Conservation narratives and the 'received wisdom' of ecotourism: case studies from Costa Rica

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Abstract: Ecotourism can be considered to be the 'dictated solution' of a conservation counter-narrative that calls for both sustainable use of wildlife and community-based conservation. This paper addresses the promotion of ecotourism by a specific group of wildlife conservation 'experts', and the implementation of ecotourism as a conservation strategy at three case-study sites in rural Costa Rica. In 1995, in-depth interviews were undertaken with 42 conservation experts and with 12 key informants at the case-study sites. Findings suggest that conservation experts promote ecotourism because it is preferable to more consumptive uses of wildlife, and because it allows experts to repeat the language of the counter-narrative, while continuing to implement traditional conservation solutions, i.e. establishment of parks and protected areas.

Keywords: Costa Rica, conservation experts, ecotourism, wildlife.

Reference to this paper should be made as follows: Campbell, L.M. (2002) 'Conservation narratives and the 'received wisdom' of ecotourism: case studies from Costa Rica', *Int. J. Sustainable Development*, Vol. 5, No. 3, pp. 300–325.

1 Introduction

Ecotourism is a popularly promoted means of reconciling wildlife conservation with economic development, particularly in developing countries, and wildlife conservation organizations and park protection agencies initiated much of the discussion of the ecotourism concept (Wild, 1994). For example, the World Conservation Union (Ceballos-Lasurain, 1996; McNeely, 1988, 1990), World Wide Fund for Nature (Boo, 1990), and Conservation International (Ziffer, 1989) all promote ecotourism as one means of achieving environmental conservation. This promotion continues in spite of long-standing concern over the negative impacts of general forms of tourism on the natural environment (Romeril, 1989, 1994), and of increasing concern about ecotourism in action (Cater, 1994; Mowforth and Munt, 1998; Ross and Wall, 1999).

This paper uses the concept of 'narrative', following Roe (1991), Fairhead and Leach (1995) and Leach and Mearns (1996), to argue that promoting ecotourism allows wildlife conservation 'experts' to repeat key elements of a contemporary conservation 'counter-narrative' (Campbell, 1997, 2000). This counter-narrative stresses the importance of ensuring local support for and participation in conservation activities, and includes concepts of community-based conservation and sustainable use of wildlife. It arose in

opposition to the traditional narrative of exclusion and prohibition, and in response to the wider 'sustainable development' challenge. By employing this counter-narrative, conservation experts and organizations remain relevant in the sustainable development era, and they gain access to funds previously earmarked for development (Meyer, 1993, 1997; Price, 1994). However, as ecotourism is a form of non-consumptive use and often relies on visits to conventional parks and protected areas, promoting it allows conservation experts to speak the language of the counter-narrative while continuing to use tools of the traditional narrative (Campbell, 1997, 2000).

In this paper, the views of conservation experts on ecotourism as a mechanism for conserving wildlife, both in general and in relation to three specific case studies in Costa Rica, are further examined. The paper's focus is on the ways in which the counter-narrative is evolving among a particular group of experts, and the extent to which experience with implementing its received wisdom in practice influences this evolution. By doing so, the paper contributes to the theory of narrative evolution, particularly regarding the relationship between a narrative and evidence as to whether or not it is correct (see Roe, 1991). The case studies in particular illustrate the tensions between the theoretical benefits of ecotourism and the reality of its implementation. Absent from the case studies are the narratives of local people that may or may not challenge the expert narrative. Although their inclusion would provide an additional level of analysis, their collection was beyond the scope of the research project. Furthermore, as expert narratives are often immune to challenges by those of local people (Roe, 1991; Leach and Mearns, 1996), their exclusion from this analysis may be entirely appropriate [1].

2 The received wisdom of ecotourism

While difficult to measure, ecotourism is believed to be the fastest growing sector of the tourism industry, one with substantial economic impacts (Filion *et al.*, 1994). Since the publication of Elizabeth Boo's *Ecotourism: Potentials and Pitfalls* in 1990, academic interest in ecotourism as a phenomenon has grown, much of which is directed at definitional deliberations (Buckley, 1994; Stewart and Sekartjakrarini, 1994). Some definitions focus on ecotourism as a 'product' (Blangy and Nielsen, 1993; Orams, 1995), and some on ecotourism as a 'principle' (Ecotourism Society, 1992, 1998; Whelan, 1991). The latter definitions emphasize the link between ecotourism and socio-economic development of local communities.

The promotion of ecotourism by wildlife conservation organizations and other advocates for nature is based partly on its perceived potential as a conservation tool. An early reflection on the ecotourism concept illustrates this:

> Ecotourism, done well, can be a sustainable and relatively simple alternative. It promises employment and income to local communities and needed foreign exchange to national governments, while allowing the continued existence of the natural resource base... It can empower local communities, giving them a sense of pride in their natural resources and control over their communities' development. It can educate travelers about the importance of the ecosystems they visit and actively involve them in conservation efforts. (Whelan, 1991, p. 4)

Although experience to date has dampened some of the initial enthusiasm for ecotourism, and few proponents would deem ecotourism a simple alternative, certain elements of the

above quote remain key. First, ecotourism has political, economic and social objectives in addition to its environmental ones. Secondly, these goals are linked: realization of political, social and economic objectives encourages local support for conservation, the precursor for environmental success (Cater, 1994; Kangas *et al.*, 1995; Ross and Wall, 1999; Scheyvens, 1999; Simmons, 1994; Sindiga, 1995; Wild, 1994).

Figure 1 depicts commonly stated economic, political and social objectives of ecotourism and how they relate to environmental ones. Without debating the validity of the objectives, ecotourism as depicted represents the ultimate realization of mainstream sustainable development, a marriage of conservation and economy [2]. With its additional political and social objectives, ecotourism also reflects the language of the conservation counter-narrative, encompassing elements of both sustainable use of wildlife (through viewing, a non-consumptive use) and community-based conservation (through empowerment, income generation, and stewardship).

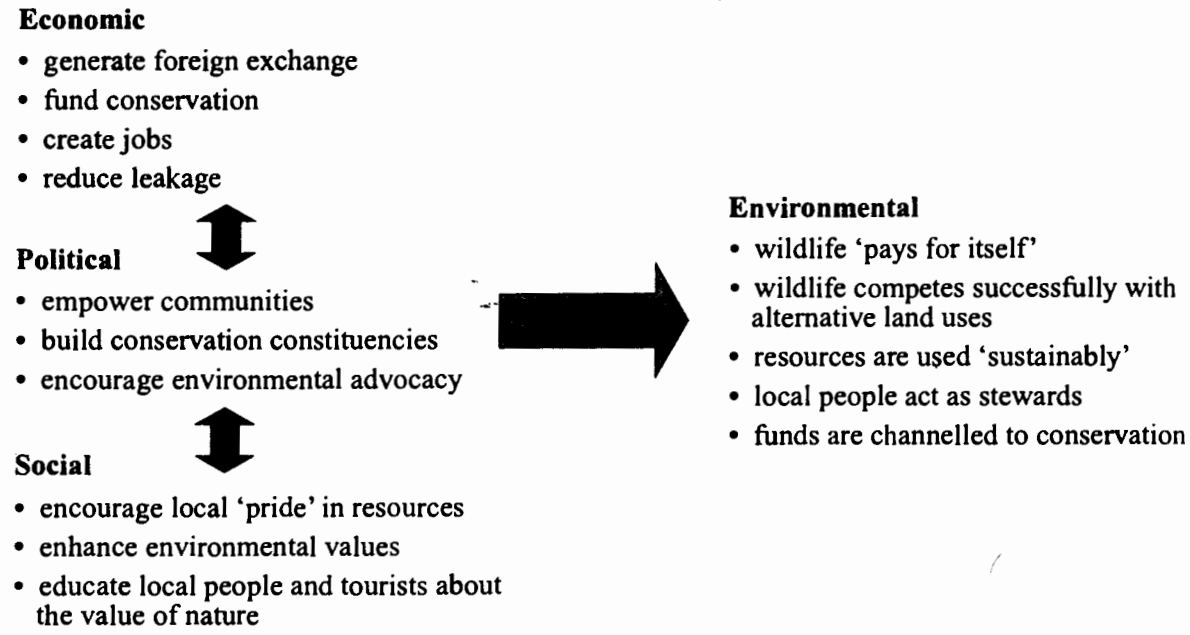

Figure 1 Ecotourism's economic, political, social and environmental objectives.

Even during the initial days of optimism regarding ecotourism, the author cited above recognized that she was describing ideal ecotourism, ecotourism 'done well'. As experience with ecotourism in practice mounts, it appears that it is rarely done well. It often falls well short of its objectives (Cater and Lowman, 1994; Price, 1996; Ross and Wall, 1999), and suffers shortcomings as does tourism in general (Hall and Butler, 1995). Economically, conservation revenues from ecotourism have been disappointing, with money leaking out of the immediate area to national governments, international investors, and tour operators (Bonner, 1993; Campbell, 1999; Lindberg *et al.*, 1996; Stonich, 1998; Wells and Brandon, 1992). Politically, support for conservation activities through ecotourism can be lacking in spite of monetary gain (Heinen, 1993; Parry and Campbell, 1992). Socially, ecotourism has experienced many of the problems associated with traditional tourism (Akama, 1996). These shortcomings can translate into a failure to protect natural environments, and ecotourism can damage directly the environments it seeks to protect (Boo, 1990; Yu *et al.*, 1997).

This paper addresses the question why, given the rather lukewarm reviews that ecotourism in practice is receiving, conservation organizations and experts continue to promote it and the repercussions of their doing so. The focus is on a sub-set of conservation experts, those interested in marine turtle biology and conservation, and on three case studies in Costa Rica. Expert assessments of ecotourism's potential generally and the reality of ecotourism in Costa Rica specifically are examined to determine the importance of various objectives as incentives for promoting ecotourism, the extent to which they are realized in practice, and whether or not this practice is influencing the evolution of the conservation narrative.

3 Study methods

This paper is based on a larger research project that considered strategies for wildlife conservation in developing countries, and expert assessments of those strategies (Campbell, 1997). Marine turtles were selected as a focus species, which allowed for familiarization with the relevant biological literature (a key factor influencing conservation policy) and identification of a group of experts for interviewing. Costa Rica was selected as a focus country to examine wildlife conservation and its link to ecotourism, partly because its economy has been fuelled recently by ecotourism (ICT, 1998) and problems associated with it are evident (Harris, 1995a, 1995b, 1995c). Costa Rica is also home to four species of marine turtle, has protected areas specifically for them, and has several internationally renowned marine turtle viewing sites, the most famous of which is at Tortuguero National Park, one of the case studies discussed.

Forty-two experts in marine turtle biology and/or conservation were interviewed over the period January to November 1995, and their attributes are summarized in Table 1. Many had direct experience with ecotourism, as regulators in the USA and/or as researchers in other countries. Interviews were semi-structured, with experts asked to comment and elaborate on a variety of general topics, including: (i) the potential for ecotourism to contribute to conservation of wildlife in general and of marine turtles specifically; (ii) how ecotourism, as a form of non-consumptive use, compares with more consumptive uses; and (iii) specific experiences with non-consumptive use. To preserve the anonymity of the experts, interviews are referred to by their number (I1, I2, etc.). For a more complete description of interview methods see Campbell (1997, 2000).

Table 1 Characteristics of interviewed experts (source: 1995 field work).

Affiliation	No.	Area	No.	MTSG Status	No.	Interview Location	No.
Academic	17	Natural sciences	37	Member	28	USA	31
Government	10	Conservation policy		Non member	14	Costa Rica	8
NGO	11		5			Canada	3
Other	4						
Total	42		42		42		42

Tortuguero National Park (TNP), Gandoca and Manzanillo Wildlife Refuge (GMWR), and Leatherbacks of Guanacaste National Park (LGNP) are the case-study sites discussed in this paper (Figure 2). All sites are home to marine turtle nesting

beaches, are protected in the national parks system, have research teams (i.e. experts) active in conservation activities, and have immediate or nearby human communities with development needs. Descriptions of each site are included in relevant sections. Methods used in the case studies were interviews with key informants, site visits [3], and analysis of project documentation and published research. Key informants included civil servants and marine turtle experts who were working (or had worked) at the sites and, in total, four, three, and five key informants were interviewed regarding TNP, GMWR, and LGNP, respectively. Topics covered included: (a) status of tourism; (b) relationship between tourism and conservation efforts; (c) impacts of tourism on the local community; and (d) alternative uses of marine turtles. To preserve informant anonymity, interviews are referred to by number (K1, K2, etc). Again, the inclusion of these case studies illustrates the problems and prospects for implementing the counter-narrative in practice, and how and if these experiences feed back into or impact on its evolution.

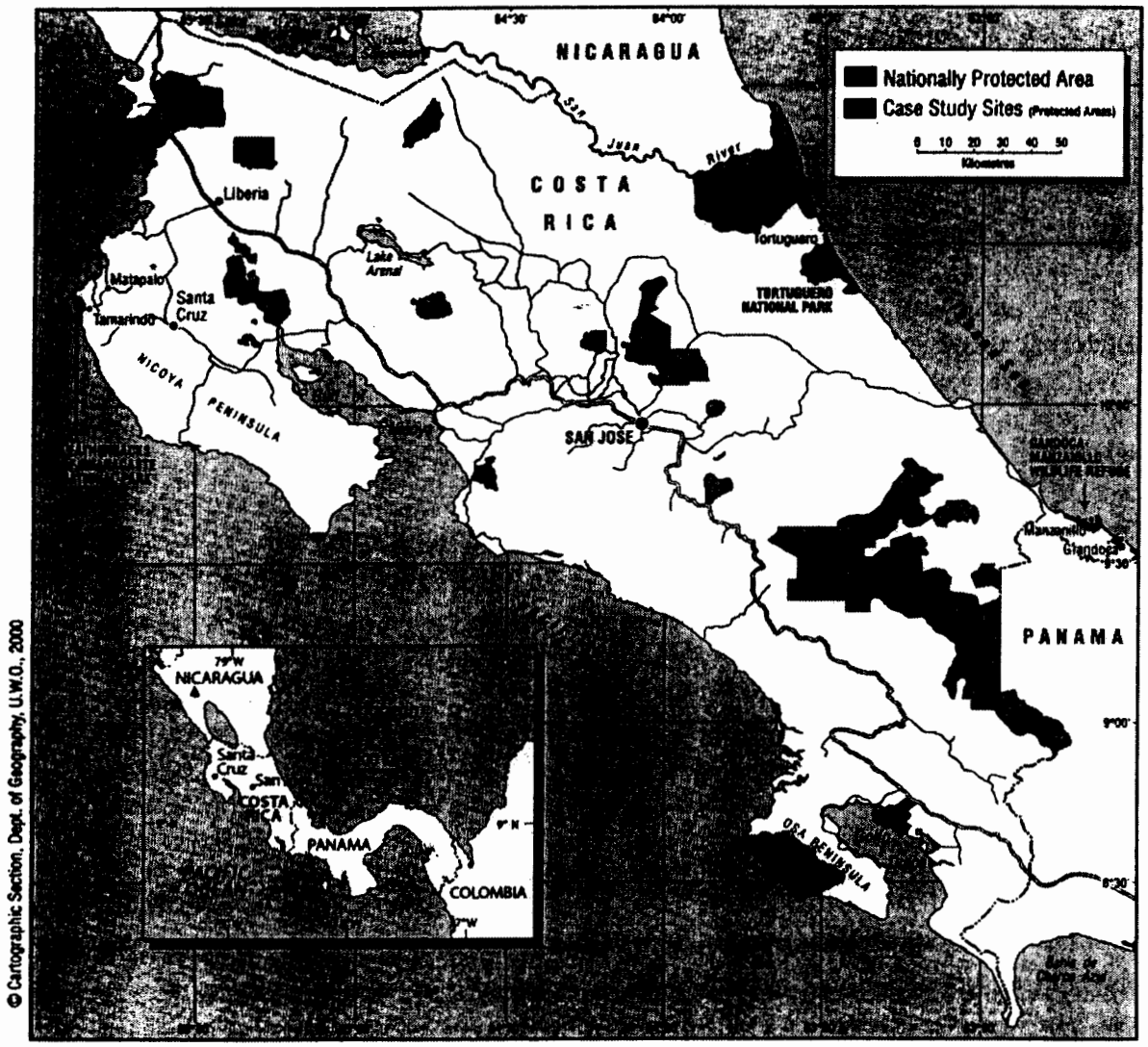

Figure 2 Protected areas and case-study sites in Costa Rica.

Results of general expert interviews and case studies are presented under the following sub-headings: environmental impacts of ecotourism; economic, political, and social impacts of ecotourism; and alternatives to ecotourism.

4 Views of general experts

Overall, experts in marine turtle biology and conservation were optimistic about ecotourism as a potential wildlife conservation tool, and they cited many of the objectives of ideal ecotourism discussed above. A sub-group of experts (n = 16) were aware of the difficulties in implementing 'ideal' ecotourism, and most of these experts had considerable experience with ecotourism in practice. They were particularly concerned with the negative environmental repercussions of tourism. Nevertheless, this sub-group was also supportive of ecotourism, and an important factor was their lack of enthusiasm for more consumptive uses of marine turtles.

4.1 Environmental impacts of ecotourism

Six experts expressed concern over indirect environmental impacts that arise from the infrastructure and development needed to support ecotourism, regardless of the species in question. In contrast, 14 experts were concerned about the direct impacts on turtles resulting from interactions between tourists and turtles. Experts were concerned that tourist disturbances via noise, lights, and physical intervention stop or change turtle nesting. The impact of these changes on reproductive success is unknown, but I20 suggested 'we have a pretty good idea that it isn't good. Now, is it a big problem or is it a small problem? Therein lies a substantial debate.' A small group of experts (n = 4) deemed these impacts potentially severe and resisted the 'non-consumptive' categorization of ecotourism as a result.

Although experts believed that tourists directly impact on nesting turtles, they also saw these impacts as controllable via formalized guiding programmes. For example, I26 believed turtles are fairly resilient in the face of tourism and felt that they must carry some of the 'burden' of their protection. I24 stated that results to date are 'encouraging': 'the turtle watch groups do not significantly alter female behaviour...' These views are supported by existing research in this area (e.g. Campbell, 1994; Johnson *et al.*, 1996), but some experts urged caution in interpreting results.

Several of the interviewed experts had considerable experience with turtle-based ecotourism in the USA and were among those most concerned about the impacts of tourists on turtles. For these experts, organized turtle-watching tours were superior to letting people wander the beach on their own, but inferior to letting the turtles nest in peace. These experts felt that ecotourism has been 'over sold' as a conservation tool.

4.2 Economic, political, and social impacts

All of the economic, political and social objectives shown in Figure 1 were identified by experts as valuable aspects of ecotourism, and many saw education as the link between those and the realization of environmental objectives. Education was identified as a benefit in and of itself, but also as a means of expanding a constituency for conservation in general and creating advocates for protected areas and marine turtle conservation in particular. Again, experts with most experience in regulating ecotourism beaches held most reservations. They were concerned about the popularity of viewing activities and asked how much tourism is 'too much'. They were suspicious of the financial benefits of

ecotourism, and saw guided turtle walks as a means of controlling access to marine turtles (damage limitation) rather than as a means of generating revenue.

Experts saw ecotourism as especially promising for developing countries, where demand for consumptive use of marine turtles remains high. Ecotourism was characterized as a replacement activity, primarily via income generation through guiding. Nevertheless, a sub-group of experts (n = 10) made up of those with most experience in developing countries recognized that ensuring that local people benefit from ecotourism is difficult. These experts felt local people often lack the skills and capital required to invest in ecotourism infrastructure, and that outside entrepreneurs tend to take over a local tourism industry once it experiences any success. They were also concerned about the social impacts that arise both via the cultural clash of North and South and via the injection of large amounts of cash into subsistence or mixed economies. One expert claimed that 'all the benefits people obtain from tourism are absorbed by social problems generated by that tourism. For example, liquor, prostitution, new consumer expectations...' (I32). Another had reversed her once-positive view of ecotourism as a result of such impacts, and she now supports ecotourism only when it can be controlled and when its promotion originates from the local people. For these experts, ecotourism was a 'reality' and unavoidable in many places owing to the nature and size of the global tourism industry.

4.3 Preference for ecotourism

In spite of their reservations regarding the possibility of achieving the various objectives of ecotourism, experts, with one exception, viewed ecotourism as a positive conservation strategy. These views should be considered in the overall context of marine turtle conservation and alternative uses of marine turtles, for example, via harvesting. Expert interviews began with general questions about the potential for sustainable use to contribute to the conservation of wildlife, and of marine turtles specifically. All experts, without exception, stated that sustainable use was a valid wildlife conservation tool, but most had specific types of use in mind. Sixteen experts responded by proposing ecotourism as a non-consumptive use with great potential, and 11 entered into a discussion of the various problems associated with consumptive use via harvesting. These numbers contrast with the one expert who responded by questioning the current emphasis on ecotourism and suggested consumptive uses should be considered more carefully. Some experts stated explicitly that ecotourism is 'a more viable utilization than certain others' (I7), and a further sub-group identified ecotourism as an economic activity that can relieve socio-economic pressure when consumptive use is prohibited.

These results show that experts remain optimistic about ecotourism as a conservation tool in spite of awareness that it often falls short of its objectives. Even experts with most experience of ecotourism in practice, and consequently the most reservations about the ability of ecotourism projects to realize their potential, returned to ecotourism as a preferred conservation option. The case studies illustrate further expert preferences for ecotourism, and the reasons for and the wider implications of this preference are discussed following the case-study results.

5 Tortuguero National Park: bringing local people onside

Tortuguero National Park (TNP) was established in 1975, and contains a 35-kilometre green turtle (*Chelonia mydas*) nesting beach, the largest green turtle rookery in the Western Hemisphere (Bjorndal *et al.*, 1999; Groombridge and Luxmoore, 1989). The green turtles at Tortuguero are the most studied in the world; United States biologist, Dr Archie Carr, began work there in 1954. The NGO formed to support his work in 1959 – now the Caribbean Conservation Corporation (CCC) – continues this work today. 'Since its founding, CCC has been dedicated to the conservation of sea turtles and related marine and coastal wildlife through research, training, advocacy, education and the protection of natural areas' (CCC, 1999). The CCC operates a research station in Tortuguero in order to maintain the green turtle tagging programme ongoing since the 1950s, to support scientific research on the green turtle population and more recently on leatherback turtles and birds, and to provide conservation education for local residents, environmental information to tourists, and additional income to local people (K6).

Tortuguero village is situated 5 kilometres south of Río Tortuguero on the Caribbean coast. Turtles have long been a part of the local economy, diet, and culture of villagers, and turtle harvesting for meat and eggs was a major economic activity in the 1950s (Parsons, 1962). In the 1960s, commercial harvesting began to decline owing to decreasing demand (Parsons, 1962) and increasing legal restrictions on harvesting. The establishment of TNP made almost all turtle harvesting illegal [4], and restricted agriculture and logging as well (Jacobson and Robles, 1992). Carr and the CCC were instrumental in these protection efforts, and relations between the community and the CCC were often strained (K2, K5). Tension has since abated, and Tortuguero is now cited as an example of symbiosis between a natural area and the local community (Honey, 1999; McConahay, 1993). Although this claim is difficult to test, it was the development of tourism that facilitated the transition.

Tourism to Tortuguero increased 24-fold over the course of the 1980s, to become the town's primary industry and revenue generator (Jacobson and Robles, 1992). Growth reached a peak in 1993, when 25 263 international and 227 national tourists visited the park [5]. Visitor numbers fell off from 1994 through 1996, and then began to increase again from 1997 through 1999 (Table 2). The levels of visitation and growth rates reflect general trends in the national tourism industry (ICT, 1998). In spite of the high rate of growth and large number of visitors, most of the lodges and restaurants in Tortuguero are small and independently owned. The largest lodge in the village has 50 rooms and 110 beds, and the smallest has four rooms and 12 beds (Troëng *et al.*, 1998). The importance of TNP, and specifically of marine turtles, to tourism is undeniable: one survey found that 90% of tourists come to Tortuguero to see specific plants and animals (and most specifically sea turtles) and 70% come to see the rain forest (Lee and Snepenger, 1992). A second found that 91% of tourists view marine turtles and 56% come for that specific purpose (Jacobson and Robles, 1992).

To view nesting turtles, tourists must be accompanied by a guide. This regulation has been in effect since 1990, when the CCC, TNP, and the University of Florida (UFL) collaborated in designing a tour-guide training programme and establishing a guiding cooperative. The programme had the objectives of: (i) mitigating negative impacts on tourists on the turtles; (ii) providing conservation education to local people; (iii) providing environmental information to tourists; and (iv) providing additional income to

a sector of the community (Jacobson and Robles, 1992, p.702). From its meagre beginnings (there were originally eight guides) and varying levels of success, the programme is now well institutionalized. In 1999, approximately 150 guides were certified following the annual training programme (S. Troëng, personal communication, July 1999).

Table 2 Visitors to Tortuguero (source: Ministry of Environment and Energy, National System of Conservation Areas).

Tourists	1991	1992	1993	1994	1995	1996	1997	1998	1999
National	389	50	227	687	1586	1203	2274	6552	5767
International	15257	19691	25263	21527	8415	7993	10757	10190	32663
Total	15646	19741	25490	22214	10001	9196	13031	16742	38430
% Change		1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
National		−87	354	203	131	−24	89	188	−12
International		29	28	−15	−61	−5	35	−5	221
Total		26	29	−13	−55	−8	42	28	130

5.1 Environmental impacts

TNP and the CCC have been concerned with the environmental impacts of tourism on the turtles and on the wider environment since the late 1980s, a key motivation for their collaboration with UFL on the tour-guide training programme (Jacobson and Robles, 1992). The guiding programme has had financial success (see below), but there is debate as to its success in eliminating environmental impacts. At the time of these interviews, views of key informants varied. One felt that 'the practice of taking tourists out on the beach in a group is something that, right now in Tortuguero, is very definitely impacting the turtles' (K6). A second felt that there were impacts, but that these had been greatly reduced (K2). A third felt that tourism continues to impact the used section of the beach (the northernmost 8 km), but believes that the marine turtle population as a whole is undamaged (K5). In spite of these impressions, there is evidence that the number of green turtles nesting at Tortuguero is increasing (Bjorndal *et al.*, 1999).

In the summer of 1999, the CCC's research director believed that tourism, as it relates to the presence of tourists on the beach, is sustainable. He felt that guides are working well together and that tourists are well controlled. This status is at least partly attributable to the relationships among guides, between guides and CCC, and between guides and national park staff, which he saw as improving. What remain questionable are the long-term impacts (positive or negative) of the industry on the environment in general (S. Troëng, personal communication, July 1999).

5.2 Economic, political and social impacts

When interviewed by Jacobson and Robles (1992), staff at TNP did not consider revenues generated for the park from tourism adequate compensation for negative environmental impacts. At the time, the entrance fee to a National Park in Costa Rica was US$1.10, and park staff deemed this insufficient to cover the operating budget (Lee and Snepenger, 1992). Entrance fees have since increased to US$6, and environmental

impacts have arguably decreased via guiding [6]. However, park entrance fees are channelled into the national budget for parks, and operating budgets for individual parks are not linked to their profitability or popularity. Thus, direct economic benefits for TNP from increased tourism are difficult to quantify.

Estimates of the economic importance of tourism to local people vary. In 1988, Place (1991) found that 40% of households were formally employed in the tourism sector. By 1990, 57% of households had at least one family member employed directly in tourism, and most other households provided some kind of ancillary service (Lee and Snepenger, 1992). Economic importance may have increased as tourism has continued to grow, but no further data are available [7]. Some employment opportunities exist directly with TNP and CCC, but most tourism-related employment is in hotels and restaurants, and in guiding. Lee and Snepenger (1992) found that 70% of business owners lived in Tortuguero, but calculations based on current hotel ownership and capacity for individual person nights suggest that this has decreased as tourism has grown. Original inhabitants of Tortuguero own approximately 10% of available beds, and long-term residents originally from elsewhere in Costa Rica own 23% [8]. Leakage of profits from accommodation is thus presumably high. Jacobson and Robles (1992) also found that tourists spend between US$29 and US$650 per person (average of US$154) on their visit, but only 10% in the village.

When the guiding co-operative was formed in 1990, the original guides charged US$2 a tourist and split their earnings. After a one-month trial, each guide had earned US$131 for about nine hours work per week. This was an excellent wage for part-time work in Tortuguero (Jacobson and Robles, 1992). In 1998, guides charged US$5 per tourist, and from 25 June to 30 October, 16 972 people paid for guided turtle walks. This generated at least US$84 860, which if divided equally among 150 people would result in earnings of US$566 per guide [9]. Guiding also has spin-off effects for the village as a whole. Approximately $0.56 of every $5 fee collected by guides is paid to the community development association. This added up to US$9220 in 1998 (Troëng *et al.*, 1998) High levels of leakage and low levels of local ownership in the accommodation sector suggest that guiding is the most important 'local' economic benefit [10], but this has not been measured.

Politically, there is support for conservation activities. Illegal harvesting of green turtles and eggs does continue and is considered a 'serious problem' (Troëng, 1998), but most illegal activity is attributed to non-residents (Troëng, 1999a; 1999b). Guides in particular are described as 'staunch defenders of Tortuguero's turtles' (Godfrey, 1999); Jacobson and Robles (1992, p. 706) found that 'All the guides felt that they and their families would benefit mainly from increased tourism development and wildlife conservation. Increased agricultural development, increased timber production and increased use of wild animal products were not favoured.' In terms of tourists, Lee and Snepenger (1992) found that 46% expressed willingness to contribute financially to TNP. Support among absentee business owners has been less evident; when tour-guide training was initiated, five of the six major hotel owners were unwilling to invest in it (Jacobson and Robles, 1992). Support for conservation by hotel owners has increased since 1992, as evidenced by investment in recycling, for example (S. Troëng, personal communication, Aug. 2000).

Although there has been no attempt to measure social or cultural impacts of tourism in Tortuguero, key informants felt tourism has come at a cost, that 'the influx of Western

society to Tortuguero ... is eroding a little bit of their distinct identity' (K6). This influx translates into population growth. In 1986, Place (1991) recorded human population as approximately 150. A recent census by the development association put this at 600, and most of the increase is attributable to migrants who have come to invest or work in tourism (S. Troëng, personal communication, July 1999). This influx has impacted on language, as the original inhabitants of Tortuguero speak English, whereas most Costa Rican and Nicaraguan migrants speak Spanish. A second possible impact of tourism is on the sense of identity among Tortuguero's residents. Their traditional means of valuing turtles, as food and a cultural symbol, has been overwhelmed by that of international tourists, who see turtles as objects of aesthetic and scientific value (Barreto, 1996). The tourists' interest in the turtles is matched by their lack of interest in people. Lee and Snepenger (1992) found that only 15% of visitors to Tortuguero were interested in local culture, and only 13% would contribute to local community development (this contrasts with 90% who were interested in turtles and 46% who would contribute to TNP). Resource managers, hotel operators, and tourists all believed that local culture and history are the least important features to be emphasized in Tortuguero's tourism development (Jacobson and Robles, 1992). These attitudes may change, and cultural history was included in the tour-guide training programme in 1999 (S. Troëng, personal communication, Aug. 2000).

5.3 Preference for non-consumptive use

Key informants associated with the CCC claimed that the organization has always recognized the importance of marine turtles to the local culture and that, in theory, it does not oppose the consumptive use of turtles to fulfil this cultural need. However, in reality, population growth, mechanization of sea turtle capture technologies, and harvesting rates in other countries sharing the green turtle population all combine to prohibit the possibility of a sustainable green turtle harvest (K6). Thus, the CCC was active in restricting and eventually eliminating the consumptive use of marine turtles in Tortuguero, and has recently participated in a successful campaign to ban a commercial green turtle fishery in the Port of Limon, south of Tortuguero (Taft, 1999). In Tortuguero, tourism has been promoted specifically as a substitute to consumptive use:

> ... we lessen the taking of turtles and eggs and we replace it with some ecotourism where people can experience the turtles and where the community benefits from that... [the] tourists sign up for tours on the beach. The guides are local villagers who have been trained to do it a certain way and they benefit financially. And the tourists who come buy stuff in the village... (K6).

Key informants associated with the CCC felt the substitution approach has been relatively successful. Funds generated by tourism, related improvements to the transportation system, and increased linkages of Tortuguero to the outside, have created a situation where the 'physiological and nutritional need for the turtle is gone. It's just the cultural aspect that's left' (K6). K6 saw that cultural need as slowly eroding as the tourism industry matures and through the CCC's educational efforts in the community.

At the time of the interviews, key informants had mixed views on the future of tourism in Tortuguero, based on slowing growth in international arrivals to Costa Rica. One informant felt that, at the national level, increasing levels of violent crime, increased park entrance fees [11], deterioration of services, and competition from other Latin

American countries are contributing to slowing growth: 'We've ridden the crest of the wave' (K2). A second key informant agreed that the 'heyday' of Costa Rican tourism may have passed, but he was optimistic about the continuing popularity of Tortuguero owing to the draw of the nesting turtles, and saw an opportunity to make Tortuguero 'a state of the art ecotourism centre' (K6). A third informant was less positive:

> There was a little window there where we thought it might possibly become a model for ecotourism, and it hasn't become a model. It's become a rather dreary example of ecotourism. Ecotourism not done very well. But so it goes. (K5)

Although aware of the negative impacts of tourism on the turtles and on the cultural fabric of Tortuguero, one informant saw it as the only option for Tortuguero:

> [Tourism's] really the only sustainable thing out there so, knock on wood, I hope it lasts forever. And even if it drops by 30 or 40 percent, it's going to be much better than what they had before... You put people in that kind of climate, in those swamps, and they're living off of wildlife, they're living off of timber. And now they're completely surrounded by protected areas – it's the Park, the corridor and the refuge. I mean those people have no place to go to now. (K2)

In the years since the interviews were conducted (1995), the CCC has continued to emphasize ecotourism in Tortuguero, and Table 2 suggests the decline in tourist visits has been reversed. The current research director sees the CCC's efforts as successful, particularly in convincing the community that the 'turtles are worth more alive than dead'. Although he has some concerns about various aspects of the tourism industry, he sees it as a far superior alternative to consumptive use of the turtles, from both an economic and a biological perspective (S. Troëng, personal communication, July 1999).

6 Gandoca and Manzanillo Wildlife Refuge: preparing for the inevitable

The Gandoca and Manzanillo Wildlife Refuge (GMWR) was established in 1985. It protects the second most important nesting beach for leatherback turtles (*Dermochelys coriacea*) in the Caribbean, on a nine-kilometre beach at its southern end. The main nesting activity occurs from March to July and, in 1994, 530 nesters were recorded (Chacon, 1994, p. 20). Association ANAI began a marine turtle project in Gandoca in 1985. A Gandocan farmer and an American biologist formed ANAI in 1983 to promote sustainable development in the region, by: (i) applying sustainable alternatives in agriculture and forestry; (ii) protecting biodiversity through conservation activities; and (iii) promoting community participation in political decision-making, through consciousness-raising, education and action, with the goal of achieving culturally based community development (ANAI, 1994).

The objective of ANAI's marine turtle project is to conserve the leatherback nesting population, by reducing the number of eggs lost to illegal harvesting and beach erosion, and by collecting scientific data on which to base a management plan (ANAI, 1995). It functions as a co-operative effort between ANAI and the refuge administration, 'with valuable collaboration of the community of Gandoca and volunteers' (ANAI, 1994). ANAI began patrolling the beach to reduce poaching in 1985, and scientific investigations began in 1990.

The community at Gandoca beach is small and isolated. Other than a cluster of houses, there are no nearby human settlements. Businesses in 'town' are limited to two

small stores and a few sodas (cafés) (K7). Turtle eggs have been harvested traditionally for subsistence consumption and for their 'supposed aphrodisiac qualities' (ANAI, 1994). The creation of GMWR ended widespread harvesting, but a small controlled egg-harvest continues. ANAI, GMWR administration, and community representatives negotiate annually the number of eggs to be collected (ANAI, 1994). However, ANAI suggests that 'Once we have sufficient data to estimate the population and population trends of leatherback turtles using the beach, we can develop a firm policy for use of eggs by the local community in a conservation context' (ANAI, 1995, p. 19).

ANAI lobbied for the creation of GMWR in response to major road-building proposals in the area. Although villagers in Gandoca and in Manzanillo were united in opposition to the road, residents of Manzanillo resisted GMWR. Residents of Gandoca supported it in spite of the restrictions it would impose on egg-harvesting activities (Anger, 1989). Egg collecting in Gandoca had been taken over by professional outsiders, who threatened the local sense of resource ownership. ANAI also made land ownership a central priority in the area, and undertook a WWF-US funded survey of the area to help register local ownership (Mclarney and Salas, 1986). This action was seen as urgent owing to increasing tourism in the area.

In many parts of the region, tourism has replaced cacao farming as a primary source of income. The regional tourism industry has increasingly attracted foreign investors, and local feelings about tourism are summarized by the Talamancan Association for Ecotourism and Conservation (ATEC): villagers 'view this means of livelihood with mixed reactions. As they earn their living from tourists, they watch their cultures erode away.' ATEC was set up in 1990 to promote socially responsible ecological tourism in Talamanca, ethnic pride and cultural expression among indigenous and Afro-Caribbean residents, and local initiative and management of tourism facilities and services (ATEC, no date).

The turtle beach at Gandoca is isolated from the regional tourism .boom. Nevertheless, ANAI identifies Gandoca as the leatherback beach 'with the greatest potential for rational tourism exploitation of its resource' (ANAI, 1995, p. 6), and is promoting small-scale tourism via the use of volunteers on its data-collection programme. 'Volunteers' become 'tourists' by boarding with local families and paying for services. Not only does this allow families to benefit economically, it serves to prepare them for possible future tourism by 'easing Gandocanyos, who know nothing about this, into dealing with tourists' (K9).

6.1 Environmental impacts

Given the minimal tourism at Gandoca at the time of these interviews, environmental impacts were considered negligible. However, key informants associated with ANAI were wary of other tourism examples, and specifically of LGNP and TNP, the two other case studies described in this paper. To avoid mistakes made in such places, a guiding programme has been established in Gandoca and the few non-volunteer tourists who do visit the beach at night must be accompanied. Other potential impacts have not been addressed by ANAI or by the community.

6.2 Economic, social and political impacts

Economic impacts are minimal, generated by accommodating the volunteer-tourists and by the few tourists who hire guides. Again, key informants used the example of Tortuguero as the model to avoid. One criticized foreign domination of the tourism industry in Tortuguero, and the relegation of local people to employees. In Gandoca:

> ...there's not one single hotel there yet and the land still belongs to the people. It's not in foreign hands yet ... That's a great strength ... A good sustainable project is when ... the hotel industry is in the hands of the community. Because, that way, more of the money reaches more people, in a better way. (K7)

The same informant envisioned small-scale tourism with local people selling food, lodging, transportation, and guide services. While the amounts of money generated would be small in dollar terms, they would be 'transformed into a lot of *colones*' (K7) for local people.

Politically, support for conservation existed with the creation of GMWR, and is possibly increasing via tourism. K9 believed ANAI's activities with tourist-volunteers have 'created ... an economic argument for protecting the turtles. Not an overpowering one... But an important one.' Socially, informants hoped that the gradual building of tourism infrastructure and its ownership by local people will increase the community's capacity to absorb the inevitable increase in visitors, and to minimize the social repercussions.

6.3 Preference for ecotourism

ANAI asserts that before 1985 'pressure on the [turtle] population was at a sustainable level' (ANAI, 1995, p. 7), with people taking only eggs they needed. Illegal harvesting began to impact the population owing to two events: the re-establishment of a banana plantation in Sixaola River valley (about 10 kilometres inland), and the gradual extension of the Costa Rican highway system in the area in the 1980s. Demand rose for the newly accessible eggs and the price increased accordingly. Professional egg harvesters moved in and took over, and it is at this point that egg use changed from a 'rational use to an irrational one' (K7).

Once GMWR was established, ANAI's efforts were directed at policing the beach, and 'the incidence of poaching has now been severely reduced and losses to erosion virtually eliminated during all periods when there have been sufficient personnel available to adequately patrol the 5.5 mile long beach' (ANAI, 1995, p. 2). Informant K9 estimated that illegal harvesting took about 14% of eggs, down from 95% in 1986. He saw the chances of further reducing this as slim, as the remaining egg 'poachers' are 'a few real pros. They're real good at what they do and real good at evading the law.'

Key informants felt that the limited egg harvest that continues in GMWR is scientifically unjustified, but that prohibiting all harvesting would be more damaging. The egg harvest gains community support for conservation, and can continue provided there is no evidence of severely declining adult numbers and provided that the levels of use are negotiated hard (K9). Furthermore, harvesting levels often end up being lower than those allowed; actual demand for eggs at Gandoca is decreasing, but K9 saw it as crucial that local people *can* have them in theory. The latter sentiment is reflected in ANAI's publications:

> Information collected from Gandoca residents shows that community support for the project will increase, and poaching by locals will be reduced if local residents are permitted to consume moderate numbers of eggs in a controlled manner. In many cases it appears that what matters is not so much whether a given family obtains eggs as that they do not feel prohibited from doing so. (ANAI, 1995, p.9)

ANAI's bargaining stance on the egg harvest varies and some employees are more opposed to the limited level of egg use than are others (K9). Informant K7 stated that 'in the specific case of sea turtles, ecotourism is more valid than commerce of turtle products.' Both ANAI and ATEC are considering how to promote tourism to Gandoca. They have considered 'the possibility of bringing in a slightly purer tourist' (K9) from hotels in surrounding towns to participate in guided turtle walks. They hesitate to do so because 'we haven't quite figured out how do you do that without running it yourself, and in such a way that the community receives the lion's share of the benefit, and the Refuge gets something out of it' (K9). ANAI hopes to prevent Gandoca from becoming like other Talamanca tourism 'hot spots', but informant K9 realized:

> It could still get away from us. The quickest way it could get away from us is if someone moves in and does it. And there's no way to stop that, and then it's taken out of the people's hands.

7 Leatherbacks of Guanacaste National Park: fighting for survival

Playa Grande, *Playa Ventanas*, and *Playa Langosta* are three consecutive nesting beaches protected in Leatherbacks of Guanacaste National Park (LGNP). Until 1995, up to 1500 leatherback turtles nested in the park every year, making the combined beaches the third largest nesting site for leatherbacks in the world (Spotila *et al.*, 1994). The park also protects an estuary and mangrove, and an extensive marine area. However, the status of the park is confusing. Tamarindo Wildlife Refuge was established in 1985 and the larger LGNP, which contains the wildlife refuge, was declared in 1991, but has not been established in law. Thus, the beaches are administered as a wildlife refuge. In reality, administration applies only to *Playa Grande* where, at the time of this research, up to 70 turtles nested each night during high season (December to March).

Physiological research on the nesting leatherbacks has been ongoing at *Playa Grande* since the mid-1980s, led by biologists from Drexel University and Purdue University. Earthwatch supports this research and, throughout the nesting season, researchers and Earthwatch volunteers live near the beach. Two of the senior researchers sit on a Costa Rican government commission set up to establish a management plan for LGNP and their research 'has been instrumental in the establishment of a new National Park' (Paladino *et al.*, 1993).

There is no village at *Playa Grande*. However there are two nearby towns, Tamarindo to the south and Matapalo to the northeast. Before protection, local people collected eggs for subsistence consumption, which is now prohibited. However, pressure to increase protection was generated owing primarily to the growing number of tourists visiting Tamarindo and *Playa Grande*. *Playa Grande* lies within a high-density, resort-based tourism region and Tamarindo is a popular destination. By 1993, the nighttime activities of tourists on the beach and the impacts on adult turtles and hatchlings attracted the attention of a local NGO. *Fundación la Gran Chorotega* campaigned successfully to have access to the beach restricted during the nesting season, and began immediately to

train local people as guides (Naranjo and Arauz, 1994). While turtle viewing is an important economic activity (Gutic, 1994), it is one of many related to tourism.

The urgency with which the guiding programme was established was reflected in its initial difficulties. In 1993, guide training began mid-way through the nesting season, with few participants, without participation from the park, with poor communication between guides, the community, and tourists, and which resulted in what one informant described as 'complete chaos' (K1). In the second year, the few already trained people acted as guides and more were recruited. By 1995, the guides were 'prepared, and we were all in agreement. We got organized on the beach' (K1).

7.1 Environmental impacts

Up to 200 tourists visit LGNP each night during turtle nesting season. Before park protection, tourists roamed the beaches, lighting bonfires, sitting on turtles, and crushing hatchlings underfoot (Naranjo and Arauz, 1994). Access is now restricted, and tourists must be accompanied by guides. Spotila *et al.* (1994) suggest that guiding has reduced the impact on turtles, and most informants believed the situation has improved. However, one informant suggested that tourism is still 'consumptive' as there are still 'people on the beach bothering turtles' (K12).

Four of the five informants identified construction related to tourism, which is encroaching on the beach, as the biggest threat to the turtles. Associated with this construction is light pollution. One informant (K9) identified government purchase of the land as the solution, but recognized that the National Parks Service does not have the funds for such action. As tourism in Tamarindo continues to grow, more problems from pollution, human presence, and lighting are anticipated. 'It's an area that is rapidly moving toward more development, one way or the other, and that will bring more threats' (K12).

7.2 Economic, political and social impacts

Guiding is a direct source of ecotourism-related income for local people. The cost of nighttime entry to the beach during the 1994/95 nesting season was approximately US$15 from Tamarindo and US$7 from Matapalo. The guides are members of a cooperative and, after the refuge entrance fee is deducted and paid to the park ($3–$5), they split their earnings. However, few people benefit from guiding, and in 1995 there were 16 guides in the Tamarindo cooperative. 'It's a benefit which can't be extended to the whole community. It's impossible.' (K1). Besides guiding, there are few opportunities for local people. Hotel development in Tamarindo and along *Playa Grande* is almost entirely foreign-owned, and while local people are employed in these businesses, there are very few Costa Rican (let alone local) owners. Of the income generated by tourism to LGNP, hotels in Tamarindo earn 72% of it but only 13.5% of this is returned to the community via employment (approx. 288 local people are employed in the hotel industry) (Gutic, 1994).

Politically, Spotila *et al.* (1994, p. 40) report that guiding has provided an economic incentive for the community to support turtle protection; they claim that illegal harvesting and demand for eggs has been reduced and the 'park is increasing in acceptance and popularity in the local communities.' This contrasts with the view of key

informant K9, who believed that local people would still like to harvest eggs, but are effectively prevented from doing so owing to large numbers of people on the beach.

Given that tourism in general is a major force of change in the Tamarindo region, it would be difficult to pin any negative social impacts of tourism on the ecotourism project at LGNP. Nevertheless, the guiding programme itself has caused social strife. Efforts to organize guides were initially met with derision and few individuals participated. As awareness of the economic benefits of guiding has increased, however, more people would like to be involved. Some local people have attempted to undermine and discredit existing guides, in an effort to have them expelled and to free up space in the guiding cooperative. Key informant K1 felt this increasing community tension is a real threat to the sustainability of the programme. Furthermore, conflict exists between the Tamarindo and Matapalo guides and between local guides and professional guides who come with package tour groups (K1, K12). The two local guiding groups reap unequal rewards. Guides working from Tamarindo, who have easier access to a greater number of tourists, charge more than twice as much as the Matapalo guides, owing to the expense of ferrying tourists across the estuary between Tamarindo and *Playa Grande*. It has nevertheless been a source of considerable conflict. Furthermore, professional guides (who earn college degrees and are registered nationally) have resisted using local guides to visit the beach and the loss of revenue is resented by the guiding cooperatives.

7.3 Preference for non-consumptive use

As a result both of foreign ownership and of negative impacts of tourism development on the park in general, K9 would like to see tourism levels stay the same and preferably decrease. None of the other informants gave serious thought to reducing tourism, only to improving it. This attitude can be understood in terms of their view of ecotourism as a replacement activity, and in the overall context of the regional tourism industry. First, protection at LGNP does not allow for consumptive use of marine turtles or eggs. K12 supports tourism:

> ... because I think that it is essential to saving the population ... By raising the prestige of the turtle. By keeping poachers off the beach because there are other people on the beach. By giving jobs to local people so there is some income that comes into the local community.

Secondly, the reality of the regional tourism industry was a powerful argument in support of ecotourism. Keeping people from the beach would be impossible in an area of intense resort-based tourism, and protection 'is the only possibility to allow for organization on beaches like these ones which, one way or another, get a lot of visits' (K1). K12 agreed:

> In the development craze on the Pacific Coast of Costa Rica, if you do not justify a park by the fact that people can come and look at turtles – there's income from those people who paid to get into the park and there's income for local people – the park would disappear, and the whole beach would be developed, and there wouldn't be any turtles.

Given the development pressure in the region, tourist support for protection is seen as crucial. K1 saw their beach experience as key to gaining support: 'It's a new public that is won over in relation to the turtles.' She cited the example of a group of foreign tourists who visited LGNP and then wrote letters to the government ministry responsible for housing to express concern about construction along the beach. As noted by Spotila *et al.*

(1994), US supporters of *Fundación la Gran Chorotega* have funded guards on *Playa Langosta*. This support contrasts with that of most national tourists, who resent having to pay for organized excursions to a beach that was previously accessible (K1). Pressure on the government to remove access restrictions has been intense, and K1 saw this as a real threat, especially given the uncertain status of the park.

Since this research was undertaken, the number of leatherback turtles nesting at LGNP has decreased drastically. During the 1998/99 nesting season, only 122 leatherback nested (Las Baulas Leatherback Turtle Project, 1999). The causes of the decline are unknown, and it is uncertain whether tourist activities, lights, or construction have contributed to it. However, the decline has real potential to undermine the economic benefits of guiding, international support for LGNP and, ultimately, LGNP existence.

8 Discussion

8.1 Contrasting case studies and general expert views

Several common issues arise from experiences at TNP, GMWR, and LGNP, and reflect general expert views of the ecotourism option. First, like many of the general experts interviewed, key informants saw tourism as inevitable, regardless of how they felt about its impacts. This is a sensible assumption given the importance of tourism to Costa Rica's economy and, in popular areas, tourism may be unavoidable. However, the nature of development varies from place to place. While the Pacific Coast is characterized by mass tourism, and LGNP falls in a highly touristic area, TNP and GMWR remain remote and difficult to access. In spite of its remoteness, Tortuguero's main economic activity is tourism, based on the well-known green turtle rookery. In contrast, current tourism levels at Gandoca are low, but they are likely to increase. In all three cases, key informants categorize existing tourism, at least as it related to the turtles, as ecotourism.

Secondly, while ecotourism is being promoted at all three sites as a form of non-consumptive use, the incentives for promoting it are slightly different. At TNP, tourism has been promoted explicitly and actively to compensate local people for lost access to resources. At LGNP, turtle viewing is promoted to justify the continued existence of a protected area in a region dominated by mass tourism. That guiding has provided income to local people is an additional benefit, but it was originally pursued to control tourist impacts on nesting turtles. In Gandoca, small-scale tourism is being promoted to prepare the local community for the anticipated onslaught of the tourism industry. With preparation, ANAI hopes that local people will maintain control over the industry and, in the meantime, tourism generates some funds within the community. The differing reasons for promoting ecotourism are reflected in the emphasis laid on components of the counter-narrative (see next section).

Thirdly, at the time of interviews, experts at both Tortuguero and LGNP believed there were environmental impacts associated with tourism and, in the case of Gandoca, there was a recognition that these impacts could arise. Like general experts, informants believed that negative impacts arising from the interaction between tourists and turtles could be controlled via guiding, and guiding appears to have had considerable success in Tortuguero. Unlike general experts, key informants at TNP and LGNP were more concerned with negative impacts of tourism on the overall environment. Again, the level

of concern for such impacts was higher at LGNP, reflecting the nature of the tourism industry there.

Fourthly, in spite of different motivations for promoting ecotourism, informants held similar beliefs about its potential as a conservation tool. They repeated the commonly stated economic, political, and social objectives of ideal ecotourism, made the link between these and positive environmental outcomes, and many claimed objectives had been realized to some extent. At each site, informants claimed that the local community supported conservation activities, but these claims have been tested only in Tortuguero (Jacobson and Robles, 1992; Lee and Snepenger, 1992). At LGNP, claims of community support are questionable given that local people have little control over the tourism industry, few benefit directly from guiding, and there is dissention between guiding groups. Likewise, ANAI claims that 'One of the unifying factors in the Gandoca community is an attachment to the turtles, and their protection is a local conservation priority' (ANAI, 1995, p. 10). No evidence is presented to support this claim, and K8 provided various examples of lack of support for ANAI's activities.

Fifthly, optimism about tourism contrasts with attitudes regarding consumptive use and, in this way, the case studies reflect general expert opinions most closely. No consumption is allowed at LGNP. The community at Tortuguero theoretically can harvest one turtle per week but have not done so since the mid-1990s. At Gandoca, a limited egg harvest is allowed, but key informants would prefer that consumption not continue.

8.2 Relative success in implementing the counter-narrative

Tortuguero has seen most success in implementing the counter-narrative via ecotourism. Negative environmental impacts of tourism on turtles are being controlled and minimized via guiding and more general impacts by the nature of the industry, i.e. it remains small scale owing primarily to its remoteness. Economically, benefits to the community exist, particularly via guiding, but local ownership of the tourism industry is low. Nevertheless, the economic benefits suffice to generate support for the conservation effort, as expressed through reduced illegal harvesting, and increased vigilance on the beach. Ownership issues do not appear to be contributing to social unrest. Alternatively, it could be argued that as the economic benefits from tourism have increased and the ecotourism industry has matured, social unrest has decreased, as reflected in improved relationships between the community and the CCC. Nevertheless, social impacts were emphasized the least by key informants. Provided there is no direct unrest, informants seem content to assume these are, or their importance is, minimal.

In LGNP, ecotourism has had less success, and negative environmental impacts of tourism have been difficult to control. While the direct impacts of tourism on turtles have been reduced, wider environmental impacts from the industry have not. The clear emphasis has been on environmental and some economic components of the counter-narrative, with ecotourism seen as a means of allowing LGNP to compete with alternative land uses via income generation, i.e. the turtles 'pay for themselves'. Other economic benefits that have followed for guides are considered important, but there has been little effort to distribute these or to consider how they can be increased. Social and political objectives of ecotourism receive the least attention from key informants, perhaps owing to the nature of the industry surrounding LGNP. The industry has a momentum of

its own, and local people, along with conservation experts, are a small part of the overall picture.

In Gandoca, the counter-narrative at its most 'pure' is evident and reflects visions of ideal ecotourism. In sharp contrast to the other two study sites, economic and social objectives of ecotourism are emphasized over political and environmental ones. This prioritization reflects the pre-emptive consideration of ecotourism, which is seen as necessary given the regional importance of the industry. The community has already supported the creation of GMWR, thus negating the need for explicit attention to political objectives, and environmental impacts of tourism are not yet evident. Whether or not the emphasis on social and economic objectives will continue once tourism reaches Gandoca remains to be seen.

9 Conclusions: wider implications for the conservation counter-narrative

The case-study results described in this paper add to the growing body of literature confirming that the environmental, political, and socio-economic benefits of ecotourism are difficult to achieve in practice. They also confirm Roe's (1991) assertion that narratives are resilient in the face of evidence of their shortcomings. Negative experiences with implementing ecotourism in practice are not detracting from the strength of expert conviction regarding its potential value as a conservation tool. This conviction should be considered in the wider context of a shift in wildlife conservation policy in general. This shift has been away from the 'traditional' approaches that exclude local people from parks and protected areas and prohibit their use of resources, towards attempting to reconcile conservation with development needs and integrating local people into conservation undertakings. The shift is particularly relevant for developing countries, where exclusionary protection has faced many difficulties (Adams, 1990; Hales, 1989; IUCN, 1993; Lusigi, 1992; Marks, 1984; Utting, 1994; Wells and Brandon, 1992; Western, 1989; Western and Wright, 1994). It is from this shift that the conservation counter-narrative described in this paper, one supporting the 'use' of resources rather than their outright protection and acknowledging the rights and roles of local people in conservation activities, emerged.

The counter-narrative includes provision for both consumptive and non-consumptive use of wildlife (Baker, 1997; Freese, 1994, 1996). However, experts interviewed in this research resisted consumptive uses of marine turtles, i.e. harvesting marine turtles and their eggs, as discussed briefly in this paper and in more detail elsewhere (Campbell, 1997, 2000). Reasons for expert resistance to consumptive use are many, but beyond the scope of this paper. When considering both the needs of local communities and the prospects of use, however, wildlife conservationists may find ecotourism an appealing concept for several reasons. First, ideal ecotourism, as described at the beginning of this paper, encompasses all of the social, political and economic components of the conservation counter-narrative. Secondly, ecotourism can be a replacement activity and reduce dependence on existing, more consumptive forms of resource use. Finally, and perhaps most importantly, as ecotourism is often built around parks and protected areas, it allows experts to continue to promote them. While certain views expressed by experts are undoubtedly tied to the species in question, their views of ecotourism and the reality of its operation at the three study sites may be indicative of the wider challenges posed

by ecotourism in practice, and of the reasons underlying its promotion in spite of these difficulties.

According to Roe (1991), in order for a counter-narrative to be successful in replacing an existing narrative, it must convince people to take action and to implement its dictated solutions. Thus, it appears that, among marine turtle biologists, the wildlife conservation narrative is somewhat muddled and is perhaps best categorized as in transition; while the rhetoric of the counter-narrative is evident, the dictated solutions of the traditional narrative remain. Via ecotourism, marine turtle experts retain their stakes in exclusionary protection via parks and protected areas without actually repeating the traditional narrative itself. This disjuncture between rhetoric and practice is important; as suggested in the introduction, using the language of sustainable use and community-based conservation allows experts and organizations to access funds previously earmarked for development (this is not necessarily the case for the ENGOs considered in this paper; no evaluation of the their funding sources has been made). This becomes problematic when the development promoted, i.e. ecotourism, restricts local access to resources without providing the hoped-for high level of socio-economic benefits. The long-term success of ecotourism as a strategy for conserving marine turtles while simultaneously promoting the socio-economic development of communities dependent on them remains to be seen. In the meantime, it appears that potential to achieve the objectives of the counter-narrative via consumptive use will remain unexplored, and that this stream of the counter-narrative is quickly being marginalized to that of non-consumptive use.

10 Acknowledgements

This research was funded by a doctoral fellowship from the Canadian Social Sciences and Humanities Research Council. Additional support for fieldwork came from the Worts Travelling Fund, Cambridge University, and the Philip Lake Fund, Department of Geography, Cambridge University. I am grateful to the 42 marine turtle experts who agreed to be interviewed and to share their views anonymously as part of this research project, to key informants who facilitated site visits, and to other members of the Marine Turtle Specialist Group of the IUCN for their encouragement and support. While I have not always agreed with their views, I hope I have done them no disservice. Additional thanks are extended to my PhD supervisor, Dr W.M. Adams, and to R. Barreto and J. Campbell for their various comments, advice, and support throughout this work.

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Notes

1 While local people were not interviewed at case-study sites used in this paper, I have considered community views of the tourism–conservation link at a different marine turtle nesting site in Costa Rica (see Campbell, 1997, 1999).

2 See Adams (1990), Frazier (1997), Roe (1996), and Sunderlin (1995) for discussions of interpretations of sustainable development.

3 I did not visit GMWR owing to transportation difficulties and I have visited Tortuguero twice since 1995. While updated information on Tortuguero is included where relevant, the analysis focuses on 1995 interviews to maintain temporal consistency. The situations at the other two sites have undoubtedly evolved since 1995, but I have not had the opportunity to undertake further research at either location.

4 Local people are theoretically allowed to harvest one turtle a week for communal distribution.

5 The number of tourists visiting Tortuguero is higher than the numbers visiting the park, as it is possible to view turtles and the canals without actually entering the park. Nevertheless, trends in park visits are taken as a reflection of trends in overall visits.

6 Visitors to TNP can also purchase a pass for US$10 that allows access for four days and three nights.

7 Research on the economic impacts of guiding in Tortugero is currently being conducted by Jocelyn Peskin-Colón, a Master's student at the University of Florida, Department of Geography.

8 Calculations are made based on hotel capacity (Troëng *et al.*, 1998) and on nationality and residence of hotel owners (S. Troëng, personal communication, July 1999).

9 This average wage is somewhat misleading. First, the larger lodges charge $25 per tourist for the guided turtle walk and some of this is passed on to the actual guide. Second, not all 150 guides participate equally, and there is a core group of guides who are most active (S. Troëng, personal communication, Aug. 1999)

10 This value will increase with the decision to raise the price of a guided tour to US$10 per person (S. Troëng, personal communication, August 2000).

11 In September 1994, the Ministry responsible for national parks raised entrance fees for foreign visitors from the Costa Rican equivalent of US$1.60 to US$15. The price increases were controversial and, in April 1996, the entrance fee was lowered to US$6 (Mowforth and Munt, 1998). Interviews conducted for this research were undertaken during the period of higher park fees.