.
2. Waste should be disposed of properly.
3. Tourism should have a positive influence on local communities.
4. Tourism should be culturally sensitive.

5. There must be no commerce in wildlife, wildlife products, or native plants.
 6. Tourists should leave with a greater appreciation of nature, conservation, and the environment.
 7. Ecotourism should strengthen the conservation effort and enhance the natural integrity of the places visited.
- B. Did you receive sufficient advance information to help you prepare for your trip?
- C. Please comment on the attitude of guides and service staff. Did you find them friendly and helpful?
- D. Did your naturalist guide have a competent knowledge of the subject and an ability to share and communicate this information?
- E. Did you have an opportunity to interact with local people?
1. Please describe the kind of interaction. What barriers did you need to overcome?
 2. Did you buy products or receive services from local people?
- F. How do you rate the comfort level of the lodge? Please feel free to add suggestions for improvement.
- Luxurious _____ Comfortable _____
- Rustic, but in keeping with the environment _____
- Unsatisfactory _____
- G. Please comment on any safety concerns.
- H. Did this experience add to your knowledge and understanding of natural history, local culture and economics, and/or ecological issues?
- I. As a result of this trip do you plan to support or participate more actively in environmental causes?
- J. Would you do it again? Would you recommend it to your friends?

Client evaluations contain such valuable information that they ought to be maintained systematically in the files of every well managed ecotourism operation and shared with suppliers and investigators.

CAROL HOLTZMAN CESPEDES

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Five Parameters of Ecotourism

Huub Gaymans
Valley Hikes

ABSTRACT

Before discussing the parameters of ecotourism success, it is necessary to discuss first the parameters of ecotourism itself. Ecotourism has almost as many meanings as the people who use the term. Therefore, it may be more fruitful to accept that there are many forms and degrees of ecotourism, as opposed to dividing the tourism world into eco and non-eco. Proposed here is a rating system, based on five parameters. Just as hotels and restaurants receive a rating of one-to-four stars, ecotourism attractions could be judged on a system of butterflies with respect to their environmental policies. The proposed parameters are: Reduced impact on environment /environmental sustainability policies, interaction with nature, community involvement and interaction with people, environmental activities, and economic sustainability. We then ask to what extent an ecotourism venture is able to score high on each of the parameters, on a continuous or sustainable basis.

VALLEY HIKES AND OTHER ECOTOURISM DEVELOPMENTS IN JAMAICA

Valley Hikes is a young non-profit ecotourism company in Port Antonio, Jamaica. It grew out of a Dutch-funded Integrated Rural Development Programme. Although Jamaica has a large tourism industry, neither the government nor the private sector is yet very supportive of ecotourism development. Not until people are convinced that ecotourism can be profitable will ecotourism development receive the support it needs. It will be a long struggle for Valley Hikes.

If one is not too strict about a definition of ecotourism, many tourism attractions in Jamaica and elsewhere could be referred to and marketed as ecotourism attractions. Certainly the term ecotourism, which companies and governments are more likely to adopt, in the Caribbean and elsewhere, has considerable market value. So the number of attractions that call themselves ecotourism is growing. Oddly enough, the Jamaican Government just adopted a definition of ecotourism which is so strict and idealistic that hardly any tourism product can be called ecotourism. Within Jamaica probably only Valley Hikes would fall within the boundaries set by that definition, as will be discussed later.

MEASURING ECOTOURISM ON A MULTIDIMENSIONAL SCALE

One of the problems of definitions is that they put a dividing line between what is and what is not ecotourism without differentiating any further. As long as many definitions abound, tourism compa-

nies can and do use the terms such as “ecotourism,” “nature tourism,” “community-based tourism,” and “responsible travel.”

There are a few ventures such as Valley Hikes in Jamaica, the Community Baboon Centre in Belize, and others, that govern themselves by strict rules to minimize negative impacts and maximize positive impacts on nature and the community.

On the other hand, so-called ecotourism can have a very negative environmental effect. For example, in the Black River in Jamaica, crocodiles are disappearing because of the number of motorized tourist launches. There are many in-between situations, where a purist would not apply the term ecotourism. The downhill bicycle tours near Buff Bay, Jamaica, have little community involvement and offer little education about nature. But this attraction has a relatively small impact on nature while offering the participants the joy of cycling in a very beautiful environment.

Instead of defining ecotourism precisely, it may be more useful and realistic to apply a gradual scale. Since most definitions of ecotourism combine different elements, the scale can not be linear, but should be multi-dimensional.

By definition interaction means impact. Increased interaction also means (the risk of) more impact.

The parameters that could be used for such a scoring are:

1. Reduced impact on environment / environmental sustainability
2. Interaction with nature
3. Community involvement and interaction with people
4. Environmental activities
5. Economic sustainability

PARAMETER 1: REDUCED IMPACT ON ENVIRONMENT AND ENVIRONMENTAL SUSTAINABILITY

The most important parameter when judging an ecotourism attraction must be its impact on the environment. Tourism that impacts negatively on the natural environment should not be termed ecotourism, whatever its intentions or other qualities.

Having no impact is almost impossible. From nature’s point of view, no tourism is probably the ideal tourism option. For this reason, there are many parks and reserve areas where no tourists are allowed. Of the seven magnificent waterfalls of the White River in the Rio Grande Valley in Jamaica, only the first two are open to the public.

Having a low impact on the environment can be equated with environmental sustainability. Oddly enough, some of the least environmental types of tourism may have the lowest impact. Most of the

all-inclusive hotels on the North coast of Jamaica have hardly any impact on the local environment, except for the little stretch of beach in front of the hotel. This is simply because the visitors don't leave the property. Of course that doesn't make them ecotourism products.

Low environmental impact or environmental sustainability therefore must be part of the equation, but cannot be the only criterion by which to judge whether a particular tourism product may be called ecotourism.

PARAMETER 2: INTERACTION WITH NATURE

It is generally accepted that ecotourism involves some form of physical activity in a natural surrounding. Hiking, scuba diving, cycling, or other forms of physical interaction with nature are an important element of ecotourism. Visiting Reich Waterfalls in Eastern Jamaica by bus should be ranked lower on the ecotourism scale than hiking for two hours toward the same waterfall.

Interaction with nature is not, however, an essential element of ecotourism. If that same bus trip to the waterfall includes environmental education, if proceeds are partly used for environmental purposes, or if the waterfall is a community-based enterprise, the overall evaluation may still be quite positive.

By definition interaction means impact. Increased interaction also means (the risk of) more impact. If hundreds of visitors used the trails of Valley Hikes daily, measures to limit the environmental impact would have to be stepped up and special paths would have to be constructed. Some of the ecotourism destinations of Costa Rica and Dominica are paved to let them carry many visitors without the risk of erosion and provide some form of railing to keep people from straying off the track.

PARAMETER 3: COMMUNITY INVOLVEMENT AND INTERACTION WITH PEOPLE

Both community involvement and, to a lesser extent, interaction with people are aspects of ecotourism often considered essential or at least important.

The experience of Valley Hikes is that many hikers start off saying they like hiking on their own, without a guide. By the end of the hike, comments are usually just the opposite. Visitors say they like the guides, because they explained things, showed them things they would not have discovered, assisted them in crossing a river or in climbing a steep part of the trail. Most importantly, the trail guides give visitors a chance to get to know a pleasant, rural Jamaican. In the case of Valley Hikes, the rural Jamaicans and their cul-

Low environmental impact or environmental sustainability must be part of the equation, but cannot be the only criterion by which to judge whether a particular tourism product may be called ecotourism.

ture are very much a part of the environment shown to and experienced by visitors.

Community involvement in hiking and similar ecotourism activities provides a unique form of interaction between visitors and the local people. Visitors should appreciate the local people as their host by both enjoying being a guest and by not transgressing on the rules that normally apply to guests.

In the Rio Grande Valley, the local people allow the Valley Hikes visitors to walk on their land and drink from a coconut or pick a grapefruit, mango, stinking toe, or sweetcup, to mention a few of the many fruits freely available. A few members of the community get a bit of income from working as trail guides or from selling something to visitors. Interaction with local people is very important and increases the value of the tourism product. But it is not a necessary element.

PARAMETER 4: ENVIRONMENTAL ACTIVITIES

The definition of ecotourism recently adopted by the Jamaican Government stipulates that part of the proceeds from a tourism attraction must be used for nature conservation in order to qualify as ecotourism. As mentioned before, Valley Hikes may then be the only ecotourism attraction in the whole of Jamaica.

Together with other organizations, Valley Hikes organizes workshops on environmentally friendly pest management for farmers in the Rio Grande Valley. Also, Valley Hikes has a tree sponsorship programme and it sets up signs to remind people to Reduce, Reuse, and Recycle. All its trail guides are also game wardens. It provides guidance to and seeks sponsorship for a community-based, hand-made paper industry. Valley Hikes will soon start building a Maroon museum. (Maroons are descendants of run-away slaves). So far Valley Hikes does most of this with funds provided by sponsors, but it plans to continue such environmental activities with the proceeds from hiking and craft sales as soon as the operation becomes more profitable.

An ecotourism organization which actively tries to reverse environmental degradation should get a higher score on ecotourism. On the other hand, this is not a necessary condition for calling a venture ecotourism. There are many commendable ecotourism attractions that have no specific environmental program.

PARAMETER 5: ECONOMIC SUSTAINABILITY

Environmental concerns are not normally the concerns of the industry and all too often environmentalists fail to think in economic and business terms.

The definition of ecotourism recently adopted by the Jamaican Government stipulates that part of the proceeds from a tourism attraction must be used for nature conservation in order to qualify as ecotourism.

Of course there are exceptions. Dutch tobacco plantations in Eastern Sumatra (Indonesia) introduced a reforestation programme 100 years ago in order to grow tobacco on a sustainable basis. Investment in nature can make good economic sense for a company.

The reverse is also true. It makes good environmental sense to ensure that environmental activities are based on a continuous flow of income. The income can be from donations, but few sponsors are prepared to subsidize organizations on a long term basis. The other option is to generate income by selling something at a profit.

What Valley Hikes tries to do is make enough money from hiking and related activities to continue its environmental and other programmes before the present flow of donor money dries up. This has many consequences. Primarily it means that Valley Hikes must operate like a company, maximizing its profits and minimizing its costs.

The result is that Valley Hikes charges a fairly high price, at least in the eyes of many young people. The charge for a regular hike is US\$10 or US\$15 for a foreigner, and half that amount for Jamaicans. Prospective clients of Valley Hikes have said that nature is free and no charge should be levied for walking in the forest.

This notion is reinforced by the fact that many governments, including the Jamaican government, are creating and maintaining trails, with expensive pavings and signs, which allow visitors to walk through for free. They do it with the idea that more people will stay at a local hotel, eat at a local restaurant, buy souvenirs, and otherwise boost the local and national economies. But it reinforces the absurd notion that nature itself has no economic value.

For Valley Hikes, becoming economically sustainable also means that a great deal of money has to be spent on marketing and promotion. What Valley Hikes has spent already on marketing would require at least a year of operation to recuperate, but without marketing Valley Hikes would not be able to attract enough visitors to cover operational costs.

Judging or measuring an ecotourism operation must include an evaluation of its economic sustainability. Will the operation be able to continue or is it a short lived idea? Like environmental sustainability, economic sustainability is a necessary condition to be met. It is hard to see how a tourism operation can be called a success if it cannot survive.

It makes good environmental sense to ensure that environmental activities are based on a continuous flow of income.

MEASURING SUCCESS ON A FIVE-DIMENSIONAL ECOTOURISM SCALE

The five parameters discussed above can be used to measure the success of tourism attractions from an ecotourism perspective. It can also be used to evaluate other tourism operations such as hotels

and other accommodations. Using a few examples from Jamaica, an attempt will be made to see to how these five parameters can be used to measure to what extent tourism attractions are “eco.”

CASE 1

Valley Hikes is an example of an operation that easily scores high on at least four of the criteria. Its impact on the environment is very low. The main activity is hiking through a beautiful and rich natural environment. Hikers make contact with local people, learn more about the local culture, and the community is clearly involved. Valley Hikes implements a number of projects aiming at nature conservation and reversing environmental degradation. Only its economic sustainability is not yet clear. It has enough funds to survive at least another year, but the returns from its marketing investments are still very low.

Its score on the 5-dimensional scale would be high, but its economic success is not yet guaranteed.

CASE 2

The second example is Rafting on the Rio Grande. On bamboo rafts that were once used to transport bananas, with a ‘raft captain’ controlling the speed and the direction of the raft. This type of rafting has virtually no impact on the natural environment. The raft captain entertains visitors with comments on the trees, birds, and other natural phenomena along the two-hour ride, so there is some interaction with nature and the local people. No environmental activities are carried out. The business has been making a profit for many years, both for the owners and for the community which supplies most of the raft captains.

The ecotourism score for Rafting on the Rio Grande should be high, because it scores high on environmental and economic sustainability and deserves a fair score on interaction with nature and with people.

CASE 3

Reich Falls, also in Eastern Jamaica, is a beautiful waterfall. One can swim at the bottom of the falls. It can be reached by bus or car. The managers make sure the visitors don’t leave any garbage or otherwise spoil the environment. However, there is little or no contact with local people and no community involvement beyond the employment of 2 or 3 persons. Its economic sustainability appears to be good, mainly because operational costs are kept low.

Reich Falls could be given a medium score, because it is environmentally and economically sustainable and has interaction with

nature. But because of little interaction with local people, the score is lower than that of rafting.

CASE 4

Near the famous Frenchman's Cove at San San, Jamaica, one can go horseback riding with a nice but not business-oriented fellow called Delroy. The impact on nature is minimal, but economic sustainability is not positive. Delroy will let you ride in various settings, and you will leave having found a new friend in Delroy. Apart from the droppings of his horses, Delroy does nothing to improve the natural environment.

An evaluation of Delroy would resemble the following description. In spite of Delroy's poor business sense and the absence of environmental activities, he has fairly good interaction with nature and with people (but without community involvement). The overall score should be moderately positive.

CASE 5

At the lower end of the scale is found an all inclusive hotel. There are many on the north coast of Jamaica. Assuming that their disposal systems are in order, their impact on the environment is low. This is mainly because they keep visitors within the hotel grounds for the duration of their stay, except maybe for an excursion to a rum factory or craft market. Interaction with nature is very low, and so is interaction with Jamaicans. The hotels have no environmental programmes beyond measures to reduce the impact of their operations. Their economic sustainability generally is very high. Despite good performance on environmental and economic sustainability, the overall score is fairly low, because of low scoring on each of the other three criteria.

AN ATTEMPT AT THE ECOTOURISM EQUATION

The above evaluation of five tourism examples in Jamaica is a very crude one. Although it will always be difficult to compare apples with pears, some degree of measurement can be introduced. The following ecotourism equation is suggested to evaluate tourism products and their success.

$$Et = S_{env} \times S_{econ} \times (I_n + I_p + A_c)$$

whereby

$$\begin{aligned} Et &= \text{Degree of ecotourism} \\ S_{env} &= \text{Environmental sustainability} \end{aligned}$$

S_{econ}	=	Economic sustainability
I_n	=	Interaction with nature
I_p	=	Interaction with people and community involvement
A_c	=	Action to conserve or even enhance the natural environment

Each of the parameters could have scores of 0 (bad, weak), 1 (reasonable), and 3 (strong, positive, good).

Environmental and economic sustainability have clearly been given a higher weight in the equation. If a tourism product scores 0 on any of these, automatically the overall score will be 0. On the other hand with a score of 0 on A_c still a reasonably high overall E_t -score can be reached.

Applying the above equation to the examples from Jamaica would yield the following results:

$$E_t = S_{env} \times S_{econ} \times (I_n + I_p + A_c)$$

Valley Hikes:

$$E_t = 2 \times 1 \times (2 + 2 + 2) = 12 = 2.3$$

Rafting on the Rio Grande:

$$E_t = 2 \times 2 \times (1 + 2 + 0) = 12 = 2.3$$

Reich Falls:

$$E_t = 2 \times 2 \times (1 + 1 + 0) = 8 = 2.0$$

Horseback riding with Delroy:

$$E_t = 2 \times 1 \times (2 + 1 + 0) = 6 = 1.8$$

All-inclusive hotel:

$$E_t = 2 \times 2 \times (0 + 0 + 0) = 0 = 0$$

The procedure is still fairly crude. It could however be refined by indicating in more detail how a score on each of the parameters is reached. This will not be attempted here.

ASSIGNING BUTTERFLIES

Based on the score given to a tourism product using the above or some other ecotourism equation, butterflies can be assigned to tourism products for their “eco”-ness, in a similar way as stars are given to hotels for the quality of their facilities. Arbitrarily putting the cut-off points at 1.5 and 2.0, the tourism products in the example would be assigned the following number of butterflies:

Valley Hikes § § §

Rafting on the Rio Grande § § §

Reich Falls § §

Horseback riding with Delroy §

All-inclusive hotel —

If introduced on a wide enough scale, the assigning of butterflies to tourism products would help ecology-minded tourists to plan their trips. Also, since ecotourism is on the up-swing, it would stimulate suppliers of tourism products to take measures to score higher on each of the parameters of ecotourism.

HUUB GAYMANS

Huub Gaymans is a Dutch citizen who graduated from Leiden University, majoring in sociology of development. For twenty years, he worked as a development expert in ten different countries in Asia, Africa, and the Americas. Environmental impacts have been a recurrent theme of the projects in which he has participated. During the past three years, he was the co-manager of a Dutch Government-sponsored Integrated Rural Development Programme in Jamaica. One of the elements he introduced was ecotourism, which is now managed by a non-profit company, Valley Hikes. Valley Hikes organizes hiking in the Rio Grande Valley (Portland, Jamaica), but also has a tree sponsorship programme and an environmentally friendly pest management educational project and carries out various activities to promote and develop ecotourism in Portland, Jamaica.

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Rainforest Expeditions: Combining Tourism, Education, and Research in Southeastern Amazonian Peru

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ABSTRACT

To establish some of the parameters by which the success of an ecotourism venture can be measured, we examine the Rainforest Expeditions lodge in southeastern Peru, the Tambopata Research Center (TRC). Rainforest Expeditions (RFE) is a private ecotourism company founded in 1992 by Peruvian conservationists to promote the conservation of the natural destinations where it operates. TRC was built with the double purpose of protecting the adjacent macaw clay lick, and of lodging nature tourist and researchers. TRC has developed innovative programs integrating tourism with education and research, and has played an increasingly important role in the conservation and sustainable development of the region. All Rainforest Expeditions' activities are promoted by the private, for-profit operation of nature tours to the TRC. Success in the traditional aspects of the ecotourism business maximizes the additional benefits generated by ecotourism towards conservation (research, local development, environmental education, support for the reserve administration, etc), although these benefits are harder to measure. However, we can comparatively gauge the success of an ecotourism enterprise by listing the benefits generated directly or indirectly. We show that by investing in the above areas, we assure success in the traditional aspects of ecotourism business, thus assuring the stability of our own company.

INTRODUCTION

Rainforest Expeditions is a for-profit ecotourism company founded in 1992 by the authors of this paper with the purpose of combining tourism with education and research to support the conservation of the natural destinations in which it operates. In order to establish some of the parameters of success for an ecotourism venture, we will examine the case of Rainforest Expeditions on the assumption that the criteria by which we evaluate success are as strict as those applied elsewhere.

We will attempt to gauge our success as an ecotour operator and lodge as objectively as possible. First, we will analyze and list company data, activities, and policies in the following areas: visitation, customer satisfaction, marketing, research, education, local development, and support for park administration. Then, for each area, we will compare activities and data from other Amazonian ecotourism ventures that have published results. Wherever possible, we will compare our standards for measuring success with those suggested in ecotourism publications.

There are three important points that should be kept in mind

when reading this paper. First, a successful ecotourism venture is hard to define. It depends almost entirely on the objectives of the people or institutions supporting the venture. In some cases, profit may be an obvious, bottom-line parameter of success. In others, when the primary goals are environmental education or local empowerment, the operation of the venture may even be justifiable at a cost, and therefore the definition of economic success quite different. Likewise, in certain cases, an ecotourism operation may be allowed to operate at certain environmental or social “costs,” because it may be required to turn out “profits.”

It is difficult, if not impossible, therefore, to define absolute parameters that will allow us to qualify ecotourism ventures as successful. It is more important, and probably useful, to think comparatively when defining the success of ecotourism ventures. One generalization that can be made about ecotourism is that, like any other industry, it is dependent upon market forces. As such, the public’s perception of the ecotourism venture will be of utmost interest to the organization’s decision-makers.

A second important generalization, when defining success in ecotourism ventures, is that it is easy to overlook many of the indicators of the impacts, both negative and positive. By examining and elucidating many of the offshoots stemming from the for-profit operation of Rainforest Expeditions tours, it will be possible to search for similar signs elsewhere and judge whether they are indicators of success.

Finally, a third point we attempt to prove in this paper is that by investing in scientific research, local development, and environmental education we are assuring success in the traditional aspects of the ecotourism business (profit, customer satisfaction, marketing, etc). Unlike other businesses in the industry, we believe spending in these areas is a necessary investment rather than a cost which must be undertaken in order to be perceived as environmentally responsible. Therefore, by proving this point, we are in effect stating that customers will eventually *require* these investments from top quality ecotour operators, rather than merely favoring operators who invest in these areas.

RAINFOREST EXPEDITIONS

Rainforest Expeditions (RFE) is a private ecotourism company founded in 1992 by Peruvian conservationists. Its objective is to promote the conservation of the natural destinations where it operates. The means used to achieve this goal combine tourism, research, and education.

Although Rainforest Expeditions operates two destinations in Peru and Bolivia, and will begin promoting others within the next year, it has concentrated its efforts in the Tambopata Research Center in southeastern Peru. Tambopata Research Center is located within the 1.5 million hectare Tambopata-Candamo Reserved Zone (TCRZ) in southeastern Amazonian Peru. This reserve protects pristine sections of the most biologically diverse ecosystem in the world—the extreme western Amazon (Gentry 1988). Tambopata Research Center was built in 1989 by the owners of Rainforest Expeditions with the double purpose of protecting the adjacent macaw clay lick (where 15 species of psittacines regularly descend to eat clay), and of lodging nature tourists and researchers. The macaw was being illegally hunted at the time. Since then, Tambopata Research Center has survived and grown as a top quality nature tour destination, developed innovative programs relating tourism to education and research, and played an increasingly important role in the conservation and sustainable development of the region.

Rainforest Expeditions' most successful combination of tourism with education and research is the Rainforest Biology Workshops.

ECONOMIC INDICATORS OF SUCCESS

All of Rainforest Expeditions activities, including those which are complementary to the conservation effort at the TCRZ, are promoted by the private, for-profit operation of nature tours to the Tambopata Research Center. Therefore, the fundamental criteria by which RFE measures its success are those applicable to any business: income and customer satisfaction. The amount of income spent or reinvested locally or in conservation is an important indicator of the positive impacts generated by Rainforest Expeditions. Additionally, success in marketing efforts assures the possibility of medium to long term success according to the above criteria. We will not spend much time discussing any of these three points, as their importance is fairly obvious and the mechanisms to measure them are standard and can be studied from traditional business ventures. Failure to meet the bottom line in finances, inability to satisfy customer expectations, or persistently erroneous marketing strategies will certainly disqualify any ecotourism venture from the possibility of generating positive environmental or social impacts. Nevertheless, there is still a surprising number of ecotourism ventures out there which fail to realize this point.

ENVIRONMENTAL AND SOCIAL INDICATORS OF SUCCESS

By definition, ecotourism ventures must meet several standards in their relation to nature and the environment. Numerous governmental and non-governmental institutions and private for-profit

companies have published guidelines for the different sectors of the tourism industry: hotels and lodges, tour operators, travelers, etc. (World Wildlife Fund 1992, The Ecotourism Society, Wildland Adventures, International Expeditions, Tourism Industry Association of Canada, Preece, van Oosterzee and James 1995, UNEP 1995) .

Essentially, these codes of conduct can be used to not only identify conscientious ecotourism ventures but also to identify those who excel in their commitment to conservation by not only taking action to avoid damage to the environment but also by playing an active, dedicated role to the conservation effort in their area of operation. For nature tour operators and ecolodges these codes of conduct can be broken down to three very broad categories: education (providing extensive pre-departure guidelines; providing intensive learning experiences for visitors, providing staff and guide training), local development (preventing cultural impacts, employing and consuming locally, assuring sensitive interaction between visitors and local communities), and prevention of environmental damage (operating small groups, minimizing visitor impact on environment, avoiding wasteful practices).

These guidelines are fairly easy to satisfy for small-scale operations because they have minimal impact on the environment. However, Rainforest Expeditions, founded with the mission to support the conservation of the natural destinations where it operates, actively executes several education, research and local development projects that aggressively seek to promote conservation. We do so because we believe in these projects as sound business investments that will pay off in customer satisfaction and marketing because they form a fundamental part of the tourism product the modern ecotraveler seeks. Also, by developing strategic alliances we have been able to minimize the costs of these investments and multiply their positive impacts.

PREVENTION OF NEGATIVE IMPACTS

Although quantitative studies on the negative impacts of our activities have just begun, we are convinced they are minimal. The clearing for infrastructure is less than 0.5 hectares. Infrastructure was designed and built by Nycander following what he learned in two years of studying traditional Machiguenga architecture in nearby Manu National Park. Visitation to TRC over the past few years has been limited to a maximum of 800 people a year. Including lodge staff, guides and researchers, an average of 10 people a day have used the facilities and trails. Guides are trained and tourist activities are designed once a year in combination with scientists,

assuring we minimize wildlife disturbance. Furthermore, a 5:1 tourist to guide ratio guarantees not only high quality nature interpretation but also strict monitoring of tourist activities. Finally, in order to measure our impact on wildlife, our scientific research program has recently been designed to include tourism monitoring methodologies on a regular basis.

Social and economic negative impacts are much harder to measure. There are no evident negative social impacts, particularly since TRC is located in the middle of a completely uninhabited conservation unit. Economically, there is little or no cost to the unit's administration from our operations. We maintain the trails we use, clean-up the beaches after informal operators use them, present trip reports for every visiting group at the Puerto Maldonado office, and have even denounced a couple of illegal sport and commercial hunters. Although there is no obvious cost generated from our activities in Puerto Maldonado, there is an evident and measurable income. At the moment, however, since these issues have not been studied extensively, it is impossible to quantify the environmental, social, and economic costs of our ecotourism operations, or to even guarantee that there are no subtle costs which we have failed to identify.

EDUCATION

Environmental education is one of the most obvious benefits to conservation generated by ecotourism (Boo 1992, Ceballos-Lascurain 1993, Whelan 1991). The potential of the industry to educate tourists in order to later involve them in active conservation efforts is well documented (Boo 1992, Ceballos-Lascurain 1993, Whelan 1991).

Rainforest Expeditions, through the Director of Education, Vanessa Frias, Mario Napravnik and with the aid of the Conservation Data Center, has developed education mechanisms for five different target groups: environmental education for visitors through an intensive learning experience in the field; environmental education for high school students through their participation in the rainforest biology workshops; training in field biology techniques for our naturalist staff; the development of local capacity to generate conservation through their participation in workshops and field training programs; environmental education for the general public on a regional, national and international level through the production of materials for distribution in the media and the participation and organization of presentations and events related to the conservation effort at Tambopata.

VISITORS

In order to maximize the quality of our nature interpretation services, we provide one guide for every five or six tourists. Guides are really young Peruvian biologists who have just finished college and are beginning their field work in one of six areas of our research program (see below). Visitors are exposed to a program combining wildlife observation with mild participation in research activities and informal in-the-field "lectures" given by each specialist in his or her area. At night, between dinner and night walks, thematic slide shows are presented. Finally visitors are exposed to written information on the rain forest not only in our library but upon receiving their pre-departure materials. The TRC travelers' information manual not only includes practical travel information, but also has extensive information on the ecological characteristics of each trail system and summaries of the research conducted at TRC.

The combination of personal relations with the guides, exposure to scientific documents, and the utilization of educational materials of different formats to educate visitors constitute valid techniques (Ham 1992). When visitors leave TRC, they do so knowing the basics of tropical ecology, herpetology, mammology, ornithology, ichthyology, botany, and entomology.

HIGH SCHOOL STUDENTS

Rainforest Expeditions' most successful combination of tourism with education and research is the Rainforest Biology Workshops. This workshop was offered for the first time in 1993. Since then over 250 students, of which more than 90 per cent were Peruvian, have participated in the workshops. Workshops were operated at considerable discounts to Peruvians. In 1995, with the program well-established, students from local Puerto Maldonado high schools were invited, with excellent results.

Positive effects from this intensive learning experience surpass the merely academic. Many of the students returned to voluntarily help conservation projects at Tambopata Research Center and elsewhere. Others have, after a first trip, returned one or two times to design and execute research projects that could be expected of university undergraduates. Students have involved their families, some of whom have even traveled to the TRC. Others have merely stayed in touch to aid the conservation effort at Tambopata. Academically, students who showed little or no interest in biology have returned to the classroom to excel for a period of time. The effect has been so strong on some students that they have gone on to enroll in biology or related careers at universities. The workshops are an eye-opener. Many of the students, coming from sheltered backgrounds, where

Rainforest Expeditions is also demonstrating the importance of creative alliances and collaborative agreements between businesses, conservation organizations, and sectors of the local community. By aggressively involving ourselves in local sustainable development projects, we are redefining the role of for-profit ecotourism companies in conservation.

they have had little chance to explore rural or natural environments, increase their self confidence after the workshops. Adventuring into a week-long learning experience in one of the world's most remote and pristine regions, where they routinely count macaws on a clay lick or follow a key to identify mist netted bats, changes their personality dramatically and creates bonds which persist years after the trip. Tambopata jokes are still told frequently when members of the first expedition meet—two and one half years after they traveled to the forest.

On the other hand, the results from a purely scientific point of view have been beyond our initial expectations. The workshops are designed to rotate the students through a selection of experiential activities covering most of the forest's major taxonomic groups. Each activity is designed so that as the students learn the ecological function and natural history of the taxonomic group they are studying, they are also physically collecting data that will be replicated by other groups to produce statistically significant results on one or more questions of relevance from a scientific or conservation perspective. Findings range from the discovery of a new orchid species during an inventory of a two hectare plot to finding surprising mechanisms by which freshwater fish survive in seasonal ponds.

The expeditions serve two additional purposes of value to the conservation effort at TRC. The first purpose is a social one. Each workshop normally has a few vacant seats. Those spaces are occupied by a number of selected students from the Puerto Maldonado high schools that could not otherwise afford a visit to TRC. These students could pass their entire lives less than 100 miles from pristine, wildlife-rich rain forest and never see a troop of wild howler monkeys. Thus they may never have a chance to develop an understanding and respect for the rain forest. Being invited to the workshops gives them this chance. Furthermore, their presence assures an enriching cultural exchange with international workshop participants.

The second purpose is training. In order to assure a quality learning experience, so that information is passed on in an effective manner and noise on the trails is kept at a minimum, we maintain, during all our expeditions, a five-to-one tourist-to-guide ratio. Nevertheless, in workshops on which the focus is principally academic, we increase the number of instructors per student. For each activity, we hire one principal instructor and an assistant. Principal instructors are generally Peruvian biologists with many years of field experience in the specialty relevant to the activity they are overseeing during the workshop. Assistant instructors are generally Peruvian biology students or recent graduates who have demonstrated ability in the specialty relevant to the activity they are assisting. The design

of the activity and the collection of data is usually a combined effort, but the analysis and discussion of the results is the responsibility of the assistants. In many cases, these results have been used by assistants as their undergraduate thesis research paper. In this manner, the workshops serve to train Peruvian biology students in field research techniques and finance their introductory research, which is many times difficult to fund. Participation in the workshop as either an assistant or principal instructor forms part of our standard field biology training program.

TRAINING IN FIELD BIOLOGY

In 1995, Rainforest Expeditions designed and implemented a three year training program to develop field techniques for university graduates interested in conducting research in the tropical rain forest. Peruvian undergraduate biology programs offer limited possibilities to obtain field experience or conduct field research. Vacancies for field training programs offered by international conservation organizations, positions as field assistants for research or conservation projects, and spaces for graduate programs are all usually limited to people who have had different degrees of field experience. Thus, beginning a career in field biology becomes a Catch-22 of sorts.

The Field Biology Training Program, which Rainforest Expeditions is in the process of implementing, is designed to alleviate this problem. Applicants are asked to send curriculum vitae and are interviewed in their junior year of college. They are required to have a working knowledge of English. Once accepted, a participant's first exposure to TRC comes during his or her senior year through assisting a principal instructor in one of the biology workshop as explained above. Later in the year, they return for a month to assist in one of TRC's research projects and interact with tourists on an informal basis. The second year of training begins with a three week course on field research techniques and tour guiding. Course instructors are the heads of each of TRC's six research areas. The first few days of the course are invested in giving participants a general overlook of each area. The next ten days, participants split up into their specialty groups and learn field techniques from the area heads. They are specifically trained to correctly execute the methodologies for TRC's research projects in their area. They also receive counseling on their own individual projects. The third week participants are instructed on guiding and nature interpretation techniques. For the remainder of the second year, participants guide and conduct the methodologies established for the TRC research projects in their area. Third year participants guide and conduct the field work for

Our strategy to involve the local population as partakers in the benefits of ecotourism is based on the contracting of competitive local services and on the empowerment of those sectors of the local society that are more closely related to the forest.

their own individual projects with the counsel of the area heads. At the end of three years, the objective is that participants should be accepted at an internationally recognized graduate biology program of their choice.

LOCAL POPULATION

By inviting local community members, be they students in the local high school, prominent community leaders, native community members or local friends, to participate in a combination of high school workshops, regular visitor programs, or field biology courses, we have in effect stimulated the development of the local population's capacity to generate conservation, research, and ecotourism. Members from the Infierno Native Community, after assisting with several of these events, expressed interest in developing their own ecotourism, an interest which is rapidly materializing into an association with RFE to operate a short cultural/natural history program in their community .

GENERAL PUBLIC

Materials produced by Rainforest Expeditions for the mass media have a notable educational content. We have assisted film crews and photographers produce 6 documentaries and 27 articles in 12 countries. The principal subject of these productions has been the biology and conservation problems of macaws. In the minority of cases, they have been about the tropical rain forest. These productions have reached millions of viewers and readers through the likes of the BBC, National Geographic magazine, and International Wildlife magazine.

RESEARCH

Although guidelines and codes of ethics are mostly limited to avoiding a negative impact on the environment, they generally include the possibility of scientific research on the site's ecosystems as one of the potential benefits stemming from ecotourism. RFE believes that scientific research on the surrounding ecosystems and wildlife is a sound business investment: the more we know about wildlife behavior and ecology, the better we will be able to use it as a tourism resource. Not only that, but we also believe that today's nature traveler finds on-site research a compelling reason to travel to a particular destination.

At the Tambopata Candamo Reserved Zone, Explorers Inn ran a successful naturalist program in the 1970s and 1980s. It has produced important scientific information to the point where it is

considered one of the Amazon's best studied locations (CDC 1995). A similar site exists near Iquitos, in northern Peru, the Amazon Center for Environmental Education and Research.

At Tambopata Research Center we have developed several important lines of research. The research program is directed by RFE's Director of Research, Mario Napravnik, and is designed in conjunction with the Conservation Data Center. TRC has six areas of research (Botany, Entomology, Ichthyology, Herpetology, Ornithology, and Mammalogy) and three mechanisms for promoting it: research projects which TRC designs, implements, and executes; research projects which are designed and executed by individuals participating in the training program described above and are implemented in combination; and research projects which are designed, executed, and implemented by outside individuals or institutions which pay RFE a reduced fee for transportation, food and lodging.

Attention to relevant scientific issues, and consistency over the long term is ensured by the fact that experienced field biologists voluntarily head each area of research. The heads then design each area's specific research objectives and methodologies for the TRC research projects, train the young biologists who will execute the field work (see above), advise them in their individual projects, and periodically supervise the ongoing research in their area.

The Tambopata Macaw Project deserves special mention because it is a clear example of the interaction between research and ecotourism. Rainforest Expeditions founders, in collaboration with other institutions, designed the project, helped collect the funds for the project, provided extensive help in logistics, such as food and lodging to project personnel, executed the field work, analyzed the results, and wrote and published the final results. The project results have been widely recognized and have generated a series of international macaw conservation projects that may help solve the plight of threatened macaw populations. Finally, this project has received ample coverage from the media, generating extensive interest in Tambopata as a destination, thus benefiting the business aspect of Rainforest Expeditions.

LOCAL DEVELOPMENT

One of ecotourism's reputed benefits is its ability to generate local development. However, there are few cases where this idea is put to practice. Many times ecotourism ventures cause negative social and economic impacts on a local scale (Brandon 1993, Whelan 1991, Boo 1991). In the Tambopata Candamo Reserved Zone, the case over the past two decades has been similar.

Rainforest Expeditions considers local development to be fundamental to our long term success in ecotourism. Our strategy to

RFE believes that scientific research on the surrounding ecosystems and wildlife is a sound business investment: the more we know about wildlife behavior and ecology, the better we will be able to use it as a tourism resource. Not only that, but we also believe that today's nature traveler finds on-site research a compelling reason to travel to a particular destination.

involve the local population as partakers in the benefits of ecotourism is based on the contracting of competitive local services and on the empowerment of those sectors of the local society that are more closely related to the forest.

When we arrived at Tambopata in 1989, one of our first actions was to invite the Ese' eja Native Community to initiate their own ecotourism venture. Their location midway between Puerto Maldonado and the fledgling Tambopata Research Center was ideal for a night stop on the way to and from TRC. They were also close enough to TRC to design competitive itineraries with a cultural focus in the three or four day range. They would complement our week-long, natural history, expeditions. Understandably, they rejected the proposal because it came from young foreigners without any history in the region. The community's experience with other foreigners involved in local tourism had, at best, been neutral. There was no reason why Rainforest Expeditions had to be different.

In the following years, we developed close relationships with those sectors of the local society that either lived off the land or were involved in tourism. We hired most of our staff from the local communities and contracted local services where possible. Eight of nine staffed employees are long-time regional residents, including the Director of Field Operations. About 90 per cent of our temporary contracts are for members of the native community or settlers. We contract local transportation, restaurant and lodging services in Puerto Maldonado and buy almost all of our food locally. We have also stimulated the interest of local inhabitants in ecotourism ventures by inviting them to participate in a variety of activities at TRC, as already noted. After three or four years, these actions earned RFE local respect, which soon became friendship.

In 1995, RFE signed a formal cooperation agreement with the Native Federation of Madre de Dios with the objective of undertaking joint initiatives in areas of common interest: conservation and ecotourism. A few months later, RFE presented the Ese' eja Native Community with essentially the same project it had suggested five or six years ago. This time it was presented in far more detail, and with a more profound knowledge of what it would take to succeed. The communal meeting that RFE summoned to discuss the project in detail was the first one in this decade at which quorum to make it official was present. During the meeting, we also conditioned our participation in the project on the formation of a commercial, for-profit association between the Community and RFE. This association would pertain only to tourism-related activities, and would allow RFE to share the decisions and the profits generated by the tourism project for a number of years, justifying our investment. At

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the end of those years the community is expected to fully manage and operate a competitive cultural tourism operation on its own. At the end of the meeting, the community approved the project proposal almost unanimously and allowed us to go ahead with the contract, refine the project proposal, and search for funding. Conservation International and other local NGOs will assist us with social and economic aspects, assuring that tourism is integrated into the community with minimal disruption.

CONCLUSIONS

Rainforest Expeditions is demonstrating both to the conservation and tourism communities in Puerto Maldonado that investing in research, education, and local development is a good business decision. These investments pay off in customer satisfaction, value of the final tourist product, long term economic sustainability, and appeal to mass media.

Rainforest Expeditions is also demonstrating the importance of creative alliances and collaborative agreements between businesses, conservation organizations, and sectors of the local community. By aggressively involving ourselves in local sustainable development projects, we are redefining the role of for-profit ecotourism companies in conservation.

From this viewpoint, our innovative activities in the regional ecotourism industry will probably result in an overall improvement of the regional product and a more committed involvement from the sector in local conservation and sustainable development. Those will be the unequivocal signs of a successful ecotourism venture.

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EDUARDO NYCANDER

Eduardo Nycander began working as a photographer and field assistant to research programs in southeastern Peru's rainforest in 1985. Since then he has graduated in architecture, produced a 439 page manuscript research paper on traditional Machiguenga architecture, used his studies in native architecture to build Tambopata Research Center and used Tambopata Research Center to direct the widely publicized Tambopata Macaw Project. He co-founded Rainforest Expeditions in 1992 to operate and market tours to TRC. His most notable achievements include photographing the first wild blue-throated macaws in Bolivia, designing highly successful artificial nests, and pioneering macaw ecotourism.

KURT HOLLE

Kurt Holle used his college degree in forest management toward conservation when he began working as Macaw Project Field Assistant and eventually Director in Tambopata. With Eduardo Nycander, he co-founded Rainforest Expeditions in 1992 and since then has led numerous groups into Tambopata Research Center. He has co-authored a chapter on Macaw conservation and ecology for a book on macaws and has written articles on the Macaw Project, TRC, and Rainforest Expeditions for *Bird Talk*, *Escala* and other magazines. He also was the first to design and organize RFE's field ecology courses. Whenever he's not guiding groups he markets RFE's tours to Tambopata and manages the RFE's headquarters in Lima.

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Trial Runs as a Tool for Responsible Ecotourism Development

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ABSTRACT

Ecotourism has by and large fallen short of its economic goals, and sometimes exerts a heavy toll both on natural environments and the indigenous communities that live in them. This is not to say that ecotourism cannot work. For some places it may well be an appropriate solution, but its application may be limited. Unfortunately, responsible ecotourism development is not easily achieved. For any particular destination, it needs to be thoroughly planned beforehand and regulated throughout. Only under such circumstances can outside interests and locals work together to achieve the best possible results. The concept of ecotourism trial runs is proposed as a tool to aid ecotourism development, particularly in new destinations where a variety of parameters need to be tested and monitored. The course of development can then be adjusted when necessary to take into account the interests of all the main players involved.

INTRODUCTION

Ecotourism has often been hailed as the savior of the world's remaining natural areas (Boo 1990, Jones 1993, Cater and Lowman 1994). The message from the developed world to the developing world is a simple one: save your forests and we will pay to see them. Ideally, this money would be sufficient to offset the financial gains from environmentally destructive and unsustainable activities, such as the clear cutting of forests. The potential for big business is immediately obvious: the industrialized world is rich in expendable cash, and the developing world contains most of the earth's biodiversity and pristine areas. Not surprisingly, the last decade saw an enormous proliferation of the ecotourism industry on a world-wide basis.

It has been known for some time that ecotourism has both good and bad effects (Boo 1990, Butler 1991). One of the main advantages that ecotourism supposedly bestows on the destination area is the inflow of cash. Yet the picture that emerges is often disheartening: ecotourism has by and large fallen short of its economic goals (Padget and Beckley 1996). Many locals have been promised prosperity in return for giving up their land or handing in their spears. Instead they have found their way of life affected beyond their wildest imagination. They are still as poor, but now find themselves in a changing world where money is the avenue to a better life.

This is not to say that ecotourism cannot work. For some places it may well be an appropriate solution, but its application may be limited. The course that ecotourism development takes in any par-

ticular destination needs to be thoroughly planned beforehand, and regulated throughout. Only under such circumstances can outside interests and locals work together to achieve the best possible results. Unfortunately, responsible ecotourism development is not easily achieved. NGOs involved in integrated conservation and development projects all too often lack vision or are simply too disorganized to rise to this task. Additionally, the funding necessary for project development is often unpredictable or ephemeral, and often is swallowed up in bureaucracies on the way to the target area. Invariably it arrives too late to beat private sector initiatives that are intent on finding the shortest route to their own financial gain.

To facilitate responsible ecotourism development a simple tool is proposed here, namely the concept of trial runs, and its use is illustrated by an example from northeastern Madagascar. Trial runs do not require big funding, if any, to start off. They pay their own way as they develop. They also provide a way in which interested and affected parties are consulted and the interests of communities incorporated into new ecotourism destinations as they develop. Trial runs also make it possible for the impacts of the growing industry to be measured in a step-by-step manner. For example, it can allow for tracking and analysis of the money involved in ecotourism activities. This may point to ways in which the financial gains to local communities can be increased. All the interested and affected parties (I&A's) can have access to trial run reports. In this way, both the aims of the ecotourism development promoters, and the expectations and aspirations of local communities can be adjusted timeously.

THE CONCEPT OF ECOTOURISM TRIAL RUNS

Trial runs are expeditions to novel or relatively new destinations in which real ecotourists participate. The aim of trial runs is to gather a wide array of information that applies to all aspects of ecotourism development, ranging from assessing the experience of the ecotourist to the impact on local communities. Trial runs help identify problems that can be resolved progressively in subsequent trial runs.

The establishment of new parks and reserves often precedes the development of an ecotourism industry in a region. Trial runs can encourage the starting up of this industry, in which recommendations by word of mouth play a big role. Trial runs can also provide hands-on experience in training guides, local park managers, and a variety of other people involved in a region's budding ecotourism industry. These people become progressively involved in each subsequent trial in a series of runs. The aim is that they eventually take over and run the industry with minimal involvement from outsiders.

Most importantly, trial runs provide an opportunity for the local inhabitants of a region to learn about the tourism industry, including its financial implications. This puts them in a better position to reap the benefits. Financial statements should be freely available to all interested parties such as developers, local business interests, and community organizations or traditional leadership structures.

Ecotourists participating in trial runs are made aware beforehand that they will be going into an area, where the degree of uncertainty may be higher than in more developed destinations. They come as willing guinea pigs, within limits, for a chance to be one of the first groups to see a new area and agree in advance to give feedback on a variety of parameters. Similarly local communities can be informed that the trial run is part of an experiment which they can influence through their feedback.

For trial runs to yield the best results, they need to be rooted in a sound philosophical framework. This will give rise to a set of ideals and concrete aims against which the results of individual runs can be measured. In this way it is possible to progressively adjust subsequent runs so they more closely approximate expectations and commonly agreed upon guidelines. Trial runs can be instigated by the planners and developers of national park systems, by independently contracted consultants, or by innovative private investors.

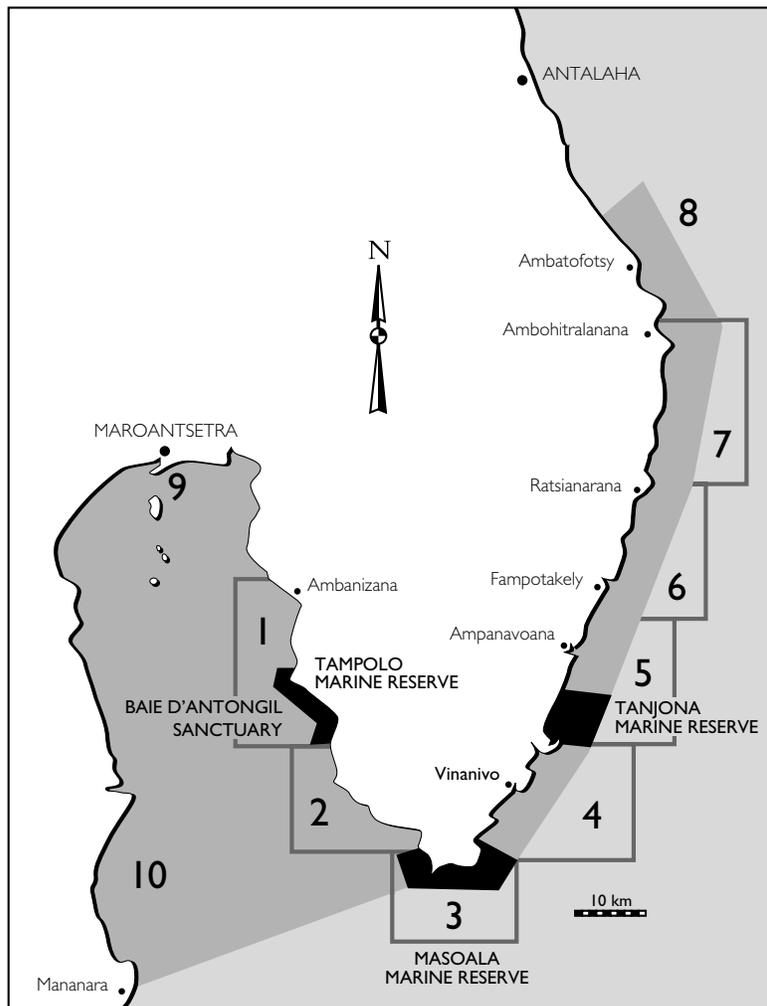
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THE MASOALA PENINSULA, MADAGASCAR

The Masoala Peninsula is one of the last relatively pristine areas in Madagascar (Figure 1). Located in the remote northeastern part of the country it is roughly pear-shaped and flanked by the Baie d'Antongil on its western side and the Indian Ocean in the East. It contains perhaps the largest remaining tropical rainforest in the country, and has some relatively undamaged stretches of coastline. Once largely protected by its remoteness and rugged terrain, the area has seen sharp increases in migration over the last few decades and is now being deforested at a rate of about 5 per cent per year. Also, the Baie d'Antongil, a breeding area for whales, as well as the reefs and lagoons along the eastern shores, are coming under increasing pressure from local fishers as well as foreign fishing interests. There is little doubt as to the potential of the Baie d'Antongil and the Masoala Peninsula as a major Madagascar ecotourism destination. It is one of a handful of places where pristine tropical rainforest exists adjacent to a coral reef system.

Until recently visits from outsiders have been largely limited to towns on the extremities of the Peninsula, the island of Nosy Mangabe, Cap Est on the northeastern part of the Peninsula, and a hiking trail that runs from Maroantsetra to Antalaha (Figure 1). The

Figure 1: Marine Parks on the Masoala Peninsula, Madagascar



number of visitors to the region has been rising sharply over the last two years. In the last year the area has seen exploratory visits by various outside interests, including ecotourism operators, property developers, and a hotel chain from the Far East.

Last year Madagascar's largest national park was delimited on the Masoala Peninsula (CARE et al. 1995), as well as three marine reserves with terrestrial components that include stretches of rare littoral and lowland rainforest (Odendaal et al. 1995). These actions will prompt a further proliferation of ecotourism interests. Responsible ecotourism development should be high on the list of priorities of any integrated conservation and development strategy in the region.

ECOTOURISM TRIAL RUNS ON THE MASOALA PENINSULA

Prompted by the rise of uncontrolled ecotourism developments on the Peninsula, a series of trial runs was started by Eco-Africa Environmental Consultants, a company contracted to delimit the Masoala Peninsula's marine reserves. Local organizations and communities are being gradually involved through a series of trial runs so they will be able to take over the operation within five years. Only when local inhabitants have a firm stake in the region's budding ecotourism industry will they support the existence of the national park and the marine reserves. The latter not only protect marine biodiversity but also are important breeding grounds for fish and other marine organisms harvested by local fishers.

Three ecotourism trial runs have been conducted thus far. The first trial run, consisting of five ecotourists, was held in November 1993. Two of the participants returned to the Masoala Peninsula for the second trial run. Eighteen ecotourists participated in the second trial run which was an advancement over the first one because only local people were contracted to provide services such as preparing meals and moving luggage. Local people were also contracted to lead ecotourists through the forests at various locations and up the Ampanavoana river in dugout canoes. The third trial run consisted of eight participants. Again, progress was made: members of the newly formed Guide Association in Maroantsetra were involved, and local staff took over a large share of the logistics on the Peninsula itself.

KNOWLEDGE AND INSIGHTS GAINED FROM TRIAL RUNS

A vast range and amount of knowledge and insights were gained from the three trial runs:

(1) Debriefings with the ecotourists provided information regarding:

- the desirability of specific camping and snorkeling sites, hiking trails, and visiting specific landmarks such as islands and cultural sites;
- the relative enjoyment of specific activities such as going upriver in dugouts, hiking in the forest, visiting mangrove stands, going on night walks, as well as fishing or hiking with locals;
- particular cultural highlights as well as potential points of friction or misunderstanding, and the degree of discomfort that may result from certain situations such as traveling in local vessels on the open sea or staying over in villages;

- the desirability of spending time on the Masoala peninsula relative to other destinations in the country (on all three trial runs tourists were also taken to other regions).
- (2) Specific information was collected on the distances of certain routes and the time required to travel along them, as well as the feasibility of specific sites for camping logistics, and the carrying capacity of specific villages;
 - (3) Key local people who can play important roles in ecotourism development were identified;
 - (4) Specific information was collected on money spent by ecotourists on residuals such as crafts;
 - (5) Information was collected on the feelings of local inhabitants about the presence and actions of ecotourists, with a focus on community members such as shop owners and teachers, and through traditional social structures such as the *fokontany*. A data bank on the region is being regularly expanded, and gaps in knowledge will be filled during subsequent trial runs. Some of this information has been included in a strategic plan for the region.

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FINANCIAL CONSIDERATIONS

How and where ecotourism money is spent is of vital importance in assessing the industry's influence on a region. Frequently the financial gain of locals from ecotourism is outweighed by environmental degradation resulting from ecotourism activities and ensuing negative influences. Often less than 1 per cent of money made from ecotourism remains in the area; the price paid in environmental degradation and erosion of local culture can be incalculable. Unfortunately this trend may be the norm rather than the exception.

Continual financial analyses made from one trial run to the next may allow for adjustments to be made with regard to where money expenditure should be focused in subsequent trial runs. For this purpose it may be useful to divide ecotourism money into four rough categories based on geographical regions:

- (1) money that never reaches the host country;
- (2) money spent in the host country but away from the destination;
- (3) money spent in the broader region that hosts the target area;
- (4) money spent inside the target area itself.

It is of paramount importance to design and direct development to increase the amount of money in the last category. On the

Masoala Peninsula, forest and reef destruction occur largely at the hands of local people who need food and space to grow rice and graze their cattle. Only by benefitting from ecotourism will the park make sense to them. The larger the fraction of ecotourism money that stays behind in the target area, the easier it will be to justify the existence of the park to those people who are denied access to previously open resources. The final aim is to empower local communities by thoroughly involving them in the running of ecotourism operations as well as endorsing their capacity as owners of the industry.

Trial runs provide a useful opportunity to study precisely how money arising from ecotourism activities is spent. The first trial run was atypical in that the boat, a major expense, was provided by CARE INTERNATIONAL, an NGO active in the area. Yet 7 per cent of total expenditure occurred in the host region and target area. During the second trial run the total expenditure in the host region and target locality together came to 10.2 per cent. In the third trial run 16.1 per cent of revenue was spent in the target area; a significant increase over the second trial run. However, the two trial runs are not directly comparable because the second circumvented the entire Peninsula, an idea that has now been discarded for trips under two weeks in length.

A finer analysis of these figures provides the insight necessary for steering the expenditure of future trial runs toward the target area itself. As an example, the financial details from the third trial run (Table 1) show the types of expenditures in the four areas of expenditure. Not much can be done at the moment to decrease the expenditure outside Madagascar. Those expenditures that occur inside Madagascar but away from the host region and target locality can, however, be adjusted.

Table 1: Actual and projected financial statements for the third and fourth trial runs on the Masoala Peninsula (all values converted to South African rands; one rand is roughly 29 cents US).

	Trial run 3	%	Trial run 4	%
Income:				
Ecotourists	38,533	98	38,533	
Loss by Eco-Africa	863	0		
Expenditure:				
In South Africa	6,213	16	6,213	16
In Host Country	26,811	68	22,712	59
In Host Region	5,236	13	3,429	9
In Target Locality	1,136	3	6,179	16
Expenses in Host Country:				
(1) Air Madagascar:	13,062		13,062	
(2) Hotels & Side Trips:	13,421		9,322	
(3) Parks Board (ANGAP):	328		328	
(4) Hotels, meals:	780		780	
(5) Supplies:	1,214		607*	
(6) Transport:	1,590		390*	
(7) Guides:	1,200		1,200	
(8) Miscellaneous:	452		452	
Expenses in Target Locality:				
(9) Supplies:	0		607*	
(10) Guides:	316		632**	
(11) Bush Hotel:	360		360	
(12) Transport:	0		1,200*	
(13) Boats:	33		33	
(14) Campsite:	54		792**	
(15) Lighthouse:	8		90**	
(16) Miscellaneous:	200		200	
(17) School:	165		165	
(18) Locality Development:	0			
Expenses in Host Region:	2,100*			

* By prior arrangement produce can be obtained from local farmers, hence the shift from (5) to (9); the transport boat can be provided by the community living in the Cap Masoala marine reserve.

** These increases can be covered by decreasing out of the region expenses (2), that will now be invested inside the target locality.

Feedback from trial run ecotourists showed that they would like to spend a longer period on the Masoala Peninsula rather than take side trips elsewhere in the country. Also, ecotourists indicated that they are prepared to stay at a considerably less expensive hotel than the luxury Gregoire while in the capital, which frees up money for other expenses. In the fourth trial run this money (Table 1, No. (2)) can now be directed to the host region and target area.

Similarly, money can be diverted from the host region to the target locality, based on knowledge gained from the first three trial runs. With prior notification, supplies can be obtained on the Peninsula itself in the form of fresh produce grown on land or harvested from the sea and kept in holding pens in the lagoons. Fuel has to be brought in from Maroantsetra. Several available boats located in the target area itself have been identified and tested to transport such imported goods. More money can be spent on local guides without detracting from the newly formed Guide Association in Maroantsetra. During the third trial run, an investment was made into providing guide instruction handbooks.

Most importantly, even if the price of the tour stays the same, there will be money left over to develop other resources (Table 1, no. 18). Any such development will be done in conjunction with traditional conventions and structures such as the *fokonolona* and *fokontany*, as was done with the installation of a school in Ambodiletra (Cap Masoala marine reserve) during Trial Run 3.

Therefore a projected 25 per cent will be spent in the target area during the fourth trial run, if the tour price remains the same. In reality the tour price will rise by 18 per cent to R 6,500 (or about \$1756 from Johannesburg, or about \$3256 from JFK). This profit will be re-invested in the target locality in the form of infrastructure. Because of this development, the real expenditure in the host region and target area will rise to 39 per cent; however, 14 per cent of this expenditure will be locked up in limited-access infrastructure.

FURTHER CONSIDERATIONS

Apart from the step-by-step approach that is both participatory and adjustable, trial runs have many other advantages. Ecotourists that participate in trial runs tend to “catch the spirit” of the development initiative and the conservation ideas behind it. Many of those who participated in the trial runs on the Masoala Peninsula are eager to return and have volunteered their help for the project, both in their own countries or on subsequent trial runs. Consequently a Friends of Masoala organization has formed. In the future this organization will be an important development tool, acting as a lobby group working for the continued health of the Masoala Peninsula environs and the well-being of the people living there.

Ecotourists that participate in trial runs tend to “catch the spirit” of the development initiative and the conservation ideas behind it. Many of those who participated in the trial runs on the Masoala Peninsula are eager to return and have volunteered their help for the project, both in their own countries or on subsequent trial runs.

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FRANCOIS ODENDAAL

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Regulating Ecotourism: Legal Frameworks and Market Guidelines

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ABSTRACT

Despite the fact that tourism is the world's largest industry, its impact on the environment is not well regulated. This paper first reviews international legislation in this area including NAFTA's environmental provisions. It then assesses the market-based guidelines developed by NGOs and other groups, as they have been collected by the United Nations. The paper finally explains the most progressive models of national tourism management, as developed by Australia and New Zealand.

The travel and tourism sector is now the world's largest industry, estimated to generate almost eleven per cent of world gross domestic product (GDP) in 1996 and forecast to generate 130 million new jobs over the next decade, either directly (hotel/airlines employment) or indirectly (construction, financial services). This sector is also growing faster than most industries. Growth rates are expected to peak at 4.4 per cent annually by 2000. Crossborder travel is the fastest-growing segment; international arrivals are set to double in the period 1990-2010, from 456 million to 937 million.¹

In this context, the impact of tourism on the world environment is generating increasing interest in public and private sectors, and has led to a number of new policies at the national and inter-regional levels. The industry itself has responded to government and market demand with the rapid development of what has been termed "ecotourism."

ECOTOURISM DEFINITIONS

Defining ecotourism has proven a challenge, since this concept attempts to describe an activity, set forth a philosophy, and refer to a model of economic development. In 1989, the Audubon Society called it a "travel ethic." A Canadian definition, based on a public/private sector consensus, calls it "an enlightening nature travel experience that contributes to conservation of the ecosystem, while respecting the integrity of host communities." The Ecotourism Society defines it as "responsible travel to natural areas which conserves the environment and sustains the well-being of local people." Broader definitions by consulting firms, such as the Vancouver-based ARA Group, include "travel to enjoy and appreciate nature" or "tourism related to nature/adventure/culture in the countryside."² Ecotourism can therefore be subdivided by degree of involvement and trip purpose (primary vs. secondary travel objective).

¹ World Travel & Tourism Council, *Key Statistics*, 1996.

² *Ecotourism: A Guide for Planners and Managers*, Kreg Linberg & D. Hawkins, eds, 1993, The Ecotourism Society, p.3; also *Ecotourism — Nature/Adventure/Culture: Alberta & British Columbia Market Demand Assessment*, Report by ARA Consulting Group, Vancouver; December 1994, pp. 1-3.

A 1994 North American study found significant differences between primary and secondary travel groups. Each was mostly between 25 and 54 years of age, but the ecotourism group (primary) had higher education levels and a higher willingness to spend (45 per cent willing to spend over \$1,500 per person on an ecotourism vacation, as opposed to 38 per cent of the secondary traveler group interested in nature).³

³ *Ecotourism/Nature/Adventure/Culture*, ARA Report, op. cit., pp. 2-12.

ECOTOURISM: SIZE AND GROWTH

Because of this broad range of ecotourist definitions, the ecotourism market has been notoriously difficult to assess, and estimates vary a great deal among the main markets of origin.

A 1992 survey by the U.S. Travel Data Center showed that 7.0 per cent of U.S. travelers (8 million) had taken at least one ecotourism trip, and 30 per cent (35 million) planned to take one within the next three years. The Center also reported a 330 per cent growth in international visitors to U.S. national parks in the 1985-91 period (63,500 visits in 1985 vs. 273,400 in 1991). Non-North American originating markets show great variations according to the source of the estimate. The World Travel & Tourism Council estimates only 4.0 per cent of European outbound travel to be ecotourism-based, but the Ecotourism Society ranks 40 to 60 per cent of all international arrivals to be nature-oriented. International arrivals grew from 393 million in 1988 to over 528 million in 1994. The Ecotourism Society has estimated 157-236 million to be nature-oriented in 1988 and 211-317 million in 1994.⁴

⁴ U.S. Travel Data Center, *U.S. Travel Survey*, 1992; *World Travel & Tourism Council*, 1995 statistics; Ecotourism Society, 1995 (oral communication).

The best market estimates may have been achieved to date for traditional ecotourism destinations. A World Wildlife Fund 1990 survey of tourists to Mexico, Belize, Dominica, Costa Rica, and Ecuador, for instance, found 41 to 75 per cent of travelers visiting protected nature areas.⁵

⁵ World Wildlife Fund, *Survey of Ecotourism Travel to Central America*, 1990.

Costa Rica has become one of the top destinations in the 1990s, and the scope and impact of its ecotourism has been relatively well-researched in government studies. International arrivals to Costa Rica grew by 37 per cent in only three years, from 500,000 in 1991 to 684,000 in 1993. Tourism receipts reached \$577 million in 1993. A survey commissioned by the National Park Service in 1992 showed that visitors to forested areas increased from 18 per cent in 1982 to 54 per cent in 1991.⁶ Given this rapid growth of tourism involving nature areas, policymakers are reviewing existing legislation and taking initiatives at the international, regional, and national levels.

⁶ *Evolucion del Turismo en las Areas Silvestres*, report by Fernando Bermudez for the National Park Service/Ministry of Natural Resources, Energy and Mining, Costa Rica, 1992, p.6.

INTERNATIONAL LEGISLATION

Presently, environmental law is not a distinct field. Environmental provisions appear in criminal, property, construction, and water law. Environmental law is also characterized by fragmentation. In the U.S., states such as New York and Illinois have adopted constitutional provisions to protect the environment, but no federal amendment has been implemented. In Europe, an EEA (European Economic Area) accord has environmental provisions, but member states retain their own regulations. In Germany, as in the U.S., states like Bavaria are often ahead of the federal government. Constitutional provisions exist in several countries. In Spain and Portugal, protection of the environment is seen as a fundamental social right and entails a constitutional claim for compensation. Guidelines for the state are provided by other European Union members such as the Netherlands.

International environmental law, as it is currently understood, began in 1972 with the UN Stockholm Conference. Prior to that, some three dozen environmental, multilateral treaties had been signed. The most comprehensive was the 1942 Western Hemisphere Convention, now under re-examination. By contrast, several hundred bilateral and multilateral agreements were concluded between the 1972 Stockholm Conference and the 1992 Rio Conference (UNCED). Most notable among these were CITES in 1973 on international trade in endangered species, the Montreal Protocol in 1987 on control of fluorocarbons emissions, the Helsinki Protocol on sulfur emissions, the Law of the Sea Treaty in 1982 and the 1989 Basel Convention on trade in hazardous waste. In 1987, the World Commission on Environment and Development's Bruntland Report reflected a major shift from a transboundary to a global, interactive approach. It viewed development as sustainable only through integration of economic planning with conservation, cultural compatibility, and local input.

More recently, the North American Free Trade Agreement (NAFTA) was the first trade agreement to include provisions aimed at protecting the environment. In particular, NAFTA prohibits the erosion of national standards to promote investment, reaffirms international agreements, and encourages the harmonization of standards among the three signatory states (Canada, the U.S., and Mexico). NAFTA was the focus of intense controversy regarding the environment, but after initial resistance, six major environmental groups, totaling 7.5 million members, backed NAFTA.

However, NAFTA shows the potential for another type of conflict related to rules of the General Agreement on Trade and Tariffs (GATT) and the World Trade Organization (WTO). GATT and now the WTO allow member countries to adopt and enforce envi-

More recently, the North American Free Trade Agreement (NAFTA) was the first trade agreement to include provisions aimed at protecting the environment.

ronmental measures, but qualify it in two ways: 1) Countries are prohibited from using environmental standards as disguised barriers to trade; and 2) standards cannot be applied in a discriminatory way. This ambiguity has already led to some disputes, including the first U.S./Mexico conflict over dolphin-free tuna fishing in the Eastern Pacific Ocean. Mexico interprets the U.S. dolphin protection measures as a disguised trade barrier.

MARKET-BASED GUIDELINES

Given the ambiguous and fragmented nature of international agreements, the last decade has seen a proliferation of voluntary codes of conduct generated by non-governmental organizations (NGOs), tour operators, public land managers, and local community groups. A 1990 survey found 60 sets of guidelines developed by these various groups, each stressing a different priority. NGOs and tour operators tended to focus on habitat protection and human impact; public land managers on endangered species and protected areas; and local groups on culturally responsible tourism.

In 1995, the United Nations Environment Programme (UNEP) listed 32 major environmental codes, from sources as diverse as the International Chamber of Commerce, the World Travel & Tourism Council, the New Zealand and Australia governments, and the English Tourist Board.⁷

These codes present two main implementation problems: measurement and funding. Their effectiveness remains impossible to assess, since none includes a quantitative framework for baseline measurement, target setting, final measurement, or monitoring.

Funding is especially problematic. The Global Environmental Facility (GEF) was set up by the World Bank and other sources to finance projects related to biodiversity, ozone depletion, and other issues. One of its pilot projects in Latin America was discontinued, however, because of criticism by local community groups that the project reflected OECD issues rather than pressing local priorities.

The most comprehensive industry code to date is contained in the WTTC/WTO/Earth Council Report, "Agenda 21 for the Travel and Tourism Industry," which translates UNCED into an action program. The report sets nine priorities for trade organizations, including environmental assessments for any new operation, training and public awareness programs, and progress measurement at local levels. The document also includes ten priorities for private sector companies, ranging from waste reduction/reuse/recycling to water and land use management, local community involvement, and design for sustainability. Both sets of priorities rely on public/private sector partnerships for implementation.⁸

Although many governments have begun to develop policies to control the environmental impact of tourism, Australia and New Zealand have made the most progress in releasing comprehensive guidelines, in part because of tourism's importance to their economies.

⁷ *Environmental Codes of Conduct for Tourism*, UNEP (United Nations Environment Programme), Technical Report No.29, 1995, p.ii.

⁸ World Travel & Tourism Council, *Agenda 21 for the Travel & Tourism Industry*, 1995.

NATIONAL TOURISM MANAGEMENT MODELS

Although many governments have begun to develop policies to control the environmental impact of tourism, Australia and New Zealand have made the most progress in releasing comprehensive guidelines, in part because of tourism's importance to their economies. Tourism is Australia's largest export industry, accounting for almost 12 per cent of the country's export earnings in 1993-4 and employing, directly or indirectly, over 6 per cent of the workforce. Total international arrivals were expected to reach 3.4 million in 1995 and almost double, to 6.3 million, in the year 2000. Nature is also a major component of the Australian tourism product; key national parks recorded a four-fold increase in the number of visitors between 1982 and 1991, and a government survey showed that 53 per cent of adult Australians planned a nature-based trip within the next twelve months.⁹

Accordingly, the Australian government released in December 1992 its *National Strategy For Ecologically Sustainable Development*. The strategy was developed through a wide process of public consultation, including workshops in all states and territories and discussion with industry, conservation, and community groups. The Australian Conservation Foundation and the World Wide Fund for Nature have endorsed its pioneering approach. Canada, Denmark, Sweden, South Africa, the Netherlands and the U.S. are studying its applicability to their national environments.

The *National Strategy* is a package of complementary ecotourism initiatives reflecting the fact that the Australian ecotourism industry is characterized by small-scale operations offering personalized service. The main provisions include:

- a feasibility study for an accreditation system for private sector companies.
- an education program for the media, the tourism industry, and consumers.
- extensive market research to assess the nature and level of demand.
- a study to improve the business skills and knowledge base of ecotourism operators.

The Australian government's commitment to the implementation of this strategy includes funding of \$10 million over four years starting in 1993-4.¹⁰

⁹ Barbara Jones and Tanya Tear, "Australia's National Ecotourism Strategy," *Industry and Environment*, (UNEP), January - March 1995, p.55.

¹⁰ Ibid.

CONCLUSION

Despite varying size and growth estimates, it seems clear that the scope and impact of tourism and ecotourism will continue to grow and will require international regulation. But the current legal framework is a patchwork of agreements and treaties that concern trade more than tourism and are often in conflict. Although international bodies such as UNEP and the WTTC are moving toward a unified set of guidelines, their implementation will remain problematic due to a lack of systematic measurement and enforcement.

The best way of regulating tourism may be found in strategic plans, like the one recently developed by Australia. Such plans base their effectiveness on a regional approach, recognize local ecosystems as their foundation, involve local participation in the planning and decision-making process, and include a long-term funding commitment at the national level.

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The Ecotourism Operation was a Success, But the Patient Died: A Case Study from Western Samoa

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ABSTRACT

This paper is based on experience, not research, and describes the expanding ecotourism programme in Western Samoa. The authors present the pro-active approach being taken in Western Samoa to implement environmental management strategies, especially forest conservation, using ecotourism as a powerful environmental management tool. While Western Samoa lends itself to ecotourism, without responsible tourism Samoa's future development could be seriously compromised. This is the result of the current exploitation of the natural resources by the custodians of the land. These problems cannot be blamed on foreigners or tourists.

In response to a 1993 environmental assessment and management plan, the Western Samoa Visitors Bureau (WSVB) has developed a National Ecotourism Programme (NEP) to help implement such strategies. Community-based tourism enterprises are being encouraged in selected areas of high conservation value: these villages are termed eco-villages. Eco-villages are receiving an increasing share of the money generated annually from tourism. However, possibly less than one per cent of this national revenue currently reaches rural villages that are actively involved in the NEP and the National Wildlife Conservation Programme (NWCP).

INTRODUCTION

In Western Samoa, six major environmental challenges were identified in 1990, namely deforestation, loss of biodiversity, pollution, global climate change, increasing human population, and cultural erosion. Many other South Pacific Island Nations are also facing similar challenges, and within the next twenty years, the Pacific Island Countries (PICs) will have lost their primary rainforests, while their human population will have doubled to 9 million, with 43 per cent of this population living in urbanized areas. Can we all afford to be patient? It is responsible travelers who may be able to put pressure on PICs not to develop the South Pacific in an unsustainable manner.

Equitable and sustainable human development is the new development paradigm for the South Pacific, especially since previous

development efforts have altered societies, weakened cultures, and encouraged the depletion of our natural resources. Culturally-responsible tourism could play a very important role over the next twenty years. If not, we stand to lose the South Pacific as a unique unspoilt tourist destination.

With the aid of an Australian anthropologist, who specializes in the establishment of ecotourism projects for indigenous peoples in the South Pacific (WSVB 1993,1995), the NEP commenced officially in 1993. Environmental awareness is increasing on-island and ecotourism is being seen as a powerful tool to help reverse many of the major recognized environmental, and the associated biological, cultural, economic, physical, and social challenges.

Western Samoa is now well positioned to become an authentic ecotourism destination in that it has a number of specialist ecotour operators, an expanding ecotourism programme, minimal cultural erosion, scenic marvels, including over 300 volcanic craters extending to over 6000 feet, 100 miles of rainforest, easily identified environmental challenges, and excellent interpretation opportunities offered by locally-trained guides.

Visitors to Western Samoa listen to the village chiefs argue that logging their forests over the past thirty years was the best decision that they could have made at the time. Until we can devise alternate options, we are going to see the disappearance of Western Samoa's beautiful tropical rainforests and many of its wildlife inhabitants.

Ecotourists are now becoming actively involved and are supporting local wildlife conservation efforts. They are also helping finance the introduction of sustainable technology (e.g., composting toilets), and they are assisting with the implementation of small village projects, including the planting of native rainforest species and construction of rainwater tanks, at a number of ecotourism destinations. Ecotourists are finding themselves playing the role of eco-workers as they help create more environmental awareness and help fund small village projects.

There are several ways ecotourists can experience Western Samoa. They can interact with villagers for US\$115 per person per day all inclusive, they can chose to stay overnight in the more familiar eco-resorts for US \$205 per person per day, they can choose to join an Eco-researcher /Eco-worker programme (Appendix 1) for three weeks or more at the Rainforest Ecolodge in Apia for US \$45 per day including bed and breakfast, or they can stay within an eco-village for US \$25 per person per day including all meals and accommodations.

Alternatively, ecotourists can purchase a sixty page guidebook, *Ecotouring in Western Samoa* (Sooaemalelagi and Brown 1995), which describes the National Ecotourism Programme and mentions

Experiencing the challenges of modernity for indigenous peoples is often the best way to appreciate the global consequences of pollution, habitat destruction, human population growth, and cultural erosion.

where the eco-villages are and where to contact ecotour guides in these villages.

The way the NEP has been designed, visitors to Western Samoa are guided to selected eco-villages in a controlled manner. Guides at these destinations are being continually trained to meet the requirements of visitors and to help enhance this cross-cultural experience.

Until the revenue from tourism increases, or from any other source, rural villagers will be left with no alternative but to over-exploit their limited and vulnerable natural resources, especially their forests. The impact of this over-exploitation on Samoa's future tourism industry needs to be assessed. In the meantime, an environmental audit of the tourism industry has been proposed for this year and assistance from ecotourism planners has been sought.

The NEP is primarily community-based. A number of villages have now established customary-owned rainforest preserves and are accommodating ecotourists, building nature trails, and offering interpretation facilities. Protection of mangrove forests is also a feature of the NEP. Reforestation projects are being conducted at a national governmental level as well as at the local village level. Eco-travelers can participate in this reforestation programme.

Also, Eco-Tour Samoa Ltd., a privately operated ecotour company and environmental consulting agency, operates ecotours from the Rainforest Ecolodge. This ecolodge acts as a center for ecotourism research, involving the planting of fruit trees, native forest trees as well as trees for timber production for traditional house construction. Attracting native wildlife onto this 150 acre site is one further objective, as is producing medicinal plants that are not now readily available to many villagers.

Ecotourists are also invited to join an eco-worker programme at the Rainforest Ecolodge where sustainable technologies are applied to rural settings. They can participate in an informal environmental awareness programme as they tour to selected ecotourism destinations on Savaii, Manono and Upolu islands, traveling in a locally-built island-style ecotour bus, professionally guided by the managers of the rainforest Ecolodge and Eco-Tour Samoa.

The NEP receives considerable input from Pacific Islands. Without the following reference material, the NEP would not be where it is today:

Ecotourism: A Business Planning Guide (Bushnell 1994)

Pacific Islands Ecotourism: A Public Policy and Planning Guide
(Liu 1994)

Agenda 21 for the Travel and Tourism Industry—Towards Environmentally Sustainable Development (World Travel and Tourism Council 1995)

Eco-researchers are invited to use the Rainforest Ecolodge as a base, help develop it into an ecotourism/ environmental resource center, and participate in the NEP (National Ecotourism Program).

State of the Environment Report (Department of Lands, Survey and Environment 1993)

National Environmental Management Strategy (Department of Lands, Survey and Environment 1993).

NATIONAL ECOTOURISM PROGRAMME (NEP)

Ecotourists are currently helping to alleviate non-sustainable forestry practices in Western Samoa simply by staying overnight in selected rainforest preserves. Unknowingly, the cultural integrity of Samoans can be enhanced by these visits if certain principles of ecotourism are followed. The ecotourism guidelines that are currently in place ensure that minimal negative impact from ecotourism programmes occurs. The following discussion describes (i) features of the NEP, (ii) how ecotourism is addressing the identified environmental challenges, (iii) different roles that ecotourists can play in Western Samoa, (iv) the case in Western Samoa and (v) incentives for eco-researchers to visit Samoa and assist with the NEP.

FEATURES OF THE NATIONAL ECOTOURISM PROGRAMME

The NEP recognizes the importance of tourism to Samoa's development and it also recognizes the role that ecotourists can play in helping to correct some of the existing non-sustainable practices. The NEP was commissioned by the Government of Western Samoa through the Western Samoa Visitors Bureau. Guidelines laid down in the Ten Year Tourism Development Plan for Western Samoa 1992-2002 (1991) have been followed. An intensive anthropological study of the ecotourism potential, combined with the potential socio-economic impacts of ecotourism, was conducted for the WSVB (1993, 1995) by Michael Parsons.

Thanks to the government of Western Samoa and the South Pacific Regional Environmental Programme, major environmental challenges in Western Samoa have been identified. The status of environmental resources has been carefully assessed, and the most appropriate environmental management strategies have been formulated. Without this basic environmental understanding, the NEP would not have developed to what it is today. The NEP is now assisting in many of the environmental management strategies (e.g., combating deforestation, conserving biodiversity, developing appropriate land use practices, promoting sustainable economic growth, and preserving traditional arts and culture) by supporting community-based tourism projects in rural forest preserves.

An environmentally-friendly and culturally-responsible format of tourism has remained the blueprint of tourism development in Western Samoa for the past four years. Ecotourism recognizes that

the threatened forests of Samoa are the very basis of the Polynesian culture on-island, and that the cultural integrity is irreversibly impoverished if the forest resources are continually depleted.

Historically, travelers to Samoa have always been considered culturally intriguing. With over 300 villages living a traditional lifestyle, visitors are rarely disappointed (except when they recognize wanton over-exploitation of natural resources). Adding to the adventure is the lack of modern tourism infrastructure on-island. Western Samoa is still considered one of the lesser developed countries. The NEP ensures that visitors to Western Samoa get the best experience irrespective of the limited tourism resources and infrastructure. The NEP is providing visitors to Samoa with a safe and comfortable method of travel and an opportunity to interact with the people in rural areas in a very intimate manner.

One salient feature of the Samoan experience is the traditional hospitality offered by Samoans. The NEP ensures that cultural interpretation is an integral component of any travel/learning experience in Western Samoa. Travelers are soon exposed to the modern reality that this is no longer a cash-less society: often the only access to cash has been from the immediate sale of surrounding forests. It is this deforestation that is thwarting the viable future of a sustainable tourism industry. It is this deforestation that is partially aiding the cultural erosion as villagers lose their dependence on the forest for their survival and traditions. While the NEP is still in its infancy, the emphasis still remains on implementing feasible solutions to existing environmental problems using ecotourism as a management tool.

My fore-fathers had a dream. They had a dream that one day the land and the rainforest would be saved for eternity, they had a dream that the land and these would forever be well looked after, and not destroyed and distributed to other people.

ECOTOURISM ADDRESSING ENVIRONMENTAL CHALLENGES

Because of their size, small island nations have some of the most fragile ecosystems. The reliance on native wildlife as traditional sources of food is rapidly declining and is being replaced by imported processed foods. Loss of habitat has also meant the loss of traditional practices (e.g., use of medicinal plants for traditional healing, use of handicraft materials and house construction materials).

To think that ecotourism guidelines can be drawn up so as to help enhance the cultural integrity of indigenous peoples is a distinct possibility, provided our needs for tourist revenue are also being met. The NEP is endeavoring to include village home stays, eco-worker experiences, ethnological studies as well as a wide range of biological and sociological research in order to primarily address the erosion of our indigenous culture.

Ecotourists to Samoa are sharing their skills with respect to solving some of the major pollution problems on-island.

Ecotourism encourages the replacement of imported foods by promoting local cuisine in traditional settings. In addition, the prospect of using composting toilets has been suggested as one means of enhancing the ecotourism destinations and at the same time demonstrating economically-viable and environmentally-friendly technology.

An increasing human population (five-fold this century) is placing impossible demands on remaining natural resources. Eco-researchers are currently pursuing the feasibility of conducting a national environmental audit that will help address the linkages between human population growth and environmental issues. This subject may be the basis of a planned ecotourism workshop to be conducted by ecoplan:net and the International Society for Ecotourism Management in Western Samoa in 1997. Members of the Samoan Ecotourism Network recognize the need for such an audit if the tourism industry in Samoa is to become sustainable. No ecotourism management plan can function without knowing basic resource use patterns and relevant socio-economic impacts. This must be the basis of any major ecotourism guidelines.

Finally, ecotourists to Western Samoa soon appreciate the threat of global climate change to small island nations, especially those nations located in the cyclone belts. Realizing the vulnerability of coastal dwellers, especially peoples living on atolls about fifteen feet above sea level, ecotourists can have their conscience pushed a little further in the right direction: their cross-cultural experience and their travel/learning experience may result in a less consumptive lifestyle upon their return home.

Ecotourism guidelines should include methods of improving the environmental awareness of indigenous peoples as well as that of visitors. Experiencing the challenges of modernity for indigenous peoples is often the best way to appreciate the global consequences of pollution, habitat destruction, human population growth, and cultural erosion.

ROLE OF ECOTOURISTS

Ecotourists can assist the NEP by visiting selected eco-villages, by shopping in rural villages and preferentially supporting community-based tourism ventures. These include specialist accommodation, mangrove canoe tours, rainforest walks, exploring lava tube caves, wildlife tours to off-shore uninhabited bird-breeding islands, and getting involved in cultural activities (activities such as tapa cloth making and woodcarving that had virtually disappeared from many villages because of the loss of raw materials and hence the traditional skills). The community-based tourism programme on Manono Island is just one example of community groups revital-

Eco-researchers are currently pursuing the feasibility of conducting a national environmental audit that will help address the linkages between human population growth and environmental issues.

izing former traditional activities through tourism. Villagers are returning from urban areas to live on their island because of available opportunities.

Ecotourism is now being seen as at least part of the development solution. It provides a realistic alternative to the over-exploitation of natural resources. Ecotourism provides another source of income to rural peoples and helps to raise the level of environmental awareness in indigenous communities. Ecotourists introduce relevant forms of sustainable technology, often based on experience gained in other indigenous rural communities. Ecotourism is fighting for the rights of indigenous peoples who prefer to remain in their tribal lands. It is a social movement. It is an environmental movement.

Donations made by tourists to the Samoan Ecotourism Trust Fund help with the implementation of small village projects. Some villages today are still without flushing toilets. Some are even without running water. Very few, if any, have hot water. Ecotourists staying overnight in the villages are expected to live like the locals. There are very few disappointments. In fact, quite the opposite. Some ecotourists have acquired such meaningful friendships and tender memories that they are moved to tears on leaving Samoa. And isn't that what traveling is all about?

Western Samoa is searching deeply for a solution to the problems associated with a modernizing society. Development techniques, in their current format, are having a detrimental effect on our natural resources, especially tropical rainforests.

THE CASE IN WESTERN SAMOA

Western Samoa is searching deeply for a solution to the problems associated with a modernizing society. Development techniques, in their current format, are having a detrimental effect on our natural resources, especially tropical rainforests.

As Western Samoa loses its forest resources, important habitats are disturbed, water catchments are degraded, villagers compete for scarce lands, and cultural integrity suffers. Completion of an environmental audit now will help clarify the urgency of bringing about sustainable forestry practices on-island. It does not make economic sense to fell our remaining primary rainforest on the island.

To assist the NEP, private ecotour operators, such as Eco-Tour Samoa, assist with the formulation and implementation of the NEP. A new Rainforest Ecolodge has recently been established on 150 acres of working tropical plantation, complete with manicured gardens of exotic plants. A small reforestation programme has been designed to help replace the existing non-indigenous forest with native trees. An eco-worker programme has been developed along the lines of a service project whereby assistance is sought to help implement environmental solutions on-site.

In Western Samoa eco-villages, there may not be five-star accommodations, but there is five-star hospitality and five-star tropi-

cal settings well removed from any evidence of modern life.

Eco-Tour Samoa offers intensive 10-14 day stays enabling visitors to see AND experience all that Western Samoa has to offer.

Eco-Tour Samoa is also actively marketing similar programmes in American Samoa and in Hawaii (especially the Big Island of Hawaii where the International Society for Ecotourism Management has a most fascinating ecotourism programme). One such programme linking Hawaii, American Samoa, and Western Samoa is called "Craters, Corals and Cultures." It is a carefully planned ecotourism experience that yields the best that all three destinations can offer to those interested in adventure, a travel/learn experience, exposure to indigenous peoples of the South Pacific, and an opportunity to assist in the conservation of endangered wildlife species.

To up-grade ecotourism marketing efforts, the Samoan Ecotourism Network (SEN) is now taking full advantage of Internet services. Information is available on the ecotourism programmes as well as the cultural and environmental issues being faced by indigenous peoples in the South Pacific. See the ORBIT Global Travel Guide, <http://www.pi.se/~orbit/samoa/welcome.html>. A Pacific Ecotourism Network (PEN) has been formed to link these similar ecotourism programmes in neighboring island nations. The South Pacific can become a stand-alone tourist destination, not just a stop-over, and can become an example of sustainable tourism from an indigenous perspective. For this to happen, visitors must be made aware that there is a wealth of opportunities and experiences that can be packaged into a holiday.

Without visitors, ecotourism programmes cannot flourish, and development opportunities and options are seriously compromised. The establishment of the SEN has helped promote this ecotouristic cause and visitors are requested to patronize these efforts. For example, accommodation centers that have been considered "close-to-nature," like the Rainforest Ecolodge, and accommodation centers considered "close-to-traditions," like Manono Island, have aligned themselves with ecotour operators and ecotourism destinations to provide guests with the penultimate ecotourism experience. Western Samoa's leading inbound tour operator, Island Hopper Vacations, has assisted greatly with the marketing of the NEP. Members of the SEN are also fortunate to have the Western Samoa Visitors Bureau assisting with the coordination and future development of the NEP.

Western Samoa has a number of examples of customary-owned rainforest preserves. Eco-Tour Samoa targets these eco-villages, not only because of the history behind the protection of their rainforests and coastal habitats, but because community-based tourism is the

The authors strongly believe that cultural enhancement is possible through ecotouristic programmes, and we invite anthropologists and other eco-researchers to document our cultural, economic, environmental, and social problems.

only economically viable alternative to deforestation. Many villages in Western Samoa have to meet the costs associated with building schools, churches, water supplies, and roads with their own funds. The inability to raise cash in the rural areas has led to the inevitable destruction of rainforests.

The success of ecotourism depends on the profitability of projects in each eco-village. The socio-economic impacts of ecotourism in these villages has yet to be assessed, and more solutions need to be found to existing problems if we are to all attain sustainable living in traditional villages. More thought needs to be given to the generation of income from non-timber forest products. Villagers also need to exploit the opportunity for eco-shopping.

Ecotourists can also help market proven ecotourism programmes. Word-of-mouth advertising is the most cost-effective method of marketing. The costs of marketing our programmes internationally by the usual means is prohibitive. Increasing reliance on Internet marketing may become a solution, provided we can access potential ecotourists and eco-researchers. This type of marketing must be very sophisticated in its targeting of travelers. Supportive "advertorials" can be published on e-zines (electronic magazines), such as Eco-Orbit (accessed via our web pages), and detailed descriptions of the range of experiences and opportunities available must be given. Already, the NEP has received attention on the Internet, and e-mail responses have just begun coming in. More guidelines could be developed for this integral aspect of the ecotourism programme.

To address the issue of marketing, the recent formation of the PEN (Pacific Ecotourism Network) has already proven to be successful. Travel wholesalers in Sweden, Switzerland, and Italy have requested multi-destination itineraries combining a range of ecotourism experiences. To date, Fiji and Vanuatu have linked with Niue, Hawaii, American Samoa, and Western Samoa. More South Pacific island destinations will be included when marketable ecotourism programmes have been designed.

INCENTIVES FOR ECO-RESEARCHERS TO VISIT SAMOA

There is a wealth of information that still needs to be gathered. Resolutions still need to be found. There are numerous projects that need to be implemented. Eco-researchers are invited to use the Rainforest Ecolodge as a base, help develop it into an ecotourism/environmental resource center, and participate in the NEP.

To date, ethnobotanical, ecotourism, sociological, and environmental researchers, as well as tourism and environment consultants, have contributed to the embryonic development of the Rainforest

Western Samoa has a number of examples of customary-owned rainforest preserves. Eco-Tour Samoa targets these eco-villages, not only because of the history behind the protection of their rainforests and coastal habitats, but because community-based tourism is the only economically viable alternative to deforestation.

Ecolodge. Ideally, we wish to test various sustainable agricultural techniques as well as sustainable technologies before implementing them at selected ecotourism destinations. This site also lends itself to the principles of Permaculture as described by Keith Mollison.

Partners in the Rainforest Ecolodge project are adopting the “ecolodge guidelines” as published by The Ecotourism Society. Efforts are being made locally to design a “traditional-styled forest dwelling” incorporating composting toilets, low cost solar power hot water systems, as well as placing an emphasis on import replacement (e.g., use of locally grown foods and locally manufactured goods). The International Society for Ecotourism Management has pledged support for such a facility, and initial plans have been made to include accommodation facilities for visiting eco-researchers, eco-workers and ecotourists.

CONCLUSION

Many do not realize how quickly tropical rainforests are disappearing in Western Samoa, despite the fact that we are one of the few nations in the South Pacific that has banned the export of whole logs. That we may have only five years of accessible tropical rainforest remaining is unnerving to many tourism industry members and nature travelers to the South Pacific.

Deforestation is being driven by agricultural and urban expansion. Therefore, an environmental audit of our natural resources, including our export industries, is needed. Once the audit is completed, we can plan a sustainable tourism industry for Samoa—one that will enhance the cultural integrity of all Samoans and ensure the conservation of our remaining tropical forests. Members of the tourism industry are taking this bold initiative and are beginning an environmental audit. Guidelines can be formulated to show how ecotourists can be included in such an audit, especially showing how ecotourists encourage import replacements and support community-based tourism projects. Western Samoa is anxious to adopt further ecotourism guidelines that will assist not only a transition towards sustainable tourism but equitable and sustainable human development in general.

We invite all to review and examine the design and implementation of the NEP. We invite suggestions about how to improve our current environmental management, and enhance our cultural integrity. At the same time, we must provide our visitors with a meaningful, rewarding, and adventurous experience here in the South Seas at a time when our most attractive natural resources are under the greatest threat. French nuclear testing has further exacer-

That we may have only five years of accessible tropical rainforest remaining is unnerving to many tourism industry members and nature travelers to the South Pacific.

bated this problem, environmentally, economically, and even culturally in that, as Pacific Islanders, we are still being dictated to by foreign interests. Samoa mo Samoa (Samoa for Samoans). Ironically, in Western Samoa there are no foreign interests currently over-exploiting our natural resources. It is now quite clear that improved use of natural resources by Samoans is warranted.

Members of SEN and PEN have rapidly adopted the basic principles of ecotourism and are now doing their utmost to push industry members toward sustainable tourism. Our members study and practice sustainable arts, and are anxious to receive more detailed ecotourism guidelines that will provide answers. We are encouraging the industry to formulate ecotourism guidelines that are easily implementable in developing countries like Western Samoa. There is no room for esoteric guidelines. We need practical or immediate solutions for rural villagers currently facing life-threatening situations.

In conclusion, and as the rightful custodians of our own resources, the following reference is presented to highlight the empathy Samoans have for their forest resources:

My fore-fathers had a dream. They had a dream that one day the land and the rainforest would be saved for eternity, they had a dream that the land and these would forever be well looked after, and not destroyed and distributed to other people.

I share that dream. Five times the logging companies have been here asking for our forest. I have been deeply depressed since they put a lot of pressure on all of us, persuading the people in our village to sell the forest for a few dollars. I resisted, because I love my people and the land more than the money. I felt an immense relief when we were offered an opportunity by the Swedish Society for Nature Conservation to realize the dream of my forefathers, to save and protect the forest, the birds, the flying foxes, and the marine resources.

I believe that we can only be masters of our destiny if we take care of our environment. The protection of our forest has brought dignity and strength to our community and gives hope for our children and for all generations to come. Fa'afetai tele lava mo lo outou alofa, Ia fa'amanuia e le Atua lo tatoulalolagi ma lo tatou lumanai'i.

The former statement comes from Ulu Taufu'asisina Tausaga, the paramount talking chief of Tafua and Vice-President of Fa'asao Savaii [Save Savaii Island].

There is no room for esoteric guidelines. We need practical or immediate solutions for rural villagers currently facing life-threatening situations.

Visitors to Western Samoa interested in indigenous cultural tourism now find themselves directly or indirectly assisting tropical rainforest conservation efforts. The authors strongly believe that cultural enhancement is possible through ecotouristic programmes, and we invite anthropologists and other eco-researchers to document our cultural, economic, environmental, and social problems.

Ideally, we are all looking for acceptable solutions. Fortunately, ecotourism has already proven to be a powerful environmental tool and a powerful development tool, capable of reversing some of the major environmental challenges in Western Samoa. But, like all other projects, an appropriate Environmental Impact Assessment (EIA) should be carried out before the project proceeds any further.

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210 THE ECOTOURISM EQUATION: MEASURING THE IMPACTS

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The Green Evaluation Program: Preliminary Results from a Pilot Ecotourism Monitoring Program for Nature Tour Operators

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ABSTRACT

The concept of ecotourism is maturing. With this development has come a search for standards to guide ecotourism suppliers and destinations. Ecotourism, unlike other forms of specialty travel, is defined by responsible practices on the part of travel businesses. Ecotourism is defined by how well ecotourism businesses can contribute to the conservation of natural resources and the well-being of local people. In 1993, The Ecotourism Society (TES) took several steps to address the need for standards by formulating and publishing *Ecotourism Guidelines for Nature Tour Operators*. The Green Evaluation Project is designed to monitor how well private tour operators are meeting the standards articulated in these guidelines. The purpose of this exploratory study is to design, develop, and analyze a tool and method which could be used to examine the compliance behavior of nature tour operators with TES guidelines. Preliminary analysis of a consumer evaluation survey revealed that nature tour operators appear to be practicing and generally following TES guidelines. The success of this pilot study and the suitability of this survey instrument and data collection technique as a potential certification program are discussed.

THE DEVELOPMENT OF STANDARDS IN ECOTOURISM

The ecotourism field has grown in the last decade from a concept to a reality. During this time period there has been a tremendous amount of discussion about how well ecotourism can contribute to conservation and sustainable development worldwide. Virtually no businesses existed ten years ago that considered or used ecotourism principles or standards when developing itineraries, training guides, or marketing products. Now, many businesses throughout the world are not only aware of ecotourism standards, but are striving towards meeting these standards. This is not to say that many nature tourism business owners were not conservationists even 20-30 years ago. Many business owners say they were already practicing ecotourism, long before it was labelled. However, there were no generally accepted ecotourism standards or guidelines until the late 1980s. In the last five years ecotourism guidelines have been formulated by many different organizations worldwide. This has been an important step in setting standards within the field of ecotourism.

Professional associations have been formed which have

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CARE - Project Subir.

developed codes of ecotourism ethics standards, and “voluntary” guidelines have been produced to aid in the management of the ecotourism product (Orams 1995). Overwhelmingly, the majority of these voluntary guidelines and standards encourage travelers, tour operators, and guides to strengthen their efforts to support conservation in the ecotourism destinations. The National Audubon Society, The Ecotourism Association of Australia, Canadian Environmental Advisory Council, and The Ecotourism Society are but a handful of organizations that have designed guidelines to assist business owners with the information they need to pursue a set of pre-established objectives.

However, few efforts have been made to determine if ecotourism businesses are succeeding in the effort to meet ecotourism guidelines. Without giving due regard to the underlying principles of ecotourism, private operators and even governmental agencies seem to be securing the short-term economic benefits to sell regions or products (Jarvie 1991, Wight 1993). The Ecotourism Society neatly summed up the problem by describing this sell perspective, warning customers of the dubious claim of “eager travel marketers who exploit the trend towards integrating environmental values into vacation choices... the public at large must continue choosing from among destinations and tour operators who mostly package nirvana and paradise like nut bars and soap” (Hiller 1991).

Another problem is that the ecotourism businesses that are truly spending their limited capital on conservation and sustainable development initiatives may be reducing their competitive edge against the nirvana and paradise marketers. The fact is that most tourism businesses operate with limited capital. They often must decide whether to put their efforts and funds into extra marketing or towards attaining sustainability in the destinations they serve.

It is precisely because of the concerns expressed above that non-governmental organizations, such as The Ecotourism Society, are suggesting that a transition needs to be made into certification and evaluation programs that help to reduce false marketing and encourage companies to consider improving their practices (Cecil 1995) and to reward the companies that are actually meeting ecotourism standards. The inevitable question is how long can we continue to promote ecotourism to our world’s protected and unprotected natural areas under the unregulated or unchecked conditions?

MONITORING

As this segment of the global travel industry grows and matures, there have emerged proposals for objective criteria to evaluate ecotourism suppliers and destinations, and to monitor the level of

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conservation affiliation and the extent of their impacts (Hiller 1991, Holland 1992, Shores 1992). Don Hawkins (Cecil 1995) summed up the situation by suggesting, "People are looking for more than just words...they're looking for concrete actions and practices." Not all ecotourists may be looking for specific actions and practices. But there are many who travel with high expectations related to the natural environment and who have come to expect certain sustainable practices to be in place (Kretchman & Eagles 1990, Eagles 1992). What some would say has evolved in a short period of time is an "ecotourist" who seeks to identify "true," principle-centered ecotourism suppliers and destinations.

With ecotourism's maturity, there is a growing consensus that it is time to objectively evaluate ecotourism suppliers and destinations. There is indeed strong interest in the travel and tourism industry to offer some type of a "stamp of approval" (i.e., Good Housekeeping Seal of Approval) to those suppliers and destinations who meet certain standards that reflect environmental and social responsibility for the particular sectors of the tourism industry they represent.

Of the tourism organizations sponsoring green seals for suppliers and destinations, The Ecotourism Society's Green Evaluation program is the only effort that relies on sources outside the sponsoring organization to evaluate business practices and adherence to principles. TES is relying on an independent evaluation of participating nature-based tour operators through the use of consumer surveys and the analysis of such by a neutral party (i.e., academic institutions) for adherence information. It is generally recognized that program sponsors and funding sources can rarely act completely independently or autonomously. As a result, TES believes independent evaluation of participating tour operators by a neutral source should be mandatory if an ecotourism certification program is to have any real credibility.

However, few efforts have been made to date to determine if ecotourism businesses are succeeding in the effort to meet ecotourism guidelines.

THE TES GREEN EVALUATION PROGRAM

In 1993, TES formulated and published *Ecotourism Guidelines for Nature Tour Operators* (Figure 1). It was drafted by a group of conservationists, tour operators, and academics. The guidelines were based on five separate surveys and focus group discussions that emphasized the practical techniques businesses have used in the past to handle thorny conservation and development issues. The guidelines were an attempt to bring to the forefront what state of the art ecotourism services should be in the 1990s. The 20-page document not only provides guidelines on what should be observed by nature tour operators, but also how these services should be delivered, with what objectives, and for whose benefit.

Figure 1 - TES Ecotourism Guidelines for Nature Tour Operators - Summary

- Prepare travelers to minimize their negative impacts while visiting sensitive environments and cultures before departure.
- Prepare travelers for each encounter with local cultures and with native animals and plants.
- Minimize visitor impacts on the environment by offering literature, briefings, leading by example, and taking corrective actions.
- Minimize traveler impacts on local cultures by offering literature, briefings, leading by example, and taking corrective actions.
- Use adequate leadership, and remain small enough to ensure minimum group impact on destinations. Avoid areas that are under-managed and over-visited.
- Ensure that managers, staff and contract employees know and participate in all aspects of company policy to prevent impacts on the environment and local cultures.
- Give managers, staff, and contract employees access to programs that will upgrade their ability to communicate with and manage clients in sensitive natural and cultural settings.
- Be a contributor to the conservation of the regions being visited.
- Provide competitive, local employment in all aspects of business operations.
- Offer site-sensitive accommodations that are not wasteful of local resources or destructive to the environment and that provide ample opportunity for learning about the environment and sensitive interchange with local communities.

When the *Ecotourism Guidelines for Nature Tour Operators* were being formulated, there was extensive discussion among the focus groups on the design of a complementary monitoring program. No monitoring programs stressing environmental guidelines and sustainability standards existed in the tourism field at that time. The practical challenges of setting up a program to effectively oversee the standards of an industry delivering its products in the most far-flung places on earth seemed enormous. Several key decisions were made at that time:

1. It would be impossible to monitor outbound tour operators and their global operations from the United States or any other outbound country.¹
2. It would be impossible to establish a monitoring program for tour operators that would be applicable to other players in the tourism industry such as travel agents or lodges.
3. It would be difficult to carry out a global monitoring program. Rather, monitoring would have to be carried out on a regional or national basis.
4. It would be difficult to organize and pay for experts to carry out independent monitoring of ecotourism operators. The process would be biased by the short-term nature of an expert's travel experience.

¹ Outbound tour operators - The outbound tour operator is the primary marketing and sales organization for the tour in the country of departure. The outbound tour operator takes responsibility for selecting and packaging tours, marketing and promoting tours, delivering all pre-tour information, making all airline arrangements, handling tour liability, and delivering all client services before departure.

While it is recognized that monitoring and evaluation programs in the field of ecotourism are still in their infancy, and funding to support them is not readily available on any scale, it is hoped that TES's Green Evaluation Project may become a prototype for future monitoring programs. The project was established as a consumer monitoring program, because consumers are the only players in the tourism industry that are present throughout the tourism product delivery process. It was felt that surveying consumers would provide the most unbiased source of information on how sustainably the tourism product is being delivered over the long-term. Three study outcomes expected are :

1. To use this process as a method to understand how well Ecuadoran nature tour operators are complying as a group with implementing TES guidelines and to provide confidential reports to individual businesses that will allow them to understand where improvements can be made.
2. To understand whether the method used to evaluate nature tour operators is reasonable, fair, and has merit as a tool to certify or rate nature tour operators in Ecuador and elsewhere.
3. To evaluate this prototype monitoring program for its potential in helping to predict the success of sustainable ecotourism development, both large and small scale, worldwide.

The fact is that most tourism businesses operate with limited capital. They often must decide whether to put their efforts and funds into extra marketing or towards attaining sustainability in the destinations they serve.

RESEARCH METHODS

The Recreation, Travel & Tourism Institute (RTTI) at Clemson University, USA, was contracted to design, develop, and analyze a tool and method which could be used to measure compliance with TES's *Ecotourism Guidelines for Nature Tour Operators*. By contracting with a third party, TES hoped to eliminate potential bias inherent in self-evaluation by nature tour operators (Rossi & Freeman 1993). The resulting 8-page questionnaire was designed in such a manner that travelers could complete it within approximately ten minutes. It consisted of the following six sections with the respective number of questions per section listed in parentheses: Pre-Departure Information (4), Visitor Information and Education Provided During the Trip (3), Tour Operator Contributions to Conservation and Local Development Programs (5), Tour Operator Impact Management Program (5), Evaluation of Local Accommodations (2), and Socio-Demographic Information About Ecotourists (14). The questionnaire was designed in such a way that nine of the ten guidelines proffered by TES could be evaluated by the consumer. The lone guideline that was not addressed was, "Giving managers, staff, and contract employees access to programs that will upgrade their ability

to communicate with and manage clients in sensitive natural and cultural settings.” This guideline, although implied and probably reflected through the service provided by the tour operator, was beyond the range of consumer evaluation.

The site chosen for the pilot study was the country of Ecuador because of the strong interest on the part of the Ecuadoran Ecotourism Association (EEA), located in Quito, Ecuador, to participate in and help administer the project. Through their efforts a Spanish version of *Ecotourism Guidelines for Nature Tour Operators* was made available in early 1994 to all Ecuadoran nature tour operators who were interested in receiving it. In August 1994, three general orientation meetings regarding the proposed Green Evaluations Project were held in the Ecuadoran cities of Quito, Guayaquil, and Cuenca. All Ecuadoran nature tour operators were invited to attend. Upon completion of the orientation meetings, 31 Ecuadoran nature tour operators, responsible for approximately 65% of the Ecuadoran tour group visitors were identified as being willing to participate in this proposed one-year long project. The 31 participating nature tour operators ranged in size from serving one to nearly forty thousand clients yearly.

The administration of the survey began on April 1, 1995 and ended on March 31, 1996. In March 1995, a total of 4,000 survey instruments were printed in four languages (English, Spanish, German, and French) in Ecuador. EEA began distribution to the 31 participating nature tour operators. One more nature tour operator was added to the study after the original thirty-one had been identified. Each tour operator was given enough questionnaires to randomly sample 10% of their yearly clients. They were to distribute the questionnaires across all 12 months of the project in an equitable manner that reflected their business cycles. For instance, if the operator had some very busy months with a high number of ecotourists, then a proportionate number of questionnaires were to be distributed during those months to reflect the increased ecotourists. Further, if they had too few ecotourists one month, then they were to select additional ecotourists the next month to achieve the desired overall number.

Nature tour operators were required to administer the questionnaires to their clients at the beginning of the tour with the instructions that ecotourists were to respond to the questionnaires as the respective tours progressed. All completed questionnaires were to be sealed in an envelope by the ecotourists and collected by the tour leader for return to EEA. The Ecuadoran Ecotourism Association, in turn, mailed the completed questionnaires to Clemson University for analysis. Another method in which Clemson University received

It was felt that surveying consumers would provide the most unbiased source of information on how sustainably the tourism product is being delivered over the long-term.

completed questionnaires was when the ecotourists took the survey instrument home with them for completion and returned them via personal mail. This represented approximately 10% of the total received. At the end of the one-year study period, a total of 353 completed questionnaires had been received for analysis. Because of difficulties in measuring the total number of survey instruments that were actually administered to ecotourists, we were unable to develop an accurate survey response rate. Of the 353 completed questionnaires, 230 were written in English, 76 in German, 25 in Spanish, and 22 in French.

RESULTS AND FINDINGS

SOCIO-DEMOGRAPHIC INFORMATION

In an effort to develop a profile of the Ecuadoran ecotourists, a series of questions were developed on the socio-demographic characteristics of the survey respondents. As can be seen in Table 1, respondents had a median age of 49 years, 54.6% were women, 67.2% had a college degree, and 47.1% have a combined yearly income of \$80,000 or greater. Nearly forty-percent (38.1%) had a Master's Degree or more. One-half (50.9%) of the respondents were from the United States, 40.9% were from Europe, and 4.9% were from South America. These results are similar to findings by Kretchman and Eagles (1990), Williacy and Eagles (1990), Fennell (1990), and Ballantine (1991).

The Ecotourism Society's Green Evaluation program is the only effort that relies on sources outside the sponsoring organization to evaluate business practices and adherence to principles.

Table I - Socio-demographic Characteristics of Respondents

	Frequency	Percentage
Gender		
Female	179	54.6
Male	149	45.4
Education		
High school diploma or less	41	12.8
College degree or some degree	121	37.8
Graduate degree or some graduate school	158	49.4
Gross family income in \$US		
Under \$20,000	18	7.6
\$20,000 to \$39,999	42	17.6
\$40,000 to \$59,999	52	21.8
\$60,000 to \$79,999	14	5.9
\$80,000 to \$110,000	43	18.1
Over \$110,000	69	29.0
Age		
14 to 29	50	15.5
30 to 39	47	14.6
40 to 49	65	20.2
50 to 59	80	24.9
60 to 69	60	18.6
70 and above	20	6.2
Citizenship		
United States	167	50.9
Europe	134	40.9
South America	16	4.9
Other	11	3.3

TRIP CHARACTERISTICS

Table 2 reveals trip characteristics of the survey respondents. Two-thirds of the ecotourists did not consider any other destination before deciding to travel to Ecuador and 82% were first-time visitors. The median amount of total expected expenses for the entire trip was \$4,200 with 32% spending over \$5,000. Finally, 70% of the respondents were traveling as part of a packaged tour with 48% booking their tour in the United States, 33% in a country other than the U.S., and 19% in Ecuador.

Table 2 - Trip Characteristics of Respondents

	Frequency	Percentage
Did you consider other ecotourism destinations before deciding to travel to Ecuador?		
Yes	103	32.8
No	211	67.2
Did you travel to Ecuador for any other purpose than ecotourism?		
Yes	73	23.0
No	245	77.0
Including this trip, how many times have you visited Ecuador?		
One	255	82.0
Two	25	8.0
Three	12	3.9
Expected expenses for this entire trip?		
\$3,000 or less	64	25.8
\$3,001 to \$5,000	106	42.7
\$5,001 to \$7,000	44	17.8
\$7,001 to \$9,000	15	6.0
\$9,001 or more	19	7.7
Part of a packaged tour?		
Yes	223	69.9
No	96	30.1
Composition of travel party **		
Spouse	124	37.6
Friends and/or professional colleagues	89	27.0
Tour company	80	24.4
Additional family members	65	19.7
Other	56	17.0
Alone	53	16.1

** Totals more than 100% due to multiple mentions.

PRE-DEPARTURE INFORMATION

It is generally recognized that receiving trip-related information prior to departure helps to strengthen and/or dispel certain travel expectations. Not only can effective pre-departure ecotourism literature provide this, but it can also act as a mechanism for environmental education, which is customarily considered part of an ecotourism package. Eighty-four percent (84.4%) of the respondents (n=270), received pre-departure information about their tour, of which 95.3% actually read the information (Table 3).

Table 3 - Pre-departure Information Supplied by Tour Operators

Information on or about...	Frequency	Percentage*
Equipment, clothing, and personal supplies to bring on the tour	251	93.0
The local ecosystems which you'll be seeing	209	77.4
A bibliography of suggested readings relevant to your trip	174	64.4
Sources of information on Ecuadoran destinations being visited	150	55.6
The local people and their culture, history, etc.	139	51.7
Travel ethics about proper behavior in natural areas	136	50.4
Illegally traded souvenir products which you ought to avoid	115	42.9
Travel ethics about proper behavior when interacting with locals	98	36.7
How to avoid accidental transport of alien plants or animals	84	31.3
Warnings against bringing disposable goods	45	16.8

* Equals the percent of respondents who replied "yes" for each query listed

Warnings against bringing disposable goods (16.8%) received the smallest amount of attention from the nature tour operators according to the respondents, with information on how to avoid accidental transport of alien species of plants and animals (31.3%) receiving only a nominal amount of attention according to the respondents.

VISITOR INFORMATION AND EDUCATION PROVIDED DURING THE TRIP

Wight (1995) suggests sustainable ecotourism should involve education among all parties before, during, and after the trip. Table 4 depicts the proportion of respondents who felt they were prepared via briefings, literature, and examples to enhance their understanding of the fragility of the area, to avoid adverse environmental impacts and to minimize their impact on local cultures.

As can be seen, there was fairly strong support that tour operators were providing information and education regarding the fragility of natural environment during the respective nature tours. Nine out of ten (88.8%) of the respondents reported that they were briefed prior to each stop of their tour, with 83.3% reporting that briefings on proper behavior while on trails, in campsites, around wildlife, or fragile plants, took place. The two areas of mild concern are the advisement against purchasing specific crafts that are produced from threatened natural resources (65.7%) and the discouragement of having unrealistic expectations of observing rare wildlife or plants (59%).

Overall, there is not as strong support for the provision of information to minimize cultural impacts as was provided by the tour operators in an effort to minimize environmental impacts. While 83.9% of the respondents felt that information was provided about local natural history, only 29.3% felt they were prepared as to how to respond to begging, with just 48.9% understanding whether it is acceptable to bargain for goods and how to do it.

TOUR OPERATOR CONTRIBUTIONS TO CONSERVATION AND LOCAL DEVELOPMENT PROGRAMS

Another area considered fundamental to the sustainability of ecotourism is nature tour operator contributions to conservation and local development programs. Table 5 represents the percentage of respondents who observed if their tour operator was contributing to profit and/or non-profit conservation and development programs in Ecuador, was facilitating visitor contributions, and did encourage visitors to write government and/or corporate organizations in Ecuador whose policies were damaging.

Over sixty percent (61.6%) of the respondents reported that their tour operator was contributing to profit and/or non-profit

Table 4—Visitor Information and Education Provided During the Trip

	Frequency	Percentage
A general orientation or overview at the beginning of your tour	301	91.2
Briefings prior to each stop of your tour	293	88.8
Information about local natural history	276	83.9
Briefings on proper behavior on trails, in campsites, etc.	275	83.3
Advisement against collecting souvenirs from natural areas	274	82.5
Informative discussions to and from destinations and/or sites	272	82.4
Information on local regulations with which you must comply	255	77.5
Information about the level of physical difficulty	251	76.1
Advisement on how to avoid adverse impacts of your visit in natural areas	251	75.6
Briefings on proper behavior with trash, human waste, fires, etc.	231	70.0
Information on history of local cultures	218	66.3
Advisement against purchasing products made from threatened flora/fauna	218	65.7
Acceptable behavior when photographing local culture/people	195	59.3
Advisement against unrealistic expectations of observing rare flora/fauna	196	59.0
When to pay gratuity, how much to pay, and to whom	184	56.1
Information about local cultural values	182	55.5
If it is acceptable to bargain for goods being purchased	160	48.9
How to respond to any begging which may be encountered	96	29.3

conservation and development programs, and this percentage could be potentially be higher due to the 26% who were uncertain (N/A). Table 5 also reveals a much higher number of respondents uncertain (N/A) as to whether their tour operator was providing contributions to strictly local non-profit conservation initiatives (69.6%), with 39.5% of the respondents unsure whether their tour operator was facilitating visitor contributions during the trip, and 38.6% unsure whether their tour operator encouraged respondents to write to government and/or corporate organizations whose policies were damaging to the environment and/or local cultures.

Table 5 - Tour Operator Contributions to Conservation and Local Development Programs in Ecuador

	Yes	No	N/A
Observed that your tour operator is making contributions in Ecuador (n=315)	61.6%	12.4%	26.0%
Operator facilitates visitor contributions to local conservation initiatives during the trip (n=314)	38.5	22.0	39.5
Operator provides corporate contributions to local non-profit conservation initiatives (n=312)	23.7	6.7	69.6
Operator encouraged you to write to government and/or corporate organizations whose policies are damaging to the environment and/or local cultures (n=311)	22.2	38.9	38.9

Finally, respondents were asked to observe if tour operators have integrated locally owned businesses into aspects of their nature tour operations (Table 6). It appears that the tour operators are generally contributing to the local economies visited via the hiring and purchasing practices observed by the respondents. It also appears that tour operators are doing a relatively good job in involving individuals, entrepreneurs, and businesses in their operations. This was especially true for transportation services (81.8%). Over one-half of the respondents indicated that their tour operators secured locally owned services from restaurants (67.5%), local guides (60.3%) and food and craft vendors (52.6%). Unfortunately, a relatively large percentage were unable to determine whether or not locally owned businesses and services were being utilized.

Table 6 - Local Involvement in Tour Operator's Business Functions

Did tour operator hire or purchase services from locally owned businesses:	Yes	No	N/A
Transportation (e.g., vehicles, boats, etc.) (n=324)	81.8%	6.2%	12.0%
Restaurants (n=310)	67.5	14.8	17.7
Guides from each community being visited (n=308)	60.3	17.5	22.2
Food and craft vendors (n=308)	52.6	15.3	32.1

TOUR OPERATOR IMPACT MANAGEMENT PROGRAM

Ecotourists were asked to evaluate how well the nature tour operators addressed impacts on the environment and local culture. Nearly all (96.6%) of the respondents felt the tour operators provided enough guides to manage the tour group (Table 7). Respondents were then asked to report how often (i.e., never, rarely, sometime, frequently, always) their tour guides communicated, encouraged, or explained how to prevent impacts on the environment and local cultures. As can be seen in Table 7, it appears that tour guides did a very good job of communicating to the ecotourists important concerns regarding visitor impacts on the environment and the local cultures to these special areas. With the exception of one person, respondents reported that in each of the questions nearly 80% of the tour guides “frequently” or “always” communicated these concerns to them.

Table 7- Tour Operator Impact Management Program

	Never	Rarely	Sometimes	Frequently	Always
Encouraged proper behavior in sensitive zones (n=318)	2.2%	.9%	3.5%	18.9%	74.5%
Communicated to tour group member about need for environmental & cultural sensitivity (n=320)	2.8	1.2	8.8	35.0	52.2
Monitored tour member's behavior during the tour (n=315)	3.8	3.2	10.8	26.7	55.5
Explained physical difficulty prior to each segment of the tour (n= 316)	5.1	3.8	10.1	18.0	63.0
Encouraged proper disposal of waste products (n=310)	4.8	3.5	11.0	18.4	62.3
Cooperated with and has respect of community leaders (n=229)	11.4	4.4	4.8	17.9	61.5
Explained concerns of the local communities (n=270)	8.5	9.3	13.3	24.8	44.1

EVALUATION OF LOCAL ACCOMMODATIONS

Overnight accommodations are a very important part of the ecotourist's experience as well as representing a significant component of the ecotourism industry. As a result, the management practices of these lodging establishments are critical to the success of ecotourism in Ecuador and other countries. To determine if nature tour operators were utilizing lodging operations that were adhering to TES guidelines, respondents were asked to report if they observed eight environmentally and culturally friendly actions and policies at all of the properties they stayed at (Table 8).

Based on all visits/stays (N= 978) at all types of accommodations (i.e., hotels/lodges/ yachts), 94.0% of the respondents reported that the accommodations did not keep or bait endangered or exotic animals on the grounds. Over one-half (51.6%) of the respondents indicated that the property had adapted to the local environment. However, for the remainder of the actions and policies, respondents reported seeing them implemented at local accommodations less than one-half of the time. Overall, it appears that nature-based tour operators are utilizing local lodging establishments that fail to consistently meet a majority of TES objectives for accommodations.

Table 8 - Evaluation of Local Accommodations

	Frequency*	Percentage**
Adapted to the local natural environment.	505	51.6
Had informative/educational materials available for guests.	475	48.6
Avoided Styrofoam, plastic, and excessive use of paper products.	410	41.9
Reflected cultural motifs through interior and/or exterior design.	378	38.7
Sold locally produced crafts and food items on premise.	338	34.6
Provided check list and guides to species found locally.	306	31.3
Had a program to re-use/reduce waste.	252	25.8
Kept or baited endangered/exotic species on grounds for viewing.	59	6.0

* Refers to the total number of times a particular characteristic was circled based on all visits to all accommodations (n=978)

** Totals more than 100% due to multiple responses

ADDITIONAL FINDINGS

For the most part, the Green Evaluation program was designed to measure nature tour operators' compliance with TES's *Ecotourism Guidelines for Nature Tour Operators*. However, a number of questions were asked which provide valuable insight into the attitudes and opinions of Ecuadoran ecotourists about their impact as a visitor, the importance of compliance with TES guidelines, and how to encourage compliance by nature tour operators. First, ecotourists were asked to report how much contact they had with local cultures

(i.e., none, some, a fair amount, quite a bit, a lot). As can be seen in Table 9, the majority of respondents indicated that they had “some” (40.7%) or “a fair amount” (28.4%) of contact with local cultures. Interestingly, when ecotourists were asked if their visit was intrusive into the lives of the local population, three-fourths (75.4%) responded in the negative. Unfortunately, we do not know if these respondents felt that their visits were not intrusive due to nature tour operators’ educational programs, efforts to keep tourists away from locals, or their feeling it was the “appropriate” response.

Second, when asked whether the TES guidelines that were discussed throughout the questionnaire should be enforced, 91.5% responded in the affirmative. For those who indicated that the guidelines be enforced, 33.1% of the respondents advocated extremely strict enforcement, 18.1% reported somewhat strict enforcement, and less than one percent stated leniently enforced guidelines. However, the most popular response was from the 48.1% of the respondents who felt that the enforcement of TES guidelines depended on the circumstances.

Table 9 - The Level of Contact Respondents had with Local Cultures

	Frequency	Percentage
None	41	12.5
Some	133	40.7
A Fair Amount	93	28.4
Quite a Bit	44	13.5
A Lot	16	4.9

Lastly, respondents were asked to indicate what methods should be used to encourage operators to follow these recommended practices. As can be seen in Table 10, respondents reported that the suspension of operating license (52.2%), fear of loss of business (49.7%), and threat of publicity (i.e., the tourists finding out) (43.4%) were the preferred methods of encouraging nature tour operators to follow the recommended practices as suggested in this study. Moderate support was expressed for heavy fines (27.8%) and fear of being prosecuted (18.0%). Least supportive techniques were the fear of being detected (10.4%) and a light fine (8.9%).

DISCUSSION

On a positive note, a considerable amount of information was generated regarding nature tour operators’ compliance with nine out of the ten TES guidelines. As a whole, recognizing potential non-response bias and non-participation by a significant number of operators, the Green Evaluations survey does provide TES as well as

Table 10 - Compliance Techniques Recommended by Respondents

	Frequency	Percentage*
Suspension of operating license	165	52.2
Fear of loss of business	157	49.7
Threat of publicity, tourist finding out	137	43.4
Heavy fine	88	27.8
Fear of being prosecuted	57	18.0
Fear of being detected	33	10.4
Light fine	28	8.9
Other	31	9.8

* Totals more than 100% due to multiple responses.

the EEA with valuable data about the current state of compliance with guidelines for nature tour operators. The survey results provide a one year “snapshot” of how well the Ecuadoran nature tourism industry has adhered to the guiding principles of sustainable ecotourism. With this information, the EEA will be able to identify what TES guidelines are being followed and which ones need to be given greater attention by the nature tour operators. The surveys will also help government and other entrepreneurs, such as lodge developers, with information on where the nature tourism industry may require assistance in order to meet international ecotourism standards.

Findings from this survey may also be used as a “benchmark” for TES and EEA to evaluate the status of compliance with nature tour operator guidelines in the future. By monitoring on a yearly basis, the EEA and TES can determine if improvements in compliance are being made over time. While the assessment of individual businesses is limited to date, it is our belief that a comparative analysis that examines the differences in compliance among small, medium, and large nature tour operators will be possible. This information could also be used by TES and EEA to educate and encourage nature tour operators of different sizes to focus on problems specific to the size of their company.

However, in examining the process of evaluating and monitoring nature tour operators a number of issues have become readily apparent with measuring compliance with TES guidelines. While nature tour operators were very supportive of the Green Evaluation process, a number of survey administration and collection problems were encountered. Out of the approximately 4,000 questionnaires that were to be distributed to the 32 participating nature tour operators for the study period (April 1, 1995 through March 31, 1996), a total of 353 completed or partially completed survey instruments

were returned to Clemson University. As can be seen in Figure 2, this problem is manifested in researchers only being able to statistically evaluate with any validity compliance with TES guidelines for four of the participating nature tour operators. Of the 32 nature tour operators participating in the project, 21 returned completed or partially completed questionnaires for analysis. Nine of the 32 operators accounted for 88.9% of the total questionnaires received by Clemson University. In addition, two nature tour operators went out of business during the study period.

As a result of the low response rate in the first year, a project extension period has been initiated between April 1- September 1, 1996, the Ecuadoran high season for eco-travel. Several problems in Ecuador in 1995, including a border war with Peru and an uprising in the Galapagos Islands, distracted participating tour operators, and may have led to problems with proper distribution of the evaluation forms to consumers. Some important questions about individual company performance and performance according to company size will be addressed in the extension period.

At this point, a critical examination of the possible shortfalls of the Green Evaluation process is required. The two underlying problems with the survey administration and collection process appear to be: 1) the length and complexity of the questionnaire and 2) the failure of nature tour operators to follow established administration and collection procedures developed by Clemson University and TES and directed by the EEA. Further analysis is needed to determine if the questionnaires were distributed consistently during the year and whether consumers resisted completing the questionnaire due to its length, complexity, clarity, or translation problems.

There was evidence from discussion with representatives from EEA and TES that nature tour operators differed in how they administered the questionnaire. This leads researchers to conclude that communication problems may have existed between researchers, agencies, owners, and managers of the nature tour operations and their field staff (i.e., guides). However, a potentially larger problem appears to be the survey instruments being administered inconsistently throughout the year by representatives of the nature tour operators. This problem is evident from the 11 nature tour operators who did not return any completed survey instruments and the nine nature tour operators who returned five or fewer completed or partially completed questionnaires. In an effort to address these potential problems, Clemson University requested that the EEA determine how many questionnaires had been distributed by participating nature tour operators and how many they still had at the completion of the study time period. With this information, an accurate survey response rate would have been calculated. This

would allow researchers to determine if the problem of low response rates existed because of the ecotourism consumers or due to poor administration by the nature tour operators. Unfortunately, the EEA was unable to fulfill this request due to the sensitivity of the issue. As a result, we can only speculate as to the source of the low participation/response rate.

Figure 2 - The Number of Questionnaires Distributed and Received from Participating Nature Tour Operators

<u>Nature Tour Operator</u>	<u>Distributed</u>	<u>Returned</u>
Adria Travel	92	0
Angermeyer Enchanted Exped.	115	0
Cabanas Alinahui	120	7
Canodros	341	67
Chasqutur	50	12
Ecoventura Tours	321	35
Ecuadoran Tours Quito	188	2
Ecuadoran Tours Guayaquil	60	0
Etnotur	46	3
Etica	100	0
Expediciones Apullacta	55	2
Expediciones Dayuma	53	1
Explorandes	175	0
Galasam	120	0
Klein Tours	341	14
Latitud Zero	50	0
Magic Ecuador	54	0
Metropolitan Touring	1	12
Native Life	61	5
Neotropic Turis	180	1
Nuevo Mundo	169	79
Pamir Travels	201	0
Quasar Nautica	260	0
Rolf Wittmer Tourism	100	43
Samoa Turismo	55	15
Sangay Touring	239	2
Supernova	40	0
Transturi	100	19
Tropic Ecologic Tours	36	7
Turismundial	91	2
Viajes Orion	75	6
Wilderness Travel**	<u>N/A</u>	<u>19</u>
TOTAL	3,989	353

** Wilderness Travel has a special arrangement with TES.

RECOMMENDATIONS

So what have we learned from this study? First, on their own, consumer questionnaires may not be the best method to evaluate nature tour operators. Because guides are often busy or preoccupied with their primary responsibilities, the administration and collection of questionnaires on a consistent basis may fall to the wayside. It is recommended that a sampling process be developed in cooperation with nature tour guides that best fits each trip schedule and meets the requirements for a valid evaluation process. Second, it appears that the questionnaire should be simplified and shortened to encourage a higher completion rate by guides, field representatives or ecotourists. It is our recommendation that a shorter instrument be developed which also addresses the nature tour guidelines in a more direct fashion. In addition, further research and discussion is needed to determine what level of compliance is acceptable. For example, should it be required that the minimum compliance rating be 75% or 80%? Should nature tour operators be required to have an acceptable compliance rating for each guideline or should it be based on an overall score? These are some of the issues that will be addressed in the summer extension period.

Through further discussions with guides, it may also be possible to determine how to best educate the ecotourists about an evaluation program. One of the benefits of a consumer evaluation program remains the education of the traveler who stands to learn a great deal about ecotourism if the surveys are treated as a fun investigation, not an embarrassing chore. Tourists will have to be creatively enlisted as partners in the process, and this is a tricky new “pitch” that guides will have to test out and learn. Apparently, tourists have been joking that the surveys represent “homework.” Neither the guides nor the tour companies feel comfortable leaving ecotourists with the impression of having to do extra work.

Another new idea that will be tested during the project extension is to whether to offer a “diploma” or framed wall certificate to tour operators that successfully get 10% of their client base to return survey forms.

Finally, the observation and opinions of ecotourists are important and are a meritorious way to measure compliance with nature tour operator guidelines. However, there are a number of limitations inherent with this evaluation method. These problems may include the inability for consumers to assess compliance with certain guidelines, confusion surrounding the terminology (i.e., jargon) used in the ecotourism industry, and the potential for nature tour operators to censor negative evaluations. Therefore, it is recommended that other evaluation techniques be included in measuring

One of the benefits of a consumer evaluation program remains the education of the traveler who stands to learn a great deal about ecotourism if the surveys are treated as a fun investigation, not an embarrassing chore.

the overall compliance of nature tour operators. The technique of using multiple methods, known as “triangulation” has the advantage of measuring compliance with TES guidelines from a variety of perspectives. These could also include peer review, outside experts, on-site inspections, “mystery shoppers,” and self-evaluations. Finally, a formal accreditation program could also be developed to ensure that standards and guidelines are being met. This would include a combination of the above methods as well as standardized testing, certification, and continuing education for nature tour operator business owners, managers, and guides.

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Opening Address

Community-Based Ecotourism Development: Identifying Partners in the Process

Keith W. Sproule
Wildlife Preservation Trust International

ABSTRACT

The focus of this paper is on achieving conservation and development objectives through development of Community-Based Ecotourism (CBE) enterprises. The premise of the paper is that successful CBE initiatives are supported by the partnerships of communities with government, non-government and private sectors. To this end, this paper attempts to evaluate those partners most able to support various initiatives. Finally, the paper provides a few thoughts about CBE initiatives in the context of a national tourism market and what might be included in a National Community-Based Ecotourism Development Strategy.

OVERVIEW

There are many terms used to link tourism development with conservation of natural and cultural resources. Some of these include: ecotourism, nature-based travel, adventure travel, sustainable tourism, and alternative tourism. For purposes of this paper, the fine distinctions between each of these terms will not be pursued.

Worthy of concern, however, is that no broadly accepted criteria of what constitutes any of these concepts have emerged. Many involved in the field of tourism research have begun to assert that tourism should satisfy various conservation and development objectives in order to be considered sustainable. Three of these objectives are: 1) financial support for protection and management of natural areas; 2) economic benefits for residents living near natural areas; and 3) encouragement of conservation among these residents, in part through economic benefits.¹

Significant resources have been devoted to developing this type of sustainable tourism on the assumption that these objectives can be achieved. However, lessons from the field have begun to highlight that without proper planning and integration, individual projects tend to operate in isolation, failing to influence either conservation or development. Generally, they also fail to generate the policy support necessary to bring their potential to fruition.

¹ Lindberg, Kreg, Jeremy Enriquez and Keith Sproule. 1995. Does Ecotourism Achieve Conservation and Development Objectives? *Annals of Tourism Research*.

A LETTER HOME

The following letter, from a hypothetical traveler, illustrates how Community-Based Ecotourism (CBE) might fit into a typical travel itinerary, just about anywhere in the world. It should also provide insight into how such experiences can be designed to maximize community participation.

Dear Family,

I'm writing you from (fill in the blank). I'm having the most wonderful experience! We left the capital city for a small community (high in the mountains / along the coast). It took the better part of a day to get here, (including a ride on the back of a motorcycle / a trek through the forest). I never thought I'd enjoy traveling in such a manner!

The village where we're staying is part of a unique program to develop community-based ecotourism. This means community members are involved with just about every aspect of tourism to their village. When we arrived we were greeted by one of the community leaders who took us to the Village Guest House. It's a simple house. Similar in design to other houses in the village. We were told it took two months to construct. There are twelve beds in the house, six per room, which makes it easy for both the men and women in our group.

In the afternoon one of the guest house managers took us on a long walk around the village. There's so much history here! The next day we went on a long hike to (a waterfall / mountain top). Our guide, (he speaks English!) told us all about (the medicinal plants of the forest / traditional uses for resources in the area). He said he likes to teach visitors about his home area and how people in his village live. Although he didn't say it, I'm sure he likes the salary he can earn from giving tours as well!

The thing I've enjoyed most about being here is eating! Yesterday I helped to do some cooking—I sure learned a lot about spices!

Learning about life in this village has been the best part of my trip. Being here is what I dream about when I'm sitting in my office at home! Tomorrow we leave for (the coast / the interior). I'm looking forward to seeing another part of the country. For the next part of our trip we have reservations at a really nice hotel.

Home soon,

P.S. I purchased several handicrafts as gifts from the Women's Craft Center in the village. I'm sure you're going to like them.

The preceding letter describes what a foreign visitor might typically experience in many communities around the world. Notice

Community-based ecotourism involves conservation, business enterprise, and community development.

that the community runs all of the activities described: lodging, food, guiding, and craft sales. In addition, the community has maintained a local natural area, perhaps a forest area or marine site, which draws visitors. This relationship between conservation of a natural area and job opportunities from tourism to the natural area is what CBE is all about.

The letter also describes many of the possible benefits to local people derived from the development of tourism in rural areas. Benefits include economic growth in rural regions; distribution of tourism revenue, which can foster improved welfare and equity in the industry; improved resource conservation by local people; and finally, diversification of the regional and national tourism product.

WHAT IS COMMUNITY-BASED ECOTOURISM?

The letter describes what might qualify as a classic community-based initiative. In its basic concept, CBE refers to ecotourism enterprises that are owned and managed by the community. Furthermore, CBE implies that a community is taking care of its natural resources in order to gain income through operating a tourism enterprise and using that income to better the lives of its members. Hence, CBE involves conservation, business enterprise, and community development.

In any CBE enterprise there will be direct and indirect participants and direct and indirect beneficiaries. It is important that the entire community has some level of involvement and some level of benefit. Direct participants in a community ecotourism enterprise might include members of the managing committee and the actual workers involved with producing products or services for sale. In some instances those who are the primary users of a resource might be involved as participants in a project as well. Indirect participants would include the broader community who selected the management committee of a project and those who do not directly use the natural resources involved in an enterprise.

Direct beneficiaries include employees, craft producers, guides, and committee members, while indirect beneficiaries include the wider community as recipients of community development projects funded by tourism revenues. How issues of participation and identification of beneficiaries get decided has a lot to do with how "community" is defined.

DEFINING "COMMUNITY"

A community is a group of people, often living in the same geographic area, who identify themselves as belonging to the same group. People in a community are often related by blood or mar-

Successful community-based ecotourism development, that is, ventures that satisfy both conservation and development objectives, are supported by partnerships between local communities, government agencies, NGOs, and the private sector.

riage. They may all belong to the same religious or political group, class, or caste.

Although communities may have many things in common, they are still complex and should not be thought of as one homogenous group. Communities are comprised of specific groups, such as landless and those with land, rich and poor, new immigrants and old residents. A number of separate interest groups that belong to one community may be affected differently by changes that are introduced. How separate interest groups respond to change is equally tied to kinship, religion, politics, and strong bonds between community members that have developed over generations. Depending on the issue, a community may be united or divided in thought and action.²

The “community-base” for community enterprises is rarely, if ever, all encompassing. Those community members with some initial disadvantages, such as poor housing, insufficient land or income, tend to be among those excluded from participation ecotourism development. Depending on how the ecotourism enterprise is designed, they may be excluded from the benefits of ecotourism development as well.

CONTROVERSIAL ISSUES OF COMMUNITY-BASED ECOTOURISM

PARTICIPATION

There is increasing recognition of the need to involve communities in general. There is much less agreement about exactly who should participate and to what extent.

One common definition states that participation is “giving people more opportunities to participate effectively in development activities...empowering people to mobilize their own capacities, be social actors rather than passive subjects, manage the resources, make decisions and control the activities that affect their lives.”³

The African Charter for Popular Participation takes a very broad approach to defining participation:

We believe strongly that popular participation is, in essence, the empowerment of the people to effectively involve themselves in creating the structures and in designing policies and programs that serve the interests of all as well as to effectively contribute to the development process and share equitably in its benefits.⁴

How a community chooses to define participation will prove important in determining what level of participation will satisfy the

² Wyckoff-Baird, B. 1990. *Community Participation in ICDPs*, WWF Technical Paper, 1991.

³ African Charter for Popular Participation.

⁴ Wells, M. with K. Brandon and M. Hannah. 1992. *People and Parks: Linking Protected Area Management with Local Communities*, IBRD, Washington, D.C.

ecotourism project's goals. Even where attempts at all-inclusive community involvement are well thought out, participation has sometimes been decided on the basis of political affiliation, land ownership, kinship, or gender. For instance, there are a growing number of examples of ecotourism enterprises which include overnight stays for visitors in villagers' homes, a type of lodging often referred to as home-stays. However, there are home-stay projects which exclude those whose homes are too small or are perceived to be too poor to lodge outside guests. Programs based on agreements between groups of landowners or tenants have excluded those not wealthy or well-connected. Level of education, English language ability and even age have been used to limit the number of participants. In some instances, the ecotourism enterprises of a community have become primarily ventures for young men.

GENDER

The role of women has proven a challenge for many community groups pursuing ecotourism enterprises. In some instances, gender issues have been dealt with overtly. In these cases it usually the young men who control ecotourism ventures. In other instances, decisions based on gender have not passed community scrutiny. For example, before revenue from a wildlife program was distributed, the leaders of the community (men) created a list of community beneficiaries, which included no female households. The women rebelled and succeeded in redefining the community to include divorced women and other female-headed households.

Many communities and cultures have "unspoken" restrictions on what roles would be appropriate for women within such ventures. Though women in rural areas may welcome ecotourism, quite often they are restricted from the most lucrative aspects of the enterprise, often working as cooks or cleaners.

Still, there are significant opportunities not to be overlooked. Many communities may find it inappropriate for women to work as guides through the forest, yet it may be quite possible for women to assume responsibility for guiding around the village. As women often will be responsible for preparing the meals, structures can be established whereby they also receive payments for food. In many locations, the sale of crafts stands out as an extremely promising approach to nurture women's participation. Overall it is important to recognize that failure to allow for maximum participation of all of the members of a community can limit the success of a project or program.

ECOTOURISM CAN BE DIVISIVE

An additional concern among community groups pursuing ecotourism is that the introduction of such ventures can reinforce

existing divisions in their communities or create new ones. This situation is in no way confined to tourism, but may be more acute since the activity involves highly visible contact with outsiders, so the returns may be perceived to be high. Issues of fairness, jealousy, and exclusion have confronted many CBE ventures.

One approach being tried in several areas is maintaining a community bulletin board and posting all decisions and actions. This has proven particularly helpful where money is concerned. Posting the agreed to prices being charged for products and services sold, such as guide services or stays at the community guest house, can help make everyone feel informed about how much money is actually involved.

Being open about monetary costs and benefits is often described as being “transparent.” Many groups have found that keeping their record books transparent has helped reduce accusations of financial fraud or corruption—one of the most divisive issues that can arise with any community project.

DECISION-MAKING

Although the broader community may be defined as the local people residing in a particular area, not all members of a community can come together all of the time. Therefore, recognized community representatives are often selected to make decisions regarding what tourism enterprise should be undertaken, how it is managed, what the benefits to the community will be, and how benefits will be distributed. In any community, there will be direct participants and indirect participants in decision making. Often the direct participants are elected representatives from a much larger number of participants, both direct and indirect. Sometimes this group of people is called the Management Committee. Management Committees can be divisive as well. Because the Management Committee is responsible for making decisions on behalf of others, sometimes involving expenditures, it may be a very sought after position.

THE PLANNING PROCESS

It is quite likely that introducing a new ecotourism enterprise into a community will raise questions about participation and distribution of benefits. One way of addressing these difficult issues is for project proponents to discuss ahead of time questions such as those found below. Planning to address the twin issues of participation and distribution of benefits can help resolve many potential problems early on. Remember that these are only some of the questions that should be asked during the planning process. No doubt there

There is increasing recognition of the need to involve communities in general. There is much less agreement about exactly who should participate and to what extent.

UNDERSTANDING COMMUNITY STRENGTHS ⁵

Many of the most successful CBE projects appear to have started small and simple and gradually expanded: informal crafts sales to tourists along routes to national parks; Bed & Breakfast offerings in the extra room of a family house; building of small thatch cabañas. Initial investments for these enterprises were often small, and comprised a mix of grants, loans, and sweat equity. All appear to have passed through an initial stage of start-up enthusiasm, to be replaced by a more realistic understanding of actual returns. Often group numbers declined during this portion of the learning curve—leaving a smaller, more committed number of implementors.

The importance of starting small and keeping the project in line with the financial, organizational, and managerial skills available in the community can be underscored by two examples of projects that might be described as overly ambitious. In the community of Gales Point, Belize, there stands a half built two-story hotel. In the community of Monkey River, Belize, there stands a half completed beach front resort with eight unfinished cabañas.

From their inception, these projects relied on significant amounts of government financing—a questionable source as the transition of governments, and the subsequent conclusion of financing, exemplifies. At the present time each of the projects has been standing idle for several years. Each is fifty to sixty per cent completed. In both instances, the impetus for these projects, as well as the design and construction of the facilities, came from outside the community. In each case, there appears to have been limited research into the organizational skills of the local community, limited financial planning beyond the initial central government allocation, and limited identification of appropriate marketing strategies for the upscale clientele each sought to attract. The fact that financing for each was undertaken during an election year suggests that political motivations were paramount.

Among the community-based tourism projects studied, levels of participation in conceptual planning, design, construction, management, and overall operation appear significantly higher than with the two projects presently standing idle.

By all accounts, the hotel and cabaña projects were designed to be “community-run.” A lesson to be learned may be that “community-based” has broader implications and should not be confused with “community-run.” It may also mean the difference between approaching communities as passive beneficiaries as opposed to active collaborators.

⁵ Sproule, Keith, W. 1994. Community-Based Tourism Development in Belize: Summary Report of a Community-Based Tourism Gathering & Identification of Similarities Among Successful Community Initiatives. Paper presented at the 1994 World Congress on Tourism and the Environment, San Juan, Puerto Rico, 31 May to 5 June, 1994.

will be others that are specific to the community and the CBE enterprise envisioned.

DEFINING “COMMUNITY”

How will community be defined? Will community be defined by geography—everyone who lives within a given area? Or, will it be based on some other factor, such as family or clan? However it gets defined, will this definition be acceptable to everyone who will potentially be affected? Even though the number of community participants in a project may be small, the number of community residents likely to be impacted may be quite large.

PARTICIPATION

Who will be a part of the CBE enterprise? Developing a new enterprise requires a lot of time and effort. Who will provide these inputs? For example, who will help construct the new trails or build the guest house? How will the work be divided? Will participation depend on physical labor? Or, will there be other methods, such as cash payments or in-kind contributions? Will men and women participate equally? Will there be opportunities for both young and old? Rich and poor? Those with schooling and those without? Will efforts be made to train those without the skills to participate from the beginning?

DECISION-MAKING

Who will be involved in the actual decision-making process? Will everyone decide everything? Or, will a smaller number of people be given responsibility to decide on behalf of the rest? Will there be a governing committee? How will members of such a committee be determined? Will they be elected or appointed? How many people will be on it? How many are too many? How many are too few? What will be their job titles and duties? Will there be compensation for serving on such a committee? Will there be ways for committee members to be held accountable for their actions?

BENEFITS

How will prices for what is to be sold (goods and services) be determined? Who will collect the money? How will money collected be divided? For instance, how much will the individual or individuals who provide the service or made the craft receive? Will any percentage go into a general fund? How will accounts be maintained? Is anyone trained to keep a record book?

CASE STUDY: ROTATING COMMUNITY “FOOD PROVIDERS”

The Toledo Ecotourism Association (TEA) is an organization of indigenous Maya and Garifuna communities working to develop ecotourism in the southern Toledo District of Belize, Central America. Since its beginning in 1990, the TEA has constructed Guest Houses in eleven villages, with plans to expand to at least two more villages by the end of 1996.

Each “Village Guest House” consists of two rooms, one for men and one for women, with separate bath houses and toilets. Each Guest House can sleep between 8 and 12 guests, making it quite comfortable for groups of travelers to stay.

From its inception, the TEA has worked to make sure that as many members of each village community participate as possible. To achieve this, they have developed a unique system of rotating “food providers.” Village food providers are those families who have agreed to provide meals to guests staying at the Village Guest House. Participating families are required to attend a workshop on food preparation, health, and hygiene which the TEA conducts. Upon completion of the course, names are added to a rotating list of families interested in providing breakfast, lunch, or dinner. No more than four guests are sent to a family at any one time. This helps assure that the benefits of visitors coming to the village are distributed among as many of the residents as possible.

At meal time someone from the community, generally a young boy or girl, goes to the Village Guest House to take the visitors to his or her home for a hot meal. As the family participants rotate, many members of the community have the opportunity of providing meals to visitors. Each family is paid directly by the visiting guest. The family keeps eighty per cent of what it is paid, with the remaining twenty per cent deposited into a Community Fund. Villagers who choose not to participate still benefit from the Community Fund. Money from the fund has been used for many community improvement projects, including the purchase of school supplies and the upgrading of the community health clinic.

Some of the difficult issues addressed by the TEA when developing the rotating food provider system included:

Feeding Vegetarians

Most local food is prepared with large amounts of lard. The answer has been to be sure to inquire *early* if a visitor is a vegetarian or not.

Feeding During Lunch Hours

Most men were in the field during the day and many families felt it would be inappropriate for a foreign visitor to come at that time. The answer has been to either prepare the lunch in the morning, or to get older family members to participate.

Who’s Next?

At the start, there was some question about which families were next on the roster. The solution was to post the list of participating families in an open place, such as the community bulletin board or Guest House wall, so that everyone could see who was next in line. This solution also helped make sure the twenty per cent for the community fund was paid on time.

PARTNERS IN THE PROCESS

When developing new ecotourism enterprises, many communities have found it important to work in partnership with other organizations. There are several important “partners” in the process of developing CBE enterprises. These include:

- The established tourism industry, particularly tour operators.
- The government tourism bureau and natural resource management agencies, especially the park service.
- Non-government organizations (NGOs), especially those involved with environmental issues, small-business management, and traditional community development.
- Universities and other research organizations.
- Other communities, including those with a history of tourism and those that are beginning.
- Additional partners in the process may include other international organizations, public and private funding institutions, national cultural committees, and many others.

The following section will give a brief overview of why and how some of these partners can help develop successful ecotourism enterprises in and around your community.

GOVERNMENT PARTNERS

Government officials have a critical role in formulating policies for ecotourism. For instance, the Government Park Service generally has responsibility for managing protected land areas. Protected land areas can include national parks, reserves, forests, and sanctuaries. The park service may also have responsibility for managing tourism in protected areas as part of its overall management obligations. For the majority of protected lands, rules and regulations are legislated at the national level. Government officials can decide, for example, to create a law requiring entrance fee systems for all parks, and ensure that the money collected returns to the park.

There are many communities located in and around the surrounding which attract tourists. These communities find themselves confronting foreigners traveling through their homelands. This situation often produces mixed reactions. Some may want nothing to do with tourists. Others may want to develop ecotourism enterprises. In either case, efforts must be made to ensure that a portion of the profit from tourism development remains in the local area.

Developing mechanisms for local residents to benefit directly from the establishment of protected areas in and around their homes can help to offset loss of revenue from traditional extractive activities which may be curtailed or prohibited by the establishment of a protected area.

Not only is this an issue of justice and motivation, but local residents are also often critical of conservation efforts in their area. If adequate rewards can be demonstrated, they can strongly influence community participation in conservation activities.

Although most ecotourism activities happen at the local level, they need to fit into systems designated at the national level. Government officials are also responsible for many of the structures and services outside the protected area which greatly affect tourism. These include airports, roads, and even health clinics.

Government officials and their policies can easily advance or hinder ecotourism development. Government can be an important partner when developing an ecotourism enterprise, especially if a community is located near a protected area.

Specific ways government can help a community develop ecotourism enterprises include:

- Providing coordination between the CBE project and other related projects in the region;
- Providing technical assistance through established government departments for the environment, social services, or cooperatives;
- Providing market research and promotional assistance through the tourism bureau;
- Providing direct financial support for CBE enterprises.
- Reducing, deferring, or exempting tax payments from the community.
- Developing and implementing policies which allow for the flexible development of CBE enterprises.

These are areas in which government can work as a partner to communities striving to develop ecotourism enterprises.

CONCESSIONS

Concessions are contracts with the government that give the holder of the contract the “right” to provide services to tourists visiting protected areas. The company or organization who receiving a concession is called a concessionaire. Often the criteria for selecting a concessionaire is either ill-defined or too stringent for communities to meet. Without concession rights, it can be difficult for communities to develop ecotourism enterprises. If a concession is necessary to develop tourism facilities at a protected area, then the community should work with government park service and an NGO familiar with small business development practices.

GUIDE LICENSING / REGISTRATION REQUIREMENTS

Many tourism bureaus have requirements for guide licensing or registration that are difficult for community groups to satisfy.

An additional concern among community groups pursuing ecotourism is that the introduction of such ventures can reinforce existing divisions in their communities or create new ones.

Sometimes a written test or drivers license is required. If these requirements must be satisfied for a community to develop an officially recognized enterprise, a community should work with the tourism bureau to provide necessary training, or to establish less stringent criteria.

PROMOTIONAL MATERIAL

Most government tourism bureaus have the promotion of national tourism destinations as part of their mandate. These bodies can help CBE enterprises “get the message out” about their projects. Some specific promotional methods include leaflets about the specific project, maps highlighting the location of the project, and inclusion within larger, more comprehensive national tourism brochures.

The process for preparing such material can prove a catalyst for serious discussion in a community setting. Asking a community group to decide just how it would like its hamlet described to visitors, or how to describe a particular attraction such as a waterfall, can help to organize and prioritize ideas behind a community initiative. Likewise, mapping activities, especially those requiring discussions of distance and time, can be quite fruitful—if only for the amount of discussion such topics can generate.

Efforts in other locations have included preparation of a Community-Based Tourism Guidebook, which takes visitors along a country-wide trail of community-based ventures; production of videos highlighting community-based ventures; and familiarity tours for travel agents and tour operators to learn about community initiatives.

NGO PARTNERS

Local non-government organizations (NGOs) can be valuable partners in the process of developing CBE enterprises in almost any area. They can be sources for training, technical assistance, advocacy at the national level, and in some instances, they can also provide financial assistance. These organizations often have members or constituencies that want information and guidance on ecotourism issues, so they can also influence the consumers of ecotourism, the ecotourists.

Many communities already work with local NGOs in such areas as health, agriculture, small-business development, or conservation programs. An example of how one NGO assisted community groups in developing ecotourism enterprises is shown in the following case-study.

BINA SWADAYA TOURS: A UNIQUE HYBRID⁶

Bina Swadaya is the largest non-government organization in Indonesia. It has a thirty year history of assisting community development projects throughout the Indonesian archipelago. In 1988, Bina Swadaya began advertising tours to several of its most prominent development projects. Tours were organized in response to requests from international visitors who were interested to learn more about grassroots activities in the country. From these non-traditional beginnings, Bina Swadaya Tours (BST) began.

BST occupies the unique position of being a for-profit business which has emerged from a development NGO. BST maintains the Bina Swadaya Development Agency mission of helping to alleviate poverty and protect Indonesia's environment and heritage, and it does so as a for-profit organization.

BST pursues its mission through the content of the tours it arranges. Typical destinations of a BST tour include: remote areas and villages, national parks and protected areas, Bina Swadaya development projects. Donations to each of these destination is included in the cost each of tour.

BST also works to educate tourists on responsible travel and to help them understand the issues of development from its own unique perspective. Every BST tour provides visitors a pre-trip educational packet containing a code of ethics for responsible travel.

In the past several years, with the increasing growth of tourism in rural areas, BST has been called upon to conduct training programs for villages and community groups. BST has become a leading advocate for sustainable CBE development in Indonesia. As the director of BST, Jarot Suwarjoto is quick to point out, assisting new communities in developing ecotourism enterprises is good business for BST too, because it increases the number and diversity of destinations they are able to offer their clients.

When asked to describe a typical BST tour client, Mr. Suwarjoto responds, "The type of tour BST runs attracts an alternative type of tourist. People interested in understanding life in rural areas, how people live, how they get by. Most of our tours utilize small-scale enterprises, which can sometimes mean no hot water showers. Of course we can arrange any type of tour, including deluxe accommodations, but "the average client is seeking small-scale, which is what we provide."

6. Author, personal communication.

LINKING COMMUNITIES, CONSERVATION, AND DEVELOPMENT

It has been argued, in a review of integrated conservation and development projects (ICDP) in Latin America, Africa, and Asia that:

For an ICDP to achieve its biodiversity conservation goals, it is not enough for the development component to foster improved local living standards—a difficult enough task. The development process must not only be economically and biologically sustainable, but must also conserve the ecosystem of the protected area. To satisfy this exacting requirement, explicit *linkages* between projects' development components and conservation objectives are needed.⁷

“Ecotourism” is one concept that has been heralded as a means for establishing such linkages. Unfortunately, while there has been a great deal of discussion about the contributions of ecotourism to local community well being, very little is visible on the ground.

In her research on CBE ventures, Deborah Meadows finds:

There have been numerous efforts to create “guidelines” for ecotourism development, and the bulk of these assign local participation a privileged position. However, these guidelines have not focused on community-based enterprises nor addressed what, if any, mechanisms exist for nurturing community interest in establishing such enterprises. Rather, they tend to view local participation as something incorporated into the design and implementation of ecotourism enterprises which are launched from “outside” the community. Additionally, they tend to focus on the quantitative dimensions of participation (e.g., number of people involved, revenue generated) rather than qualitative aspects of local participation (positions in the ecotourism enterprise).⁸

Whether a community-based tourism enterprise encourages community conservation of natural resources depends on at least four factors:

1. The scale of benefits received by local residents (and whether they outweigh the short term costs of foregoing resource use or changing resource management);

⁷ Wells, M. with K. Brandon and M. Hannah. 1992. *People and Parks: Linking Protected Area Management with Local Communities*, IBRD, Washington, D.C.

⁸ Meadows, Deborah. Beyond Shamans, Toucans and Tourist: Local Participation in Ecotourism in Ecuador and Costa Rica. Presented at the 1995 meeting of the Latin American Studies Association, The Sheraton Washington, September 28-30, 1995.

2. The extent to which the benefits are clearly perceived as dependent on the resource base, and therefore on sustainable management;
3. Whether benefits reach all resource users; and
4. Whether local institutions are strengthened, so as to increase their capacity for collective resource management.⁹

⁹ Sproule, Keith W. 1995. Community-Based Ecotourism Development: Linking Conservation and Development. Paper presented at PACT/WALHI Community-Based Ecotourism Workshop and Seminar, Bogor, Indonesia, April.

If the above conditions are not met, massive financial earnings for a few people will not necessarily change a community's approach to resource utilization. Changes in resource use will also depend on whether communities gain rights, ownership, and control over resources and hence a sense of responsibility for their management.

Developing mechanisms for local residents to benefit directly from the establishment of ecotourism enterprises in and around their home areas can help offset any loss of revenue from traditional extractive activities which may be curtailed, in some instances, by the establishment of the new enterprise. It can also motivate community participation in conservation activities, if adequate rewards can be consciously realized. Developing National CBE strategies can help focus efforts on achieving such mechanisms. At the least, it's a very good way of beginning the process of forging the partnerships deemed so valuable to the process.

DEVELOPING A NATIONAL CBE STRATEGY

The impact of an enterprise on the competitiveness of the national tourism market is important for tourism officials to gauge. Analysis can take the form of three questions:

1. Does the enterprise expand the capacity of the tourism sector, particularly for priority, up-scale market, overseas tourists?
2. Does it diversify the national tourism product, by adding elements of eco-ethical, wilderness, cultural, or adventure tourism?
3. Does it increase the geographical spread of tourism facilities around the country?

As the long-term competitiveness of many national tourism sectors depends on a sustained natural and cultural resource base, concern with encouraging conservation is also a key component of strengthening the national tourism product. Research has shown that enterprises contributing to economic growth, welfare, and equity at the community level gain public and political support for the economic sector in the long run.

COMMUNITY-BASED ECOTOURISM DEVELOPMENT: A PRIORITY SECTOR IN MANY COUNTRIES

• In April 1995, a *Community-Based Tourism Enterprise Workshop* was held in Wereldsend, Namibia. Until the staging of this workshop, there had been few opportunities for people from different communities, and the various NGOs that support them, to come together. The workshop gave all participants a chance to stimulate ideas, share experiences, and learn from each other so that they could take this information back to their communities. The workshop was also designed to enable those involved in community-based tourism to come up with recommendations for policy makers and others involved in the tourism industry.¹⁰

• Indonesia conducted a National Seminar and Workshop “*Community-Based Ecotourism: Opportunity or Illusion?*” on April 18 - 21, 1995, on the island of Java. Recent dramatic increases in tourism-derived revenue has made tourism the preferred economic development option throughout the Indonesian archipelago. The seminar and workshop were organized to analyze what role Indonesian communities should play in this growing sector of the national economy. The conference was jointly organized by two NGOs and featured keynote speeches by the Indonesian Minister of the Environment and the Director General of Tourism. Over thirty organizations involved with CBE enterprises spoke. More than two hundred people attended—the majority of whom were representing communities involved with, or interested in developing, tourism enterprises.¹¹

In March 1994, the Government of Belize, in conjunction with a local NGO, staged a three day “Community-Based Ecotourism Gathering” to address issues of CBE development in the country. The workshop took place at a cooperatively run facility at a community-based tourism enterprise in the middle of the country. The nation of Belize has given prominence to the role of small-scale CBE initiatives within the development of its national tourism industry. The Minister for Tourism and the Environment, the Honorable Henry Young, opened the gathering with an outline of Government of Belize support to the sector. Over twenty-four communities have now established, or have plans to establish, facilities and activities for receiving visitors.¹²

¹⁰ Christ, Costas. Community-Based Tourism Enterprise Workshop Report. Living in a Finite Environment (LIFE) Project, USAID through World Wildlife Fund, Namibia, 1995.

¹¹ PACT/WALHI Community-Based Ecotourism Workshop and Seminar, Bogor, Indonesia, April, 1995. See: Sproule, Keith. Community-Based Ecotourism Development: Linking Conservation and Development. Paper presented at PACT/WALHI Community-Based Ecotourism Workshop and Seminar, Bogor, Indonesia, April, 1995.

¹² Community-Based Ecotourism Gathering, staged by the Government of Belize, March, 1994. See: Community-Based Tourism Development in Belize: Summary Report of a Community-Based Tourism Gathering & Identification of Similarities

Expanding community benefits from tourism will depend on many factors, including expanding the information and ideas to which community groups and tourists have access; adequately assessing the viability of different ecotourism ventures in regional and national tourism markets; improving the legal rights that communities have, particularly with regard to revenue sharing and concession arrangements; addressing issues of land tenure; and providing the institutional and financial resources necessary to advance CBE enterprise development. Each of the above issue areas will vary over time and place, but certainly they all can be affected by a broadly designed national CBE development strategy.

Following are five broad areas that a National CBE Development Strategy should address:

1. Mechanisms for communities to directly benefit from ecotourism revenues.
2. Financial and legal mechanisms that facilitate, not constrain, CBE development.
3. Information and communication within and between the CBE sector and other sectors of the industry.
4. Increasing the share of the national ecotourism market, while striving to improve standards and criteria for services that are at the cutting edge of this demanding market.
5. Support for institutions of education, training, and other forms of skill development within rural communities.

CONCLUSION

The premise of this paper has been that successful CBE development, that is, ventures that satisfy both conservation and development objectives, are supported by partnerships between local communities, government agencies, NGOs, and the private sector. Partnerships are recognized to emerge from areas of mutual benefit to each of the sectors involved. Policies, then, are seen as formal mechanisms for achieving the goals of mutual benefit through collaboration. They are an overt manifestation of the need for collaboration and cooperation to achieve conservation and development objectives.

Partnerships, then, should be viewed as an integral part of the design and development of community-based ecotourism ventures. They are deemed indispensable for achieving a positive policy and planning framework.

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To Ecotour or not to Ecotour: Unpacking the Impacts and Business Realities of Tourism Development in Sana and Tariquia Reserves of Tarija, Bolivia

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ABSTRACT

Many ecotourism programs are developed to raise money for programs to protect natural areas and to help local indigenous peoples. They are often developed by non-profit groups specializing in environmental advocacy. These groups are often ill-prepared to handle the programs they create. This paper provides case studies analyzing ecotourism development in two reserves. It also discusses the planning process necessary to make an ecotourism program successful for the non-profit group PROMETA (Proteccion del Medio Ambiente Tarija).

This paper is based on the author's work with the group Protection del Medio Ambiente en Tarija (PROMETA) in southern Bolivia. The project was designed to address issues involved with developing an ecotourism program in two reserves in the Tarija Department. The author conducted feasibility studies by visiting the reserves, assessing Tarija as a base for tourism, and evaluating the potential of ecotourism as a business in the context of PROMETA goals.

There is the opportunity to develop an ecotourism program at PROMETA. The reserves are interesting and attractive, although they lack spectacular features that would attract a large tourist base. The reserves and the city of Tarija could provide a good ten-day agenda for tourists. The reserves might also be part of a package that includes other ecosystems of Bolivia, such as the Beni, or the Andes.

There are several questions regarding the costs and benefits of ecotourism that need to be carefully answered in order to proceed with a program that meets the objectives of the group. In many ways the questions are more important than the guidelines for implementing a program.

Tourism can have a negative impact on natural areas and rural communities unless the program is very carefully thought out. The author concentrated on the issues and problems associated with ecotourism, and on the business of ecotourism, as well as a "how to" approach to the project.

Some of the key steps taken in analyzing a project are to:

- write a business plan for each ecotourism area, treating the program as a business;

- carefully weigh the costs and benefits of an ecotourism program in terms of financial goals and environmental and cultural impacts; and
- be aware of the potential negative impacts of tourism and implement a thorough plan for monitoring and evaluation.

DESCRIPTION OF PROMETA

PROMETA is a non-profit, non-government organization oriented toward conservation of the environment and rational management of natural resources in southern Bolivia.

The mission of the organization is to contribute to the conservation of the environment to improve the quality of life for the population of Bolivia.

Its institutional objectives are:

- to contribute to the conservation of biological diversity in the ecosystems in the region;
- to promote public participation in environmental management;
- to strengthen the institutional base of PROMETA; and
- to lobby against activities that threaten environmental conservation.

Everyone wants to go where no one else is.

PROMETA has three major areas of concentration: Biological Diversity Conservation; Environmental Education; and Institutional Development Program. It is a young organization in terms of its existence and in terms of its staff. They are an energetic, dedicated group with a foundation of good intentions.

If ecotourism is to be a part of PROMETA's program, then a staff person who understands the European and North American cultures should be in charge. The Ecotourism program should be a separate division as well, and not be part of the Biodiversity Division. It is a business that must be run like a business, and not managed as an afterthought. Ecotourism can be a viable business for PROMETA on a small scale at first, growing as the demand and the market increase.

The head of the ecotourism division should be trained in business, management, and tourism, and have a general background in natural history, anthropology or a similar social science. Currently the staff at PROMETA is not ready for managing and operating an ecotourism program.

ECOTOURISM IMPACTS AND DEFINITIONS

Ecotourism is often an oxymoron. Tourism and eco-related concerns often have conflicting needs. By promoting tourism and bringing people into an area that is fragile and pristine enough to warrant making it a reserve, the program can, if not carefully planned and managed, undermine the foundation of conservation.

There are obvious economic benefits in nature-based tourism. It is a large segment of the largest industry in the world. In 1989, an estimated \$12 billion was spent by U.S. citizens traveling overseas for nature-based travel. According to the World Travel and Tourism Council (WTTC), tourism in 1993 was estimated to generate \$3.5 trillion in world output, employing 127 million workers.

Costa Rica generated \$336 million in 1991, and Kenya earns more than \$500 million per year. According to Latin Finance, tourism represented 5.2 per cent of Bolivia's GNP. A total of 300,000 tourists visited Bolivia and generated US\$135 million in foreign exchange. US\$25 million was invested in lodging, with construction of 400 new hotel rooms.

The ramifications of tourism on culture, economy, and the environment are not clear. There are many more examples of failures than successes in the ecotourism business. Most of the problems have been related to insufficient planning and staffing. Often organizations that are not properly staffed to work in the tourism business undertake ecotourism programs and become overwhelmed with the problems that ensue.

Ecotourism is a business that must be planned like any other business, but with a keen eye on the impacts that cannot be measured in financial terms. Briefly, the positive impacts can be thought of as social and economic. Positive social impacts could be:

- visitor awareness of the natural environment, raised consciousness, and involvement in conservation;
- availability of reserves for research and education;
- support for rural communities by incorporating research results in natural resource management;
- protection of resources from encroachment by squatters and destructive industries;
- making conservation better known and popular and paying attention to reserves in decision making.

Positive economic impacts could be:

- funds for environmental groups to run their programs, jobs and development projects for rural people who live in and around reserves;

There is no right or wrong definition of ecotourism but there is merit in creating a definition that will, in essence, become a direction statement for a tourism program.

- reserves as an attraction in the national tourism base, thereby supporting airlines, ground transportation, hotels, food industries, and things like handicraft markets.

More and more people are participating in some form of nature-based tourism. This is a function of easier access via cheap and frequent air travel and also a function of popularity. There is a definite trend toward participating in something that is environmentally oriented. This trend can be related to the boom in outdoor recreation and fitness activities. People want to escape the urban and suburban environment and experience something more natural. It can also be related to the emergence into a new lifestyle. People in most “developed” countries are seeking an adventure, or an extraordinary experience in their vacation.

Unfortunately, the infrastructure necessary to accommodate the growing number of people who want to go somewhere natural is rapidly pushing back the limits of what is natural. Some people truly want to get away, but most people want some level of comfort. The situation represents a thought-provoking concept. Everyone wants to go where no one else is.

There are no clearly defined levels of nature-based tourism, and many travel groups are promoting ecotourism trips that have no real significant social or economic benefits for the natural area or the people who live near them. Their staff is not trained in natural history or in managing impact on the environment; they are simply using the natural area as a tourist attraction. The industry is growing faster than careful planning and management in natural areas can keep up with.

The questions arise: to promote ecotours or not in the case of areas that are truly in need of protection; to ecotour or not to ecotour.

There is no right or wrong definition of ecotourism, but there is merit in creating a definition that will, in essence, become a direction statement for a tourism program. In the case of PROMETA, ecotourism managers question what type of ecotourism achieves the goals they have for their reserves. Where are they going with the program? In an effort to focus the program, it is advisable to write a clear strategy for the ecotourism program including: mission, goals, strategies to achieve goals, and methods for evaluating progress.

TYPES OF ECOTOURISTS AND WHAT THEY WANT

For the purposes of this paper, a breakdown of types of tourist is included. There are many other descriptions and names for the various types of tourists. But for the case studies being used for this paper, the following will serve during program planning discussions.

Not only will the presence of strangers be disruptive, but the material possessions and appearance of the strangers will create a consumer mentality, especially in the younger people.

TRUE ECOTOURISTS

The true ecotourist may be described as a person who travels with an interpretive group that is led by an environmental advocacy or educational institution. They are willing to study information presented to them and they are genuinely interested in nature and culture. Most groups are willing to endure some hardship in accommodations as long as basic needs are met and there is not much danger.

The true ecotourist is well-educated and probably has an affiliation with environmental groups through membership or volunteer activities. They require guidance, but are fairly aware of how to conduct themselves in nature.

ENVIRONMENTALLY AWARE TOURISTS

There is a growing segment of tourists who are aware of nature and who are capable of venturing into a remote area and not creating a large impact. They may need some assistance and education, but they generally have an awareness of the natural world and how to interact in it. This type of tourist is generally active and well-educated. They may prefer to go alone rather than participate in a group.

Buy locally, but be sure that the products are not having negative impact.

NATURE TOURISTS

There are millions of tourists who want to be near nature and spend some time in a natural environment, but who want a fairly high degree of "creature comforts." They may or may not have some nature-oriented hobby such as bird watching, fishing, or hiking. They want to be able to drive through nature, stay in a comfortable, safe, clean place with good food, hot showers, and few mosquitoes. They want a room with a view. They appreciate nature, but they would prefer not to get too dirty, hot, or wet.

ADVENTURE TOURISTS

Travelers or back packers and activity-oriented tourists constitute another type of tourist. They want an experience. Although the travelers generally have a limited budget, they are aware of nature and have a fairly educated perspective. They usually are not actively interested in educational trips. They spend a surprising amount of time in towns and cities with other travelers. They are generally less than thirty years old.

The activity-oriented tourists want to go rafting, bungee jumping, or ski, sail, scuba dive, or DO something else. Although they enjoy being out of doors, their participation in nature trips and things like bird watching or botany is limited.

RESEARCHERS AND STUDENTS

Researchers and students who come to the centers to conduct research and to participate in on-going projects are a good constant source of tourist-type people for the reserves. They have minimum impact, are attentive to the needs and goals of the organization, and don't expect too much in the way of accommodations. They generally have a grant for research and can afford to pay a fair price for accommodations and equipment.

ECOTOURISM PLUSES

By promoting reserves and bringing people into them, their value is demonstrated. People who visit the reserves will promote their existence if they have a good time.

Visitors will learn something about the natural history of the area and the people of the area. They will learn something about the culture of the people who live in and around the reserves, which may change their perspective of how they live.

By charging money to go into the reserve, funds will be made available for PROMETA to manage their programs in the reserves. Some jobs will be created for the locals. Value added jobs including airlines, hotels, restaurants, and merchants along the route to the reserves will be created.

ECOTOURISM MINUSES

The presence of visitors will disrupt the local culture. Not only will the presence of strangers be disruptive, but the material possessions and appearance of the strangers will create a consumer mentality, especially in the younger people. In order to accommodate visitors, buildings need to be built. Inherently, construction is damaging to the natural environment, although some lessons can be learned from the local inhabitants on how to work with the natural materials and to adapt them to the climatic features of the area. Sewage, garbage, noise, lights, and vehicles to transport visitors all detract from the natural setting.

Visitors will disturb wildlife and traditional lifestyles and will create an impact on the environment. An ecotourism program diverts the research, education, protection and management efforts of PROMETA. It is a full-time job to manage a tourism business. Whether it is subcontracted out or run from within, a tremendous amount of planning and monitoring needs to be done in order to carefully implement a new tourism program. Accounting and personnel management and training need to be incorporated into a position within the organization.

GUIDELINES

As the program develops, a workshop on guidelines and evaluation techniques is proposed. For the purpose of this document, the following basic thoughts are presented to help PROMETA approach the ecotourism concept:

1. Maintain a careful vigilance on the mission and goals of the programs.
2. Make sure the program can support PROMETA's overall agenda and not just run the ecotourism program for its own sake.
3. Buy locally, but be sure that the products are not having negative impacts. Examples: firewood, lumber, and beef may be contributing to deforestation. Continue to discourage intensive agriculture techniques to feed tourists. Chicken has less of an impact than beef.
4. Be careful that contact between locals and tourists is not having a negative impact on the lifestyle of locals. Orient the program so that visitors improve their awareness of their own society through interaction with locals. Encourage simpler, less consuming lifestyles, family, and community values of locals.
5. Support ecological and social science research that circulate back to the local communities.
6. Facilities and actions of the organization need to be exemplary. Buildings need to fit the site and show methods of sustainable energy use. Staff need to be advocates of the organization's goals. Buildings should be cost effective and it should be possible to duplicate them.
7. Include things like trail repair and reforestation in activities. Help to repair damage to the environment.

An organization interested in developing an ecotourism program will require personnel who know business and the ecotourism field.

A BUSINESS PLAN

For the purposes of structuring the ecotourism program, the following components of a typical business plan outline will help to structure the business:

1. Institutional strength and personnel: Describe the institution and qualifications of the people who will be working on the ecotourism staff.
2. Financial background of the institution: Provide three years of financial history on the organization.
3. Goals of the ecotourism program: List specific milestones and a time frame for the program including income and distribution of funds over five years. What is the action plan?

4. Strategic plan: List methods to achieve goals.
5. Financial projections: Provide a spreadsheet with monthly expenditures and income for the first year, quarterly for the second year and annually for the years 3-5. Provide an extremely detailed list of all costs, broken into line item categories.
6. Market: Carefully describe the clients that are to be part of the ecotourism program, including what they want out of the program.
7. Marketing strategy: Describe all methods of marketing and why they are to be used.
8. Market niche: Describe the industry trends and competition. Describe the unique qualities of the organization and the natural and cultural features of the area that will make the ecotourism program competitive.

LAND TENURE AND ENVIRONMENTAL CONDITIONS

The environmental conditions at the site are a key element in planning a research center and lodge facility. The following issues raise questions that need to be addressed prior to deciding on the exact location:

LAND TENURE

Who owns the land or will question the land use for the center? Does it interfere with anyone's grazing patterns, etc.? Is the community fully behind the location of the center, or do some people have questions that need to be addressed? What do the locals say about building at the site?

TOPOGRAPHY

Does the site offer protection from the wind and afford strategic orientation to the sun for solar energy. Is the site protected from run-off in cases of flooding?

PREVAILING WINDS AND FRONTAL SYSTEMS

The site should be planned for protection against prevailing winds and storms;

SOILS

Soil percolation and issues relating to water and sanitation in relation to water ways and fresh water sources are important;

NATURAL FEATURES

What natural features of the site will be incorporated into the construction? Rocks, adobe bricks, sand for cement? Are these resources near by? Will their use disturb the site?

WATER

Is water available for the maximum use of the site? Can it be contaminated? Is it saline?

IMPACT ON WILDLIFE

The center may impact the wildlife it is dedicated to protecting. After observing the flamencos in Sama, it is apparent that they are very weary of humans. The center should be located far enough away from the lake that it will not impact birds;

SITE DISTURBANCE

Because the center will be built near the lake, it is important not to disturb the vegetation at the site. Unless absolutely necessary no roads should be cut to the site and vegetation should be disturbed only where actual construction is taking place;

PROXIMITY

The proximity of the site to local communities is an issue that requires attention. The benefits of the center to the villages need to be clearly discussed with the communities. In many ways, there are advantages to locating the center away from the communities, so that:

- There is no competition for favors from the center. None of the communities should be receiving more benefits from the center than another
- The cultural habits of the local communities are not disturbed. Visitors, researchers, and tourists will have contact with the locals, but it is preferable to remain separate and let them carry on their life styles. The facility should be far enough away from the villages that children are not encouraged to spend a lot of time there.
- Emergency radio use and demonstration projects are services which may be provided by the center.
- Transport on a regular basis in PROMETA vehicles should be carefully considered

DESIGN AND CONSTRUCTION

Design and construction of the tourist center has important functional and aesthetic aspects, especially in regard to the impact the center will have on the local population. Balance between the project and the locals is necessary, if the project is to achieve its social goals. Design and construction need to take cost, environmental conditions, and materials into account. The center has to “fit in.”

If visitors are going to be a major part of the program, then they must be catered to at the onset of the design. Having just outlined ways the center must fit in, it is also imperative that the center accommodate people who are used to and demand a level of comfort much higher than the local population. For tourists, the accommodations are a major part of the experience. The center needs to be innovative and unique and still reflect the local vernacular style and fit with the landscape.

The center should be low in stature so as to not “stick out” in the landscape. The concept of an observation tower does not fit in with this philosophy. An observation room that can accommodate spotting scopes and an open roof that can be used during clement weather for small astronomical telescopes seems ideal. Continuing on the theme of observation, the preferred approach is to have a series of observation stations or blinds, where people are concealed, but they are generally closer to the wildlife than a lodge would ever be.

The ecotourism lodging should be located as a “satellite” to the center. The accommodations should be comfortable, with good beds and heating or cooling. A common room for eating and relaxing is recommended. By having the lodging separate, the staff can carry on their work and their lives without the feeling that they are always entertaining.

When feasible, opportunities to install solar and wind energy systems should be analyzed. Passive solar heat, solar water heat, photovoltaic battery charging, and a small wind mill for pumping water are recommended to the extent that these technologies are available at a reasonable cost. The benefits of these types of systems in reducing the impact of the center are obvious.

In particular, any opportunity to avoid running a generator will help maintain the serenity of the area. As sound travels over water much further than over land, the impact of a generator on wildlife in the reserve can be an important consideration.

Photovoltaics are quite efficient in charging a bank of batteries that can be used for radios and lights. Invertors are now more efficient in converting DC power to AC. The primary consideration is the cost of the batteries. Natural gas lamps can be used as a back-up for the lights.

If a well is to be drilled for fresh water supply, then some type of pumping system must be installed to raise the water into a tank. As the center will not be occupied all the time, it is possible to have a small snap pump run by batteries to slowly fill the tank. If there are many people using water at the center, this option may not be feasible. A small, simple wind mill can have a fairly low impact on the site.

PROGRAMS AND ACTIVITIES

Generally ecotourists want an activity-oriented vacation. They want to learn something about the natural history and culture of the area they are visiting. They want to exercise and see new exotic things. In the absence of dramatic natural features or wildlife, hiking, boating, and bicycling in remote terrain can be appealing.

A set of participatory research projects can be attractive. The researchers would pay rent to participate in on-going programs by organizations such as the School for Field Studies and Earth Watch. Participants in such programs pay a lot and generally do not expect a major, natural attraction like most ecotourists. They also expect a research environment and therefore do not expect sophisticated food and lodgings.

Ecotourism can be an excellent tool for education and for generating income. An organization interested in developing an ecotourism program will require personnel who know business and the ecotourism field. The staff and local people in and around the natural areas will need training in ecotourism, basic accounting, and business methods. Often language training is necessary. The person in charge of the ecotourism program needs to understand the culture of the visitors and the local culture in the areas that are being visited, and should be multilingual.

Because ecotourists like to be active, organizations managing natural areas might consider banding together to provide accommodations of uniform standards and an itinerary where visitors can move between the areas. Coastal and inland forest combinations are particularly popular.

Any ecotourism program needs to be carefully and properly planned and managed. The program needs a clear business plan and financial evaluation in order to proceed. Hotel and restaurant businesses are complex. When placed in remote areas without access to equipment, supplies, communication, or health-care facilities, the businesses become even more difficult. In remote locations, often under the assault of harsh weather, insects, and unusual surroundings, the guests become very demanding of basic creature comforts.

Any organization involved in the ecotourism business must be willing to dedicate resources, time, and effort in the tourism business, which may not be directly related to the work they have done in the past.

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Ecotourism: A Tool for Sustainable Development in an Era of International Integration?

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ABSTRACT

Ecotourism, to be successful, must promote sustainable development by establishing a durable productive base that allows local inhabitants and ecotourist service providers to enjoy rising standards of living. An ecotourist project must incorporate the social dimensions of productive organization and environmental conservation. Based on the experience of the overwintering reserves of the Monarch Butterfly in west-central Mexico, we suggest that unless ecotourism actively incorporates the local society into service planning and provision, and includes programs to meet the fundamental needs for income and employment for all people in the region, the special qualities of the site and its flora and fauna may be irreparably damaged.

INTRODUCTION

Ecotourism projects must go beyond prevailing notions of “the overlap between nature tourism and sustainable tourism”¹ to encompass the social dimensions of productive organization and environmental conservation. Ecotourism must do more than create a series of activities to attract visitors, offering them an opportunity to interact with nature in such a way as to make it possible to preserve or enhance the special qualities of the site and its flora and fauna, while allowing local inhabitants and future visitors to continue to enjoy these qualities. They must also establish a durable productive base to allow the local inhabitants and ecotourist service providers to enjoy a sustainable standard of living while offering these services.

The study of ecotourism offers many opportunities to reflect on the importance of sustainability, and the possibilities of implementing approaches which move us in a new direction. But it also suggests that there are significant obstacles. Overcoming these obstacles requires more than well-intentioned policies; it requires a new correlation of social forces, a move toward broad-based democratic participation in all aspects of life, within each country and in the concert of nations. Strategies to face these challenges must respond to the dual challenges of insulating these communities from further encroachment and assuring their viability.

The obstacles are an integral part of the world system, a system of increasing duality, polarized between the rich and poor nations, regions, communities, and individuals. A small number of nations dominate the global power structure, guiding production and determining welfare levels. The remaining nations compete among them-

¹ A definition offered by a leading scholarly participant in the discussions of the theme, Kreg Lindberg, of Charles Stuart University in Australia, in the InterNet discussion group “Green-travel” (@jgc.apc.org) on 14 March 1996. He adds: “because ‘true’ ecotourism (i.e., verifiably sustainable nature tourism) is comparatively rare, perhaps we are left with ecotourism as a goal.”

selves to offer lucrative conditions that will entice the corporate and financial powers to locate within their boundaries. Similarly, regions and communities within nations engage in self-destructive forms of bargaining compromising the welfare of their workers and the building of their own infrastructure-- in an attempt to outbid each other for the fruits of global growth. The regions unable to attract investment suffer the ignoble fate of losers in a permanent economic olympics, condemned to oblivion on the world stage, their populations doomed to marginality and permanent poverty.

Sustainability is not possible as long as the expansion of capital enlarges the ranks of the poor and impedes their access to the resources needed for mere survival. Capitalism no longer needs growing armies of unemployed to ensure low wages, nor need it control vast areas to secure regular access to the raw materials and primary products for its productive machine. These inputs are now assured by new institutional arrangements that modify social and productive structures to fit the needs of capital. At present, however, great excesses are generated, excesses that impoverish people and ravage their regions. Profound changes are required to facilitate a strategy of sustainable development. We explore such an approach, suggesting that ecotourist development strategies may contribute to promoting a new form of dualism: a dual structure that allows people to rebuild their rural society, produce goods and services in a sustainable fashion while expanding the environmental stewardship services they have always provided.

Research shows that when given the chance and access to resources, the poor are more likely than other groups to engage in direct actions to protect and improve the environment. From this perspective, an alternative development model requires new ways to encourage the direct participation of peasant and indigenous communities in a program of job creation in rural areas to increase incomes and improve living standards. By proposing policies that encourage and safeguard rural producers in their efforts to become once again a vibrant and viable social and productive force, this essay proposes to contribute to an awareness of the deliberate steps needed to promote sustainability.

Ecotourism is widely believed to be the perfect economic activity to promote both sustainability and development. In this essay we examine the relationship between these two goals and end up with some reflections on the organization of specific projects.

SUSTAINABILITY

Sustainable development has become a powerful and controversial theme, creating seemingly impossible goals for policy makers and development practitioners. Prevailing trickle-down approaches to economic development enrich a few and stimulate growth in “modern” economies and sectors within traditional societies, but they do not address most people’s needs; moreover, they contribute to depleting the world’s store of natural wealth and to a deterioration in the quality of our natural environment. A new discourse of sustainability is emerging, one that troubles thoughtful people, who are realizing the difficulty of implementing such an approach. When fully understood, people realize that *present levels of per capita resource consumption in the richer countries cannot possibly be maintained much less generalized* to people living in the rest of the world.

In the ultimate analysis, we rediscover that in present conditions, the very accumulation of wealth creates poverty. While the poor often survive in scandalous conditions and are forced to contribute to further degradation, they do so because they know no alternatives. Even in the poorest of countries, social chasms not only prevent resources from being used to ameliorate their situation, but actually compound the damage by forcing people from their communities and denying them the opportunities to devise their own solutions. For this reason, the search for sustainability involves a dual strategy: on the one hand, it must involve an unleashing of the bonds that restrain people from strengthening their own organizations, or creating new ones, to use their relatively meager resources to search for an alternative and autonomous resolution to their problems. On the other hand, a sustainable development strategy must contribute to the forging of a new social pact, cemented in the recognition that the eradication of poverty and the democratic incorporation of the disenfranchised into a more diverse productive structure are essential.

Sustainability, then, is about the struggle for diversity in all its dimensions. International campaigns to conserve germplasm, to protect endangered species, and to create reserves of the biosphere are multiplying in reaction to the mounting offensive, while communities and their hard pressed members struggle against powerful external forces to defend their individuality, their rights and ability to survive while trying to provide for their brethren. The concern for biodiversity, in its broadest sense, encompasses not only threatened flora and fauna, but also the survivability of these human communities, as stewards of the natural environment and as producers.

Internationalization has stymied this movement towards diversity. The powerful economic groups that shape the world economy

The proposal calls for creating structures so that one segment of society that chooses to live in rural areas finds support from the rest of the nation to implement an alternative regional development program.

(transnational corporations and financial institutions, and influential local powers, among others) are striving to break down these individual or regional traits, molding us into more homogenous and tractable social groups. They would position us to support the existing structure of inequality and to engage in productive employment; and, for those lucky enough to enjoy high enough incomes, to become customers.

SELF-SUFFICIENCY AND THE RELATIONSHIP BETWEEN PRODUCTION AND CONSUMPTION

A crucial issue in developing a strategy of sustainability is that of self-sufficiency. The existing process of integration into the global trading system promotes specialization based on monocropping systems. Although sustainability does not lead to autarchy, it is conducive to a much lower degree of specialization in all areas of production and social organization. Historically, food self-sufficiency emerged as a necessity in many societies because of the precariousness of international trading systems; specific culinary traditions developed on the basis of highly localized knowledge of fruits and vegetables, herbs and spices. Although the introduction of green revolution technologies raised the productive potential of food producers tremendously, we soon found out how hard it was to reach this potential and the high social and environmental costs that such a program might entail.

Food self-sufficiency is a controversial objective that cogently raises the question of autonomy. Although development practitioners are unanimous in rejecting calls for extreme specialization, there is general agreement on two contradictory factors in the debate:

1) Local production of basic commodities that can be produced equally well but more efficiently elsewhere is a luxury few societies can afford, *if and only if* the resources not dedicated to the production of these traded goods can find productive employment elsewhere; and

2) There are probably few exceptions to the observation that greater local production of such commodities contributes to higher nutritional standards and better health indices. In the context of today's societies, in which inequality is the rule and the forces discriminating against the rural poor legion, a greater degree of autonomy in the provision of the material basis for an adequate standard of living is likely to be an important part of any program of regional sustainability. It will contribute to creating more productive jobs and an interest in better stewardship over natural resources.

There are many parts of the world in which such a strategy would be a wasteful luxury. It would divert resources from other

The poor are more likely than other groups to engage in direct actions to protect and improve the environment.

uses that could better contribute to improving well-being. But even when the importation of basic needs is advisable, people concerned with sustainable development raise questions about modifying local diets so that they are more attuned to the productive possibilities of their regions; in the current scene, the tendency to substitute imported products for traditional foods is having terrible consequences for human welfare in many societies.²

Food self-sufficiency, however, is only part of a broader strategy of productive diversification whose tenets are very much a part of the sustainability movement. Historically, rural denizens never have been 'just' farmers, or anything else, for that matter. Rather, rural communities were characterized by the *diversity of the productive activities in which they engaged to assure their subsistence*. It was only the aberration of transferring models of large-scale commercial agriculture to development thinking in the Third World that misled many into ignoring the multifaceted nature of traditional rural productive systems. Sustainable development strategies directly face this problem, attempting to reintroduce this diversity, as they grapple with problems of appropriate scales of operation and product mix.

A STRATEGY OF DEMOCRATIC PARTICIPATION FOR RURAL DIVERSIFICATION AND PRODUCTIVE IMPROVEMENT

Sustainable development is an approach to productive reorganization that encompasses the combined experiences of local groups throughout the world. The techniques for implementation vary greatly among regions and ecosystems. A single common denominator pervades this work: the need for effective democratic participation in the design and implementation of projects. Another lesson from recent experience is the importance of creating networks to support and defend this work. Without the mutual reinforcement that the international grouping of NGOs provides, the individual units would not be as effective in obtaining funds for their projects, in obtaining technical assistance for their implementation, and political support against intransigent or incredulous local and national politicians and institutions (Friedmann and Rangan 1993).

Sustainable development, however, is not an approach that will be accepted, simply because "its time has come." In the final analysis, it involves a political struggle for control over the productive apparatus. It requires a redefinition of not only what and how we produce but also of who will be allowed to produce and for what ends. For organizations involved in projects of sustainable development in rural areas, the conflict will center around control of mechanisms of local political and economic power, and the use of resources. The struggle to assure a greater voice in the process for

² The complexity of the task of ending hunger is widely recognized. But recent literature has stressed the social rather than the technical (or supply-based) origins of famine and hunger; Sen (1981, 1982) is a particularly effective exponent of this point, while others have gone into greater detail about the "social origins" of food strategies and crises (Barkin et al. 1990, Garcia 1981, Barraclough 1991).

peasants, indigenous populations, women, and other underprivileged minorities, will not assure that their decisions will lead to sustainable development. But broad-based democratic participation is the best way create the basis for a more equitable distribution of wealth, one of the first prerequisites for forging a strategy of sustainable development.

DUALISTIC DEVELOPMENT: A STRATEGY FOR SUSTAINABILITY

Global integration is creating opportunities for some, nightmares for many. In this juxtaposition of winners and losers, a new strategy for rural development is required, a strategy that revalues the contribution of traditional production strategies. In the present world economy, the vast majority of rural producers in the third world cannot compete on world markets. Unless insulated in some way, their traditional products only have ready markets within the narrow confines of poor communities suffering a similar fate.

But these marginal rural producers offer an important promise: they can support themselves and make important contributions to the rest of society. Present policies are driving peasants from their traditional activities and communities (Barkin, Batt and DeWalt 1991). Peasants and indigenous communities must receive support to continue living and producing in their own regions. Even by the strictest criteria of neoclassical economics, this approach should not be dismissed as inefficient protectionism, since most of the resources involved in this process would have little or no opportunity cost for society as a whole.³

In effect, we are proposing the formalization of a dual economy. By recognizing the permanence of a sharply stratified society, the country will be in a better position to design policies that recognize and take advantage of these differences to improve the welfare of people in both sectors. A strategy that offers succor to rural communities, a means to make productive diversification possible, will make the management of growth easier in those areas developing links with the international economy. But more importantly, such a strategy will offer an opportunity for the society to actively confront the challenges of environmental management and conservation in a meaningful way, with a group of people uniquely qualified for such activities.⁴

The dual economy is not new. Unlike the present version that permeates all our societies, confronting rich and poor, the proposal calls for creating structures so that one segment of society that chooses to live in rural areas finds support from the rest of the nation to implement an alternative regional development program. The new variant starts from the inherited base of rural production,

³ Many analysts dismiss peasant producers as working on too small a scale and with too few resources to be efficient. While it is possible and even necessary to promote increased productivity, consistent with a strategy of sustainable production, as defined by agroecologists, the proposal to encourage them to remain as productive members of their communities should be implemented under existing conditions.

⁴ Much of the literature on popular participation emphasizes the multifaceted contribution that the productive incorporation of marginal groups can make to society. (Friedmann 1992, Friedmann and Rangan 1993, Stiefel and Wolfe 1994) While very little has been done on specific strategies for sustainability in poor rural communities, it is clear that much of the experience recounted by practitioners with grassroots groups (e.g. Glade and Reilly 1993) is consistent with the principles enunciated by theorists and analysts alike.

improving productivity by using the techniques of agroecology. It also involves incorporating new activities that build on the cultural and resource base of the community and the region for further development. It requires very specific responses to a general problem and therefore depends heavily on local involvement in design and implementation. While the broad outlines are widely discussed, the specifics require investment programs for direct producers and their partners.⁵

What is new is the introduction of an explicit strategy to strengthen the social and economic base for a dual structure. By recognizing and encouraging the marginal groups to create an alternative that would offer marginal groups better prospects for their own development, the dual economy proposal might be mistaken to be the simple formalization of the “war on poverty” or “solidarity” approach to the alleviation of the worst effects of marginality. This would be erroneous. Rather than a simple transfer of resources to compensate groups for their poverty, we require an integrated set of productive projects that offer rural communities the opportunity to generate goods and services that will contribute to raising their living standards while also improving the environment in which they live.

THE LIMITATIONS OF ECOTOURISM: THE MONARCH BUTTERFLY

The Monarch butterfly and its 5,000 mile trek between Canada and Mexico have come to symbolize the bridge that is bringing the three nations of North America closer together, forging a single trading bloc. The phenomenon of the overwintering of the Monarch Butterfly was “discovered” some twenty years ago (1974-1976) when researchers from the University of Florida finally traced the flight path from Canada. Of course, their presence was well known to local residents and to a broader segment of the population in west-central Mexico from time immemorial, but with the publication of the details of the journey in *Scientific American* and *National Geographic* magazines, its social and economic significance altered conditions in the region.

Once announced to the world, the spectacle of the wintering lepidoptera began to attract hundreds of thousands of visitors who make the pilgrimage to the reserves that were created so that this winged caller might enjoy some degree of protection from the ravages of encroachment by human activities. As a result, many of the people living in the region have come to resent the intruder; its annual visits have brought increasing government regulation of their

⁵ For the more general discussion, see Adelman 1984 and Barkin 1990, ch. 7. FUNDE (1994) offers a specific program for the reconversion of El Salvador based on the principles discussed in this paper. The proposals of groups like the IAF and RIAD offer specific examples of ongoing grassroots efforts to implement initiatives like those discussed here. The Ecology and Development Center in Mexico is pursuing a program of regional development consistent with the proposed strategy (Chapela and Barkin 1995).

lives, effective appropriation of their lands, intense social conflict, and heightened misery.

There are serious social and economic problems in the protected area. Many of these problems are simply local manifestations of the larger crisis of Mexican society, making it difficult for poor rural producers to survive by continuing their traditional activities. In this protected area, people have been particularly affected by specific conservation measures that intensified the adjustment process. The declaration of certain important areas to be part of the nuclear and buffer zones of the reserve led to a prohibition or severe restriction on traditional forestry activities, without offering the communities or their members compensation for the reclassification of their lands or alternative productive opportunities with which they might earn a livelihood elsewhere in the region.

The region's problems and those of the communities did not begin in 1986 and cannot be attributed solely to the butterflies. Local systems of control by economic elites and political bosses were an important part of the local scene long before the visitors acquired their new found fame. Industrial demand for sources of pulp, and local mechanisms to concentrate the wealth and opportunities were already creating pressures on the forests and dividing individual communities as well as pitting one against another. The opportunities created by the unbridled expansion of tourism and the arbitrary distribution of the spoils among a very small group of people compounded the problems.

In this environment, a new approach to regional development is required. While there is a general recognition that ecotourism can offer more opportunities to the people, it is also clear that without other, complementary productive activities that create jobs and income, the people in the region will continue their environmentally destructive activities that also threaten the viability of the fir forests in which the Monarch nests.

A local network of NGOs and confederations of communities and productive groups has begun to play an important role in creating these opportunities. There appears to be an understanding of the great cost that was incurred as a result of the internecine warfare that the strategies of bureaucratic imposition created. The principal limitation, I think, is the lack of mechanisms for the various groups to implement realistic productive strategies; they need information about resources and markets, as well as mechanisms to channel available resources more effectively. The organizations require a process of local cooperation, constructed on a firm basis of broad-based effective local participation. This is the route to creating a "dual society" in which ecotourism would contribute to an overall strategy of sustainable development.

In effect, we are proposing the formalization of a dual economy. By recognizing the permanence of a sharply stratified society, the country will be in a better position to design policies that recognize and take advantage of these differences to improve the welfare of people in both sectors.

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Maho Bay, Harmony, Estate Concordia, and the Concordia Eco-Tents, St. John, U.S. Virgin Islands

Stanley Selengut
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ABSTRACT

In summary, the criteria for the success of the Maho Bay resorts boils down to three key issues. They are: 1) Design for a specific segment of the traveling public. That is, do not try to be “all things for all people”; 2) Stay open-minded. Design a modular program so that you can start small. Learn from customer reaction and environmental impact. Adjust your ideas and then proceed to expand; 3) Work together with government and environmental agencies from the very inception of the project.

It all started eighteen years ago when I acquired land within a U.S. National Park on St. John in the U.S. Virgin Islands. The land was above a white sand beach with coral reefs, endangered turtles, and abundant marine life. I was a New York developer with little background in sensitive development. However, years before, I had built housing within Fire Island National Park, a barrier island close to New York City. There, the Park Service had constructed elevated walkways to protect the rare vegetation from pedestrian traffic. At Maho Bay I decided to build similar walkways to protect the plants and to avoid erosion. Without these walkways, the heavy seasonal rains could wash top soil into the ocean, smothering the coral.

I designed a light inexpensive “tent-cottage” which could be built within the existing trees and plants. The walkways were built first, on hand-dug footings. Construction materials were wheeled along the walks and carried into place. Pipes and electrical cables were hidden under the walks rather than buried in trenches. The finished walkways flow naturally through the trees and foliage. We call the project Maho Bay Campground. Guests can traverse the steep hillside without trampling the forest floor. People fit comfortably into this natural setting.

We started small with only eighteen units and a modest cash investment. The campground won the 1978 Environmental Protection Award, was featured in the *New York Times* Travel Section, and attracted more customers than we could handle. We used the profits to add units a few at a time. Now, with 114 units, Maho Bay is one of the most profitable and highly occupied resorts in the Caribbean. And after eighteen years of operation and almost one million guest days, the property has been restored in such a way that habitat for plants and animals is healthier than before it was developed. Recycling our water supply and compost accounts for much of this. We

After eighteen years of operation and almost one million guest days, the property has been restored to a healthier wildlife and horticultural habitat than before it was developed.

use over one million gallons of fresh water each year for drinking, washing, and flushing. The treated water is then used to irrigate the hillside.

From a distance, you can hardly see the 130 tents and buildings hidden in the foliage. This example of sensitive land use stimulated massive free publicity which has caused high occupancy and resultant profits.

In November 1991, the Virgin Island Government and U.S. National Park Service hosted a workshop on Sustainable Design at Maho Bay. It was attended by over sixty renowned architects, engineers, landscape architects, and naturalists. The result of the workshops was the book *The Guiding Principles of Sustainable Design*. Authors addressed solar design, use of recycled building materials, energy from wind power and photovoltaics, responsible waste disposal, building ecology, and other aspects of sustainable design.

I was inspired to use these concepts! I acquired a parcel of property adjacent to Maho Bay Campground and proceeded to design Harmony, the world's first luxury resort energized exclusively by solar and wind power, and constructed with recycled materials.

I presented development ideas at public meetings to find what would be acceptable to the people in the area, the U.S. National Park Service, and the local planning department. This dialogue led to partnerships with agencies that could be helpful, such as the Virgin Islands Energy Office and Sandia National Laboratories. They helped us demonstrate that nature consists of more than plants and animals. It is also energy from sun and wind and nature's ability to recycle.

Perhaps our *most* meaningful relationship was with the Society for Ecological Restoration. The premise of this society is that every parcel of land has a historical point when it reached its height as a balanced ecosystem. Once this point is identified, then there is a clear path to restoration.

The Virgin Islands reached the height of its native habitat in pre-colonial times, before Columbus landed in the "New World." That was before all the hardwood trees were cut and exported to Europe for ship building, before the land was farmed and grazed and heavy rains depleted the top soil. The land I purchased above Maho Bay is a degraded forest with eroded top soil. Alien species have replaced native plants and animals. Confronted with this condition, I was led to the theory of ecological restoration and a new development concept.

In conventional development the land is usually clear cut and then re-landscaped with foreign exotics, such as grass and palm trees, thereby eliminating the land's value as a natural habitat.

Every parcel of land has a historical point where it reached its height as a balanced ecosystem. Once this is identified, then there is a clear path to its restoration.

Instead, we designed two-story buildings with a small footprint which could be placed between the trees. The units could then be connected by elevated pedestrian walkways.

Solar panels and a windmill were purchased early to be used to energize construction equipment. We saved money on a generator and diesel fuel. Construction components were chosen from recycled materials such as composite, built-up wood I-beams for floor joists. The floor decking is made from 100 per cent recycled newspaper. The siding is made from a composite of cement and recycled cardboard. It comes with a fifty-year guarantee, as do the roof shingles, also made from waste cardboard and cement. The shingles look like slate but are lighter and easier to work with. The ceramic floor tiles utilize post-industrial glass waste from a GTE light bulb manufacturing facility. The bathroom tiles and furniture tops are made from 73 per cent post-consumer glass bottles. Outside decking is made from recycled old tires. Lumber for walkways is treated with a new process called ACQ, which is rot and termite-proof, but less toxic than regular pressure-treated lumber. The lumber for walkways is made from recycled plastic mixed with sawdust. The sheetrock is of recycled paper and gypsum. Even the paint is water-based and kind to the environment. The passive solar design provides a wind scoop to suck out hot air, while shading, insulation, and reflective glass in the windows and doors keep out heat.

To avoid disturbing the site, we devised construction methods that were incorporated into the design plans. Walkways were built first so workmen could traverse the slopes without trampling vegetation. For buildings farther from the road, footings were hand dug. Dirt was placed on the side of the trench to be covered by a slab. A concrete pump delivered concrete mix long distances without spillage.

From the adjacent hillside you would hardly know a development is in progress. I'd like to contrast that with other developments at the same stage. Most have been constructed with little regard for erosion and aesthetics.

Our goal is to leave as much valuable flora as possible and to restore the habitat to its past glory by native-plant landscaping. Our plan emphasizes plants and trees that attract and support native birds and wildlife, to control insects and entertain the guests. Our bat houses, for example, host one of the world's best bug-catchers.

At present, there is a feral animal population of stray cats, wild donkeys, goats, and mongooses. These have devastated indigenous plants and animals. With the help of park professionals, we will try to regulate the number of these feral animals. We will try to re-introduce land-nesting birds and native wildlife. You can imag-

From the adjacent hillside you hardly know a development is in progress. I'd like to contrast that with other developments at the same stage. Most have been constructed with little regard for erosion and aesthetics.

ine the marketability of a resort where walls open up to cactus and turpentine trees, draped with orchids and air plants, and alive with parrots, iguanas, and parakeets.

Harmony should be like Maho, where we don't just preach conservation and caring. It's all around you. Right from the start you get a feeling of communal cooperation. We have a "help yourself center" where guests find free, unused food and supplies left by previous visitors. There is a small but ample store stocked with healthy foods, and products which are sensibly packaged, purchased in bulk, and environmentally friendly. Our self-service outdoor restaurant offers local foods. A few phone calls assure us that the shrimp we serve is caught in nets with turtle release devices, that the tuna we serve is not caught by nets that drown dolphins and other creatures. Conservation efforts include baking bread in our solar oven, serving vegetarian alternatives that encourage people to eat lower on the food chain, and making ice in our solar ice-making machine.

Our kitchen uses biodegradable cleaning products, and employs water and energy-saving devices. We use boric acid instead of persistent pesticides for roach control. All food waste is composted, and even on this arid island, we are able to produce some of our food from the use of compost and waste water.

The Pavilion is the center for interpretive functions. Park rangers give lectures on Wednesdays. On Tuesdays, the water sports people discuss fragile reefs and sea life and proper behavior while snorkeling, sailing, wind-surfing, or scuba diving. Other days you may find concerts, dances, lectures, or local cultural activities which bring people together. But most activities are designed to promote health, fitness, and appreciation of the natural world around us.

A valuable lesson that guests learn at Maho is how little one needs in life to be truly happy and comfortable. Harmony proves that a much more extravagant lifestyle can be sustained with even less energy consumption. At Harmony, one learns that solar and wind power can replace conventional utility systems and provide savings and environmental benefits without sacrificing the use of typical appliances. A computer terminal in each unit guides occupants through "off the grid" living and produces valuable data for recycling industries.

You might ask a developer: "Why choose to build an eco-resort rather than a more traditional hospitality facility?" BECAUSE, IT IS MUCH MORE PROFITABLE! What makes sense from an environmental and conservation point of view also saves money. Collecting rain water and conserving power and fuel saves thousands of dollars. Native plant landscaping and feral animal control programs

Imagine the marketability of a resort where walls open up to cactus and turpentine trees, draped with orchids, and air plants —and alive with parrots, iguanas, and parakeets.

will lead to a heavily foliated, cooler landscape, replete with indigenous wildlife, and with fewer biting bugs and little maintenance.

Waste water from our sewage treatment system is valuable for irrigation and toilet flushing. Recycling programs can also generate profits. A can compactor allows the Island to get enough aluminum in a container to make shipping cost-effective.

Sally Fox has engineered the color right into the cotton plant so there is no need for toxic dyes and bleaches. We use her fabrics for linens, towels and upholstery, and native crafts for decorations. Conservation of natural resources can be a marketing tool. Maho Bay has developed a repeat customer list of almost 20,000 people who enjoy a nature-based vacation. To my surprise, many of the Harmony guests miss the “close-to-nature” feeling of the Maho Bay tent-cottages, even though they enjoy the hot showers, private bathroom and amenities of Harmony. Imagine! I build a \$70,000 luxury unit, and many guests still prefer the \$7,000 tent-cottage.

We are now developing an “eco-tent” community at Estate Concordia on land I own on the southeastern side of St. John. It utilizes photovoltaic cells and a windmill to energize a refrigerator, overhead fan, water pump, and electric lights. A cistern, solar hot water heater, and a composting toilet will add bathroom convenience without intrusion into the environment. Space-age fabrics reflect heat while providing great strength and protection.

Surely, we are riding on the tourist wave of the future.

Why choose to build an eco-resort rather than a more traditional hospitality facility? Because —it is much more profitable! What makes sense from an environmental and conservation point of view also saves money.

STANLEY SELENGUT

Stanley Selengut is a civil engineer specializing in resort development. His varied career began in the 1950s when he created a large-volume importing company specializing in South American native crafts. The company grew to service 1,100 stores and employed over 2,000 Andean Indians. His solutions to the problems of these villages led him to serve as consultant to the Kennedy Administration, where he completed fourteen contracts in Latin America working for the State Department and then worked as staff consultant in Industrial Development for the Office of Economic Opportunity. A consulting assignment on low-income housing for the Rockefeller Brothers led him to the Virgin Islands National Park in St. John. The 114 unit Maho Bay Campground is not only environmentally responsible, but also achieves a 95 per cent high-season occupancy and is one of the most profitable businesses on St. John. He has recently developed a research resort adjacent to Maho Bay Camp grounds called Harmony: A Center for the Study of Sustainable Resort Development.

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Ecotourism and Cultural Heritage Tourism: Forging Stronger Links

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ABSTRACT

Cultural heritage is defended as an important part of ecotourism. Recent developments which have recognized cultural heritage are discussed. The author asks readers to question the direction in which ecotourism is heading and to take action in order to preserve the cultural resources of the areas in which tourism is developing.

The relationship between culture, heritage, the environment and tourism has received a great amount of attention throughout the world. Yet rarely have individuals or organizations representing these special interests worked together on a local, regional, or national basis to define their common interests and discover ways in which they can develop a strong and mutually beneficial working relationship that conserves natural, cultural, and human resources.

Today, it is not distance but culture and heritage that separates the people of the world. How do we create stronger links between historic sites and monuments, indigenous people in the host community, and those individuals seeking a quality ecotourism experience? How do we improve the life of the two hundred and fifty million indigenous people in the world through ecotourism?

Individuals interested in ecotourism tours and projects are generally professionals with a higher degree of education than the average traveler. Those people choosing to participate in adventure travel are usually younger than travelers interested in cultural travel. Most have an interest in the natural resources and culture of the area they are visiting. Most of them also want to see many species of wildlife and at the same time understand wildlife in the context of the people who inhabit the area they are visiting.

While the pace of world tourism growth slowed only slightly in 1995, international tourist arrivals were up 3.8 percent to 567 million tourists worldwide. Revenues grew 7.2 percent (\$372 billion) in 1995. Tourism is now viewed as a political and economic development necessity and is quickly emerging as one of the basic development tools at all levels of government.

At this time, most communities are more interested in attracting tourism investment than in attempting to measure the environmental and cultural impacts that increased tourism development brings.

With the tourism industry predicted to grow into the next century, isn't it time to ask ourselves or the organizations we represent, how we are going to solve the issues related to human beings, tourists, and the environment?

One approach is through the integration of ecotourism with cultural heritage tourism (travel directed toward experiencing local traditions, arts, and heritage while respecting the host community and its surrounding environment). Cultural heritage tourism is an important link that should be part of all ecotourism products and tour packages. People travel to see how other people live, to experience their neighborhoods, and to understand the natural environments that define their existence. Culture and heritage sums up a community's beliefs and values—shared behavior acquired as the result of living within a group and a defined geographic area. To develop ecotourism without considering local culture is to take the humanity out of ecotourism.

Environmentalists, conservationists, and preservationists should collaborate to develop an ecotourism experience in which everyone benefits. Not only are the wildlife and the atmosphere endangered on this planet—human beings are under threat as well, especially many of the indigenous peoples. Individuals and organizations working to protect and manage forests, farmlands, and wetlands must be equally concerned about protecting archaeological sites, historic buildings, and local communities. All over the world, human resources and their cultures are threatened with destruction.

The issues are plentiful; however, we need to demonstrate through ecotourism and cultural heritage tourism that natural and cultural resources are irreplaceable and worth conserving. The threat is immense but there is hope. There is a growing global awareness of the need to protect the environment, special places, and indigenous people.

An example of this global concern was announced on February 26, 1996, when representatives from the World Tourism Organization (WTO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) signed their first cooperative accord. In the agreement they pledged to work together to promote cultural tourism and protect historical sites worldwide. The same agreement, signed by WTO Deputy Secretary General Francesco Frangialli and UNESCO Director General Federico Mayor, pledged cooperation in the fields of environmental protection and nature-based tourism. Mr. Frangialli stated:

At a time when the countries of the world are finding it increasingly difficult to fund cultural and environmental projects, tourism offers the only solution. We need to work together to make sure fees collected from visitors and some of

At this time, most communities are more interested in attracting tourism investment than in attempting to measure the environmental and cultural impacts that increased tourism development brings.

the income generated from tourism goes directly to the protection and maintenance of historic monuments, as well as conservation of the environment.

People working in all areas of ecotourism need to encourage their national and local politicians to take actions which implement this philosophy.

Cooperation between WTO and UNESCO was established under terms of a previous accord signed in 1979. During the past decade, the two organizations have collaborated closely on a project to link cultural tourism and ecotourism, developing tourism packages along the famous Silk Road, the ancient caravan route linking Europe and Asia which was traveled by Marco Polo. They are also working to develop a heritage tourism package which will educate visitors about historic sites associated with the African slave trade. Historic sites in the context of their natural environment provide tangible links between past, present, and future.

Another positive event occurred on March 25, 1996, when the World Monuments Fund announced its list of the world's 100 most endangered cultural monuments, a collection of man-made sites around the globe that urgently need conservation. The announcement was made in conjunction with American Express, which committed \$4 million toward saving historic monuments from destruction. The threat to heritage sites falls into two categories: natural and man-made. Many monuments in Asia and Africa are threatened by natural elements, such as annual monsoons that threaten sites in Cambodia, Thailand, and Vietnam. The Khami National Monument in Zimbabwe is imperiled by aardvarks, little animals whose underground tunnels are undermining the foundations of the ancient city. The greatest threat to heritage sites is from human beings: pollution, vandalism, poor restorations, sewage, war, and most of all poorly planned and developed mass tourism.

It would have been impossible to create a list of sites threatened by mass tourism ten years ago. Through modern computer technology, the World Monuments Fund is now photographing sites and making them accessible for analysis on the Internet. It is now possible to check how many heritage sites or areas are threatened by excessive tourism—the answer as of a few months ago was sixty-five.

Another significant declaration promoting the preservation of natural and cultural resources was made at the White House Conference on Travel and Tourism, held on October 31, 1995. Issue papers prepared by delegates representing all sectors of the tourism industry stated that the natural and cultural environments of many

The education of employees as well as tourists about these issues is an important way of decreasing negative environmental and social impacts.

of the nation's tourism destinations are the most significant part of the travel and tourism industry's major assets. With this global and national support, the time has come to find ways to work together and develop integrated tourism development plans which create the most beneficial experience for everyone involved in the conservation of the Earth's resources.

The addition of socio-cultural content to the ecotourism experience gives visitors greater depth of understanding. Given the public's growing concern for both cultural and natural environments, some challenges which have developed as a result of ecotourism include:

- determining the carrying capacity of the resource;
- understanding the underlying purpose for conservation of natural and cultural resources;
- identifying whose resources are being interpreted and by whom;
- questioning the need to encourage repeat visitation.

Tourism research confirms that as tourists become increasingly better educated and more affluent, they expect their ecotourism experience to be both educational and enjoyable. More and more tourists are saying that an important factor in their travel decision is the desire for an authentic experience through interaction with the local culture in its natural context.

But it is important that we recognize that all forms of ecotourism or cultural heritage tourism impact the host society. There are both positive and negative impacts. At the individual level, a positive impact might be the reinforcement of the visitors' self-concept, while a negative impact might be some loss of the host's self-image or identity. At the family level, impacts might be related to the strengthening or weakening of the family unit. At the community level, tourism can lead to the improvement of educational and social opportunities, or may instigate social disintegration.

Ecotourism can be a positive force in sustaining the natural, historic, and cultural environment when visitors are properly educated. The development of guidelines for educating visitors about environmentally fragile areas and cultural issues is paramount in any tour package. The education of employees as well as tourists about these issues is an important way of decreasing negative environmental and social impacts.

Ecotourism of tomorrow will need to become more strategic to maintain its success. It will be necessary to combine business skills with integrated planning practices in order to satisfy customers and meet competition. The tourism industry must be an active partici-

part in the continuing dialogue over conservation of natural and cultural resources. For example, Central America is one of the richest zones of biodiversity in the world. It is also home to 43 distinct indigenous/linguistic groups, a population of 4 million to 5.5 million people. Local culture contributes significantly to the ecotourism experience, but what are we doing to ensure that it continues to minimize the impacts of increased visitation? Indigenous groups must value, preserve, and develop their cultures, as expressed through their dance, music, architecture, and food. Many of the indigenous peoples' survival into the next century is questionable. Since the beginning of this century, more than ninety of Brazil's indigenous tribes have disappeared.

In Guatemala, in just the last fifteen years, 45,000 Indian women have become widows, 200,000 Indian children have been orphaned, and two million Indians have become refugees. In 1970, there were 13,000 Penan tribe members living in the forests of Sarawak. Two decades later, there were fewer than 500.

Indigenous people all over the world ask for the right to survive in a unique way. They choose to walk toward the future in the footprints of their ancestors, to maintain their inherent rights of self-determination, to decide on their own form of government, and to preserve their cultural identity. Of all resources in the world, I consider indigenous people to be the Earth's most valuable non-renewable resources.

It is time that partners in ecotourism forged stronger links to create the highest quality sustainable tourism practices. We must seek solutions to the following questions:

1. How can we work together so that tourism, as an industry, can help promote the conservation and restoration of both natural and cultural resources?
2. How can ecotourism be used to promote better understanding of the role between the host culture, its guests, and the relationship to other cultural resources?
3. How can ecotourism expand its mission to promote an accurate picture of global, regional, or national identity (i.e., values, traditions, customs), and minimize commercialization at the same time?
4. How can individuals and organizations working with natural and cultural resources develop better lines of communication and maintain collaboration with the tourism industry?
5. What are the positive and negative impacts of working together? What alternatives are needed so mutual benefits arise from such cooperation?
6. What kind of educational programs should be developed to

- foster the link between ecotourism and cultural heritage tourism? What role does each sector play?
7. How do we increase the use of new and emerging technologies that enhance a visitor's experience and that change the way the tourism and travel industry does business?
 8. How do we work together to preserve our natural, historic, and cultural resources for future generations while expanding urban and rural development opportunities that foster protection of the environment? Where is the balance?

Our natural and cultural resources are the engine that drives the tourism industry. Those working in the tourism industry have the responsibility to protect the environment, the society, and individuals being visited. As we move into the next century, the following must happen in ecotourism:

- greater collaboration between environmentalist, preservationists, and conservationists;
- development of ecotourism that does not disrupt the lives and culture of local residents;
- planning that protects visual integrity as well as natural and cultural resources;
- identification and enforcement of limits of acceptable change;
- development of direct benefits to local residents from increased visitation to their community.

Tourism is now viewed as a political and economic development necessity and is quickly emerging as one of the basic development tools at all levels of government.

It is time to take action! How you choose to act and develop ecotourism, whether you work on environmental or cultural heritage issues, will depend on your personal experiences and education. Whichever you choose, begin to forge those links with the tourism industry today.

SHARR STEELE-PROHASKA

Sharr Steele-Prohaska has more than fifteen years of experience in consulting to the tourism industry, national, state and local governments, and indigenous peoples' organizations and communities. Her specific expertise includes sustainable tourism planning with special emphasis on cultural heritage tours, ecotourism and rural tourism development, marketing strategies, educational workshops and professional training programs. She is currently acting chair of the Tourism and Travel Administration Program at the University of New Haven in Connecticut and also serves as adjunct faculty at the George Washington Graduate School in Tourism Administration, the New York University Center for Hospitality and Tourism, and at the University of Oregon School of Recreation and Leisure and the School of Allied Arts and Architecture. She is currently completing a book on international cultural heritage tourism. She is a frequent guest lecturer and has conducted many educational workshops on various aspects of the tourism and travel industry, including international workshops in Venezuela, Ecuador, and Bermuda.

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Participatory Planning for Ecotourism Development in the Peruvian Highlands

Miriam Torres
The Mountain Institute

ABSTRACT

This paper is based on recent experience gained from working on the Huascarán National Park Tourism Management Plan, the first tourism plan in a Peruvian protected area. This experience suggested that ecotourism can be an effective conservation mechanism when designed within a participatory framework. This paper presents the context of the planning process including important contextual information about Peruvian protected areas and tourism activity, specific constraints to the process, and planning of tourism management. Special consideration is given to the participatory mechanisms used and the lessons learned during the process.

INTRODUCTION

This paper reviews some of the obstacles that we confronted in the process of developing the Huascarán management plan and presents our experience with a participatory planning approach as a potential solution to such obstacles. I will spend some time at the outset of the paper discussing the history of parks, conservation, and tourism in Peru and offer general background on the nature of Peruvian government. My attention to such topics is meant to provide a context in which to understand the process of developing the plan. It also underlines the importance of considering the social, political, economic, and ecological context before planning any eco-tourism or conservation initiative.

The plan was developed with technical and financial support from The Mountain Institute (TMI) under a contract with the Peruvian government. The Mountain Institute is a non-profit, scientific and educational organization committed to preserving mountain environments and advancing mountain cultures throughout the world. The Andean Program is its most recent activity and is focused on community-based biodiversity conservation in the highlands of Bolivia and Peru. I started as part of the planning team, focusing principally on the concepts of park management and stakeholder involvement. Presently I am the Director of Protected Areas Management for the Andean Program.

BACKGROUND PLANNING

THE NATIONAL PARK SYSTEM

It is important for people to remember that the oldest park in Peru dates back only thirty years, and the first government agency

to oversee protected areas has been in existence only twenty years. Most of this time, each area was managed separately. The present *system* of parks having a truly national character, but decentralized and managed at the regional level, has only existed since 1990. The national government gives low priority to management of national parks. This results in a lack of coordination in the creation and management of parks. This lack of commitment to conservation has led to a chronic weakness of protected area management. The national body which oversees protected areas has not been able to effectively manage protected areas, especially with regard to community development. Such ineffectiveness has further eroded any national belief in the importance of protected areas.

It has been difficult to carry out planning activities and set policies in coordination with the government because of the constantly unstable political situation. Within two years, there have been five national Directors of Protected Areas. Because of this instability, the government has never developed a clear definition of protected areas. The most evolved ideas have come from NGOs. This creates jealousy between the state and NGOs, and thus further hinders cooperative planning efforts.

Additional obstacles that we faced during the planning process include:

- An extremely centralized bureaucracy, which does not permit the local park administration to make decisions based on local issues. As a result, the park personnel often could not be involved full time in planning activities.
- The roles of different actors, such as the park staff and the TMI, could not be clearly defined because of the lack of a clear national policy on inter-institutional collaboration.
- Severe tension between NGOs and the government, which limited participation of national NGOs in the process. This led to a loss in valuable technical support.
- Lack of training on the national level of government staff, which meant that every detail of every action had to be painstakingly described to the Lima authorities.
- Many times the park staff was not paid, making it difficult to maintain a high level of energy throughout the process.

PERUVIAN VISIONS OF NATIONAL PARKS

The lack of knowledge and appreciation of protected areas by the general population has led to very different impressions of parks. I will present some stereotypes here in the hope that they will clarify

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how people perceive national parks in Peru. First, some people believe that parks are simply from “the north” and are basically playgrounds for foreigners. They resent national parks and are often opposed to their existence. Another group values parks as a means of gaining income from tourists. This group wants to see parks developed as they are in the US, with telephones and ski-lifts and fancy hotels. This group often feels threatened by programs that try to increase involvement of local people in tourism. A third group is conservationists, who see parks as a basis for conserving biodiversity and natural resources. The oldest of these groups in Peru, APECO, has existed about twenty years. But neither APECO nor younger organizations has been able to instill in the general public a sense of the importance of conservation. Not having a base of popular support has led to a lack of power for most conservation advocates in their efforts to protect national parks against commercial development.

The diversity in perceptions of protected areas suggests the need for collaborative and participatory approaches to management. These approaches can help minimize imbalances of power and neutralize political pressures by ensuring representation of all parties.

In addition, local participation can present difficulties of coordination and communication among different interest groups. People who live in small communities often have histories of conflict or hostile relations. It was therefore important to set these difficulties in a participatory framework and to include staff in the project to deal with community relations.

Even though participatory processes are usually costly and prolonged, they are perhaps the only way to establish the necessary dialogue and reduce tensions. But with participation comes the risk of opening new controversies. The challenge of managing such situations is to deal with difficulties slowly, in a controlled manner. In this way, all participants in the process can recognize the roots of conflicts over resource use and confront them together.

HUASCARAN NATIONAL PARK

Huascaran National Park is strictly protected, the equivalent of category II in the IUCN’s definitions of protected areas. The Park covers almost all of the Cordillera Blanca, the highest part of the central Andean mountain range. It is surrounded by numerous communities whose residents benefit from traditional grazing rights, harvesting of medicinal plants, and more recently, acting as guides and porters for tourists. There is also constant use of resources and pressure for more use to carry out mining and hydroelectric projects.

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In terms of tourism, Huascarán National Park is the second most popular national park destination in Peru, behind only Macchu Picchu. It contains the only ski area in the country and the best trekking, mountaineering, and rock climbing. It is also quite accessible, being only a short trip from Lima. Peru's mountains are very close to towns and lowlands, so they are easily accessible to tourists. Last year alone, over 85,000 persons were registered in just two of the entrances to the Park. Significantly, over 80 per cent of these visitors were Peruvian. Without a doubt, tourism is the most important economic activity in the region.

NATIONAL ECOTOURISM

Peru's interest in ecotourism began in 1990 when the political crisis created by the Shining Path movement had greatly reduced the number of visitors to the country. At that time, the private sector presented "ecotourism" as a new way of promoting tourism. Lack of political will and the many obstacles to cooperative action between the government and private sector, however, impeded the development of any government-sponsored plans for ecotourism development. Indeed, the Huascarán National Park management plan is the first detailed ecotourism management plan for any park in Peru. The tourism sector had not developed any planning document for protected areas; it has not even provided clear guidelines for tourism regulation in Peru. In short, as we started to develop the ecotourism management plan for Huascarán National Park, there was no real precedent to help consolidate the economics of tourism and the conservation of protected areas.

The central administration of INRENA (National Institute of Natural Resources) supported the management plan as a way of opening up the park for infrastructure development. In the name of free market ideology, the government has defined a strong policy of extractive use of resources, without analyzing long-term impacts or exploring appropriate land-use practices for protected areas. Government policy does not distinguish between different categories of protected areas, nor does it attempt to use protected areas for the benefit of local people. The government views a tourism management plan as a way to collect data that will allow for more intensive and extensive development of tourism services in national parks.

REGIONAL TOURISM

In Huascarán, tourism developed rapidly beginning in the 1970s, opening new economic opportunities for a population that has had very low incomes. Tourism has become a central part of the lives of the people throughout the area. It has radically changed the social

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relations of the people living in and around the park, especially those between people from rural and urban areas. In the principal city of Huaraz, people who work in tourism look at the mountains on the outskirts of the city and see, more than anything else, economic resources. Such a perspective clearly presents a challenge to any conservation initiative.

In the buffer zone of Huascarán National Park, which is one of the areas with the most potential for tourism, tourism development has occurred in a chaotic manner. The reasons for this are: 1) lack of cooperation between tourist agencies; 2) lack of public and private planning for tourism; 3) lack of training opportunities for people in the tourism sector; and 4) little involvement of community members in tourism management.

THE PLANNING PROCESS

Negotiations with the Peruvian government, leverage of funds, and relationship building were the first steps of the project, carried out in 1994 and early 1995. Serious planning began in September 1995 with the signing of a contract between TMI and INRENA. It took a full seven months to finish the plan and to negotiate its approval with INRENA.

The planning process contained the following four steps:

1. Creation of an inter-institutional work group.
2. Diagnosis of tourism in the Park.
3. Workshops (capacity building).
4. Formulation of the plan.

Building relationships and confidence with local, regional, and national actors was a constant activity.

FORMATION OF THE WORKING TEAM

First the working team had to consist of people the park team knew and trusted. There was a lot of concern at the beginning that TMI would bring in outside people or people the park did not trust. Thus, every person on the team was discussed with the park and ground rules were laid to ensure the park's leadership in the management of the team. This reassured the park staff, who were all educated in the region, that they would not be threatened by the more experienced people who would eventually make up the team. The TMI team decided not to have any designated "specialist" on the team, but rather to have different members work on different activities to help strengthen their abilities in new areas and also to avoid the "I am the specialist" mentality.

The second aspect of team creation was building the capabilities of the team in technical aspects as well as in human relations as-

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pects. The team assessed the tourism situation within the park and identified the strengths and weaknesses of the park management. This was also a convenient time for training the park employees about participatory facilitation methodologies. This activity prepared the park to take criticism from the different sectors without becoming overly defensive. It also reinforced their knowledge of issues related to ecotourism and encouraged them to start to reflect on concerns that might be brought up during the workshops. This team strengthening and planning proved vital to the following phases of the process.

CONCEPTUAL FRAMEWORK OF THE PROJECT

Figure 1 summarizes the initial concept behind the plan, which came out of the workshop involving the Park and TMI. Figure 2 presents the conceptual framework devised by all the participants in the process in the final workshop which included indigenous communities, INRENA, the tourism sector, adventure tourism agencies, conventional tourism agencies, municipalities, and the Working Team (Park and TMI staff members in charge of conducting the planning process).

As the figures illustrate, despite their different structures and despite periodic changes in the basic idea of the plan throughout the process, in the end, the vision defined by the planning team and the vision of the stakeholders were quite similar. This is important because it shows that the process allowed the people involved to better understand the linkages between tourism development and conservation. It also shows that, despite differences between park administrators and the local tourism sector (including communities offering tourism services), there is, to some extent, a common ground between these key players.

FIELD INVENTORY (DIAGNOSTIC)

Even though there are existing publications on Huascarán National Park and a good general knowledge of the area, we felt it was important to do a complete field inventory of the park. We believed it was important for the following reasons: 1) It allowed the park staff, who had no camping equipment, to explore and get to know parts of the park that they have never seen before, making them more competent managers and better informed for the workshops with private guides; 2) It allowed the team to work closely together in the field which created trust and a mutual understanding of the problems associated with tourism in the park; 3) This better under-

Figure 1: Huascarán National Park Tourism Management Plan

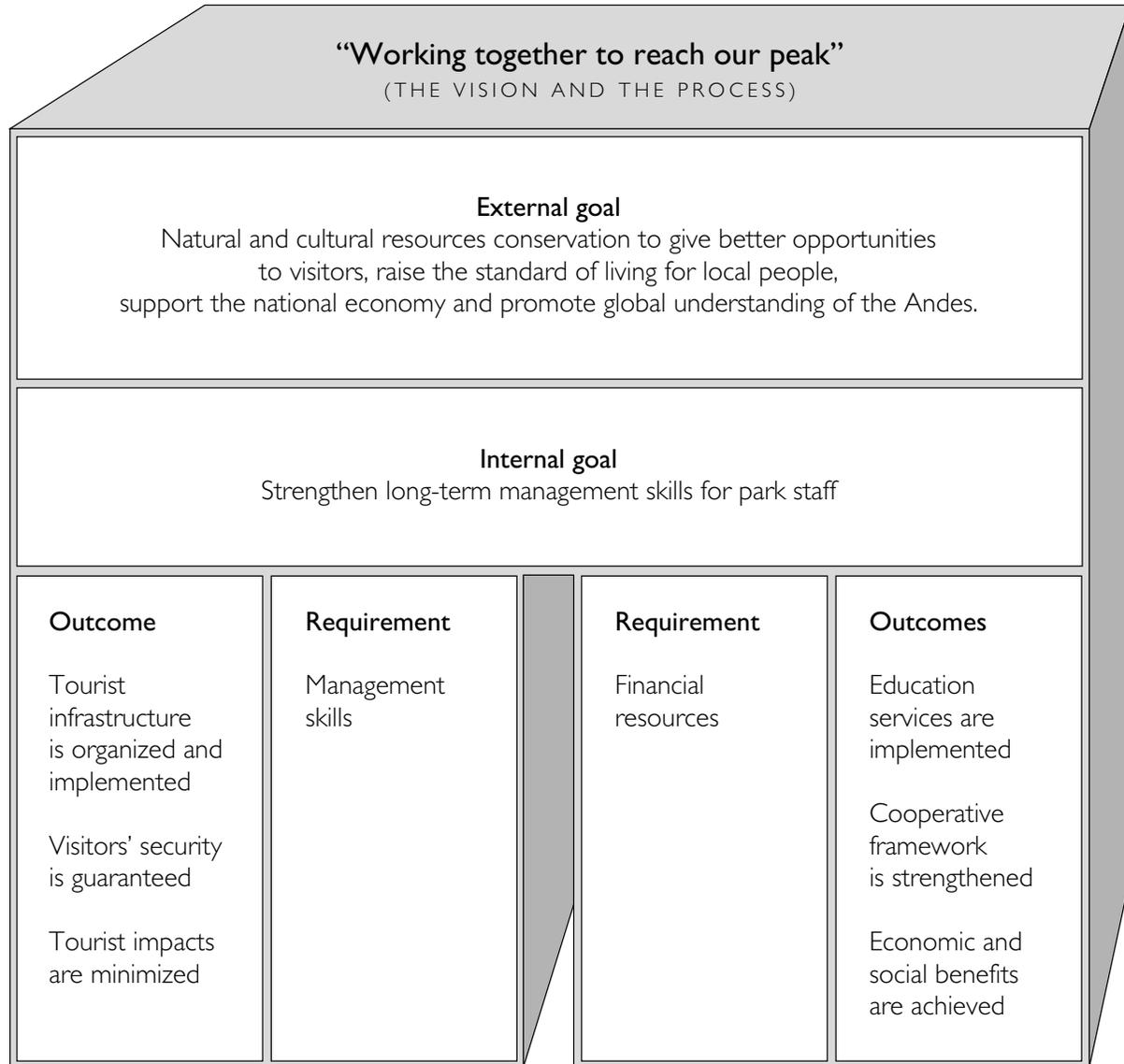
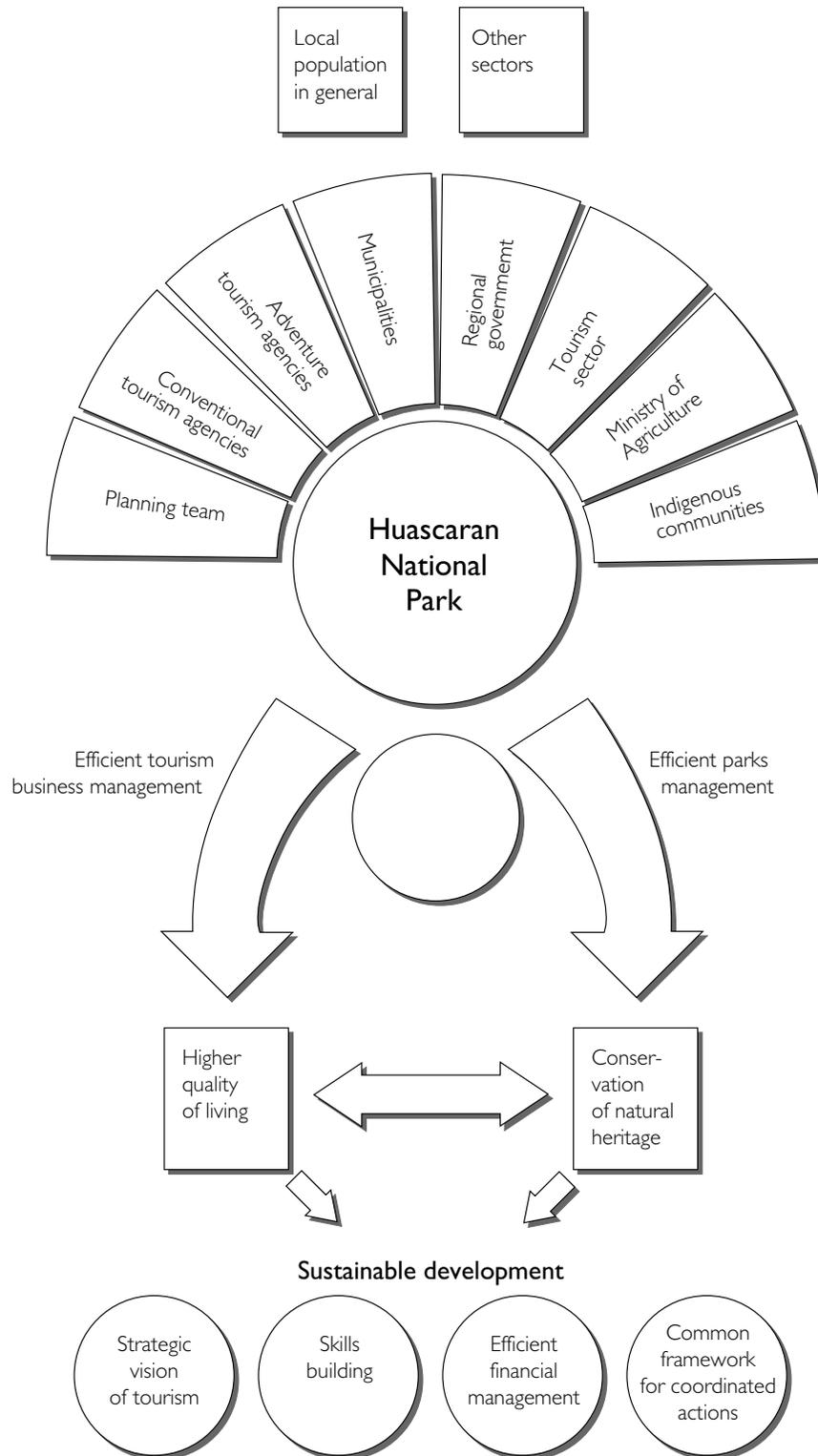


Figure 2: Conceptual Framework



standing of the problems gave the park staff greater confidence to develop new projects, to discuss with the private sector the alternatives for future tourism management, and conceive of common criteria; and 4) It gave other sectors confidence in the park, ensuring that park proposals will be received with greater respect.

WORKSHOPS, MEETINGS, AND CAPACITY BUILDING

First, we learned that the methods used should ensure the building of trust and prohibit small groups from manipulating meetings. This can be accomplished by allowing all participants to have full access to information before decision-making occurs, and through reporting opinions discussed and decisions made immediately following each meeting. In this way, all involved in each step of the process can help correct errors, make it so that no significant information is left out and monitor the involvement of all groups such that no favoritism occurs.

This process facilitated the development of an understanding among the participants that to achieve a common goal, there are common responsibilities that also must be shared. The planning process, in this case, worked very well and allowed everyone to see the benefits of cooperation as well as their own responsibilities to the project and to the future of the national park.

In presenting the results of the process, the same people who participated in the creation of the plan were the ones to present the findings during the project meetings and to the public. This created the incentive to carry out the projects while giving credit to the people who had worked on the plan and shared their ideas. This process of having the participants become the presenters reinforces and strengthens the plan in the eyes of the government agencies. They see the project as not only belonging to the park or TMI but also to all communities who have participated, thus making it harder for the agencies not to support the process and the final plan.

We tried to ensure that the working team responsible for the project was always clear and honest about the extent and the limits of making decisions for the participants of the process, while maintaining their role as facilitators rather than decision-makers. In addition, the working team had to be willing to explain the limitations of the process within the context of national policies and financial constraints.

It is important that the supporting agency respect the authority of the park, facilitating the analysis of the implications of the decisions for them who must carry out and achieve a balance between the opinions and mandates of the administration of the park and the opinions expressed by other participants in the process.

CONCLUSIONS

1. Even when projects have a local and rural focus, exceptional efforts must be made to build trust and negotiate with governmental organizations. Governments have the authority. They determine project opportunities and implementation. Therefore, strong personal and institutional relationships must be developed with government officials.

2. There are no recipes for building relationships between government and conservation organizations. At the project design stage, planners have to be aware that negotiations with government officials involve more than what is officially required. In defining a project time table, it is necessary to set aside significant amounts of time to build relationships with counterparts and government officials. That is especially true in countries with poorly organized and centralized governmental institutions.

3. It is important to understand that it will be difficult to involve National Park officials continuously in the planning process. To reduce the negative effects of this limitation, conservation organizations should offer a strong sense of continuity while at the same time being careful not to threaten park officials' authority. If such an effort is not made, projects often become the "NGO project." This produces tension between governmental officials and the NGOs and increases the likelihood that the goal of raising public awareness about the importance of conservation will not be achieved.

4. High priority must be placed on the training, skill-building, and development of self-confidence among park staff during the project. The goal is not just to accomplish the project steps, but also to help park officials understand the roots of their institutional problems and consider solutions. It is also essential that Park officials be able to apply to park management what they have learned in the areas of networking and participatory decision-making.

5. Project timing must be flexible. This is a very difficult issue given the requirements of funding institutions. Nevertheless, it is important to stress the need for flexible timing. Otherwise, the planning process will not allow all stakeholders enough time to internalize the process. Nor will park staff have the opportunity to accomplish other activities. Without adequate time for stakeholders to build relationships, a participatory process is simply not possible.

6. Participants should be made aware that it may not be possible to implement every aspect of the plan or to pursue the participatory approach at all levels of negotiation. Uncertainty about future political, social, economic, and ecological realities may limit the effectiveness of a participatory approach.

The TMI team decided not to have any designated "specialist" on the team, but rather to have different members work on different activities to help strengthen their abilities in new areas and also to avoid the "I am the specialist" mentality.

7. Although each situation is unique, we can conclude that it is essential to anticipate problems and build relationships among donors, government officials, and local stakeholders if there is to be cooperative management of tourism.

8. The key question is how to make viable a planning process that seeks to achieve equilibrium between conservation and community development when the government structure is inflexible and government officials do not believe in and are threatened by a participatory process.

9. The most difficult part of any plan is not technical information gathering or research, but dealing with power struggles and diverse histories, on the local, regional, and national levels. That is, the planning process and methodology are as important to the outcome of the plan as are the data and proposals.

Finally, it is important to mention that there is no one correct solution. All management plans and planning processes must be shaped for and by the specific social, political, economic, and ecological context. However, this paper and its account of one planning project may be useful to others interested in ecotourism, participatory planning, and protected area management.

In defining a project time table, it is necessary to set aside significant amounts of time to build relationships with counterparts and government officials. That is especially true in countries with poorly organized and centralized governmental institutions.

MIRIAM TORRES

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Making Ecotourism an Ally in Biodiversity Protection

Douglas B. Trent
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ABSTRACT

If tourism is going to successfully aid in protecting biodiversity, a realistic look at the problems confronting biodiversity preservation and what ecotour businesses can do to solve those problems is essential. The vast majority of the Earth's species live outside protected areas. If biodiversity is to be preserved, it will happen because of the efforts of local communities around the world. Ecotours have the potential of generating significant funds that can be used to support community-based conservation efforts. The biggest stumbling block to date has been that consumers are not discriminating when choosing an ecotour. If consumers can be persuaded to choose lodges and ecotours based in part on their commitment to conservation, market forces would favor conservation. Suggestions for determining which companies have a conservation ethic and which provide high quality services are provided.

An often unspoken goal of ecotourism is to preserve biodiversity. Thus, an understanding of what is necessary to achieve this is essential in implementing successful ecotour projects. Approximately four per cent of the earth's surface falls within a protected area, receiving various degrees of protection. While the protected area strategy for biodiversity preservation is both important and significant, most of the earth's species live outside these protected areas. In addition, diversity is decreasing over time in many, if not most, of these reserves, and we can only expect it to continue decreasing. Reserves cannot protect the larger hydrological and other natural cycles on which they depend. They frequently do not have the support of the people living around the area. Many reserves were formed from lands appropriated from those now living just outside their borders. Population growth is unrelenting in most places, and there is simply not enough money to create protected areas which would preserve as little as fifty per cent of the Earth's biodiversity.

With biodiversity distributed around the entire planet, we need to look to communities throughout the world for answers. When local communities become the beneficiaries and custodians of their biodiversity, they are much more likely to preserve it. There are several issues that stand out in community-based conservation. A knowledge of the basics is important to anyone wanting to implement an ecotour project that will substantially promote the preservation of biodiversity.

Land tenure is one prerequisite to providing an incentive to preserve biodiversity. Rural community members without secure tenure can often only afford to consider their own short-term inter-

ests. Land tenure seems to be the only way to consistently involve local communities in the decision-making process that otherwise leads to the degradation of habitats. Local land owners are less likely to support the large scale “development” plans such as dams and roads that are known for their disastrous effects on both biodiversity and local communities. For example, Brazil’s Pantanal wetlands are now at risk from the proposed *Hidrovia* river channelization project. A handful of rich families own most of the Pantanal, and the local citizens have little power to oppose this project.

Empowering women is also necessary in the preservation of biodiversity. The research of Dr. Deborah Tannen, a well respected sociolinguist, has shown that women are more community-minded than men, regardless of cultural differences. In many cultures, women do most of the wood gathering, cooking, child-rearing, and other jobs that support the family. However, men often work outside the home, and wield most of the power in the relationship. An educated woman is more likely to be interested in the long term welfare of her family and community, which will include a concern for the surrounding natural environment.

Well-meaning outsiders need to work with and support local participation if conservation projects are to be effective for the long term. Communities often are the recipients of short-term conservation projects run by foreign organizations, and are not actively involved in the decision-making processes that form the project plans. If community involvement is not substantial at the planning stages, the community is not likely to have any long-term commitment. Without a long-term commitment, it is difficult for the goals of the project to be realized. Projects need to support people, processes, and institutions such as farmers’ cooperatives, small, sustainable industries, and women’s groups. There are no short-term answers for the long-term protection of our biodiversity. People cannot be separated from the biodiversity with which they live. Failures in protected area programs usually result from ignoring these facts.

Ecotour projects usually fall into two categories: lodges and tour operators. While lodges receive most of the attention, tour operators who use the lodges and other services can also play an important role in the ecotourism equation. Eco-lodges are considered here to be lodges for ecotourists that observe the definition of ecotourism as stated by the Ecotourism Society or a similar definition. They are usually culturally interesting places or places with a rich natural history, and their clientele come to the lodge to experience those places. Ecotour operators are considered here to be the tour operators who observe the same definitions as noted above. Pseudo-

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ecotour operators are those who use the name but largely ignore the definition.

Eco-lodges tend to have long-term status in a community. By employing and training local citizens they can provide income and prestige. They are frequently located near protected areas, and thereby increase the effective size of that reserve. The Ecotourism Society (USA) offers a number of publications concerning the creation and construction of eco-lodges. For further information, I urge you to contact the Ecotourism Society.

Following are some observations which are relevant to this discussion.

Eco-lodges are typically small, but need to be large enough to be profitable. In most cases, they need to be able to accommodate one, or possibly two, ecotour groups simultaneously. This requires ten to twenty rooms with adequate facilities to handle as many as thirty or forty people, or one group of twenty people. Lodges that are not financially successful cannot provide positive benefits to conservation. When jobs are lost to a failed enterprise, community interest dissolves, leaving little incentive to preserve the surrounding natural habitat that had been the source of their wealth.

It is in the best interest of eco-lodge owners to invest in the local and surrounding communities. The more support the lodge gives these communities, the more support it will receive in return. If the goal is to preserve the natural surroundings, it is in their interest to preserve as much of an area as is possible. A successful project can finance similar projects nearby. This way it will enjoy the existing support of the community, while preserving other parts of the natural environment.

While the need to be profitable is essential to both eco-lodges and ecotour operators, it is often unappreciated and misunderstood by those outside of the ecotour business. If an ecotour business does not make a substantial profit, it is unable to financially participate in conservation projects in a substantial way. Ecotour businesses need to realize more profit than non-ecotour businesses, as they need enough profit to be successful and fund conservation projects.

It is necessary to understand the difference between an ecotour operator and an ecotour lodge. Comparatively little has been published about ecotour operators, yet it is often these operators who bring the groups to the lodges. Tour operators have a large role to play, but their potential contribution often is not recognized in the literature. While many types of tour operators exist (adventure, cultural, trekking, etc.), my experience as a nature and birding tour operator leads me to the following distinction. We are more of an inbound operator than an outbound operator; that is, we are the

“local company” with which many outbound operators contract to operate their tours. Outbound operators are tour operators in the country where the international travelers usually book their tours. They typically offer tours to many different countries. They usually contract inbound operators, who receive the international tourist in the destination country.

It is useful to take a look at some issues that affect inbound operators, both from the business point of view and the “eco” point of view. When possible, ecotour operators will choose to stay in eco-lodges. In many areas, however, eco-lodges are not located close to wildlife. Other issues may also make ecotour operators appear to be less “eco” to those without an understanding of the business. For example, while eco-lodges may prefer to use local guides, it is not always in the best interest of a company offering tours to several destinations. Natural history ecotour guides should be knowledgeable about the flora and fauna at each destination the tour visits. They should be able to talk about environmental and social issues that exist in each destination. Unfortunately, guides from nearby communities often do not possess the requisite skills and knowledge to be professional tour guides. Furthering the problem, it is often detrimental to business for an ecotour operator to train local guides if they are likely to join the competition.

Thousands of dollars and many months are needed to find “spots” where we can show our tour participants important species. More time and money is invested in getting sound recordings of animal calls. These are regularly used on birding as well as general nature tours in order to see species that would otherwise be seen only very rarely. Knowing the spots and the recordings are often what draw clients from one operator to another. There is great importance in not letting your hard-earned knowledge or recordings get into the hands of your competition. An ecotour company is a business as well as a force in preserving biodiversity. It is, therefore, preferable to hire naturalists who, although not necessarily native to each individual community, are native to the country which is being toured. It is also more desirable to employ guides who can remain with the group for the entire tour throughout the region. This allows them the opportunity to establish a better rapport with the tour participants. These guides can also answer a wider range of questions about the destination countries.

An ecotour guide will work with tour participants to collect beverage bottles and other trash generated by the tour in remote areas and transport it back to the city. Eco-lodges will almost certainly appreciate this. While there are not many true eco-lodges in the regions of South America where we operate most of our tours,

we have been able to secure the assistance of hotel staff in collecting our disposable beverage containers from the meal tables. At the same time, we have been largely unsuccessful in getting the hotel owners to encourage other tour operators to do the same.

The ecotour operator can easily do several things that are more difficult for eco-lodges. They can design tours into proper areas from an ecological point of view. With their insight, they can assist lodges in meeting the standards of the industry. Ecotour operators can also bring tourists to conservation projects and provide the opportunity to purchase souvenirs from or donate money to these projects. We provide lists of the birds and animals seen in the region, which can help eco-lodges market their product.

One of the more practical things an ecotour operator can do, whether an inbound or outbound operator, is to put a portion of tour profits into *local* projects that aid in preserving biodiversity. A common mistake of outbound operators is that they often put large amounts of their conservation budgets into the pockets of conservation organizations in their own country. While most of these non-governmental organizations (NGOs) put some of that money into some very good projects, a good portion of their budgets go to rent, salaries, and other expenses of the outbound country.

Both inbound and outbound operators who want to contribute significantly to biodiversity preservation should look for projects to support within the destination country. It is a contradiction that some NGOs from developed countries offer tour programs which specifically prohibit the incoming operator from soliciting donations to local conservation efforts while on tour (fearing a decreased donation to their coffers when the participants return home).

Perhaps the biggest difficulty facing the ecotour industry is that very few consumers determine whether the lodge or tour operator they choose are ecotour companies at all. Focus Tours has been in operation for over fifteen years, with the goals of using tourism for environmental education and for raising funds for conservation work. In all this time, we have had less than ten prospective clients ask us about our qualifications from an ecotour point of view. Other ecotour operators have shared similar experiences. It makes little sense to put time and money into ascertaining which lodges and operators in a given area are true ecotour companies if the consumers do not use that information in choosing a company. Most ecotour consumers are interested in conservation. At the same time, consumers seem to be much more concerned about price, comfort, and what they can see rather than whether or not the company they are traveling with is ecologically conscious. We have had outbound tour operators ask if we could reduce our price if we refrained from

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giving a portion of our profits to conservation projects. There is a proliferation of pseudo-ecotour companies that promote themselves as ecotour companies. Our tours are real ecotours. Given the reputation pseudo-“ecotours” have earned, we have chosen to not advertise our tours in this way.

Organizations interested in funding studies to determine which businesses are ecologically responsible need to channel their funding into projects which would educate consumers to be more discriminating, so they will choose true ecotours. Market forces would solve much of the ecological problem if consumers based their travel decisions on a business’ degree of ecological activism.

How might a concerned consumer find a real ecotour lodge or ecotour outfitter? It might help to ask the lodge or tour outfitter the following questions:

- 1) How would you describe your business? *An ecotour business would identify itself as that, along with talking about where it offers tours, group sizes, etc.*
- 2) What aspects of your business do you think make it qualify as an ecotour business? *Look for a portion of the profits going into destination country conservation projects, trash removal from sensitive areas, etc. Look for something beyond what you would find with any lodge or tour. For example, almost all lodges hire people from the regions where the lodges are found. Do they give them any special training that would allow workers to progress into more profitable positions?*

Ecotours usually cost considerably more than a week at the beach. The consumer can ask a number of questions to determine the nature and level of professionalism of a natural history tour. We suggest:

- 1) Who are your guides, and what are their qualifications? *Look for professional naturalist qualifications, rather than assuming that someone who lived in the area all their life would know the natural history of the region.*
- 2) What equipment do your guides use? *Binoculars will be used by all professional guides. Tape recording and playback equipment are essential to seeing many animals in forest situations. Spotlights are necessary for night and crepuscular wildlife viewing. Appropriate bird and mammal field guides should be on hand.*
- 3) Can you send a copy of your bird and mammal list for the tour areas? *They should have a tour checklist already prepared with English and Latin names.*

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- 4) What other companies or organizations use your tour services? *In most countries the major outbound operators use the same one or two inbound operators. If you can determine who those inbound operators are, you will have usually found the best company with which to work. This is because most outbound operators tend to work with the same few inbound operators as they want to work with companies that do a good job. An outbound company places its good name with an inbound operator, and has a strong incentive to work with the best.*

With “ecotourism” being the industry buzzword of the 1990s, many companies around the world are touting themselves to be professional with “naturalist” guides. Without the equipment mentioned above, you will see a small portion of the animals living at the site, and may not have a good view of what you do see. If a company cannot easily produce a list, with English names at least, they probably do not have adequate knowledge of the natural history of a given area.

If consumers who do go to the trouble of finding a real ecotour discover that a company is not professional in other aspects of its business, they will be unlikely to support other ecotourism businesses in the future. This will have a negative effect on the goals of ecotourism.

Humankind is facing an unparalleled challenge when it comes to preserving the planet’s biodiversity. Solutions that are most likely to be successful are those that will work at the community level in a decentralized manner. Ecotourism is well positioned to evolve into an important element of the total equation if the demand for real ecotourism substantially increases. The biggest problem ecotourism currently faces is the apathy of the consumer public. Those wishing to assist the ecotourism movement need to address that apathy. The alternative is the proliferation of the dangerous arm of tourism that has left its destructive mark on much of the world to date.

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Douglas Trent holds an Honors Degree in Environmental Sciences from the University of Kansas. He founded Focus Tours in 1981 while living in Brazil. He wanted to come up with a concrete means for addressing the deforestation issue, which he saw first hand long before deforestation became a concern for most NGOs. The company was established with the goals of using tourism for environmental education and raising funds for conservation projects. He is one of the few tourism professionals who is also a trained ecologist. He is also an environmental writer, ecotour consultant, speaker, and teacher. His efforts have supplied binoculars to park guards fighting poaching, generated thousands of dollars for Brazilian conservation organizations, helped support the Caratinga Biological Station, provided data on wildlife populations to the Brazilian national parks department and private reserves, provided free organizational consultation to Brazilian NGOs, and many other projects. His current ecotour project is funding a tent camp for a local family in Brazil's Pantanal wetlands. He has delivered presentations to conservation organizations and universities as well as in schools in Brazil and the USA. In addition, he is a regular speaker at international ecotourism congresses.

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