

Reconciling local conservation practice with global discourse: the trouble with sea turtles

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Introduction

The traditional wildlife conservation narrative relies on the tragedy of the commons argument to explain wildlife depletion, and proposes guarded, people-free parks and protected areas as a solution to the problem. More recently, a conservation counter-narrative proposes community-based conservation and sustainable use of wildlife as means to promote ownership of, and create financial incentives for, conservation by local people. Due to the charismatic nature of sea turtles, their global distribution, their long distance migrations and other biological characteristics, the relevance of the counter-narrative for this species is contested. This paper analyses the debate about how best to conserve sea turtles, and specifically how this debate is constructed around issues of ownership at different scales. Case studies of sea turtle conservation in Costa Rica are used to illustrate the specific difficulties in pursuing community-based conservation and sustainable use at the local level, when dealing with a globally valued resource.

Wildlife in the commons

Geist (1995) examines North American wildlife policies and identifies several keystones, including that: 1) wildlife is a public resource that can be held privately only in trust for the public; 2) markets for dead wildlife are disallowed (excepting furs); and 3) wildlife is an international resource to be managed cooperatively by sovereign states under treaties. Geist (1995, 12) invokes Hardin's (1968) tragedy of the commons as one of the key motives for adopting such principles. Because wildlife is a public good, public agencies are entrusted with management (Crowe 1995).

While there are other ways that wildlife has been managed (e.g. historically owned by the elite in Europe), the North American model, and accompanying National Park tool,

dominates contemporary conservation efforts in many countries. The National Park approach to wildlife management has been supported traditionally by a conservation narrative, as follows. Wildlife populations in developing countries are described as threatened with extinction directly by local harvesting and indirectly by habitat degradation and fragmentation resulting from increased human populations. Local people do not value or appreciate wildlife and, the solution becomes providing wildlife with protection, a place where it is not be subject to human exploitation or competition. This protection is enforced by the state. Local people are removed and, if they do not respect the conditions of their removal and return to hunt or harvest, they are labelled 'poachers' and 'encroachers.' Thus, they reconfirm beliefs about the source of the problem and, as they are breaking the law, the solution becomes more and better enforcement (Campbell 2000).

While this story of and approach to wildlife conservation has dominated in the post WWII era, it has increasingly come under threat by what is characterized as a 'failure' of National Parks in developing countries, and resulting new thinking about conservation (Adams & Hulme 2001). This thinking is encapsulated in two ideas: sustainable use and community-based conservation. While sustainable use, under a variety of names, has long been part of management strategies for renewable natural resources (Rosenberg 1993), acceptance of its principles by wildlife conservation organisations is more recent. It became most evident in 1980, when the IUCN (1980, 1) defined conservation as "the management of human use of organisms or ecosystems to ensure such use is sustainable. Besides sustainable use, conservation includes protection, maintenance, rehabilitation, restoration, and enhancement of populations and ecosystems." Sustainable use programs often combine environmental and socio-economic goals (Westing 1996), but sustainability is difficult to determine in both areas. Biological sustainability is theoretically achieved when human extraction rates match the bounds dictated by the biology of the species, such that extraction is low enough to ensure its long-term survival (Ludwig et al. 1993; Mangel et al. 1993; Rosenberg 1993; Shaw 1991). Socio-economic sustainability is theoretically achieved when users are provided with adequate incentives (economic, social, legal, institutional, political, etc.) to respect extraction rates dictated by

the biology and life history of the species in question (Campbell 1998). Sustainability is a goal, but is by no means guaranteed when implementing use regimes and has proven difficult to implement in practice (Freese 1997, 1998).

The promotion of sustainable use by wildlife conservation organisations is in part based on the perceived need to imbue wildlife with economic value. By allowing people to use wildlife resources - giving wildlife a market value - sustainable use attempts to ensure that wildlife conservation can compete with other land or habitat uses (Holdgate & Munro 1993; Robinson & Redford 1991; Swanson & Barbier 1992). It has largely assumed that, particularly in developing countries, economic benefits are key to gaining support for conservation. However, this assumption has sometimes proven false. Economic benefits may exist, but if they are not perceived or valued as significant by users, local support for conservation will still be lacking. Parry and Campbell (1992) and Heinen (1993) describe two such cases and conclude that devolution of control over resources to local people is equally, if not more, important to gaining their support for conservation activities.

Participation in, and/or control of, use regimes by local people can enhance economic and social security and can help convince people living on marginal livelihoods that it is in their interest to sustain their use of a wildlife resource into the future (Campbell 1998; Parry and Campbell 1992; Heinen 1993; Freese 1997, 1998; Mangel et al. 1996). Redclift and Sage (1994, 11) would exchange the label 'poachers' for 'stewards' by assigning "management responsibilities to local institutions, strengthening community-based resource management systems, and introducing a variety of property rights and land tenure arrangements." This recognition of the importance of involving local people in conservation schemes is reflected in the concept of 'community-based conservation.' According to Little (1994, 350) community-based conservation implies "at least some of the following: local-level, voluntary, people-centered, participatory, decentralized, village based management" of resources.

The issue of property rights is addressed in both sustainable use and community-based conservation, but often indirectly, or with vague reference to the necessity of considering property rights and regimes, promoting stewardship, vesting interests, and encouraging ownership. Unclear property rights are deemed a problem and a source of over-exploitation, particularly in the instance where a consumptive use of wildlife is introduced (Shaw 1991; Redclift and Sage 1994; Freese 1996), but there is little discussion of how assigning property rights may be problematic. In Hardin's original tragedy of the commons, he proposed either socialism or privatization as the two solutions, but research since then has shown that there are a range of property rights that can function at the local level (Ostrom et al. 1999). Furthermore, much of the discussion of sustainable use and community-based conservation is at the case study level, and thus the issue of how property rights are assigned at different scales, or in the case of migratory resources how assigning property rights in one location may interact with those in another, is often overlooked.

In this paper, I consider how the issue of property rights underlies and problematizes efforts to conserve marine turtles at different socio-political scales, namely the local, the national, and the international. In particular, I consider how elements of 'new' conservation fare with regards to marine turtles. I draw on research conducted at protected marine turtle nesting beaches in Costa Rica (Campbell 1998, 1999, 2002a), with marine turtle conservation experts (Campbell 2000, 2002c) and on the Inter-American Convention on the Conservation of Sea Turtles (Campbell et al. 2002). I apply Giordano's (2003) geographic approach to the problem of the commons. He argues that geographers have been relatively disengaged from the commons argument, in spite of its relevance to many aspects of geographical inquiry, and basic principles of scale and space. "The commons problem is, in the simplest terms, a general resource problem with particular spatial characteristics related to resource domains and rights assignment" (p369), and "the problem for any given resource must be defined for a particular sociopolitical scale if its nature is to be fully articulated" (p367). Thus, he develops a scale and space explicit theory of the commons to address this gap in the geographic literature. His spatially explicit theory is particularly relevant for highly migratory

species, and the use of socio-political scale allows for the proposed comparison of local, national, and international efforts for marine turtle conservation.

To explain his theory of scale, Giordano (2003) uses the example of an international treaty. The treaty may clearly articulate how rights are assigned to particular signatories, but it will not address how rights are assigned within a signatory country. He uses the example of the Pacific salmon agreement between Canada and the US. Rights to the salmon resource were negotiated bilaterally (the national socio-political scale), but then had to be negotiated within each country (regional and local socio-political scale).

Giordano (2003) raises the issue of space to highlight how rights assignments (and the tendency to overexploit in a tragedy of the commons scenario) will be impacted by the spatial distribution of the resources and whether or not it is private, open access, fugitive or migratory (Figure 1). Scenario D in Figure 1 one is most appropriate to marine turtles. As will be shown in the discussion below, the migratory nature of sea turtles, or their spatial characteristics, is a major issue underlying debates about their conservation.

The problem with turtles: views of conservation experts on new conservation

Before considering the local, national and international cases, I review some work I have done with marine turtle experts towards understanding their positions on a variety of conservation options (Campbell 2000, 2002c). While the conclusions made from these expert interviews are not meant to be representative of all marine turtle experts, it is worth noting that many of those interviewed hold or held influential positions in policy making bodies, and many of them had direct experience in the Costa Rican case studies described below. These general views provide a context for understanding arguments made about the three cases presented.

At a general level and with few exceptions, marine turtle experts accept sustainable use as a valid conservation tool for wildlife (Campbell 2000). However, many see marine turtles as an exception, due to constraints imposed by marine turtle life history

characteristics (specifically delayed sexual maturity and long distance migrations), data deficiencies, and the general status of marine turtle populations (Campbell 2002). Long distance migration is the most relevant constraint for understanding the role of property rights in debates about marine turtle conservation. Migrations are deemed problematic because “i) all threats along the migratory route may not be known and thus the cumulative impacts on turtles may be underestimated or even ignored; ii) the migration itself makes it difficult to determine the magnitude of individual and cumulative threats; and iii) national user groups, types of use, management techniques and objectives along the route may be conflicting” (Campbell 2002, p.1236). In reality, Giordano’s diagram is too simple for marine turtles, and we need to represent multiple ‘rights domains’ to fully capture marine turtle migrations (Figure 2).

When considering the roles of local communities in conservation, most experts reject the idea of local rights to use resources, accept that either economic or cultural need can justify subsistence use of resources (but then discount such need by challenging its basis or re-defining key terms), and accept and encourage local participation in conservation undertakings (Campbell 2000). Expert position on rights and participation are most relevant for understanding the role of property rights in debates about marine turtle conservation.

The idea that local people have rights to use resources is problematic for most experts such that many refused to address the issue when asked (in the words of one expert “I’m not touching that one”). Of 41 interviewed experts, 18 commented on local rights. Five believe local people have rights to use resources and are concerned with making the resulting use as sustainable as possible. The remaining 13 either reject the notion of local rights, or express strong reservations. They are concerned, firstly, with the non-universality of the concept, and how the notion of rights can ‘slip out of your grasp.’ Secondly, rights can interfere with end objectives, and experts argue for caution regarding assigning rights, as the concept can be used to invalidate or override other arguments. Thirdly, local rights are deemed null and void in the case of globally valued resources, for which “everybody on the planet has a stake” (Campbell 2000). This is

where the migratory nature of marine turtles resurfaces, and it is a key theme in policy documents related to marine turtles. The IUCN's Marine Turtle Specialist Group *Strategy* (MTSG 1995), for example, emphasises that marine turtles are at least regionally, if not globally, 'shared' and should be managed as such.

While the migratory nature of turtles is used to discount local rights, migrations are also used to support the rights of outsiders to intervene in management. Some experts struggle with the role of one country in interfering with the sovereignty of another, but others are happy to dismiss sovereignty issues in the case of marine turtles, a 'globally valued' resource. At the extreme, one expert argues that individuals will pay to travel to see marine turtles nesting on beaches in the tropics, and that these people have equal and even greater rights than local people living with turtles (Campbell 2000). Thus, it is not that experts will not assign rights, they are simply hesitant to assign them to local people.

Less contentious than the idea of local rights is local participation in conservation activities. However, while the concept of community-based conservation includes caveats relating to community ownership of and control over resources and their management, views on participation fall well short of this type of empowerment. Many experts talk about the need to 'work with the local people', and refer specifically to things like employing people as conservation officers, educating people about the need to conserve, keeping people informed and listening to what they had to say. A few experts gave local people more say, according them status as co-participants with resource managers and scientists, but most were adamant that participation should not be used to guide decision-making. Overall, participation was seen as a means to get people 'on side' with predetermined conservation objectives (Campbell 2000). Given this view of participation, it is hardly surprising that experts resist assigning rights to local people.

The problems of space and scale: local, national, and international examples

Local level: olive ridley egg harvesting in Ostional

In Ostional, Costa Rica, olive ridley sea turtles nest in what are known as arribadas, a mass nesting phenomenon in which hundreds of thousands of turtles emerge at the same

time on a small stretch of beach to nest. This happens approximately once a month. There is a legalized commercial harvest of turtle eggs, run by a community cooperative (Campbell 1998). From an environmental perspective, existing scientific evidence supports this harvest (Cornelius et al. 1991), and based on the project, the cooperative undertakes additional environmental protection (Campbell 1998). In terms of socio-economic sustainability, there is substantial support for the project throughout the community, primarily because of the significant monetary benefits derived from egg harvesting. However, other elements that compliment economic benefits and enhance support for the project include the legal and administrative frameworks and the high level of community participation. It is the combination of these factors -- substantial and secure economic benefits and community control -- that allow for re-investment of profits into community development, promote an equitable approach to profit distribution, and encourage respect for rules. Individual and collective stakes in the project are high enough to discourage illegal harvesting and to encourage community self-policing (Campbell 1998).

Prior to commercialization, people from Ostional and surrounding communities took eggs in large numbers for use and for sale on the black market, and fed them to pigs. Extraction was unmanaged and illegal (Cornelius 1981). Was a tragedy of the commons occurring? Based on existing data, it is difficult to know. Local families report that turtles had been nesting and exploited since the area was settled in the 1940s. Population growth via rural migration to the coast, and facilitated via improved transportation, undoubtedly contributed to increased harvesting (Campbell 1997). However, there are no data on nesting numbers or extraction rates until the late 1970s, so it is difficult to evaluate impacts. Oral histories of older residents are inconsistent regarding whether there were more or less turtles before (unpublished data). Nevertheless, after 30 years of uncontrolled exploitation, and 20 years of legal exploitation, existing data suggest no overall decrease in the population size. While it is always difficult to say with certainty that the project underlies environmental sustainability, it is clearly at the heart of socio-economic sustainability (Campbell 1998).

Rights: While I have argued that a sense of security is crucial to the socio-economic health of the project, this has not been provided through resource ownership. Marine turtles remain in the public domain and the responsibility of the state (through the state agencies responsible for national parks and marine fisheries), and many interviewees and questionnaire respondents stressed that the turtles were not their property (normally cited as belonging to God) (Campbell 1997).

The management and extraction and of marine turtle eggs is ceded to the community cooperative, and the community's role in management was outlined in the original laws allowing the harvest. Individual participation in the cooperative is limited. The right to belong to the cooperative was originally given to all residents of Ostional. Immigrants could join once they had lived in town for 5 years, and paid a membership fee. Due to pressures on membership, this is no longer an option. Children of members can join when they turn 15. Membership restrictions were part of the original agreement, but ceilings set in that agreement have been exceeded. While there is recognition of the need to limit membership (and egg harvesting), there is also sympathy for expanded membership and concern for issues of fairness. Support for the project among Costa Rican resident non-members is high, as most of these people provide goods and services in town, and recognize that the egg harvest provides money for such purchases (Campbell 1998).

Residents of surrounding villages were the losers in the establishment of the project, as they lost open access to eggs. To compensate them, outside families are allowed to collect 100 eggs for household consumption immediately following the formal collection (Campbell 1998). Residents of Ostional call non-Ostional friends and family to tell them when the arribada arrives so that they can collect their bag of eggs (personal observation). Again, this reflects a low sense of ownership of the resource itself. Ownership of the project, on the contrary, is highly valued. Many members comment with pride on the village's achievements through the project, and on their independence from outside government assistance (Campbell 1998).

Access: The community's use of the egg resource is restricted to the first 36 hours of an arribada. At all other times, marine turtle eggs are off limits, and the association pays for guards to patrol the beaches to discourage illegal harvesting. There are cases of individuals breaking this rule. When caught, members are punished, usually via a ban from one or more future harvests (Campbell 1998). Access to the beach and turtles by tourists is also restricted; tourists wishing to visit the beach during arribadas must pay and be accompanied by a local guide (since January 2004).

Space: The legal egg harvest is restricted to an 800 meter stretch of beach, where the majority of arribada nesting normally occurs. All other parts of the 12 km refuge are off limits. Every now and then, the arribada shifts, as does the harvesting (not officially sanctioned, but tolerated).

The migratory nature of marine turtles calls for a consideration of space beyond the nesting beach. A second arribada aggregation exists at Nancite beach in Santa Rosa National Park, north of Ostional along the Pacific Coast. Fully protected and far from human settlement, the arribada beach at Nancite is not under threat from human exploitation. Olive ridleys also nest solitarily at a number of locations along the Pacific Coast of Costa Rica. Some of these nests are harvested illegally by humans, but in general, exploitation elsewhere is not used as an argument against Ostional egg harvesting. In fact, one of the original goals of the project was to saturate the market with legal eggs from Ostional, and to keep the prices low enough such that illegal harvesting elsewhere would be discouraged. While there have been few studies evaluating the success of this objective of the project, the intended spatial impact was not only local, but national.

National level: turtle based tourism in Costa Rica

Costa Rica is home to many marine turtle nesting beaches, several of which are protected in the Costa Rican parks system. I discuss how rights, access and space interact in marine turtle conservation at three locations on the Caribbean coast: Tortuguero National

Park, the city of Limon, and Gandoca village in the Gandoca and Manzanillo Wildlife Refuge.

Rights: Marine turtles are public property safeguarded by the state. With the exception of Ostional, the consumptive use of marine turtles and their eggs is prohibited throughout the country. In several places, however, exceptions for limited consumptive use existed until very recently.

1) Up until the mid-1990s, a limited leatherback egg collection was allowed at Gandoca Village in the Gandoca Manzanillo Wildlife Refuge (est. 1985). Local families were given the right to harvest a certain number of eggs, and this number that was negotiated annually by the park staff, the national NGO Asociacion ANAI, and the community. The rationale for the harvest is described in the following quote:

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, 9)

While ANAI recognized the political importance of rights in the above quote, the limited egg collection no longer occurs (Gray 2003). The decision to end the harvest was made by the park and ANAI, and the community was divided over the issue.

2) Limon was the center of a large, commercial green turtle fishery that exported to the US and Europe for the first half of the 20th century. Following the outlawing of turtle fishing (and a closure of markets for turtle meat), the commercial fishery stopped. However, an annual fishery for 1,800 green turtles continued out of the port of Limon, and was justified for cultural reasons. In 1999, this limited fishery was closed following a petition by Costa Rican and US environmentalists that challenged the constitutional legitimacy of the harvest (Taft 1999). The argument was not that 1,800 turtles threatened

the overall population, but that the fishery was unconstitutional and that it was out of sync with Costa Rica's reputation as a green republic.

3) A limited harvest of a few green turtles per week (estimates vary from 1-3) from the nesting beach in Tortuguero National Park existed since the creation of the park in 1975 through the mid-1990s. This was to compensate local people for lost access to marine turtles (which were commercially and culturally valuable) when the Park was established. While technically still allowed, the rules for such harvest have changed and are onerous to the extent that the community no longer applies for this right (Campbell 2002a). There is evidence that some local people, particularly long term residents, would like access to a limited number of turtles for consumption only (Peskin 2002). Recent work by Meletis (per com) suggests that local people would like to have rights to take turtles that are found freshly dead on the beach. Park staff resist this request because it is not in line with Costa Rica's conservation philosophy, which they describe as non-use.

In all of the above cases, ecotourism is proposed as an alternative use of marine turtles, one that allegedly brings economic benefits to communities, and encourages their participation in conservation. Ecotourism is a national development strategy and priority, and Costa Rica has cultivated a green image to capitalize on this growing segment of the travel industry (Campbell 2002b). While development of ecotourism has been slow in Limon (Troëng et al. 2004), it is a significant activity in Tortuguero and in Gandoca. In both of these cases, local people act as guides, and tourists have the right to visit and witness nesting after paying and being accompanied by a guide.

Access: There are no restrictions on access to open waters for fishing in Limon. Access to the nesting beaches at Tortuguero and Gandoca is restricted during the nesting season. NGOs, their research staff and volunteers, and park staff have access to the turtles and the beaches. All other people are restricted from the beach (public property under Costa Rica Law) at night, unless accompanied by a guide. Guides in Tortuguero must take a training course and be 'certified', while guides in Gandoca are chosen and paid by Asociación ANAI. Tourists gain access through payment of an entrance fee.

Space: the most obvious spatial consequences of tourism in Gandoca and Tortuguero is the restriction of the beach at night to paid touristic visits to see, and scientific research on, turtles. However, there are extended spatial arguments in support of conservation programs for each species concerned.

Global declines in leatherback turtles: The decline of the Pacific Leatherback is currently the ‘hot’ issue in marine turtle conservation, and has been since the Nature publication by (Spotila et al. 2000) that predicts impending extinction in the absence of drastic action. Interesting, this discussion is often transferred to the global population of leatherback turtles, in spite of the fact that Atlantic populations appear to be increasing at key nesting sites (e.g. St. Croix, Boulon et al. 1996; and Surinam, Girondot et al. 2002). However, the global decline of the leatherback is invoked by ANAI (and other NGOs working on Costa Rica’s Caribbean Coast) as mandating their efforts, and one ANAI employee has suggested that the egg harvest in Ostional should be stopped because people cannot distinguish between the highly endangered leatherback and olive ridley eggs (even though leatherback eggs are the only eggs that can be identified by their larger size).

Movement and use of green turtles: Green turtles nesting numbers are on the increase in Tortuguero (Bjorndal et al. 1999) , to the extent that the CCC is looking beyond its traditional focus on the nesting beach. The importance and size of the Tortuguero nesting population, and long history of tagging, means that there is extensive data on where Tortuguero green turtles go. The CCC was one of the key supporters of the closure of the Limon fishery, for example, and is now focused on other key migration spots:

...tag returns make it clear that turtles nesting there [Tortuguero] disperse to feeding areas throughout the Caribbean. A large portion of them go to the Miskito Coast of Nicaragua. Efforts are now focussed [sic] on limiting the number of turtles killed there for meat (<http://www.cccturtle.org/behav.htm#mig>).

These examples show the way that the spatial characteristic of marine turtles, namely their migrations and global distributions, are invoked to influence conservation at the local level and at higher socio-political scales.

International level: eliminating use through the IAC

The purpose of the IAC is “to promote the protection, conservation and recovery of sea turtle populations and of the habitats on which they depend, based on the best available scientific evidence, taking into account the environmental, socio-economic and cultural characteristics of the Parties” (Article II). The preamble states that [unspecified] species of sea turtles in the Americas are considered “threatened or endangered, and that some of these species may face an imminent risk of extinction;” and identifies direct and indirect human activities as a causal factor. Thus, the first measure listed towards achieving the overall objective of the convention is “The prohibition of the intentional capture, retention or killing of, and domestic trade in, sea turtles, their eggs, parts or products” (Article IV, 2.a). There is no consideration of whether domestic uses of marine turtles might be sustainable or not.

There is an exception clause (Article IV, 3.a.) related to Article IV, 2.a. This clause is important to this analysis and is repeated verbatim here:

Each Party may allow exceptions to Paragraph 2(a) to satisfy economic subsistence needs of traditional communities, taking into account the recommendations of the Consultative Committee established pursuant to Article VII, provided that such exceptions do not undermine efforts to achieve the objective of this Convention. In making its recommendations, the Consultative Committee shall consider, *inter alia*, the status of the sea turtle populations in question, the views of any Party regarding such populations, impacts on such populations on a regional level, and methods used to take the eggs or turtles or to cover such needs.

The emphasis on subsistence needs of traditional communities again skirts the issue of whether or not a particular use is sustainable. The inference that can be drawn is that the IAC considers all turtle use to be unsustainable.

Rights: As an international agreement, it is not surprising that the IAC recognizes rights of states, and seeks agreement among states to give up some of those rights. Under the exception clause, for example, *states* make exceptions and consider the advice of the Treaty's Consultative Committee in doing so. The Committee, in turn, is to consider the view of any Party on the exception, and the exception's regional impacts. The consideration of other Parties' views, and indeed the entire purpose of the convention, can be linked to the preamble statement that "sea turtles migrate widely throughout marine areas and that their protection and conservation require cooperation and coordination among States within the range of such species;"

The IAC's attempt to override individual sovereign state's rights failed to an extent, in that the Party asking for an exception, having 'considered' the Consultative Committee's recommendations, can then do what it likes. Attempts to make exceptions subject to unanimity were not accepted by all signatory states.

The rights of communities under the IAC are limited. Only a subsistence, cultural use will be considered for exception (and there are problems with defining both of these terms), and there is no obvious or formal mechanism for hearing a community's voice in the exception process.

Access: In the case of the IAC, we can think of access in terms of access to the decision making process. The IAC has an interesting history in this regard.

The IAC is a result of inter-governmental negotiations that began in 1994. The IAC's original focus was on the use of Turtle Excluder Devices (TEDs) in shrimp trawl nets, and the impetus was US Public Law 101-162 that requires the use of TEDs by nations

wishing to export their shrimp and shrimp products to the United States (Frazier). A hemispheric treaty on the use of TEDs was seen as an alternative to unilateral US inspection and certification of foreign shrimp fleets and, in the early stages of negotiations, governments and fishing organizations dominated, with little participation by marine turtle conservationists and scientists. This changed, however, and in post-1995 negotiations, scientists, conservationists and NGOs all played a role. As a result of this broader participation, the IAC expanded beyond TEDs to include scientific research on marine turtles (Article VIII), habitat conservation and management (Article IV, 2.d. and Annex II), and subsistence use of marine turtles by rural communities (Article II, 3.). Naro-Maciel (1998) and Frazier (2000) link this broadened scope to the inclusion of NGOs' concerns. So, while states are the focus of decision making, scientists and NGOs had access to treaty negotiations, and will have seats on the scientific and consultative committees respectively.

The role assigned to local people is limited and two-fold. Firstly, local people are passive by-standers impacted by conservation measures (Article VII, 2.c.). Secondly, some local people are active, and 'support' conservation objectives outlined in the IAC (e.g. Article IV, 2.g. encourages community participation in the 'protection, conservation and recovery of sea turtle populations'). This support is facilitated via environmental education (Article IV, 2.g., Article VI, 1.d.i.). Thus, community participation in the IAC appears designed to get people on side with pre-determined objectives. There is no reference to livelihood strategies or economic alternatives to marine turtle use, the consideration of which will be particularly critical if the IAC hopes to realize the measure of restricting human activities that could seriously affect sea turtles (Article IV Measures). Any assumptions about the role of NGOs in representing communities should be treated with caution.

Space:

As a hemispheric treaty, the IAC's goal is to regulate the conservation of marine turtles throughout the region. In reality, 9 states are signatories to the convention, although an additional 3 are signatories (Figure 3).

Discussion: Reconciling local, national and international conservation

The underlying premise of the IAC is that marine turtles cannot be used in a consumptive manner. While there are no specific reasons cited for this, elements of the preamble suggest that marine turtle migrations and the status of populations support this position. Migrations also play a key role in the rejection of sustainable use as a conservation tool by marine turtle experts, and are highlighted in the *Global Strategy for the Conservation of Marine Turtles* (MTSG 1995). States, experts, and NGOs are given active roles in the IAC, and states are accorded rights to make decisions about marine turtles, in consultation with other Parties and within the rules of the treaty. Local people, on the other hand, have few rights to use turtles, and these must be treated as ‘exceptions’ under the treaty.

Costa Rica has established itself as a leader in conservation in general, and to a certain extent, for sea turtles specifically. The Caribbean Conservation Corporation is one of the oldest marine turtle NGOs in the world, and Tortuguero is one of the longest studied sites. The Secretariat for the IAC is housed in Costa Rica, and the most recent symposium on the biology and conservation of sea turtles was held there. In general, the approach to sea turtle conservation is a non-consumptive one, and rights to use resources by local people are superseded by rights of tourists to visit them, scientists to study them, and by conservationists to know they are protected. Costa Rica has already eliminated small scale, subsistence use of marine turtles at nesting sites on the Caribbean Coast of the country. What then, will Costa Rica do with the Ostional egg harvest?

Under the IAC, the Ostional egg harvest would not qualify as an exception. The harvest is neither for subsistence (it generates an important source of cash income) nor undertaken by a traditional community (the community’s establishment dates to the 1940s). Whether or not Costa Rica will invoke the exception clause anyway, and continue the egg harvest at Ostional, remains to be seen. In spite of largely being seen as biologically sustainable, one of the few cases that scientists actually agree upon, the Ostional egg harvest conflicts with Costa Rica’s general approach to wildlife and turtle

conservation. The irony is that the closure of the egg harvest could actually threaten the nesting population; one of the biological justifications for the harvest is that removing a portion of eggs from the beach actually increases hatchling success. In contrast to Ostional, the arribada at Nancite beach in Santa Rosa National Park is decreasing in size, and one of the factors that may attribute to this is the high levels of sand contamination associated with rotting eggs and other biomass, occurring when succeeding waves of nesting turtles unearth eggs laid by previous arribada nesters (Cornelius et al. 1991).

Tourism is also playing an increasing role of Ostional. I previously suggested that tourist displeasure with the egg harvest poses a potential threat to it (Campbell 1999). During a recent visit to Ostional in 2004, local guides confirmed that tourists are often extremely upset by the idea of egg harvesting, whether or not they witness it. I have spoken to at least three turtle biologists and conservationists working in Costa Rica who would like to see the Ostional egg harvest ended, because: a) it goes against general Costa Rican conservation philosophy; and b) further tourism will provide greater amounts of revenue. Thus, decisions about whether harvesting in Ostional should continue or not will be caught up in wider values and beliefs about conservation and development. In all of these instances, the rights of Ostional residents to harvest eggs are depicted as conflicting with the rights of conservationists to see their vision of Costa Rican conservation dominate, and rights of tourists to witness undisturbed nature.

The problem with sea turtles thus appears to be one of both scale and space. The global distribution and migrations of turtles, an issue of space, is invoked in many instances to override local rights to use resources. National or international conservation objectives, an issue of scale, are invoked to the same effect. The sentiment appears to be that, because sea turtles are difficult to manage across their spatial distribution, the only acceptable management should be a no-use, hands-off policy, preferably articulated at the international scale and translated downward. Differences in species numbers or migratory patterns appear not to matter.

In evaluating privatization approaches to wildlife conservation, Geist (1995, 16) argues that “Invariably, wildlife winds up as the property of the social elite, and much of wildlife management is generated from a struggle between the public disenfranchised from wildlife, but normally carrying the cost of maintaining wildlife, and the rich and powerful that reap benefits and enjoyment from wildlife.” While sea turtles in Costa Rica are treated as public property, a wide spread no-use policy, and support for this at the international level, in effect achieves the same result. The rights of the elite, in this case international tourists, scientists and conservationists, supercede those of local people.

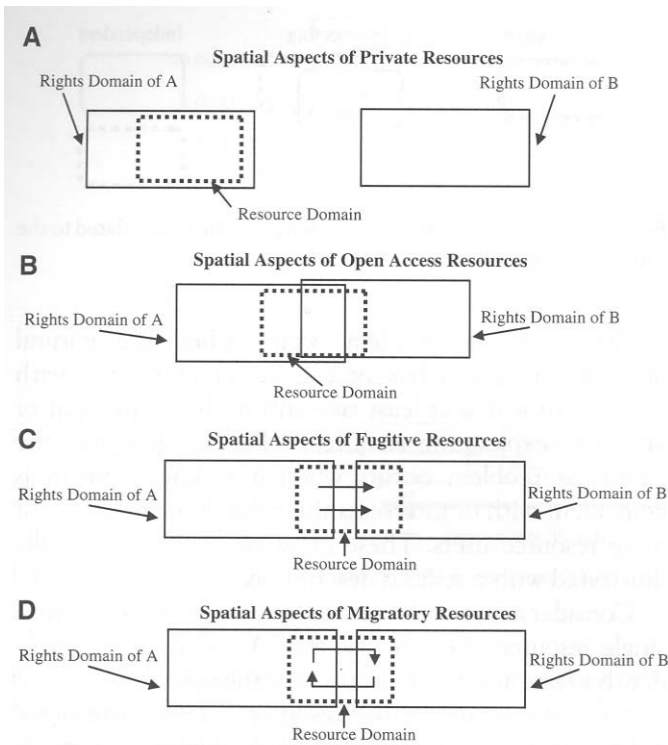


Figure 1: Spatial aspects of (A) private, (B) open access, (C) fugitive and (D) migratory resources (Giordano 2003, 370).

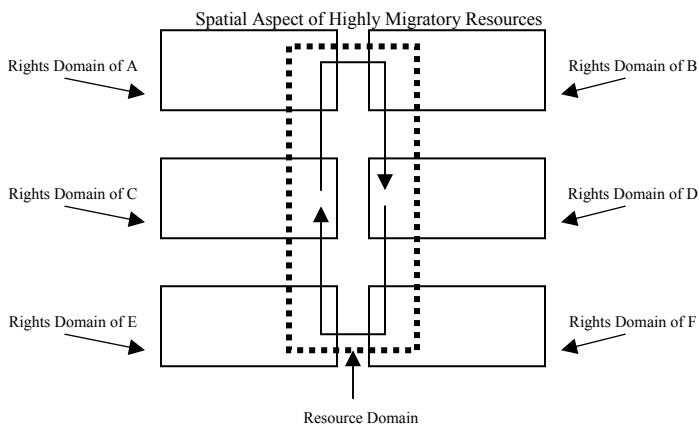


Figure 2: Giordano's diagram of spatial aspect of resources applied to highly migratory resources

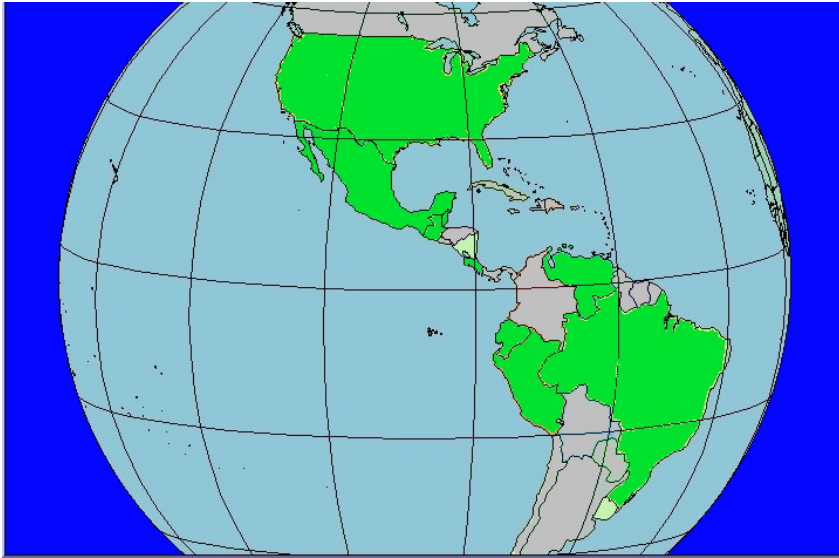


Figure 3: Ratifying countries (dark green) and signatory countries (light green) to the IAC.

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