

Sector Turístico en Costa Rica: Análisis de Sostenibilidad

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Documento en proceso: Escrito por Lawrence Pratt, director adjunto del Centro Latinoamericano para la Competitividad y el Desarrollo Sostenible, CLACDS, y Naomi Olson, Investigadora-Consultora de CLACDS. Este trabajo busca estimular la reflexión sobre marcos conceptuales novedosos, posibles alternativas de abordaje de problemas y sugerencias para la eventual puesta en marcha de políticas públicas, proyectos de inversión regionales, nacionales o sectoriales y de estrategias empresariales. No pretende prescribir modelos o políticas, ni se hacen responsables el o los autores ni el Centro Latinoamericano de Competitividad y Desarrollo Sostenible del INCAE de una incorrecta interpretación de su contenido, ni de buenas o malas prácticas administrativas, gerenciales o de gestión pública. El objetivo ulterior es elevar el nivel de discusión y análisis sobre la competitividad y el desarrollo sostenibles en la región centroamericana. El contenido es responsabilidad, bajo los términos de lo anterior, de CLACDS y no necesariamente de los socios contribuyentes del proyecto.

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1. INTRODUCTION AND OVERVIEW

This paper reports the results of research undertaken for the INCAE Center for Latin American Competitiveness and Sustainable Development on the Costa Rican tourism sector and sustainable development. The paper looks at the sustainability of the tourism sector from the point of view of the environmental resources it draws on as factors of production, and affects in the course of its activities. The paper examines the environmental impacts of actors upstream and downstream of the industry, as well as environmental impacts of the industry itself.

As depicted in the graphic above, by upstream actors, we refer to those individuals and economic actors whose actions affect the environment in ways that have the potential to affect the tourism industry. By downstream actors, we refer to those individuals and economic actors who can be expected to rely as a factor of production on an environment benefited or degraded by impacts of tourism. The paper also looks at the tourism industry as an actor whose activities have the potential to damage -- or to fruitfully invest in -- the environmental resource upon which it relies. Whenever possible, the paper highlights opportunities available to decisionmakers who wish to increase the sustainability of the industry.

In general this study concludes that the Costa Rican tourism sector faces important challenges to its competitiveness related to the consistency of its product with the image it has successfully promoted to the world (that of a "natural paradise"). While most Costa Rican tourism industry operations and activities are not imposing alarming environmental costs, opportunities to improve sustainability exist throughout the sector. Of greater concern is the vulnerability of the Costa Rican environment in general. This paper highlights concerns about the conservation and environmental protection institutional infrastructure in Costa Rica, suggesting that it is in the tourism industry's interest to become more actively involved as an environmental advocate.

1.1 Industry Environmental Impacts

In this section we review key observations concerning environmental impacts of the Costa Rican tourism sector. First we examine environmental benefits of tourism, and the positive investments in sustainability by the sector that we consider to be most significant. Next we introduce those negative impacts which we deem to be of priority concern to the industry.

1.2 Industry Investments in Sustainability

For the most part the tourism industry does not appear to have imposed an undue environmental price on Costa Rica. There is considerable evidence that the Costa Rican tourism industry is investing in environmental sustainability. This study highlights the following such activities:

- Direct contributions to environmental and conservation causes on the part of the tourism sector;

- Conservation undertaken by private reserve owners;
- Eco-efficient and environmentally friendly hotel operations; and
- Environmental education activities on the part of diverse industry actors.

Additionally, we highlight a programmatic effort to drive broader awareness of and investment in environmentally sustainable activities: the ICT Sustainable Tourism Certification program.

1.3 Direct contributions to environmental and conservation causes on the part of the tourism sector

Many tourism industry operators are personally dedicated to the cause of conservation in Costa Rica, and others clearly recognize the strategic role played in their businesses by a solid conservation areas system, and well-maintained and protected natural assets accessible to tourists. Outstanding investments in conservation have been made over the years by private reserve owners and this contribution is discussed below in Section II A 2. Here we mention the thrust of other sector contributions to environmental protection, as examples of positive transfers, or investments in the environment.

Two outstanding examples of such contributions are noted:

- The Fondo para Guardaparques; and
- The Instituto Costarricense de Turismo (ICT) environmental program.

The Fondo del Beneficio de los Guardaparques is a trust fund administered by Fundación Neotropical, launched in 1992 with a combined gift of \$25 000 from Horizontes Nature Tours and Costa Rica Exhibitions. These receptive travel agencies also solicit gifts from clients and wholesalers. The fund makes gifts "...to improve the living and working conditions of park rangers, in accordance with a list of 13 priorities established by the Park Service...[Top] priorities are health, clean water, housing, clothing and gear. Others include communications, personal safety, training, and recreation."¹ Over the years these operators have also solicited contributions and donations of tents, packs, binoculars and outdoor equipment to the fund. The fund has disbursed over \$38 000 and over 1,000,000 colones worth of goods for the comfort and well-being of Park Service guards.²

The involvement of the ICT in environmental issues has been substantial but is impossible to fully quantify based on available data. Still, based on an internal ICT study, certain observations can be made.³ The ICT is a public institution and an arm of the Federal government. Nonetheless it is approximately 60% financed by taxes on

¹ Horizontes (1992). Horizontes and Costa Rica Expeditions Establish \$25,000 Park Fund. [Horizontes Nature Tours News](#). 1: 1.

²Arias, T. M. (1997). Letter FN-UAF-038 and attachment, Fundación Neotropical.

³ Monge Quesada, R. (1996). Acciones en Materia Ambiental Realizadas por el Instituto Costarricense de Turismo 1991-1995. San José, Costa Rica, Instituto Costarricense de Turismo.

tourism services such as the 3% tax on hotel rooms and the 5% tax on international travel purchased here, and is thus highly accountable to the industry.⁴

TABLE TWO
ICT FINANCIAL EXPENDITURES ON ENVIRONMENTAL PROJECTS,
1991-1995⁵
(IN COLONES)

Topic	1991	1992	1993	1994	1995
Conservation	13 000 000	4 500 000	18 562 000	0	43 050 000
National Parks Planning	0	0	40 135 894	60 419 161	3 401 065
Coastal zone "planes reguladores" and other coastal zone planning, activity and impact studies ⁶	7 000 000	4 400 000	30 430 444	48 628 714	18 641 866
Research and Program Development ⁷	0	0	3 319 171	17 480 000	2 900 000
Environmental Education	0	6 077 818	12 300 000	2 439 990	12 988 000
Publicity and Dissemination	503 441	1 678 769	945 738	160 000	14 044 729
Totals	20 503 441	16 656 587	105 693 247	129 127 865	95 025 660
Totals in U.S. dollars at the annual average exchange rate	179 618	122 944	737 258	900 725	524 308
Percentage of total ICT expenditures	2,5	1,2	6,7	7,3	3,7

These contributions are significant; projects of importance to conservation that have benefited from significant funding include the preparation of *Planes Generales de Manejo* for the National Parks, and of *Planes Reguladores Zona Maritimo Terrestre*. Contributions to the Conservation Area system have included eight million colones for the Poás visitor center in 1991 and twelve million colones for the construction of trails at Carara in 1993. Eight million colones were spent during 1991-92 on "vigilancia" at Isla San Lucas, and twenty million colones were spent in 1995 on "vigilancia" at Isla del Coco. Additional investments have been directed at developing and disseminating knowledge about sustainability and developing methods for encouraging and measuring environmentally constructive behavior on the part of sector operators.

2. CONSERVATION ACTIVITIES UNDERTAKEN BY PRIVATE RESERVE OWNERS

While the majority of conservation in Costa Rica is neither motivated nor financed by tourism revenues,⁸ tourism is clearly making substantial private conservation activity

⁴ Juan Huertas, pers. comm.

⁵ The table does not include relevant staff and overhead expenses, and is based on the author's interpretation and reorganization of data from Monge Quesada, R. (1996). *Acciones en Materia Ambiental Realizadas por el Instituto Costarricense de Turismo 1991-1995*. San José, Costa Rica, Instituto Costarricense de Turismo. and from information on the overall ICT budget from Juan Huertas, pers. comm.

⁶ Includes the "Puntarenas Para Siempre" campaign.

⁷ Including the Certificación de Sostenibilidad Turística and other projects.

⁸ According to Amos Bien, the Coordinator of the *Red Costarricense de Reservas Privadas*, founded in 1995, property-owners eligible to join the association may hold up to five per cent of the land in the country. The 50 existing members own approximately one per cent of the land in Costa Rica. The association defines a reserve as any property which includes at least two hectares of land being managed for conservation or sustainable management, and hopes to see

financially viable. Private reserve lands whose management is motivated or financed by tourism income are an important asset to the tourism industry and provide great environmental benefits to Costa Rica. As Ree Sheck, author of Costa Rica; A Natural Destination, tells it, "...at the time of the first edition [of my guidebook which was researched in 1989], the private reserves were just being established, in part to provide lodging for visitors to the National Parks. By 1991 an astounding growth had occurred..." According to an analysis of data from all four editions of Ms. Sheck's guidebook, private reserves that she reviews,⁹ are managing nearly 20,500 ha. of forest lands (see Table Two).

**Table Two: Private Nature Reserves
Reviewed in Costa Rica; A Natural Destination¹⁰**

	1989-90	1991-92	1993-94	1995-96
Number of Reserves	15	20	26	29
Per cent Increase in Number of Reserves		33,3%	30%	11,5%
Average Price per Person ¹¹	\$61,50	\$61,76	\$73,35	\$73,34 ¹²
Number of Operations for which price information is averaged	10	17	22	26
Hectares of Reserve ¹³	16 260 ¹⁴	436 reported added ¹⁵	3093 reported added	745 reported added

this definition attain legal status in a future *Ley de SINAC* or *Ley de Biodiversidad*. The pattern of private reserve land ownership is:

- (1) **NGOs.** 10-15 in all with properties that tend to be large.
- (2) **Ecotourism operators.** Bien estimates that there may be up to 150 in this category with properties averaging 200 hectares.
- (3) **Conservation-minded landowners.** This group of property owners have often inherited their land. Bien estimates that there may be 1000 such properties of varying size.
- (4) **Campeños.** Based on a FUNDECOR estimate that there are 1500 landowners in their management area (the Cordillera Volcanica Central) and interviews with SINAC staff, Bien estimates that there are 5000 such small properties. These can be deemed reserves because (a) owners can't get permission to cut their trees; (b) the properties are too far away to make a tree harvest affordable; or (c) owners wish to conserve their forest.

⁹ Preserves are included in the book if Ms. Sheck deems them to be financially stable, reputable tourism destinations, providing easy access to natural forest.

¹⁰ Not all offer lodging. For example, the Monteverde Cloud Forest Reserve provides housing only to researchers and volunteers, as was the case at Las Cruces in 1989-90.

¹¹ Based on average per person rate for a one-day stay where full data were available; includes only lodging and meal costs (e.g. Monteverde is not included). Kabinas Karen and Cabinas Chimuri also not included because rates there are significant outliers (\$4.50-12.50). This estimated cost per person is an indicator of change, not an accurate estimate since it is not divided by the number of beds, which sometimes vary in price within an operation.

¹² The Fourth Edition reports prices without tax in contrast to earlier books.

Corresponding increases in conservation activities on the part of private reserve operators in the future are not ensured in today's market however. Many of these operations face serious financial challenges, due to:

- The current *sobreoferta*, both generally and specifically within this segment of the market.
- Changing market conditions and customer tastes.¹⁶
- Recent changes in tax law, which have markedly increased the real estate tax burden for private landowners, and discouraged capital investments that would raise the values of their properties.

3. ECO-EFFICIENT AND ENVIRONMENTALLY FRIENDLY HOTEL OPERATIONS

The Costa Rican tourism industry can boast examples of environmentally friendly hotel locations. Thoughtfully sited and constructed hotels exist, as do those whose operations are carried out to minimize environmental impacts. Customer and investor interest have converged to give such operations a market advantage, with sustainable operations highlighted, for example, in one of the most popular English-language guidebooks in a custom rating scheme.¹⁷

In a study of 92 lodges scored for the sustainability of their operations over two years, Jane Segleau Earle showed that 49% of the businesses studied were doing more than was necessary to pursue their bottom line, by making investments in economic, socio-cultural and environmental projects.¹⁸ Segleau found little evidence that businesses had been responsible for serious impacts of construction/deforestation, with the exception of some badly sited with relation to rivers or which had used large quantities of rare woods. Most had acceptable wastewater systems, and many had purchased and protected land,

¹³ Excluding actively managed farm operations, but including *charral* and land in tree farming or reforestation.

¹⁴ Includes the 10,569 hectare Monteverde Reserve.

¹⁵ Amounts of land in reserves were not reported for all reviewed operations.

¹⁶ Visitors seeking a "hard-core" eco-tourism experience are either fewer and/or there is more competition for them than in the past. To adjust to the current market (both in terms of demand and supply) newer operators provide amenities that early eco-tourism operators did not need to offer to satisfy their clientele, leaving more established operations at a competitive disadvantage, and their investments in conservation at risk.

¹⁷ The New Key to Costa Rica financed the work of ULACIT Masters' degree student Jane Segleau Earle to develop the sustainable lodgings measure used in the three most recent editions of the book. Ms. Earle's work was influential in the organization of the 1996 Ecotourism Society workshop held in Costa Rica, which will lead to the eventual publication of guidelines for hotels similar to existing Ecotourism Society guidelines for tour operators. (Terry Pratt, pers. comm.)

¹⁸ The survey was limited to hotels that have their own reserve and/or that offer tours to nearby protected areas. One might expect the results to suggest a lower level of commitment to "sustainability" were all Costa Rican hotels to be rated by the same criteria.

or participated in local conservation projects.¹⁹ Many opportunities for improvement in this area exist, nonetheless, and these are discussed below in section II. B. 1.

¹⁹ Segleau Earle, J. (1995). La Empresa de Hospedaje Ecoturístico en Costa Rica y sus Aportes al Desarrollo Sostenible: Una Propuesta de Clasificación. Programa Regional de Maestría en Turismo Ecológico. San José, Costa Rica, ULACIT: 181.

SOURCES OF TECHNICAL GUIDANCE ON GOOD ENVIRONMENTAL MANAGEMENT

Some of Segleau's recommendations -- that further research be carried out on clean technologies and products, and that a practical manual be developed for hoteliers on clean technology -- are being implemented. The ICT Natural Resources Department hopes to carry out related projects,²⁰ and the Ecotourism Society is developing broad guidelines based on its 1996 workshop on this topic held in Costa Rica.²¹ Additional sources of guidance that may be of use to operators in the interim are mentioned below.

A great deal of technical guidance and experience within the industry exists to facilitate the process of making the tourism sector more eco-efficient. A few examples are noted below.

Resources that may be of use to hoteliers include The Ecolodge Sourcebook for Planners and Developers by the Ecotourism Society, the UNEP "Environmental Action Pack for Hotels" , and the International Hotels Environmental Initiative manual.

Green Lights is a voluntary program sponsored by the United States Environmental Protection Agency aimed at promoting energy efficiency through investment in energy-saving lighting. Green Lights Partners recognized in the Green Lights Fourth Annual Report include: Hilton at the Circle, Inn America Hospitality Inc., Interstate Hotels Corp., Long Beach Marriott, Marriott Corp., Outrigger Hotels Hawaii, Ritz-Carlton Hotel Company and Westin Hotels and Resorts. Not only do such businesses benefit from positive publicity, the average Green Lights Partner also has shaved their electricity bill in half.²²

To help hotels find practical, profitable solutions to the business of managing water, the United States EPA has also created a program called Water Alliances for Voluntary Efficiency Hotel Water Management for the 21st Century (WAVE). WAVE is a voluntary partnership that encourages hotels to survey water use and to implement water-awareness and efficiency programs. By combining high-efficiency upgrades with company water-awareness initiatives, even large users can reduce water and sewer expenses by up to 30%. Significant savings in chemical, energy and maintenance costs are also possible. The typical payback period is usually less than three years. The following hotels were WAVE's first official Partners: Hyatt Corporation, ITT Sheraton, Outrigger Hotels, Saunders Hotel Group, and Westin Resorts.²³

It is possible that Costa Rica has avoided some negative impacts of hotel siting, construction and design simply due to the fact that the great majority of its hotels are small, with correspondingly small footprints. This is not to suggest that large hotels are *de facto* environmental bad actors. It can be argued that given the right kind of market, legal and financial incentives, large hotels are actually more capable of realizing economies of scale in certain types of environmental mitigation investments such as wastewater treatment.²⁴ The Hampton Inn, part of the Hoteles Marta chain, has made investments along these lines, and is an urban case in point.²⁵ The following case describes a proposed beach development where minimizing environmental impacts is actually key to the business strategy.

CASE: PLAYA DULCE VIDA, S. A. STRIVES TO SET THE STANDARD FOR SUSTAINABLE HOTELS²⁶

²⁰ Rodolfo Lizano, pers. comm.

²¹ Terry Pratt, pers. comm.

²² EPA, U. S. (1995). EPA Green Lights Fourth Annual Report. Washington, DC, USA, Air and Radiation.

²³ EPA, U. S. (1994). Introducing WAVE - Water Alliances for Voluntary Efficiency in Hotel Water Management for the 21st Century. Washington DC, Office of Water.

²⁴ Crist Inman, Glenn Jampol, Dave Stipanuk, pers. comm.

²⁵ Obando, Y. (1997). Hampton Inn: Servicio y Calidad Ambiental. Costa Rica Today. San José, Costa Rica: 8.

²⁶ Glenn Jampol, pers. comm.

Playa Dulce Vida, S. A. is a proposed hotel at Manuel Antonio Beach on the central Pacific coast. The hotel will be built on a concession acquired during the 1980s for a four hectare forested property now surrounded by degraded lands. The proponents are interested in exploring the possibilities for setting as high a standard as possible for an environmentally sustainable hotel operation, doing what they can to protect the image of Manuel Antonio as a special beach where luxury can be mixed with wild nature. To minimize the environmental impacts of the hotel, proponents are exploring such possibilities as:

- A clothes drier energized by the wind and waste heat from the kitchen;
- An electric car to transport guests and luggage over the hill;
- A landscape plan that relies on locally native plants, to maximize the habitat value of the property;
- An innovative wastewater treatment system that will render water clean enough for re-use, and recycling onto the grounds; and
- An aggressive waste recycling and composting program.

The developers are interested in conserving as much of possible of the forest cover on their lot, and plan to construct on less than 20% of it; this is under half of the amount of land that the *Secretaría Técnica Nacional Ambiental* SETENA, of the *Ministerio del Ambiente y Energía* recommends as the buildable limit for projects in the *zona marítima*. Additionally they have contracted for a stem-by-stem map of every tree of at least 10 c. diameter, and are identifying each individual to species. This information will be used to guide to development and interpretation of trails on the property that will be open both the guests and to visitors from the community.

The trails are only one aspect of the overall educational effort proposed by Playa Dulce Vida, S. A. management. They plan to involve both guests and employees in environmental protection by explaining the rationale for their management decisions. For example, all members of the construction crew will be trained on job rules to minimize damage to the environment, along with information about why these rules matter.

Many of the initiatives go beyond what is required by any law or regulation, but project proponents feel they can be justified on business grounds. In fact their prospectus to investors argues that they are investing to develop just the kind of destination sought by the target Costa Rican tourist, and that Playa Dulce Vida, S. A. will thus not only maximize benefits to the environment and to the community, but also to its investors.

4. ENVIRONMENTAL EDUCATION ACTIVITIES

The educational aspect of tourism is one of the key features that recommends it as an instrument of sustainable development, because tourists who learn about their destination are more inclined to limit the damaging impact of their visit and to make gifts, purchases, and investments in sustainability. This is one reason why measures of the sustainability of tourism ventures examine the educational practices of tourism operators.

Many operators in the sector seem to grasp that the typical tourist who selects Costa Rica as their vacation destination is seeking to learn something about tropical nature, as well as to escape into it. This is the reason that businesses such as butterfly farms, the Serpentario Nacional, the iguana farm, Zoo Ave., and others have succeeded in attracting so many visitors over the years. The Rainforest Aerial Tram, whose visitors acclaim the educational aspect of the experience is the number one tourism attraction in the country.²⁷

This understanding is also one of the keys to the success of the most stable tour operators such as Horizontes and Costa Rica Expeditions. These businesses invest heavily in well-trained guides, often employing university trained, bilingual biologists, some with many years of guide experience, and implementing guide training programs during the off-seasons.²⁸ Additionally, they work hard to tailor their communications to the interests, physical condition and previous preparation of individual clients.²⁹

Costa Rica attracts as visitors everything from some of the world's greatest experts in tropical ecology, people who have never hiked in the forest before. Operators have observed a tendency on the part of visitors away from "hard-core" eco-tourism activities in favor of "soft natural history" experiences, which are not as physically rigorous or educationally challenging. This means that to be successful in the marketplace one must offer products and experiences that allow neophytes and experts access to nature on their own terms. Successful guides, destinations and interpretive materials respond to this challenge. They are able to offer tours for fanatical and dedicated bird-watchers whose day begins at four and ends at eight am, and for Elderhostel students who cannot undertake strenuous exercise, for example.

One of the keys to making the Costa Rica vacation both pleasant and educational is to properly prepare the visitor for his or her experience. Guidebooks play a key role in this, and marketing studies show that many Costa Rican tourists get their travel information from guidebooks.³⁰ Tour operators are also a key source of such information. The best kind of preparation for a potential visitor will include realistic information about weather, crime, insects and mud. It will help prepare tourists to expect access to rich, complex ecosystems, but will not overemphasize the likelihood of spotting animal and bird life.³¹ Relatively speaking, although there are players in the industry who do an outstanding job

²⁷ Michael Skelly, pers. comm.

²⁸ Carlos Jiménez, Terry Pratt, pers. comm

²⁹ Jim Lewis, pers. comm

³⁰ Comm.

³¹ Jim Lewis, pers. co

of educating tourists and preparing potential visitors to Costa Rica, this is an area of great opportunity for improvement.

5. THE ICT SUSTAINABLE TOURISM CERTIFICATION PROGRAM

The *Certificación para la Sostenibilidad Turística* under development by the Department of Natural Resources of the ICT may be available to Costa Rican hoteliers as early as 1997. Hoteliers who request to be tested, and achieve an acceptable score on the questionnaire, still under development, will be rated on a scale reflecting the consistency of their operation with the principles of sustainable development. Applicants will be measured on such factors as *su entorno físico-biológico, su planta de servicio, su entorno social, y su programa de involucramiento del cliente.*³²

Rodolfo Lizano, the Director of the ICT Department of Natural Resources, states that *empresarios* view the rating system "...as an incentive to invest and as a useful promotional tool without the disadvantages of a law." Finances permitting the program will eventually include a manual for hoteliers, *capacitación, divulgación, y análisis sobre el "sector industrial de desarrollo sostenible"*³³ Funding for these tools must be a priority if the program is introduced, as initial results of a pilot evaluation process showed that some hoteliers will need help and reassurance if they are to embrace it in detail.

The program, which is meant eventually to be extended in modified form to other kinds of operations within the sector, can have a domino effect on the sustainable development practices of industry suppliers. However, there is a danger that the scheme will unduly favor highly capitalized operations and those not yet built. Thus the program should be subject to evaluation by the most diverse possible critics before it is introduced, as it is sure to swiftly influence market conditions, acting as a magnet for scholarly, environmental and journalistic scrutiny. Additionally, according to Lawrence Pratt:

*...most of the negative environmental and social impact of tourism is pre-determined in the siting, design and construction phases...there are too many cases where developers build a hotel or destination that is an environmental disaster (due to location, design and construction), institute a water reduction and recycling program, and then demand a rating as an environmentally responsible business.*³⁴

³² Murillo Aguilar, K. (1996). *Satisfacción de Expectativas del Turista que Visita Áreas Silvestres Estatales in Costa Rica*. San José, Costa Rica, UNALCIT.

³² Murillo Aguilar, K. (1996). *Satisfacción de Expectativas del Turista que Visita Áreas Silvestres Estatales in Costa Rica*. San José, Costa Rica, UNALCIT.

³² For more information on this program see Lizano, R. (1997). *Certificado para la Turística. Hacia una nueva ventaja competitiva*. Turismo Sustentable, San José, Costa Rica, ULACIT.

³³ e.g. domestic capacity for waste recycling, the market for energy conservation audits and devices, etc.

³⁴ Lawrence Pratt, pers. comm..

5.1 Unsustainable Industry Practices

Now we turn to a discussion of practices of tourism sector which have the potential to degrade the environment and eventually to imperil the attractiveness of Costa Rica as destination to tourists. In this section we consider:

- Environmentally destructive business siting, construction and operation; and
- Damaging visitor impacts in areas of conservation value.

Each of the topics highlighted above give rise to concerns in isolated circumstances; thankfully, none of them are dominant or driving factors in Costa Rica's tourism economy today. However each one is also a real and serious problem where it exists and it is very much in the industry's interest to evaluate these problems so that they can be avoided in the future.

At the close of this section, we discuss a concern about tourism that is inconsistent with the overall image of Costa Rica as a natural destination. While this discussion does not pertain directly to an environmental externality, it does center on a potentially self-destructive tendency within the tourism sector.

5.2 Environmentally destructive business siting, construction and operation

Unfortunately, tourism activities and operations do occur at a cost to the physical and biological environment which they are designed in part to highlight. Siting of tourism operations does sometimes occur in sensitive ecological areas, with resulting damage to coral and mangrove ecosystems, for example. Even in the coastal zone which is subject to the most rigorous land-use controls under existing law, environmental protection is far from guaranteed. Additionally, where careful planning and controls are demanded as a consequence of political pressures, models and methods for planning and mitigation of environmental damages are not always adequate to the task. It must be argued that the tourism industry itself is both the aggressor and the victim in this regard; and it is in tourism's interest to drive for better practices even if so doing sometimes will increase the short-term costs of doing business.

Siting of a tourism destination can have unwanted environmental impacts if it:

- Requires razing native vegetation and habitat, as was the case on 40 of the 50 ha. set aside for the construction of the Playa El Carmen golf course one hour south-east of Cancún, Mexico,³⁵
- If it threatens to overtap a limited water supply, as has occurred in La Cruz, Guanacaste where seven tourism developments have chosen to locate, only to find that their on-site wells deliver salt water;

³⁵ Luis Sanz, pers. comm.

- Or if it invites damage to a delicate resource, as has been the case for example, of some hotels located near turtle nesting beaches, for example.

Siting decisions by individual property owners, condo, club and larger scale developers, agricultural interests, and hoteliers sometimes imply competition for the groundwater resource, which may supply up to 85% of water consumers in the country³⁶ This vulnerable resource can be:

- Drawn down at a rate that exceeds supply;
- Contaminated by salt water drawn into the aquifer from the sea due to the pressure of pumping a well -- as has occurred at Playa Flamingo in Guanacaste; or
- Contaminated by other sources of pollution, such as materials leaking from septic systems or underground fuel storage sites, or from chemicals placed on land such as pesticides and waste disposal sites.

Individual hotels may be hard pressed to confront these dangers in part because of the weakness of institutional controls on water development, which prevent them from controlling future development in their vicinities adversely affecting their water supplies (see Section IV. B. 3. of this paper for a discussion of environmental regulation).³⁷ But hotel owners could be more aggressive in studying the recharge rates of the aquifers underlying their properties and planning projects whose water demands will not exceed them, as has been done by the Melía chain at Conchal.³⁸ Having done similar studies might have helped the half-a-dozen hotel developers in La Cruz, Guanacaste, who have been obliged to band together to finance the installation of a water delivery system by the fact that the wells they had planned to use delivery salty water.³⁹ Additionally, tourism sector interests should organize to advocate that reasonable public resources be dedicated to this issue,⁴⁰ and to vigorously promote regional planning.⁴¹

Construction practices in Costa Rica are frequently destructive of vegetation and soils, and damage aquatic resources or other natural habitats. At Papagayo dumping of construction wastes has damaged coral reefs; at Tambor it has involved filling in mangroves; in many locations significant alterations to the natural terrain are achieved by earth moving which leads to erosion and siltation of water bodies. Such practices reduce natural habitat (nesting grounds, spawning grounds, food supplies, hiding places, etc.) and thus reduce biodiversity. They can also affect local hydrologic conditions, reducing the infiltration of fresh rainwater into forest soils, favoring soil runoff, damage to aquatic resources and flooding.

CASE STUDY: CONSTRUCTION AT PAPAGAYO

³⁶ Victor Hugo Vargas, pers. comm.

³⁷ For example, the nation's groundwater resource generally has not been fully mapped; neither has the presence of all existing wells been documented. Eduardo Lezama, pers. comm.

³⁸ Victor Hugo Vargas, pers. comm.

³⁹ Sonia Espinoza, pers. comm.

⁴⁰ At the moment there is only one geologist in the country assigned to review all the requests for permission to drill wells nationwide, and the regulatory authority ARESEP does not have the resources to do field inspections. Three to four hundred such approvals are granted annually. Victor Hugo Vargas, pers. comm.

⁴¹ See the case study below, Case: Private Interests Foster a Regional Plan for Sustainable Tourism in the Nicoya

The controversial development at Papagayo illustrates several useful lessons. Noble sentiments may have inspired the legislation, negotiations and planning of this resort, resulting, for example, in the inclusion of creative aesthetic standards for the buildings. However, during this same process the scale of planned development grew by an alarming 700%,⁴² and, incredibly, no systematic studies of the marine resource and possible effects on it of the development were ever conducted.⁴³ Masters' thesis research carried out by Carlos Jiménez is documenting dramatic degradation of a spectacular coral reef offshore both due to direct dumping of construction project wastes into the water, and to the smothering impact of soil redistributed by the fierce Guanacastecan trade winds from mountains of earth left exposed by construction crews. These findings suggest that even if development plans were adequately reviewed, construction operations were not.

One may ask, whether the site of a rare coral reef formation ever could have been the appropriate site for the scale of construction and recreational activity intended at Papagayo. In any case, to develop the site in a way that compromises the resource is a counter-productive business practice, since to do so reduces its value as a tourist attraction.

Nonetheless,

Hotel operations generally also leave room for improvement in terms of their environmental impacts. The Segleau survey of Costa Rican lodges mentioned previously identified numerous concerns. For example:

...[E]lectricity and water should be conserved through planning and education of tourists;...better information should be developed for employees and visitors;...wild animals should not be exhibited or kept as pets and guests should be taught that to do so is not helpful for conservation; [there is a need to push for] biodegradable products in the market and [for their]use.;...[P]rivate forest lands tended not to be well managed, and almost no [involvement on the part of hoteliers] in the management of public conservation lands was observed. Trash management was an area of weakness, augmented by the lack of national activity in recycling.

⁴² Bull, 1996.

⁴³ Carlos Jiménez, pers. comm.

CASE: SITING, CONSTRUCTING AND OPERATING GOLF COURSES TO MINIMIZE THEIR ENVIRONMENTAL IMPACTS

Golf courses are a kind of tourism development which can involve severe alterations of the natural landscape, at a significant cost to the environment. Course siting can occur at the expense of natural ecosystems. Construction can involve disturbing natural vegetation, habitat, and wildlife. And operations can pollute wetlands, streams, and aquifers, draw down local water supplies and harm insect and wildlife populations. To preserve a uniform glowing green can involve significant applications of fertilizers, pest and weed control chemicals, and be very water intensive. In Santa Ana and in Nicoya, Puntarenas and Guanacaste, where most of the proposed Costa Rican courses are slated to be built,⁴⁴ water is a scarce resource, and the watering of the courses may tap into limited supplies.⁴⁵

Fortunately, the new generation of golf course designers and superintendents are interested in environmental protection and increasingly aware of opportunities to minimize the environmental impacts of golf courses. An indicator is the very practical set of guidelines, "Environmental Principles for Golf Courses in the United States," developed as the result of a collaboration of 25 golfing and environmental organizations⁴⁶

Some traditional challenges of temperate zone golf course management may actually be less problematic in Costa Rica. According to Jay Miller, Superintendent of the Playa Grande, Guanacaste course, Rancho La Colinas, the disease problems frequently encountered in wetter environments are non-existent in dry Guanacaste. Pests and weeds have also been easy to keep in line at Las Colinas using integrated pest management, a system of control that keeps the amounts of chemical inputs to a bare minimum. Miller's staff tour the Las Colinas course weekly, and report back on an emergent weed or pest problems. These are then dealt with immediately, while they are still small-scale. Of course, developers are happy to avoid the high cost of chemical inputs,⁴⁷ so they should be aware that one of the best methods for keeping pests down is to keep nearby natural ecosystems in tact.⁴⁸

The Rancho Las Colinas course is designed to include natural grass buffer areas around the ponds. These do not need to be watered and act as filters to reduce potential chemical runoff into the ponds. The golf course design at Melía Conchal includes the planting of 10,000 trees of native species, in an area that was formerly used as a rice farm. The author of the resort's environmental impact study (EIS) states that the mangroves down from the development have shown signs of regeneration since Melía began to manage the property.

Water consumption is the negative environmental impact of a golf course most difficult to avoid, even for the most conscientious course Superintendent, according to Jay Miller. Although Rancho Las Colinas is seeded with a highly drought tolerant species of Bermuda Grass, the green will look better if it can be watered. The wells on site now have delivered adequate water to seed in the course when average water consumption is more than twice what it must be to maintain an established course. But according to ARESEP Geologist Victor Hugo Vargas, no study exists measuring the aquifer recharge rate and justifying a sustainable consumption level. Miller is confident though that if community demands for water were to oblige the course to go without, that his drought-tolerant grass would survive the Guanacaste dry season. Further, Landy Blank feels that the golfer who invests in a tropical vacation is sophisticated enough to accept the inevitable brown patches in Guanacaste and Nicoya courses.

Key barriers to improved environmental performance on the part of lodges studied by Segleau were:

⁴⁴ Blank, L. (1997). Golfers Alert! 18-Holers are on Their Way to C.R. The Tico Times. San José, Costa Rica: 1.

⁴⁵ Victor Hugo Vargas, pers. comm.

⁴⁶ (1996). Environmental Principles for Golf Courses in the United States. Washington, DC, National Wildlife Federation and Center for Resource Management.

⁴⁷ Landy Blank, pers. comm.

⁴⁸ Eric Olson, pers. comm.

- Lack of interest or ignorance on the part of those responsible for the businesses;
- Lack of access to low-impact products and technologies;
- Lack of incentives; and
- Lack of tourist interest.

This latter factor is ironic. It may not be possible to argue simply that market interest will drive operators to make the necessary environmental investments, the logic behind the ICT sustainable tourism certification program. Rather, operators may need to evaluate for themselves whether it is in their own long-term interests to do so, promoting tourist support for their investments through education.

5.3 Damaging visitor impacts in areas of conservation value

Another aspect of tourism that may endanger the resource base upon which the sector relies, is the use of natural areas in ways which degrades and damages them.

The technical biological term "carrying capacity" can be used to refer to the number of visitors a natural area can receive without sacrificing its conservation or touristic value. But the more appropriate concept to consider in a tourism context is visitor impact management since there is no "absolute" carrying capacity in a given landscape type or conservation reserve. The carrying capacity of a natural area is a factor not only of the number of visitors, but, significantly, of:

- the infrastructure in place to mediate human impacts,
- the role played by human intermediaries such as tour-guides and conservation areas staff, and
- the biology, geology and history of a site.

Thus for example, although they are little used, the trails at Chiripó and Poás have suffered considerable damage, because they are in sensitive high montane vegetation. (Haysmith, Hoare et al. 1996).

For this reason, to protect the integrity of natural areas open to tourists, strategies must be in place to limit visitor impacts.

CASE STUDY: VISITOR IMPACTS AT CARARA NATIONAL BIOLOGICAL RESERVE

Carara National Biological Reserve is a site where the tourist' experience of nature is threatened by current conditions of visitorship, because of crowding and noise. Here, the "carrying capacity" could be increased and using established techniques of parks management. One such technique is a figure-eight trail system, consisting of two circular loops, which enables four groups of visitors to move through the same area of a park concurrently but independently, dramatically reducing the sensation of crowding. A staffed area at the entrance, perhaps with parking and bathroom facilities, but most importantly with an interpretive information center, would allow conservation area staff to stage the groups, ensuring that each visitor has a much more private experience of the park.⁴⁹

At Carara it is the visitors themselves who suffer a less pristine, beautiful and educational site because of the noise and overcrowding which have driven wildlife back into the forest. Interestingly, although conditions are not ideal, Carara also offers an example of how industry involvement and dialogue with scientists and conservation officials can lead to a constructive compromise. Cruiseship operators whose practice of discharging large busloads of passengers would have been prohibited under the terms of a draft *reglamento de uso público*, or park management plan, were invited to comment. They proposed a middle ground solution, that would allow them to bring slightly larger groups of tourists than the draft stipulated, allowing them to use a smaller size of bus to capacity.⁵⁰

- In an excellent article on the negative environmental impacts of tourism, Leslie Haysmith (et al.) reviews some of the kinds of damage that tourism can take including: soil erosion on trails; trash and waste water disposal in countryside and water bodies; water contamination; increases in mosquitos near dumps; fish and wild animal mortality due to contamination, deforestation and ecological changes in eco-tourism destinations. The results of some specific studies in Costa Rica include:
- White-face monkeys (*Cebus capuchinus*) overly accustomed to tourists at Manuel Antonio come down from their trees to steal possessions from the beach.⁵¹
- Divers touching tropical fish leave them susceptible to infection by removing the protective mucous.⁵² Broken corals and detached coral colonies are more common at more popular diving sites in Culebra Bay, as a consequence of anchors being dropped on the corals and anchor lines being dragged along the bottom.⁵³
- Sea turtles are irritated by tourists use of lanterns and cameras, by being touched and having their paths blocked, by the movement of sand near their

⁴⁹ Terry Pratt, pers. comm.

⁵⁰ Rafael Gutierrez, pers. comm.

⁵¹ Haysmith, L., A. Hoare, et al. (1996). *Impactos Ambientales Negativos Causados por el Ecoturismo. El Ecoturismo y La Conservación de la Naturaleza en Centroamerica*. L. Haysmith and J. Harvey. Gainesville, FL, USA, Proyecto Paseo Pantera: 80-104.

⁵² Eric Olson, pers. comm.

⁵³ Jiménez, C. E. (1996). *Corals and Coral Reefs of Culebra Bay, Pacific Coast of Costa Rica: Anarchy in the Reef*. Eighth International Coral Reef Symposium, Panama, In Press..

nests; such disturbances have led turtles to interrupt their laying to return prematurely to the ocean.⁵⁴

- Surveys of monkey populations before and after the Cabo Blanco Reserve opened to tourism showed a 40% reduction in the population of howler monkeys (*Alouatta palliata*) and a 27% reduction in the population of white-faced monkeys (*Cebus capuchinus*).⁵⁵

A widely echoed concern of tourists, guides, scientists and conservation officials is that there is a great need for better visitor infrastructure and interpretive services in the Costa Rican Conservation Areas. Investments in infrastructure, guard and guide training, tourist education and the like can protect both the natural resources and visitors' experience of them. In some cases, more involved planning and controls may also be required. Nonetheless, the government lacks resources to significantly advance infrastructure development; practical involvement and aid from the tourism industry could be increased for mutual benefit.

5.4 Inconsistency with Costa Rica's image as a natural history destination

ICT data on tourist activities show that the majority of potential Costa Rica travelers or actual visitors are interested in "sun and sand." These data are sometimes interpreted to mean that people come to Costa Rica seeking the same kind of beach experience they may find in other tropical beach destinations, such as Mexico, Hawaii and the Caribbean, and that Costa Rica is thus competing in a commodity market with these destinations.

However, Costa Rica's tourism market is a segmented one. Available market research and general impressions of industry players and observers suggest that the central mental image that most foreigners have of the country is one of a peace-loving, friendly, idealistic site of special natural treasures and beauty. Most Costa Rica-bound tourists today come with general interests, usually including some form of relaxation and education about nature and Costa Rican culture.

A shrinking though still important proportion of today's market is made up of the same kinds of "eco-tourists" who fostered the original boom of the 80s. "Eco-tourism" has been variously defined as "...purposeful travel that creates an understanding of cultural and natural history, while safeguarding the integrity of the ecosystem and producing economic benefits that encourage conservation,"⁵⁶ and as "...an environmentally responsible type of tourism consisting in travel to relatively undisturbed natural areas to enjoy, appreciate and study the natural and cultural attractions of those areas through a process that promotes conservation, has low impact and encourages the socio-

⁵⁴ Annie Chavez, pers. comm.

⁵⁵ Haysmith, L., A. Hoare, et al. (1996). Impactos Ambientales Negativos Causados por el Ecoturismo. El Ecoturismo y La Conservación de la Naturaleza en Centroamerica. L. Haysmith and J. Harvey. Gainesville, FL, USA, Proyecto Paseo Pantera: 80-104.

⁵⁶ Ryel and Grasse, in Whelan, 1991.

economic involvement of local communities.⁵⁷ Such tourists can also be classified according to the depth with which they wish to study:

- Turismo del Aventura
- Turismo Naturalista (fuerte y suave)
- Turismo Científico⁵⁸

The "soft" natural history traveler has become an increasingly important segment of the Costa Rican market. These are travelers who are interested in nature but less specialized in their level of preparation and require interpretive services to have fully satisfying experiences in Costa Rica,⁵⁹ as well as to minimize the environmental impacts of their presence here. Another group of visitors are "soft adventure" tourists, who seek an experience with some element of risk, but which can be had without much training or preparation, such as rafting on the Pacuare.⁶⁰ Additionally, certain Costa Rican tourism markets are specialized; bird-watching; sport-fishing; surfing; Spanish-language studies; plastic surgery; new-age spas; and scientific research and educational programs. Some of these markets are very valuable and each must be considered in tourism planning, development, marketing and service.

What this means, is that "...we need to learn how to give the variety of people who come, including those who are here primarily because of Costa Rica's fad status, a good experience. It is not appropriate to classify visitors into those who want to come to the beach and those who are here for the forest. Most people want to do a variety of things during their vacations."⁶¹

This Costa Rican clientele arrive seeking service from a young and inexperienced market, one of whose most successful promoters feels must be carefully positioned. Michael Kaye, of CEO of Costa Rica Expeditions, says:

People travel based on dreams and desires for memories...Costa Rica is not big enough and doesn't have enough history of tourism to be able to deliver the right kind of memories to a huge tourism market yet. It's a small market. For now it needs a unified image if it wishes to retain the "soft natural history" travelers that are our core customers...The "soft natural history" travelers can be deterred by an image shift and by publicity trumpeting an inconsistency between the image and the reality.⁶²

Ecologically destructive siting, design and construction and tourism operations are practices that damage the Costa Rica that tourists come to experience, at worst presenting them with a commoditized "tropical" experience. If a Costa Rican destination is designed to look and feel like any other tropical spot, then it can only compete on price and quality, generally not Costa Rica's strong suits. In this context, a ecologically destructive tourism operations -- such as large resorts and golf courses -- pose a double

⁵⁷ Hector Ceballos-Lascurain, IUCN, cited in Budowski, 1993.

⁵⁸ Budowski, 1993.

⁵⁹ Terry Pratt, pers. comm.

⁶⁰ Terry Pratt, pers. comm. This form of recreation may be considered "soft" adventure, and since 1978, at least a million people have tried it, however accidents such as a recent drowning on the Reventazón (*La Nacion* 29 noviembre 1996), suggest that it should be better regulated (*La Nacion* 30 noviembre 1996).

⁶¹ Ree Sheck, pers. comm.

⁶² Michael Kaye, pers. comm.

fisted threat of degrading the environment and requiring the promotion of a "non-authentic" destination, e.g. one that is not particularly Costa Rican in character and may seem inconsistent with the idea of Costa Rica, a natural destination.⁶³ Similarly, the frequent use of "eco" tour, and "eco" experience in the local promotional literature degrades the use of the term. Some tourists expecting an "eco" experience will be put off by inaccessible, degraded and poorly interpreted natural destinations. It is in the industry's interest to maximize the consistency of the Costa Rican travel experience with the country's image or "brand" to use marketing terminology.

CASE: IMPACTS ON THE ENVIRONMENT AND ON THE ENVIRONMENTAL IMAGE OF COSTA RICA AS A DESTINATION OF CONTEMPORARY TRENDS IN TOURISM

When Louis Wilson of Hotel Las Tortugas at Playa Grande in Guanacaste, arrived in Tamarindo over 20 years ago, it was a sleepy vacation retreat for perhaps 30 Costa Rican families. The year-round population consisted of a handful of families who lived according to the traditions of the indigenous people who inhabited this area on corn and pig farming.

Wilson's vision for economic development of the area as an eco-tourism destination went hand-in-hand with his conservation convictions. Back in the '70s and '80s, when turtle egg poaching in the area was done on an industrial scale, with large machinery on the beaches, ICT deployed the national guard to protect the nests. Another threat to the vision of the area as an eco-tourism destination was a major development proposed by the Playa Grande Development Corporation, financed by Arab investors, who wanted to build a marina, two big hotels, and a high profile gambling operation. Wilson and his colleagues have worked hard to counteract these threats, in part by advocating the eventual designation of the area, which is the site of important nesting grounds of several species of sea turtles, as a National Wildlife Refuge in 1985.

Wilson's understanding of eco-tourism involves not only using nature as an attraction, but working to minimize visitor impacts on the natural destination. In this context, he argues persuasively that large-scale visitorship to the turtle beaches to watch egg-laying and turtle-hatching is antithetical to the spirit eco-tourism, because turtles are distracted and confused by such crowds. Another aspect of tourism development that has proven problematic for the turtles are the lights of Tamarindo, which confuse the turtle hatchlings as they swim to sea, driving many off course to perish at Tamarindo. Wilson's guests have been horrified to find that busloads of tourists from nearby resorts, many whose behavior on the beach suggests that they are only marginally interested in the spectacle, seems to have priority reservations for turtle viewing on the beach at Playa Grande.

Additionally, Wilson feels that eco-tourism should promote community development, giving local residents economic alternatives to turtle harvesting, and as such he laments large-scale employment of illegal Nicaraguan labor in the construction of some local hotels, workers whose long-term well-being is of no interest to the developers, and who have become a factor in increased crime suffered by local tourists, particularly those who do not remain cocooned inside the high-security large resorts such as Melía Conchal and Guanamar.

Wilson questions other aspects of the economic development contribution offered by and of the overall the economic sustainability of these kinds of developments as well. He notes that the Spanish Barcelo chain, for example, can sell a \$5000 tour package through any one of their

⁶³ Michael Kaye and Terry Pratt, pers. comm.

chain of 200 US-based travel agencies, spending only \$2000 of this in Costa Rica. Their local investment benefits disproportionately, and the profit is directly repatriated to Spain.

Vigorous and consistent research on potential and actual tourist interests, experiences, and preferences, including demographic, psychographic and geographic characteristics of the target market, is needed.⁶⁴ Yet, according to numerous observers, the information on which large investment and promotional decisions are being made today does not reflect a sufficiently well-informed understanding of Costa Rica's target tourist. Fresh efforts by the ICT in this regard, reflected in its 1996-97 promotional campaign, "Costa Rica: no artificial ingredients," are a step in the right direction, but should be complemented by targeted marketing at specialized segments, and marketing assistance to smaller operators.⁶⁵ This research should guide future discussion and decisionmaking that affects the image used to promote Costa Rica and to evaluate the consistency of the tourism product with that image.

6. ENVIRONMENTAL EFFECTS OF TOURISM THAT AFFECT THE REST OF COSTA RICAN SOCIETY

Center research for this study did not identify many environmental impacts of tourism that significantly affect "downstream" economic actors. Of course, private investments in conservation for tourism provide environmental benefits to the general society in terms of biodiversity conservation, watershed protection, and carbon sequestration, for example. But there is little information available to quantify these benefits. There is a strong indication that "...nature-based tourism...[has] served to focus public attention on [public conservation areas] and greatly increase[d] their inherent value in the minds of Costa Rican citizens...heightened awareness has led to greater park visitation by Costa Ricans..."⁶⁶

With regards to potential negative impacts of tourism, the potential for over-consumption of groundwater resources, mentioned above, leading to dry or polluted private and public water supplies, is a serious concern. Additionally, wastewater disposal from hotel developments could at some point become a concern to fishing operators or even to the public health of a community relying upon a receptive water supply. Evidence available to date does not suggest that this is a large-scale concern today however.⁶⁷ This could change if development densities are allowed to increase and if corresponding waste management infrastructure and practices do not follow suit. A third concern is that tourism development may place certain natural areas and experiences out of reach of average Costa Ricans, either by making them too costly, or by physically limiting public access. Again, this is likely to remain an irritant in very localized situations, since so much land is in public hands, including the entire coastline. However, the public interests in protection of and access to the Costa Rican environment need to be defended. Violations of the protected marine zone by residential developers, squatters and tourism interests all threaten these interests.

⁶⁴ Ryel and Grasse, in Whelan, 1991.

⁶⁵ This is one of several key recommendations made in the Inter-American Development Bank funded study recently published by the Cámara Nacional de Microempresarios Turísticos (CANAMET, 1996).

⁶⁶ Horizontes Nature Tours, 1996.

⁶⁷ For example, where the first round *Bandera Azul* assessment identified degraded coastal water quality, these findings were not correlated to local hotel development, but rather to upstream community and industrial wastewater disposal practices. Rodolfo Lizano, pers. comm.

CASE: CONSTRUCTION IN THE MARITIME ZONE OF A CONSERVATION AREA⁶⁸

The Nosara Civic Association, a planned residential community in Santa Cruz, filed suit against MINAE in 1994 for granting construction permits to Hotel Playas de Nosara, which holds a concession in the local maritime zone. This stretch of beach was included in the Ostional Wildlife Refuge in 1985, and the concession was granted under the understanding that the concessionaire would protect the beach in its natural state. While the Civic Association's petitions to MIRINEM (now MINAE) for reconsideration of this permit were pending, the hotel bulldozed a road into the maritime zone of Playa Pelada, bulldozed a construction platform and began building a concrete boat garage. The matter eventually went to the Sala IV which granted an injunction against further construction.⁶⁹ However, based on a minor modification of building plans, the Sala IV eventually rejected the Civic Association appeal, allowing construction to proceed. The originally proposed "boat house" has become an operating bar.

Residents of Nosara have organized to protect local natural resources from such threats as unpermitted extraction of river gravel and sand, from turtle egg poaching, squatting (a significant factor on Playa Pelada) and from sewage disposal that is sullyng the estuaries of neighboring Playa Sámará. For example, they house and pay the salary of a MINAE ranger, put trash cans on the beach, and support a locally organized initiative called FEDEAGUA to collect and recycle trash. Perhaps in part because of the history of explicit conflict between the Community Association and commercial tourism interests there (see above), FEDEAGUA reports that the Playa Pelada bar

⁶⁸ Case developed based on interviews with several anonymous contacts, among them some who have been personally threatened by the developer mentioned.

⁶⁹ Kitson, D. (1994). Newsletter to Members. Nosara, CR, The Nosara Civic Association/Asociación Cívica de Nosara.

7. ENVIRONMENTAL IMPACTS OF OTHER COSTA RICAN ACTORS AND INTERESTS THAT AFFECT THE TOURISM INDUSTRY

Interestingly enough, Center research suggests that the most important threats to the environmental sustainability of tourism in Costa Rica are those *upstream* to the sector. That is, Costa Rica's environment in general, and conservation system in particular, may be vulnerable to weak institutional protections and strong degradation pressures on the part of other sectors, and citizens in general. Before discussing this theme in more detail though, we will review "upstream" actors and interests whose investments in environmental protection and conservation benefit the tourism industry.

7.1 Costa Rican investments in sustainability

The history of tourism in Costa Rica is intimately related to patterns of economic investment in the country that have for decades favored, peace, education, health and conservation. Early visitorship by scientists and conservationists, along with the development of the Costa Rican national parks were key to the country's eventual emergence as a tourism destination. According to Alvaro Ugalde, who was the first Director of Santa Rosa National Park in 1970, and Director of the Parks System from 1974 to 1986 and from 1991 to 1993:

When we began the parks 25 years ago, we thought they'd be "polos de desarrollo" for their surrounding communities when tourism would eventually arrive. The market actually began to flourish during the 1980s and it became a force for, and an ally of conservation.⁷⁰

During the 1980s the ICT was formed and launched its campaign: "Costa Rica es...natural."

In 1986 about 75% of respondents to an ICT questionnaire asking their reasons for visiting Costa Rica mentioned natural beauty, 66% mentioned culture and political environment, and 36% mentioned flora and fauna. "Just two year later," ...[said Tamara Budowski, in a 1990 article in Tecnitur International magazine]..."one out off every two tourists interviewed during the high season indicated that they had visited natural sites...Visits to seven of the principal national parks increased by 50% over those two years.⁷¹

A wave of important publicity and guidebooks began to appear: a widely-seen National Geographic Special, Adrian Forsythe's writing in Canada to raise funds and save the forest, popular English-language guidebook *The New Key to Costa Rica*, and George Powell's work on the quetzal drove broader awareness of Costa Rica as a nature tourism destination.⁷²

⁷⁰ Alvaro Ugalde, pers. comm.

⁷¹ D. R. Wallace (1992), pp. 119-120.

⁷² Ree Sheck, pers. comm.

Today, the conservation areas of Costa Rica continue to be a primary draw for tourists, attracting from nearly 500,000 to nearly 800,000 international visitors per year between 1991 and 1995.

Costa Rica also offers some innovative incentives for conservation by private landowners. The Forestry Law of 1996 empowers the *Fondo Nacional de Financiamiento Forestal* (FONAFIFO) of MINAE to compensate landowners for forest management, reforestation and conservation activities, and for environmental services provided by these activities, such as watershed protection and carbon sequestration.⁷³ This activity will be financed by a portion of the tax on *combustibles*, as well as sales of Certifiable Tradeable Offsets of carbon on the world market, the first such sale of which was recently made to a consortium of public and private interests in Norway.⁷⁴ Funding distribution to compensate landowners within forest preserves will be a priority since they often serve as buffer zones to parks and can be legally cut, albeit subject to a required management plan.⁷⁵

Additionally, the *Ley de Vida Silvestre* enables qualified properties to receive a designation as a private or mixed wildlife refuge. Benefits of this status, which Amos Bien says is not very burdensome to acquire, include:

- Exemption from the impuesto territorial
- Possible exemption from the one percent impuesto sobre activos
- Protection against precaristas⁷⁶
- Exemption of beach front properties from municipal management plans authorized under the *Ley de Maritima Terrestre*⁷⁷

But Costa Rica has also made significant commitments to environmental protection more generally, which aim to safeguard not only pristine nature but also the developed areas in which citizens and tourists alike breathe the air and drink the water. Potable drinking water is available in most areas, public transportation services nationwide are cheap and efficient, and infectious diseases like cholera are nearly non-existent in Costa Rica. In the last few years, modernized environmental legislation has begun to appear, including:

⁷³ Lic. Marco Vinicio Araya B., pers. comm.

⁷⁴ Additionally, a Forestry Development Fund (FDF), financed by about \$.5 million in funds from the Netherlands and \$5 million from Sweden complements the activities of FONAFIFO to organize and incentivize rural conservation and forestry activities.

⁷⁵ Lic. Marco Vinicio Araya B., pers. comm.

⁷⁶ These three advantages are also available for forest management and regeneration projects receiving forestry bonds (see above). The *Red Costarricense de Reservas Privadas* lobbied to include “conservation” as a form of management in the regulations to the *Ley Forestal*.

⁷⁷ The *Ley del INVU* also authorizes municipal zoning; however the Coronado plan is the first one to have been brought to the stage of public review.

**CASE: CONTEMPORARY GOVERNMENT INITIATIVE TO PROMOTE ENVIRONMENTAL PROTECTION: THE
AYA BANDERA AZUL PROGRAM.**

The philosophy behind the ICT "*Bandera Azul*" program,⁷⁸ is that communities have important opportunities to band together to promote their own development and to avoid the destructive face of competition.⁷⁹ Organized by a commission, coordinated by the Executive President of *Acueductos y Alcantarillados* (AyA) including the Ministries of Health, Environment and Energy, the *Cámara Nacional de Turismo* and the ICT, this program announced the results of its first evaluation of 57 Costa Rican beaches in late 1996. Beaches were evaluated on such issues as the quality of sea and drinking-water, security, waste management, and signage and educational campaigns. Ten beaches were given a Class A rating permitting them to publicize their accomplishments to potential visitors.⁸⁰ By the same token, the program also found that five beaches not swimmable due to fecal contamination of their waters, provoking community members to focus on organizing against pollution.⁸¹ The program is a creative initiative which has the potential to highlight the critical importance of environmental quality to the tourism sector, and to reward those who work actively to promote it.

Other government initiatives with promise

In conclusion, the substantial investment in environmental protection that has led to public conservation of 11% of Costa Rican territory, and to the widespread delivery of clean drinking water, health care, and other public services has been a key driver behind the emergence of Costa Rica as an international tourism destination.

7.2 Challenges to the sustainability of Costa Rica's environment

Unfortunately, despite noteworthy public commitment to policies of sustainable development, Costa Rica is grappling with some serious threats to its environmental sustainability. Among these, the ones we deem to be of greatest concern *vis a vis* their downstream impacts on the tourism sector are:

- The vulnerability of the conservation areas system;
- The chaotic state of land-tenure law, land-use planning and controls on development; and
- The weak environmental control regime in the context of contemporary environmental threats.

⁷⁸ Rodolfo Lizano, pers. comm.

⁷⁹ In the past developers have built beach front properties that directly obscure their competitors views, or have met arriving passengers at bus stops with lies that their hotels have closed down since making their reservations.

⁸⁰ *La Nación*, 22 noviembre 1996.

⁸¹ *La Nación*, 30 noviembre 1996.

7.3 The vulnerable conservation areas system; SINAC under stress

We have argued that better infrastructure and visitors' services are needed in the public conservation areas managed by the *Sistema Nacional de Areas de Conservación* (SINAC) to maximize their tourism potential (see Section II. B. 2.). However, today the riches these areas contain are at risk, as SINAC funds are inadequate either to finish buying appropriated lands, or to finance operating budgets, including basic protection.

Since the merger in May of '95 of the Departments of *Vida Silvestre, Forestal* and *Parques* into SINAC, Costa Rica has enjoyed a policy of better coordinated management of conservation lands.⁸² This policy has led to increased decentralization of management decision-making, represented in part by the creation of *Direcciones Regionales* in October and to a reengineering of activities according to processes begun in November of 1996.⁸³

Budget plans developed for each conservation area, reflect not only operations costs but also the cost of land that still needs to be titled to the government.⁸⁴ In December 1995 this cost amounted to 8 298 million colones (approximately \$38 million at the exchange rate prevailing in December of 1996) for the remaining 4-5% of the territory declared as national parks, biological reserves, and other federally protected lands.⁸⁵ The budget for 1997 does not allow for lands acquisitions.⁸⁶

An area-by-area budget plan exists for infrastructure development,⁸⁷ but no substantial resources are available to fund it. International donor and development bank interest in Costa Rican parks is on the wane. With certain exceptions⁸⁸ these scarce funds and credits are going to other regions, countries or issues. Several donor programs targeted to SINAC terminate during '96 and '97, compounding financial worries⁸⁹ The *Fundación de Parques Nacionales* has \$16 million in trust funds whose interest income can be used for parks operations, \$9 million of which are under dedicated management for the Guanacaste Conservation Area (GCA). System expenditures during 1996 were nearly \$11 000 000, but SINAC could comfortably spend another \$2 000 000 on infrastructure development, including trails and other visitor services.⁹⁰

Along with improvements in productivity, possible remedies to this crisis include:

- Use of funds from Joint Implementation -- a concept arising from global climate change negotiations, but not yet authorized under the Climate Change Convention -- to establish trust funds for the conservation areas.

⁸² See MINAE, 1996.

⁸³ Luis Rojas, pers. comm.

⁸⁴ This acquisition campaign is guided by priorities established in a landmark SINAC study finalized in September 1996 commonly referred to as the GRUAS report, which documents lands needed to protect up to 90% of Costa Rica's biodiversity.

⁸⁵ Garcia, in press and Carlos Manuel Rodriguez pers. comm.

⁸⁶ Alvaro Conejo, pers. comm.

⁸⁷ Cuadro: "Sistema Nacional de Areas de Conservacion Detalle de la Inversion Total en Facilidades y Servicios Turisticos para 1996-1997".

⁸⁸ An \$8 million grant from the Global Environment Facility has been dedicated to the development of visitor facilities in the Osa and La Amistad-Región Pacifico areas, for example.

⁸⁹ "Estrategia Financiera para el SINAC".

⁹⁰ Alvaro Conejo, pers. comm.

- Fundraising from multinational companies with tourism interests⁹¹ and from the Costa Rican private sector, although current tax rules limit the potential of the latter strategy.
- A ruling by the Finance Ministry to exempt SINAC from the *limitaciones de gasto* imposed by *Programa de la Reforma del Estado*, since the system is 80% self-financing.⁹²

But each of these ideas implies a challenging negotiation, and the first is not within the power of domestic decision-makers. And none of them ensure a sustainable financial situation for Costa Rica's conservation areas. The very soul of the country's history and image as a tourist destination is at stake.

Another potentially important source of support for SINAC is contributions from domestic donors. The tourism sector has a strategic interest in a viable Costa Rican conservation lands system, with suitable infrastructure for visitors. In the face of the serious financial constraints under which the system is operating, it behooves the sector to launch vigorous negotiations with SINAC management at both national and regional levels to facilitate investments in the system, and to channel donations to national and regional foundations interested in the parks.⁹³

Having noted several useful financial subsidies of conservation on the part of the tourism sector, it must also be said that tremendous opportunities remain untapped for public-private partnership in this realm. Center research suggests that particularly interesting opportunities exist for hotel owners and other sector operators to participate in regional SINAC area planning at the conservation area level, and to invest in parks projects. Trends at SINAC place important decisionmaking power in the hands of regional administrators who are working to build community and private sector alliances. Several conservation areas have developed or are developing local foundations to channel private sector gifts into the system. Most parks now have management plans in place that indicate SINAC priorities for the development of infrastructure, such as trails and visitor centers. SINAC is also increasing its focus on marketing and tourism as a source of future income. This backdrop, in conjunction with the severe financial crunch faced by the system, suggests that opportunities exist for tourism interests to approach SINAC with targeted donations for lands acquisition and infrastructure development, as well as for maintenance and protection of the system.⁹⁴

7.4 Land-tenure, planning and development are chaotic, evolving

Land-tenure and development in Costa Rica occur in a chaotic context. The national registry of deeds does not cross-reference property claims to maps, and ownership can be established by squatting and clearing of land. The relevant authorities frequently lack

⁹¹ Rodolfo Lizano, pers. comm.

⁹² Carlos Manuel Rodriguez, pers. comm.

⁹³ National foundations include Fundación Neotropica and the Fundación de Parques Nacionales. Regional ones include FUNDECOR (Cordillera Central), FUNDACA (Arenal), and ACOSA (Osa); others are in development. Yadira Mena, pers. comm.

⁹⁴ Karla Cecilia, Alvaro Conejo, Rafael Gutierrez, Yadira Mena, Carlos Manuel Rodriguez, Luis Rojas, Jorge Serendero, pers. comm.

knowledge of environmental issues, and usually lack the resources to responsibly plan for and control development.⁹⁵ Land use planning in is disarray; only 30% of the Costa Rican coastline is governed by a *plan regulador*,⁹⁶ and the municipalities that have the legal responsibility for allowing construction plans to go forward, have neither the technical preparation, the resources, or in many cases the motivation, to constructively uphold these responsibilities.⁹⁷

To develop projects legally in Costa Rica can be complicated, costly and time-consuming, discouraging conscientious deep-pocket investors.⁹⁸ Recent initiatives to clarify and streamline the process, such as the preparation of more detailed guidance on the conduct of EISs by SETENA,⁹⁹ and the opening of a *ventanilla unica* by the ICT,¹⁰⁰ should help. But the history of multiple and overlapping government authorities, has led both to excesses of bureaucracy, and to loopholes in environmental protection. In the past, for example, while *urbanizaciones* required EISs, farms along public roads could be fragmented with very similar results without having to do such a study. Similarly private clubs, could use the condominium law to avoid

Controls on the development of individual projects are also problematic. The 1996 *Ley General del Ambiente* and Presidential Decree 25226-MEIC-TUR, *Reglamento de las Empresas y Actividades Turísticas*, will require most future developments to be screened by SETENA, but the resources available to staff this function are tight.¹⁰¹ National experience with environmental impact studies is still evolving, resulting in plans of uneven quality. Soon to be published EIS guidelines are likely to include the first requirement for studies of the marine resource by coastal project proponents, for example.¹⁰² Further project-by-project evaluations cannot guarantee ideal environmental impact mitigation.

⁹⁵ Robert Wells, pers. comm.

⁹⁶ Mora, E. (1997). Un Proyecto a la Deriva. *La Nación*. San José, Costa Rica: 5A.

⁹⁷ Chacón, C. (1997). Breve Descripción del Marco Legal Relativo a las Actividades Turísticas en Costa Rica. Alajuela, Costa Rica, Centro Latinoamericano de la Competitividad y Desarrollo Sostenible.

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Petritz, D. (1997). Experts: Uncontrolled Building a Threat. *The Tico Times*. San José, Costa Rica: 13.

⁹⁸ Glenn Jampol, pers. comm.

⁹⁹ Sonia Espinoza, pers. comm.

¹⁰⁰ Rodolfo Lizano, pers. comm.

¹⁰¹ Sonia Espinoza, pers. comm.

¹⁰² Sonia Espinoza, pers. comm.

**CASE: PRIVATE INTERESTS FOSTER A REGIONAL PLAN
FOR SUSTAINABLE TOURISM ON THE NICOYA¹⁰³**

Development along the coast in the Municipalidad de Nicoya has occurred very rapidly over the last decade, and in an anarchy guided by the goals of individual project proponents. For example, the 2500 ha Bosques Puerto Carillo teak plantation, not far from the coast is responsible for significant loss of natural forest cover and stream siltation; siltation at the mouth of the Río Malanoche is affecting the shoreline and threatens coral reefs of Playa Sámará. Untreated sewage is visibly affecting water quality in the Sámará estuaries. Properties have been bought and developed up and down the coast without regard to the abilities of the authorities to provide roads, waste collection, phone and electricity service and so on. Local people are suddenly finding themselves priced out of local land. Perhaps most worrisome it is not clear that drinking water supplies or wastewater treatment provisions are sustainable. Individual landowners are drilling wells without benefit of any study of the local groundwater capacity. In short, development in the area is occurring without reference to potential environmental impacts and uninformed by a plan.

Municipal powers to control this development exist but without the corresponding resources. Encargado Municipal Felix Angel Vasquez and his staff are still working to update the woefully inadequate inventory of properties given them by the central government after the passage of the *Ley de Impuesto Bienes y Muebles* two years ago. Until properties are correctly inventoried and assessed, the municipality will lack the funds necessary to finance the tremendous demand for services, not to mention its other important functions of planning for, and control of, development.

Community members frustrated by this scenario have begun to organize, and local property owners have begun to explore ways to strengthen the local capacity for planning and control. With the help of Diputado Roberto Zumbado Arias, the municipality has tapped into sources of support for the professionalization of municipal staff. Nicoya municipal employees have benefited from training on the administration of their environmental control powers from MINAE, and on their powers of land assessment and taxation from IFAM. Additionally, frustrated with the limited vision of regional possibilities and impacts made possible by a beach-by-beach *Planes Reguladores* required under the *Ley de la Zona Marítima*, local property-owners are well on their way to forming a regional cámara, whose priority will be to develop a regional plan.

Their vision is of a regional tourism destination, is inspired by *Las Bahías de Huatulco* in Oaxaca, Mexico. There, another lovely necklace of beaches has been made accessible to international tourists in a way that protects the environment, and provides both economic opportunity and the development of community infrastructure and services for local residents. A hub community serves as the key destination for lodging, offered at a range of prices, from which tourists can fan out to the various nearby beaches, ferried by former artisanal fishermen from bay to bay. This same hub community offers area residents amenities such as education and health care, while limiting the cost of infrastructural investment, and gives residents a place to foster and protect their cultural values, avoiding the cultural conflicts that sometimes occur when rural beach residents mix with international tourists.

Regional planning for tourism in Costa Rica is a good idea, and it is promising that private property owners in Nicoya are banding together to do it. This kind of planning can dictate which areas will receive the benefits of concentrated investment in infrastructure and services that limit the negative environmental impacts of development. It can also define the density limits allowable in an area whether for environmental reasons or simple to protect the quality of life and of the visitorship experience.

¹⁰³ Minor Chavez, Jorge Valerín Vargas, Felix Angel Vásquez, anonymous member of the Nosara Civic Association, pers. comm.

Planning on a regional scale is also underway on the part of the conservation areas of SINAC. Most of the conservation areas have *Planes Generales de Manejo*, prepared by teams at the *Universidad de Costa Rica*. Some also have more detailed site and interpretation plans. These plans identify priority locations for improvement of visitor services and infrastructure. Increasingly SINAC is oriented towards maximizing the tourism potential of the areas, while doing more to benefit surrounding communities from this tourism activity.¹⁰⁴ This management climate and development strategy suggests that tourism operators with a long-term vision have opportunities to participate constructively in improving the conservation areas.

7.5 Incipient environmental controls and modern Costa Rican

Of grave concern to a nature-based tourism destination like Costa Rica are contemporary trends in environmental degradation: urban air pollution, increases in non-degradable waste generation, littering and poor waste management systems; open dumping of wastewaters in rivers; and the like. Of equal concern is that the environmental protection legislation, regulations and government institutions are weak and struggling to address these serious national problems.

The following comments touch on a few areas of potential concern to the tourism industry:

- Visual pollution, such as the use of unsightly billboard advertisements along highways, out of keeping with tourists' image of the country, is completely unregulated. The relevant law (art. 71 of the Ley General del Ambiente) refers to potential future standards that do not exist.
- Waste management nationwide is a disaster. Official waste disposal sites are full (Río Azul) or poorly located (the dump for Santa Cruz is located on a riverbank). Dumping in lots and on roadsides (including, for example the scenic highway running through Braullio Carillo National Park) is common. Littering appears to be a culturally acceptable practice, and tourists are scandalized to see people litter from cars and buses as they drive through the country.
- Air quality in the Central Valley has degraded rapidly, due primarily to the huge increase in vehicular traffic. Between 1983 to 1993, the number of vehicles in use in Costa Rica doubled from 190,000 to 390,000, with the number of automobiles increasing from 66,000 to 150,000. The structure of import duties applied to vehicles has favored the disproportionate importation of older, more polluting vehicles. Additionally, the poor state of Costa Rican streets and roads invites those who can afford to bring in sport utility vehicles even for primary use in urban traffic. Burning of trash and vegetation is also common and another irritating source of air pollution.
- Watershed planning and protection are chaotically managed by several authorities with somewhat overlapping powers and inadequate resources (see the case below). Quality drinking water is available to at least 95% of the

¹⁰⁴ Yadira Mena, pers. comm.

population, but the water resource in Costa Rica is in heavy demand, and serious conflicts over availability may appear in the very near future.¹⁰⁵

Certain natural resources have specific economic value to tourism, including, for example, rivers used for white-water rafting, and natural areas for visitorship. The following case illustrates a conflict over one such resource between tourism and other economic interests.

CASE: SPORT FISHING; THREATS TO THE SUSTAINABILITY OF A SPECIALIZED TOURISM MARKET

“The current situation with the sport fishing business is a tragedy,” according to Jerry Ruhlow, Publisher of *Costa Rica Outdoors*, a magazine that caters to this specialized but highly valuable segment of Costa Rica’s tourism sector. The stock people come for (various species commonly referred to as “billfish”) are a sustainable resource, according to Ruhlow, given Costa Rica’s long-standing catch-and-release practice which returns approximately 95% of the catch to the sea alive. Unfortunately, in recent years the stock has been depleted by commercial fishing practices, particularly long-lining. The majority of the commercial catch is exported to be ground up as an additive to poultry feed and for use in processed fish products such as fish-cakes.

The commercial market is of insignificant value when compared to the economic significance of the Costa Rican sport fishing market. According to a socio-economic study carried out by Robert P. Ditton and Sheperd R. Grimes of Texas A&M University, the overall value of charter boat billfishing off the Pacific Coast of Costa Rica from September 1993 through August 1994 was \$28,3 million. These benefits reflect 15 657 angler-days and 5,219 billfish boat trips chartered (16% from Quepos, 10% from Golfito and the remainder from Northern Guanacaste province). This sum does not reflect additional benefits from other west-coast species, Caribbean tarpon or snook fishing, or of any inland fishing activity. It does assume that every dollar spent on a charter, led to an induced or indirect economic benefit of an additional \$2. Trip expenditures within Costa Rica by fishing aficionados (excluding air-fares) totaled over \$17,7 million.¹⁰⁶

A report by the Ministerio de Agricultura y Ganaderia suggests that 28 800 marlin and sailfish (billfish) are being harvested by the commercial fleet of approximately 200 long-line vessels, with an estimated market value to the fishermen of approximately \$6000 over the three-month period of the study, thus contributing about five to six per cent of the income of commercial long-line operators.¹⁰⁷ The growth in this market responds to demand created by the passage by the United States Congress of the Atlantic Billfish Act which prohibited commercialization of marlin and sailfish from Atlantic waters, and led US consumers to seek other suppliers particularly Costa Rica.

Unfortunately, a survey of sports fishers conducted as a part of the Texas A&M study, suggests that 82% of those interviewed would take their business to another destination should the populations of billfish drop by 25%.¹⁰⁸ Indeed, negative publicity about the threat of commercial fishing in Costa Rica over the past several years in major fishing publications in the US market appears to have had a strongly negative effect on the sector. “A survey we recently conducted shows that the number of fishermen plying Costa Rican waters has indeed dropped, and may boats along the Pacific are for sale,” according to Jerry Ruhlow. “On the other hand, the fishing is still great, and we are seeing signs of a better high season this year, perhaps because the

¹⁰⁵ Gerardo Ramírez, pers. comm.

¹⁰⁶ Ruhlow, Jerry. “Study Shows Value of Sport fishing” *Costa Rica Outdoors*. Jan.-Feb. '96.

¹⁰⁷ op cit. and Rick Wallace, pers. comm. who based his comments in part on the findings of a Presidential Commission for the Sustainable Development of Sport fishing convoked two years ago.

¹⁰⁸ op cit.

initial wave of negative publicity has abated.” Indeed, according to Rick Wallace, Costa Rica possesses a unique position in the world of sport fishing due to the diverse variety of fish available here.¹⁰⁹

According to Ruhlow, long-term threats to the Costa Rican position include Panama, which is not recognized for a commercial billfish industry, and Guatemala, which strictly prohibits commercial sales of billfish. However, Costa Rica has the infrastructure and the reputation to keep its market if the Sala IV rejects a recent appeal of an INCOPESCA regulation which would acceptably limit the impact of commercial fishing practices. The approach of this regulation is to create seasons (*vedas?*) during which commercial fishing activity would be limited along those portions of the coast where migrating species of the greatest interest to sport-fishing are concentrated.¹¹⁰

Additional priority measures that could be taken to fortify Costa Rica's regimen of environmental control for tourism development and operations are:

- Review and consolidate multiple laws governing topics such as land use and water. Streamline and simplify related government authorities. Finance such functions adequately.
- Assure some continuity of technical resources at the municipal level so that the important powers of municipal government can be executed, and so that investments in training at the municipal level are not lost every four years with changes in government.
- Finance thorough technical studies of still uncharacterized watersheds and aquifers and develop regional plans that relate to the quantity and quality of available water.
- Reassign the responsibility for review of *delitos ecológicos* to a technically trained judiciary, and out of the *juicios penales*.¹¹¹

¹⁰⁹ Rick Wallace, pers. comm.

¹¹⁰ op cit.

¹¹¹ Robert Wells, pers. comm.

CONCLUSION

Tourism is growing worldwide and Costa Rica has great hopes for the growth of its own tourism sector. Yet, according to the Secretary General of the World Tourism Organization, "With very, very few exceptions we are only paying lip service to the ideals of protecting the environment through sustainable tourism. At the same time we are repeating over and over again the mistakes of the past by going after big numbers...many [destinations] are...deteriorating fast."¹¹² The problem is that:

Tourism is at the top of the global food chain. Its success depends upon the success of all other sectors. The tourism sector does not manage the majority of products and experiences it sells...Unlike all other enterprises, tourism takes consumers to the product, not the product to the consumer.

The tourism industry is fragmented into many parts...[and]...is highly competitive at both the national and international levels. In many nations it has low profit margins and a rapidly changing marketplace.

These factors make tourism particularly fragile...a single incident such as beach pollution or a widely reported crime can have devastating effects as tourists choose alternative destinations.

*Increasingly we are discovering that, unless responsible management practices are in place, the industry can degrade the very features on which its prosperity is based.*¹¹³

In this context, it behooves tourism operators to build new bridges between themselves and with their communities and regions to work on conservation and environmental protection in Costa Rica, and on delivering tourism experiences that are consistent with Costa Rica's hard-won image as an environmentally conscious natural history destination.

¹¹² (1996). Secretary-General Calls for Protection of Environment. World Trade Organization News.

¹¹³ (1996). Carrying Capacity and Environmental Indicators: What Tourism Managers Need to Know. World Trade Organization News.

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