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Community-Based Conservation via Global Legislation? Limitations of the Inter-American Convention for the Protection and Conservation of Sea Turtles

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1. Introduction

International treaties, agreements, and memoranda of understanding can play an important role in wildlife conservation, particularly for species that defy national boundaries. They hold the potential to surpass the limits of local or regional projects, and to foster international collaboration and cooperation that can facilitate experience-sharing and capacity-building. However, there are limits to what an international treaty can accomplish. This paper examines a scalar mismatch between current thinking in conservation policy regarding locally-responsive, community-based initiatives and one method of pursuing conservation, i.e., international instruments. The Inter-American Convention for the Protection and Conservation of Sea Turtles[1] (hereafter the IAC), which recently entered into force, is examined to illustrate the mismatch. The foci of analysis are on one of the IAC's measures, that to eliminate domestic use of sea turtles except in cases of subsistence economic need, on the interplay of natural and social sciences, and on the roles explicitly assigned to various conservation actors, including communities. The concern is that the goal of eliminating localized use via an international treaty, with no reference to whether or not use might be sustainable, does not reflect current conservation thinking and may serve to undermine the effectiveness of the treaty.

As an international agreement, the IAC is a product of negotiations among various countries and interest groups. As a product of compromise, the IAC (or any other treaty) cannot be all things to all people, and negotiators undoubtedly have ideas regarding what could have been improved or had objectives that they relinquished. As none of the authors partic-

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[1] Inter-American Convention for the Protection and Conservation of Sea Turtles, entered into force May 2, 2001, 78 MARINE TURTLE NEWSLETTER 13 (1997), available at http://www.seaturtle.org/iac/intro.shtml.

ipated in treaty negotiations, the analysis is made without first hand insight into the process or the specific compromises that produced the IAC, and relies on the final text of the treaty and published accounts of negotiations.[2] As a relatively small number of individuals participated in negotiating the IAC, however, external views or evaluations of this nature are both inevitable and necessary. The objectives in this paper are to outline ways in which the IAC converges and diverges with contemporary thinking about wildlife conservation, to identify potential problems arising from the divergence, and to outline possible options to minimize such problems during treaty implementation.

A brief description of the IAC, constructed from negotiation updates published in the *Marine Turtle Newsletter* and elsewhere[3] and from the treaty itself, is provided in Section 2. In Section 3, four key issues in contemporary conservation policy and practice — the shift away from exclusionary protection, and move to sustainable use, community-based conservation, and multiple conservation agents — are discussed. In Section 4, the analysis of the final text of the IAC with regards to how it does, or does not, reflect the ideas outlined in Section 3 is presented. Finally, the paper concludes with a discussion of the specifics of the scalar mismatch in the IAC, considers the general problems of achieving community-based conservation through international agreements, and offers suggestions as to how the implementers of the IAC might seek to address some of these problems.

This paper is a modified version of a presentation given at a workshop convened in conjunction with the 21st Annual International Symposium on Sea Turtle Biology and Conservation.[4] The purpose of the workshop was to discuss the value of international agreements for sea turtle conservation. In the concluding section of the paper, some of the key criticisms made of the original presentation and general reflections on the nature of these are discussed.

2. The IAC

Following the 8th country ratification, by Honduras on February 1, 2001, the IAC came into force on May 2, 2001. The IAC is the first international treaty aimed specifically at protecting sea turtles, and its objective (Article II) is as follows:

[2] M. Donnelly, *Western Hemisphere Sea Turtle Treaty Negotiations*, 70 MARINE TURTLE NEWSLETTER 7 (1995); J. Frazier, *Guest Editorial: Inter-American Convention for the Protection and Conservation of Sea Turtles*, 78 MARINE TURTLE NEWSLETTER 7 (1997); J. Frazier, *Guest Editorial: Update on the Inter-American Convention for the Protection and Conservation of Sea Turtles*, 84 MARINE TURTLE NEWSLETTER 1 (1999); J. Frazier, *Building Support for Regional Sea Turtle Conservation in ASEAN and the Asian Region: Learning from the Inter-American Convention for the Protection and Conservation of Sea Turtles*, in SEA TURTLES OF THE INDO-PACIFIC: RESEARCH MANAGEMENT AND CONSERVATION 277 (N. Pilcher and G. Ismail, eds., 2000); J. Frazier, *Editorial: Advances with the Inter-American Convention for the Protection and Conservation of Sea Turtles*, 90 MARINE TURTLE NEWSLETTER 1 (2000); E. Naro-Maciel, *The Inter-American Convention for the Protection and Conservation of Sea Turtles: An Historical Overview*, 1(1) JOURNAL OF INTERNATIONAL WILDLIFE LAW AND POLICY 169 (1998).

[3] *Id.*

[4] Workshop held February 23rd, 2001, Adams Mark Hotel, Philadelphia, PA.

Table 1. Structure of the IAC.

Preamble[b]		Article XVI	Settlement of Disputes
Article I	Definitions	Article XVII	Rights of the parties
Article II[b]	Objective	Article XVIII	Implementation at the national level
Article III	Area of application of the convention	Article XIX	Non-parties
Article IV[b]	Measures	Article XX	Complementary protocols
Article V[b]	Meetings of the parties	Article XXI	Signature and ratification
Article VI[b]	Secretariat	Article XXII	Entry into force and accession
Article VII[b]	Consultative Committee	Article XXIII	Reservations
Article VIII[b]	Scientific Committee	Article XXIV	Amendments
Article IX[b]	Monitoring programs	Article XXV	Withdrawal
Article X	Compliance	Article XXVI	Status of Annexes
Article XI[b]	Annual Reports	Article XXVII	Authentic texts and certified copies
Article XII[a]	International cooperation	Annex I	Sea turtles
Article XIII[a]	Financial resources	Annex II[b]	Protection and conservation of sea turtles habitats
Article XIV	Coordination	Annex III[a]	Use of turtle excluder devices
Article XV	Trade measures	Annex IV[b]	Annual reports

[a] Articles referred to.
[b] Articles used in analysis.

> ... 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.

The structure of the IAC is outlined in Table 1. The Measures for implementing the treaty are outlined in Article IV, and in Annexes II and III. Articles of the treaty that are particularly relevant for this analysis, along with those referred to briefly, are indicated in Table 1. It is noted from the outset that certain key issues for the IAC, e.g., the use of turtle excluder devices in shrimp trawl nets, are not discussed in this paper. Focusing on certain key issues is bound to influence both the selection of articles to evaluate and the overall interpretation of the treaty. The implications of such "selectivity" will be discussed further in the concluding section of this paper.

The IAC is a result of inter-governmental negotiations that began in 1994, although its origins have been the subject of debate.[5] Four inter-governmental meetings were held over the course of 1994 to 1996. 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[6]. that requires the use of TEDs by nations wishing to export their shrimp and shrimp products to

[5] Frazier suggests that a variety of parallel initiatives considering the value of a regional treaty for marine turtle conservation merged to become the IAC. See: Frazier, *Building Support for Regional Sea Turtle Conservation, supra* note 2, at 284-285 (footnote 5).

[6] For a discussion of the relevance of US Public Law 101-162 to sea turtle conservation, see: J. Frazier and S.J. Bache, *Sea Turtle Conservation and the "Big Stick": the Effects of Unilateral US Embargoes on International Fishing Activities*, in PROCEEDINGS OF THE 20TH ANNUAL SYMPOSIUM ON SEA TURTLE BIOLOGY AND CONSERVATION (in press).

the United States.[7] 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. As a result, Frazier[8] reports a general lack of enthusiasm for the planned treaty and distrust for the process among the latter group, who saw the treaty as "a poorly-veiled attempt to support the commercial shrimp industry, under the guise of protecting sea turtles."

The IAC has since received wide (but not unanimous) support from the marine turtle conservation community as expressed by resolutions passed at the 16th, 17th, 18th, 19th, 20th and 21st Annual Symposia on Sea Turtle Biology and Conservation and in other smaller fora.[9] Two things helped to facilitate this shift from lack of enthusiasm to support.[10] The first was the inclusion of marine turtle biologists and conservationists in post-1995 negotiations. In 1996, a symposium on sea turtle conservation was held in Caracas, Venezuela, immediately prior to the third inter-governmental assembly on the IAC. The delegates who participated, scientists, conservationists, students, and NGOs presented a summary of the deliberations endorsing the convention and providing recommendations to the inter-governmental meeting. This marked a major shift in the participation of scientists and conservationists, providing them some input into IAC negotiations. The second is the broadened scope of the IAC. Rather than being a just "TEDs treaty,"[11] the IAC includes articles that address 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-Maclel and Frazier[12] link this broadened scope to the inclusion of non-governmental groups' concerns. To some extent, it is this broadened scope, one that commentators support,[13] that leads to the scalar mismatch between conservation objectives and methods, as will be discussed further in Section 4.

[7] Frazier, *Guest Editorial: Inter-American Convention for the Protection and Conservation of Sea Turtles*, *supra* note 2, at 7. Naro-Maciel, *supra* note 2, at 171.

[8] Frazier, *Guest Editorial*: *Inter-American Convention for the Protection and Conservation of Sea Turtles*, *supra* note 2, at 7.

[9] Frazier, *Building Support for Regional Sea Turtle Conservation, supra* note 2, at 285. Also, over 900 people representing interests across a variety of groups and levels 'signed' a web site (http://www.seaturtle.org/iac/) seeking support for the IAC.

[10] Frazier, *Guest Editorial*: *Inter-American Convention for the Protection and Conservation of Sea Turtles, supra* note 2.

[11] Under the measures of the convention, that relating to TEDs (Article IV, 2.h) is the last one mentioned, and TEDs are dealt with in detail in Annex III. While relegation of the TEDs issue to an annex could be seen as result of the broadened scope of the IAC or simply as a means of providing detail on an issue at a level inappropriate in the main text, Naro-Maciel believes it is a result of opposition to trade sanctions by many negotiating countries. See: Naro-Maciel, *supra* note 2, at 172.

[12] *Id.* at 173; Frazier, *Building Support for Regional Sea Turtle Conservation*, *supra* note 2.

[13] *Id.* at 173; Frazier, *Guest Editorial: Inter-American Convention for the Protection and Conservation of Sea Turtles, supra* note 2, at 10. Donnelley, *supra* note 2, at 8.

3. Current issues in wildlife conservation

In general, wildlife conservation policy statements have shifted over the last twenty years. Firstly, parks and strictly protected areas, the traditional tool of wildlife conservation and based on exclusion of people and prohibition on resource use, continue to play a role in conservation, but are being supplemented and sometimes replaced by alternative practices. Sustainable use and community-based conservation are two alternatives that have received considerable attention. Secondly, while states and their governments are normally assigned the central role in managing parks and protected areas, other agents, specifically local communities and non-government organizations (NGOs), are now seen as critical to implementing successful conservation. Underlying both of these shifts is one towards integrating social, economic, political and cultural considerations in conservation planning. In the sections below, the basis of the movement away from exclusionary protection, the central elements of sustainable use and community-based conservation, and the rise of local communities and NGOs as key actors in implementing conservation in practice are examined. This will lay the groundwork for the analysis of the IAC presented in Section 4.

3.1. Moving away from exclusion

The search for alternatives to exclusionary protected areas arises due to pragmatic, philosophical, and justice concerns associated with them, particularly when they are applied in developing countries.

Pragmatically, the issues of how much land can ultimately be protected and the costs and effectiveness of protection efforts have been raised. Regarding the amount of land under protection, some developing countries rank among the top park-oriented countries in the world. For example, of the 15 countries including more than ten percent of their land in protected areas in 1990, 12 of these were developing.[14] Nevertheless, most developing countries "*do not* have, and probably *will not* have, a large protected-area system,"[15] and in countries with large systems the potential to put further land under protection will be limited. Where parks do exist, they are often "paper parks" given low funding priority in countries with over-stretched human and financial resources.[16]

The value of strictly protected areas has also been questioned from a biological perspective, reflecting increased understanding of how natural systems operate. Ecosystems, previously seen as "stable, closed, internally regulated" and behaving in a deterministic

[14] D.R. Lightfoot, *An Assessment of the Relationship Between Development and Institutionally Preserved Lands*, 26(2) AREA 112 (1994).

[15] S.H. Ham and R.A. Menganck, *Applying Environmental Interpretation in Protected Areas of Developing Countries: Problems in Exporting a US Model*, 20(3) ENVIRONMENTAL CONSERVATION 232, 233 (1993).

[16] Even in Costa Rica, a country with approximately 20% of its land under some form of protection and which gains substantial economic benefits from tourism to protected areas, chronic under-funding of the protected areas system is a problem and some parks have no operating budgets. See: M. Boza, *Conservation in Action: Past, Present, And Future of The National Parks System in Costa Rica*, 7(2) CONSERVATION BIOLOGY 239 (1993).

manner, are now often characterized as "open to various degrees, in a constant state of flux, usually without long-term stability, and affected by many factors originating outside of the system itself."[17] The value of rigidly delineated areas in protecting such ecosystems is questionable, especially as many existing parks were not established based on sound ecological guidelines[18] and many are too small for their stated purpose.[19] Broadly based landscape planning may prove a more effective conservation tool.[20]

The combination of the factors outlined above highlights the need for the integration of conservation efforts into the wider social and economic activities of people living with protected resources. "The human dimension of ecological issues"[21] and social and economic factors are increasingly seen as key to the success of conservation undertakings.[22] Protected areas that fail to consider social and economic pressures on surrounding communities often contend with encroachment and illegal extraction activities, and efforts to enforce exclusion can consume disproportionate amounts of conservation funds and personnel. There is increasing consensus that conservation efforts, particularly in developing countries, depend on the cooperation of (often) poor, un-empowered people.[23]

Philosophical and justice concerns are linked to pragmatic ones. Philosophically, the issue is that parks and protected areas have their historical roots in both North American romanticism and European utilitarianism[24] that emphasize the separateness of humans from nature. When imported to developing countries, this vision has routinely conflicted with local visions of human–environment relations and can undermine local cultural and

[17] M. Mangel et al., *Principles for the Conservation of Wild Living Resources*, 6(2) ECOLOGICAL APPLICATIONS 338, 339–340 (1996).

[18] L.D. Harris and J.F. Eisenberg, *Enhanced Linkages: Necessary Steps for Success in Conservation of Faunal Diversity*, in CONSERVATION FOR THE 21ST CENTURY 166 (D. Western and M.C. Pearl, eds., 1989); J.H. Shaw, *The Outlook for Sustainable Harvest of Wildlife in Latin America*, in NEOTROPICAL WILDLIFE USE AND CONSERVATION 24 (J.G. Robinson and K.H. Redford, eds., 1991); I.F. Spellerberg, EVALUATION AND ASSESSMENT FOR CONSERVATION: ECOLOGICAL GUIDELINES FOR DETERMINING PRIORITIES FOR NATURE CONSERVATION (1992).

[19] R.J. Hobbs et al., *Nature Conservation: The Role of Corridors*, 19(2) AMBIO 94 (1990); Shaw, *supra* note 18.

[20] J.G. Nelson, *Beyond Parks and Protected Areas: From Public and Private Stewardship to Landscape Planning and Management*, 21(1) ENVIRONMENTS 23 (1991); Shaw, *supra* note 18; C. Freese, WILD SPECIES AS COMMODITIES: MANAGING MARKETS AND ECOSYSTEMS FOR SUSTAINABILITY (1998).

[21] J.L. Meyer and G.S. Helfman, *The Ecological Basis of Sustainability*, 3(4) ECOLOGICAL APPLICATIONS 569, 570 (1993).

[22] See 4(3) ECOLOGICAL APPLICATIONS (1993), a special issue on science and sustainability. While there are examples of good science failing to produce good conservation (see J.A. Livingston, THE FALLACY OF WILDLIFE CONSERVATION (1981); J. Burgess, *Representing Nature: Conservation and the Mass Media*, in CONSERVATION IN PROGRESS 51 (F.B. Goldsmith and A. Warren, eds., 1993); C. Harrison, *Nature, Conservation, Science and Popular Values*, in CONSERVATION IN PROGRESS 35 (F.B. Goldsmith and A. Warren, eds., 1993)) weak science has sometimes resulted in good conservation. Shaw describes game harvesting in the United States via bag seasons and bag limits, as a conservation mechanism that is cultural rather than scientific. Hunters accept the importance of restraint in harvesting, even though the actual mechanisms are scientifically untested. See Shaw, *supra* note 18.

[23] M.P. Wells and K.E. Brandon, *The Principles and Practice of Buffer Zones and Local Participation in Biodiversity Conservation*, 22(2–3) AMBIO 57; J.D. Hackel, *Community Conservation and the Future of Africa's Wildlife*, 13(4) CONSERVATION BIOLOGY 726 (1999).

[24] J. McCormick, THE GLOBAL ENVIRONMENTAL MOVEMENT: RECLAIMING PARADISE (1989).

social norms, and traditional knowledge.[25] Furthermore, such visions of the divide between humans and nature may be at the heart of environmental degradation in general.[26] The justice concern is that exclusive protected areas impact most on rural livelihoods and local human populations bear a disproportionate share of the conservation costs, through lost access to land and resources and through reduced variety of economic activities.[27] Parks can exacerbate existent inequities between the rural people living next to them and those who gain through visiting, knowing areas exist, or receiving wider environmental benefits of protection.

While parks and protected areas continue to play an important role in wildlife management, they no longer dominate conservation policy statements. This change is detectable in statements by conservation organizations, such as The World Conservation Strategy[28] and Caring for the Earth.[29]

3.2. Sustainable use

Sustainable use has become a central component of conservation, with "conservation" defined by the IUCN[30] 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 is generally defined along the same lines as sustainable development, i.e., the managed use of resources in a way and at a rate that does not compromise their long-term existence. Use can be either consumptive, defined as "when an entire organism is deliberately killed or removed or any of its parts are utilized, either as a goal in and of itself ... or for a product,"[31] or non-consumptive when no such removal occurs (e.g., wildlife viewing and so-called ecotourism). Use can also provide subsistence or commercial benefits to users. Sustainable use is based on the argument that wildlife and biodiversity must be valued by those expected to conserve it, and that value is often derived through utilization. As an alternative to more prohibitive approaches to conservation, sustainable use responds to the pragmatic, philosophical and justice concerns outlined above. In this paper, sustainable use refers to a management tool or program implemented in a conservation context (rather than to resource use that does not require management and is by default assumed to be sustainable), and to what is often an objective of management rather than a certainty.

[25] See K.B. Ghimire and M.P. Pimbert (eds.), SOCIAL CHANGE AND CONSERVATION (1997); S. Marks, THE IMPERIAL LION: HUMAN DIMENSIONS OF WILDLIFE MANAGEMENT IN CENTRAL AFRICA (1984).

[26] R. Rogers, NATURE AND THE CRISIS OF MODERNITY: A CRITIQUE OF THE CONTEMPORARY DISCOURSE ON MANAGING THE EARTH (1994).

[27] D. Anderson and R. Grove (eds.), CONSERVATION IN AFRICA: PEOPLE, POLICIES AND PRACTICE (1987).

[28] IUCN, WORLD CONSERVATION STRATEGY (1980).

[29] IUCN/WWF/UNEP, CARING FOR THE EARTH (1991).

[30] IUCN, *supra* note 28, at 1.

[31] Freese, *supra* note 20, at 11.

"Sustainable use" is a concept prominent in conservation discourse and is the subject of much discussion and debate regarding how and if it can be achieved.[32] The number of successful cases of sustainable use, and particularly of commercial, consumptive use, of wildlife is low,[33] although this relates both to the difficulties associated with implementation and to differing criteria for "success." Some of the difficulties encountered in implementation are related to biological sustainability (i.e., the inability of resources to sustain even low levels of use, or the difficulties in predicting correctly the response of a population to use), and others to socio-economic sustainability. For example, economic incentives for conservation may turn into those for over-exploitation if users take a short- rather than a long-term view to management. Furthermore, even when managed use schemes are determined to be biologically sound and return economic benefits to local people, they may fail to gain support for conservation if control over resources is not devolved to local users.[34] This lack of support can translate into illegal use of managed resources and undermine biological sustainability, as well as social and economic sustainability. These difficulties (again) highlight the need to study and understand the local social, economic, cultural, and political context of conservation and to actively engage local users in the design and implementation of use schemes. Thus, sustainable use is often combined with community-based conservation.

3.3. Community-based conservation

There is no one definition of community-based conservation, but it is commonly seen as having two objectives: to enhance wildlife/biodiversity/environmental conservation and to provide social and economic gains for local people. Kellert et al.[35] add four objectives to the original two — equity, empowerment, conflict resolution, knowledge — and evaluate community-based conservation efforts on their ability to achieve the six. The inclusion of these rather nebulous and difficult to measure criteria again reflects that socio-economic gains are sometimes not enough to encourage local support for conservation, and community-based conservation is geared towards encouraging local "ownership" of conservation activities. Community-based conservation is also defined by a mix of char-

[32] See J.G. Robinson and E.L. Bennett (eds.), HUNTING FOR SUSTAINABILITY IN TROPICAL FORESTS (2000) for case studies evaluating the biological, social, and economic components of sustainability in wildlife use regimes.

[33] Freese, *supra* note 20, at 3.

[34] See J.T. Heinen, *Park-People Relations in Kosi Tappu Wildlife Reserve, Nepal: A Socio-Economic Analysis*, 20(1) ENVIRONMENTAL CONSERVATION 25 (1993); D. Parry and B. Campbell, *Attitudes of Rural Communities to Animal Wildlife and its Utilization in Chobe Enclave and Mababe Depression, Botswana*, 19(3) ENVIRONMENTAL CONSERVATION 245 (1992). Both articles conclude that lack of community control over conservation projects undermined support, in spite of provision of economic benefits. See also L.M. Campbell, *Use Them or Lose Them? The Sustainable Use of Marine Turtle Eggs at Ostional, Costa Rica*, 24 ENVIRONMENTAL CONSERVATION 305 (1998), for a discussion of the links between community control and sustainability.

[35] S.R. Kellert et al., *Community Natural Resource Management: Promise, Rhetoric, and Reality*, 13 SOCIETY AND NATURAL RESOURCES 705 (2000).

acteristics. Little[36] suggests that community-based conservation implies "at least some of the following: local-level, voluntary, people-centered, participatory, decentralized, village based management." There is a wide spectrum of views on community-based conservation, and the mix of components and prioritization of objectives vary according to the definer.[37]

Like sustainable use, community-based conservation has experienced mixed success in practice. Some of the major obstacles to community-based conservation identified in the literature are, firstly, that its implementers fail to operationalize community participation in project identification, design and management. Participation is, rather, often seen as a means to get people on side of pre-determined conservation programs.[38] Secondly, community-based conservation projects have often been undertaken without an adequate understanding of the local social and economic context and by environmental NGOs with limited experience in community development.[39] Thirdly, community-based conservation has not learned from the related field of participatory development, where organizations primarily interested in human development have struggled to implement successful participation.[40] Community itself is emerging as a problematic term, too often treated as self-evident or generic.[41] Communities are assumed to be homogenous entities, acting collectively to achieve common environmental goals. Little consideration is given to individuals within communities and the motives they might have to work against conservation programs.[42] Furthermore, while conservation can function in heterogeneous communities, an understanding of community structure is necessary in order to determine appropriate and realistic incentives for conservation.[43] Once again, these shortcomings highlight the need for further integration of social science planning and perhaps planners in conservation initiatives.

[36] P. Little, *The Link Between Local Participation and Improved Conservation: A Review of Issues and Experiences*, in NATURAL CONNECTIONS: PERSPECTIVES IN COMMUNITY-BASED CONSERVATION 347, 350 (D. Western and M.A. Wright, eds., 1994).

[37] See D. Western and M.A. Wright (eds.), NATURAL CONNECTIONS: PERSPECTIVES IN COMMUNITY-BASED CONSERVATION (1994) for case studies in community-based conservation.

[38] Hackel, *supra* note 23; A.N. Songorwa, *Community-Based Wildlife Management (CWM) in Tanzania: Are the Communities Interested?*, 27(12) WORLD DEVELOPMENT 2061 (1999).

[39] Wells and Brandon, *supra* note 23.

[40] Little, *supra* note 36.

[41] J.P. Brosius et al., *Representing Communities: Histories and Politics of Community-Based Natural Resource Management*, 11 SOCIETY AND NATURAL RESOURCES 157 (1998); B. Derman, *Environmental NGOs, Dispossession, and the State: The Ideology and Praxis of African Nature and Development* 23(2) HUMAN ECOLOGY 199 (1995); M. Leach et al., *Challenges to Community-Based Sustainable Development: Dynamics, Entitlements, Institutions*, 4 IDS BULLETIN 4 (1997); M. Wells and K. Brandon, PEOPLE AND PARKS: LINKING PROTECTED AREA MANAGEMENT WITH LOCAL COMMUNITIES (1992); Western and Wright, *supra* note 37, at 1–12.

[42] Hackel, *supra* note 23; C. Wainwright and W. Wehrmeyer, *Success in Integrating Conservation and Development? A Study from Zambia*, 26(6) WORLD DEVELOPMENT 933 (1998).

[43] Campbell, *supra* note 34.

3.4. Conservation agents

The need for further integration of social sciences in the planning, implementation, and monitoring of conservation projects is a recurring theme in the review of the three conservation tools discussed above. The need is not to replace natural science, but to complement it. However, including social scientists on conservation teams usually represents an additional form of external expertise, and does not automatically shift conservation activities from top-down to bottom-up. Partly in recognition of the importance of gaining the support of local people and partly in acknowledgment of the unique understandings that local, sometimes indigenous, people have of their natural environments, the inclusion of local communities and/or non-government organizations (NGOs) familiar with the local context is often cited as critical to conservation success.

NGOs have emerged as key stakeholders in conservation over the past two decades.[44] Their increased popularity is linked to: (1) increasing scepticism about the ability and willingness of state institutions to address the needs of local people;[45] and, (2) the association of NGOs with the World Commission on Environment and Development's[46] vision of "sustainable development" and the Earth Summit's Agenda 21.[47] NGOs have been some of the most enthusiastic promoters of community-based conservation[48] and are often cited as the key to its implementation. NGOs are characterized as being knowledgeable of and responsive to local needs, good at encouraging local participation, and capable of empowering communities.[49]

Local people are also considered important to conservation based not only on the need for their support, but also on the potential value of what is termed "traditional ecological knowledge" to conservation undertakings. Studies of ecological change over time have sometimes challenged western scientists' interpretations of environmental change and re-

[44] J. Fisher, THE ROAD FROM RIO: SUSTAINABLE DEVELOPMENT AND THE NONGOVERNMENT MOVEMENT IN THE THIRD WORLD (1993).

[45] L. Macdonald, *NGOs and the Problematic Discourse of Participation: Cases from Costa Rica*, in DEBATING DEVELOPMENT DISCOURSE: INSTITUTIONAL AND POPULAR PERSPECTIVES 201 (D.B. Moore and G.J. Schmitz, eds., 1995); P. Wapner, *Politics Beyond the State: Environmental Activism and World Civic Politics*, 47 WORLD POLITICS 311 (1995).

[46] WCED, OUR COMMON FUTURE (1987). This publication popularized the concept of sustainable development. The term itself is problematic, and can be used by a variety of stakeholders to support highly divergent views [see J.G. Frazier, *Sustainable Development: Modern Elixir or Sack Dress?*, 24(2) ENVIRONMENTAL CONSERVATION 182 (1997); W.D. Sunderlin, *Managerialism and Conceptual Limits of Sustainable Development*, 8 SOCIETY AND NATURAL RESOURCES 481 (1995)]. Nevertheless (and perhaps consequently), it impacted profoundly on discourses of environment and development.

[47] U.N., Agenda 21: Programme of Action for Sustainable Development (1992).

[48] Brosius et al., *supra* note 41.

[49] T.F. Carroll, INTERMEDIARY NGOS: THE SUPPORTING LINK IN GRASSROOTS DEVELOPMENT (1992); P. Ekins, A NEW WORLD ORDER: GRASSROOTS MOVEMENTS FOR GLOBAL CHANGE (1992); J. Fisher, *supra* note 44; T. Princen and M. Finger, *Environmental NGOs: Carving out a New Niche*, 22 ECODECISION 26 (1996); T. Princen et al., *Nongovernmental Organizations in World Environmental Politics*, 7(1) INTERNATIONAL AFFAIRS 42 (1995).

vealed the logic of indigenous or traditional management practices.[50] One example is found in Leach et al.[51] who challenge the conventional wisdom of negative impacts of human settlements in the fragile environment on the Southern edge of the Sahara desert. They use evidence of aerial photographs and interviews with community elders to show that, rather than destroying forests, the establishment of human communities is linked to forest regeneration. An example of where traditional ecological knowledge is being used actively in conservation is in biodiversity inventory activities in Costa Rica, where local people with knowledge of plants and their traditional medicinal uses are employed as parataxonomists.[52]

As with sustainable use and community-based conservation, there are mixed views on the role of NGOs and communities in conservation. A critique of NGOs, one that questions many of the assumptions outlined above, is emerging.[53] Furthermore, environmental NGOs will have their own stakes in conservation and their objectives may be in direct conflict with those of communities.[54] Likewise, the existence of traditional ecological knowledge in communities does not automatically equate with desire or willingness to conserve and there is a danger of romanticizing traditional lifestyles.

4. Analysis: contemporary conservation in the IAC

The four elements of contemporary conservation thinking outlined in Section 3 are interrelated, and their separate consideration is somewhat arbitrary. The underlying and unifying message in all four is that local people are critical to the success of conservation activities, and that their social and economic (and cultural, and political) realities must be considered in designing conservation schemes. The means for doing this, i.e., attempting to implement sustainable use and/or community-based conservation and to integrate local people and NGOs into conservation planning and implementation, have experienced difficulties. Whether these difficulties are based on inherently flawed principles or on continued inad-

[50] For a discussion and examples of the role of traditional ecological knowledge in conservation see: M. Leach and R. Mearns (eds.), THE LIE OF THE LAND: CHALLENGING RECEIVED WISDOM ON THE AFRICAN ENVIRONMENT (1996); 10(5) ECOLOGICAL APPLICATIONS (2000); L. Nader (ed.), NAKED SCIENCE: ANTHROPOLOGICAL INQUIRY INTO BOUNDARIES, POWER, AND KNOWLEDGE (1996).

[51] M. Leach et al., *Second Nature: Building Forests in West Africa's Savannas* (Video, 1997).

[52] C. Meyer, *NGOs and Environmental Public Goods: Institutional Alternatives to Property Rights*, 27 DEVELOPMENT AND CHANGE 453 (1996); A. Nygren, *Environment as Discourse: Searching for Sustainable Development in Costa Rica*, 7 ENVIRONMENTAL VALUES 201 (1998). The use of indigenous knowledge in bioprospecting is not without problems and, given the importance of bioprospecting to major pharmaceutical companies, it could be argued that indigenous knowledge is being used primarily for commerce rather than conservation.

[53] M. Howes, *NGOs and the Development of Local Institutions: A Ugandan Case-Study*, 35(1) THE JOURNAL OF MODERN AFRICAN STUDIES 17 (1997); M. Howes, *NGOs and the Institutional Development of Membership Organisations: A Kenyan Case Study*, 33(6) THE JOURNAL OF DEVELOPMENT STUDIES 820 (1997); A.C. Hudock, NGOS AND CIVIL SOCIETY: DEMOCRACY BY PROXY? (1999); P. Lundy, *Community Participation in Jamaican Conservation Projects*, 34(2) COMMUNITY DEVELOPMENT JOURNAL 122 (1999); Macdonald, *supra* note 45.

[54] Brosius et al., *supra* note 41; Lundy, *supra* note 53.

equate understanding and/or oversimplification of local reality remains to be seen. The following analysis focuses on evidence of attention to these issues in the IAC and the resulting implications for its implementation. This is done in full awareness that the above review highlights that there is no blueprint solution to conservation problems, something that will be discussed further in the conclusions.

4.1. Moving away from exclusion

"Protection" of marine turtles is an objective of the IAC, and protected areas are cited as a potential conservation tool in two other instances. The first instance is in the fourth measure (Article IV, 2.d) that calls for "the protection, conservation and, if necessary, the restoration of sea turtle habitats and nesting areas, as well as the establishment of necessary restriction on the use of such zones, including the designation of protected areas ..." The second instance is Annex II that details methods of protecting and conserving sea turtles habitats, including (among other things) protected areas (Annex II, 3). The types of protected areas promoted are not fully exclusive in the traditional sense, and flexible protection options, like seasonal restrictions, are noted. This restrained approach to protected areas may reflect the pragmatic issues described in Section 3.1. For example, in the case of signatory countries like Costa Rica, where turtles nest extensively on both coasts of the country and are protected in several locations,[55] opportunities to protect further nesting beaches, given the large amount of land mass already under protection and conflicting demands on coastal resources, may be limited. Whatever the reasons, the IAC's limited emphasis on formally protected areas reflects contemporary conservation thinking.

4.2. Sustainable use

While protected areas are not overly emphasized in the IAC, sustainable use is almost absent. 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). Thus, while protected areas may not be the prioritized means, prohibition on use remains an important end of the IAC. There is no direct reference to whether domestic uses of marine turtles might be sustainable or not, and as conservation includes sustainable use, this measure appears to contradict part of the treaty's objective, or to equate use with non-consumptive use.

Sustainable use is mentioned twice in the IAC. The first mention is in Article IV, 2.h, the measure that deals with TEDs and reducing incidental capture of marine turtles. This is done in keeping with the principle of sustainable use of fisheries resources, in this case, non-turtle ones. The second mention is in describing the Secretariat's function to disseminate and promote exchange of information regarding efforts of the Parties to raise aware-

[55] Nesting marine turtles are protected in Tortuguero National Park, Gandoca and Manzanillo Wildlife Refuge, Santa Rosa National Park, Leatherbacks of Guanacaste National park, and the Ostional Wildlife Refuge, all part of the national system of protected areas.

ness of the need to conserve sea turtles, "while maintaining the economic profitability of diverse artisanal, commercial, and subsistence fishing operations, as well as the sustainable use of fisheries resources." While these resources could include turtles, the language is non-specific.

Further allusion to use of marine turtles appears in Article IV, 2.f, the measure that calls for efforts to enhance sea turtle populations and includes experimental reproduction, raising and reintroduction of sea turtles into their habitats. This measure may be a reference to headstarting turtle hatchlings, i.e., raising them in captivity until they reach a size at which they will be less vulnerable to predators in the wild. Alternatively, it may refer to ranching or farming marine turtles, activities usually undertaken in conjunction with some kind of culling and sale of marine turtle products, and controversial in marine turtle conservation.[56] The measure raises the possibility of use, but without explicit reference to it.

Determining levels at which marine turtles might be used sustainably is challenging due to the life histories of these species,[57] and many marine turtle biologists and/or conservationists oppose consumptive use of marine turtles, eggs or other by-products.[58] Some of the life history characteristics (e.g., migration) that make marine turtles biologically difficult to use, however, also make them candidates for sustainable use for pragmatic reasons; widely dispersed animals are unlikely to enjoy protection throughout their range, particularly when migration paths and nesting are in areas of high economic need. Furthermore, they are widely used, and there are cases of consumptive use that have been on-going for some time, centuries perhaps.[59,60] Thus, trying to make existing use sustainable might be

[56] See: P. Richardson, *Guest Editorial: Obstacles to Objectivity: First Impressions of a CITES CoP*, 89 MARINE TURTLE NEWSLETTER 1 (2000).

[57] D. Ehrenfeld, *Conserving The Edible Sea Turtle: Can Mariculture Help?*, 62(1) AMERICAN SCIENTIST 23 (1974); D. Ehrenfeld, *Options and Limitations in the Conservation of Sea Turtles*, in BIOLOGY AND CONSERVATION OF SEA TURTLES 257 (K.A. Bjorndal, ed., 1981).

[58] L.M. Campbell, *Human Need in Rural Developing Areas,* 44(2) THE CANADIAN GEOGRAPHER 167 (2000); L.M. Campbell, *Conservation Narratives and the 'Received Wisdom' of Ecotourism: Case Studies from Costa Rica*, INTERNATIONAL JOURNAL OF SUSTAINABLE DEVELOPMENT (in press).

[59] See: Campbell, *supra* note 34, for an evaluation of egg harvesting in Ostional, Costa Rica; E. Carrillo et al., *Hawksbill Turtles (Eretmochelys imbricata) in Cuba: An Assessment of the Historical Harvest and its Impacts*, 3 CHELONIAN CONSERVATION AND BIOLOGY 264 (1999); J. Frazier, *Science, Conservation and Sea Turtles: What's the Connection?*, in PROCEEDINGS OF THE 21ST ANNUAL SYMPOSIUM ON SEA TURTLE BIOLOGY AND CONSERVATION (in press), for a summary of legal exploitation in Latin America and the Caribbean; C. Lagueux, *Economic Analysis of Sea Turtle Eggs in a Coastal Community on the Pacific Coast of Honduras*, in NEOTROPICAL WILDLIFE USE AND CONSERVATION 136 (J.G. Robinson and K.H. Redford, eds., 1991); C. Lageuex, MARINE TURTLE FISHERY OF CARIBBEAN NICARAGUA: HUMAN USE PATTERNS AND HARVEST TRENDS (1998); K. Mohadin, *Sea Turtle Research and Conservation in Suriname: History, Constraints and Achievements*, in 3RD MEETING ON THE SEA TURTLES OF THE GUIANAS, PROCEEDINGS 5 (L. Kelle et al., eds., 2000); G.A. Ruiz, *Sea Turtle Nesting Population at Playa La Flor, Nicaragua: An Olive Ridley 'Arribada' Beach*, in PROCEEDINGS OF THE FOURTEENTH ANNUAL SYMPOSIUM ON SEA TURTLE BIOLOGY AND CONSERVATION 129 (Bjorndal et al., compilers, 1994).

[60] The examples cited above show that use of marine turtles is ongoing in many states in the region the IAC applies to. The IAC as worded assumes such use to be unsustainable and permits it to occur only in exceptional cases where economic subsistence need demands it. Potential repercussions of this approach are discussed further in the concluding section of this paper.

more feasible than trying to eliminate use altogether. A clause that aims to eliminate domestic use via an international treaty (except under exceptional circumstances, see below), and that makes no reference, or at best an indirect reference, to the possibility that some cases of use might be sustainable, is out of line with current conservation thinking.

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.

There are two points of concern in this Article. The first is related to language (discussed below) and the second to control over decision-making (Section 4.3).

The language of Article IV, 3.a is vague, with "traditional," "subsistence," and "community" undefined. Conservation literature is replete with examples of problems arising due to the ambiguity of such terms and, without defining them, the IAC will invite their wide interpretation. Furthermore, the need to limit use along such lines is debatable. One example of use that is believed to be sustainable,[61] egg collection in Ostional, Costa Rica, is neither subsistence (it generates an important source of cash income) nor undertaken by a traditional community (the community's establishment dates to the 1940s).[62] While Costa Rica will presumably invoke Article IV, 3.a to continue the egg project at Ostional, and will likely receive IAC approval, the egg harvest, ironically, fails to meet the criteria for the exception.[63]

It can be argued that by leaving key terms undefined, the IAC is more flexible; for example, a broad interpretation of subsistence, one that recognizes the role of cash in economies, can be incorporated. However, Campbell's[64] study of 42 marine turtle ex-

[61] S.E. Cornelius et al., *Management of Olive Ridley Sea Turtles (Lepidochelys olivacea) Nesting at Playas Nancite and Ostional, Costa Rica*, in NEOTROPICAL WILDLIFE USE AND CONSERVATION 111 (J.G. Robinson and K.H. Redford, eds., 1991).

[62] Campbell, *supra* note 34.

[63] The irony is that the egg project at Ostional is one of the few cases of consumptive use that many marine turtle experts believe to be biologically justifiable. See: P. Pritchard, *Guest Editorial: Ostional Management Options*, 31 MTN 2 (1984).

[64] Campbell, *Human Need in Rural Developing Areas, supra* note 58. The forty-two experts working with marine turtles were from Canada, the USA and Costa Rica, and include scientists, policy makers, and conservationists. The purpose of interviewing is to identify the range and depth of views evident on a topic, rather than to identify a statistically significant 'representative' view. While there were experts with alternative views on these issues, they were in a clear minority in this research, and the differences between views of experts from North America and Costa Rica were minimal. Most interviewed experts were members of the Marine Turtle Specialist Group, many of them active members, and many were engaged in research and/or conservation in Latin America. Thus, their views may have impacts outside of their own geographic location.

perts and their attitudes to sustainable use suggests that such an interpretation is unlikely. All but one expert rejected the idea that local people have rights to use marine turtles, and while some accepted that either economic or cultural need (13 and 9 experts, respectively) can justify subsistence use, they discounted such need by challenging its basis or re-defining key terms. For example, subsistence need was discounted by questioning what poverty means and by excluding cash or the use of technology from subsistence economies.[65] While marine turtle biologists and/or conservationists will not be the only stakeholders defining these terms under the auspices of the Consultative Committee of IAC, they are likely to have considerable influence in these discussions (see Section 4.4).

4.3. Community-based conservation

Reference to community-based conservation is absent from the IAC. This absence is most striking in the IAC's early reference to Agenda 21 and its call to "protect and restore endangered marine species and to conserve their habitats" (preamble to IAC). This is a selective use of Agenda 21, a document that highlighted social and economic aspects of conservation and emphasized local action.[66]

The IAC does recognize (limited) needs of communities (economic subsistence in Article IV, 3.a), but the problem with undefined terms discussed in Section 4.2 applies here as well. Potential impacts on communities resulting from measures undertaken as a result of the IAC are also recognized (e.g., Article VI, 1.d.ii identifies the need to disseminate information regarding such impacts and Article VII, 2.c requires the Consultative Committee to examine reports of such impacts), but as will be discussed below, no responsibility for examining these are assigned, and there is no call to report on such studies in Annual Reports (Annex IV).

The role assigned to local people in the IAC is 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).

[65] Equally problematic for the interviewed experts was the notion of 'cultural need.' However, cultural need is not explicitly included in the exception cause, so the various interpretations of it are not discussed here.

[66] Full text of Agenda 21 can be found at http://www.un.org/esa/sustdeve/agenda21text.htm. Article 3.7.d of Agenda 21 deals specifically with how to empower communities by giving them "a large measure of participation in the sustainable management and protection of the local natural resources in order to enhance their productive capacity."

4.4. Conservation agents

Formal participation of conservation agents in the IAC is determined by its meeting and committee structure, outlined in Table 2. States will make decisions via the meeting of the Parties, and this is appropriate for an international treaty. Other agents will have influence on such decisions via advisory committees. In the following sections, the balance between natural and social science (and scientists), and the role of NGOs and local communities as assigned in the IAC are examined.

Table 2. Decision making in the IAC.

Body	Membership
Meeting of the Parties — Article V	No restrictions on Party representation listed
Consultative Committee — Article VII	Representatives defined as: • 1 from each signatory state (with option of accompanying advisors) • 3 from the scientific community • 3 from the private sector • 3 from the NGO sector
Scientific Committee — Article VIII	Size and membership not stipulated

4.4.1. Natural versus social science (and scientists) Scientists hold three assured positions on the Consultative Committee and compose the entire Scientific Committee. Thus, early concerns among marine turtle conservationists regarding their inclusion in the IAC appear to have been addressed, and scientists are well represented in the IAC committee structure. The text of the treaty does not stipulate whether these scientists are to be natural and/or social scientists, and the size and membership of the Scientific Committee is left undefined. While social scientists may be included in the "scientists" category, the Scientific Committee's functions (see Table 3) suggest these scientists are envisioned to be natural scientists.[67] That natural sciences are implicated is further seen when the evolution of the treatment of "science" alongside "other" fields is examined in the text (Table 3).

Two issues are highlighted in Table 3. Firstly, the treatment of natural versus social sciences is very different. While the IAC refers specifically to the types of biological studies required, assigns responsibility to the Scientific Committee for conducting them, and outlines reporting procedures related to them, the same cannot be said of social sciences. While socio-economic impacts are to be considered, there is no indication of who will study them, and they are not part of the annual reporting procedure. Secondly, the treatment of cultural impacts in the IAC is inconsistent (after the initial acknowledgement of cultural characteristics of parties in Article II, culture only re-enters the language in Article VII). Thus, while a generous interpretation might suggest the use of "science" in the IAC refers to all sciences, including social, the document as written does not support this view. Thus, there is potential that the IAC will not achieve a balance between natural and

[67] Also in an IAC negotiation update, Donnelley, *supra* note 2, at 9, calls for 'sea turtle biologists' to be formally included in negotiations. This is not to dispute the need for marine turtle science in the IAC, but to show that the conception of science and scientists is often limited to natural scientists.

Table 3. Inclusion/exclusion of natural science and 'other' issues in the IAC.

Article	Text	Issue
Article II Objective	"... 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, socioeconomic and cultural characteristics of the Parties"	• Socio-economic and cultural characteristics of Parties are recognized
Article IV 2.e Measures	"The promotion of scientific research relating to sea turtles and their habitats, as well as to other relevant matters that will provide reliable information useful for the adoption of the measures referred to in this Article;"	• 'Scientific research' is not specific, but is directed towards sea turtles and habitats • 'Other matters', which could arguably include socio-economic ones, are unspecified
Article IV 2.g	"The promotion of environmental education and dissemination of information ..."	• environmental education is a social and natural science activity
Article IV 3.a Measures	In evaluating applications under the exception clause, the Consultative Committee should "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 to cover such needs"	• Identified considerations are biological • No evaluation of socio-economic status of communities of concern, nor of overall socio-economic context in which use occurs
Article VI, 1.d Secretariat	Secretariat is given function of "Disseminating and promoting exchange of information and educational material regarding efforts undertaken by the Parties to increase public awareness of the need to protect sea turtles and their habitats, while maintaining the economic profitability of diverse artisanal, commercial, and subsistence fishing operations, as well as the sustainable use of fisheries resources. The information shall concern, inter alia: • environmental education and local community involvement; • the results of research related to the protection and conservation of sea turtles and their habitats and the socio-economic and environmental effects of the measures adopted pursuant to the this Convention."	• Economic needs of communities are acknowledged • Information regarding environmental education and community involvement is to be provided • Possible socio-economic impacts of IAC activities are acknowledged • Responsibility for predicting or measuring socio-economic impacts is not assigned (see below)

Table 3 (continued). Inclusion/exclusion of natural science and 'other' issues in the IAC.

Article	Text	Issue
Article VII, 2.c Consultative Committee	Consultative Committee is charged with examining reports of environmental, socio-economic and cultural impacts on affected communities	• Responsibility for producing report on socio-economic and cultural impacts is not assigned (see above) • First time cultural impacts are mentioned since cultural characteristics recognized in the Preamble and objective
Article VIII, 2.a Scientific Committee	"Examine and, as appropriate, conduct research on sea turtles covered by this convention, including research on their biology and population dynamics;"	• Socio-economic research is not listed
Article VIII, 2.b Scientific Committee	"Evaluate the environmental impact on sea turtles and their habitats of activities . . ."	• Socio-economic impacts are not listed
Annex IV, c Annual Reports	Annual Reports should include: ". . . scientific research, including marking, migration, and repopulation studies; environmental education; programs to establish protected areas; cooperative activities with other Parties; and any other activities designed to achieve the objectives of this Convention;"	• Scientific research explicitly includes only biology-related issues • Environmental education is the only specific activity outside realm of natural sciences
Annex IV, e Annual Reports	Detailed description of any exceptions must be included in Annual Report, and, "in particular, any relevant information on the number of turtles, nests, and eggs, as well as sea turtle habitats, affected by the allowance of these exceptions;"	• Economic context of exceptions is not part of reporting

social scientific analysis and understanding of conservation, and this lack of balance may be exacerbated if NGO representatives have natural science training (which may be the case if the NGOs are environmental ones). This issue is addressed further under recommendations (Section 5.2).

4.4.2. NGOs and local communities The role assigned to local communities has already been discussed; the current text of the IAC shows communities acting as recipients of and perhaps participants in environmental education efforts designed to encourage their support for conservation. The inclusion of NGOs as active conservation agents is more evident in the IAC. NGOs influenced IAC negotiations, more so as negotiations progressed,[68] and

[68] Frazier, *Building Support for Regional Sea Turtle Conservation, supra* note 2.

will have a role in its implementation via representation on the Consultative Committee. Furthermore, NGOs are given a role in monitoring implementation of the IAC under Article IX, 3. Thus, in this respect the IAC reflects recent conservation thinking, and the inclusion of NGOs in such a capacity in an international agreement is laudable. Some caution is required in assuming their roles as representative of communities in the context of an international treaty, however, as will be discussed further below (Section 5.1).

5. Discussion and conclusions

The treatment of exclusionary protection, sustainable use, community-based conservation and conservation agents in the IAC have been reviewed. The discussion now turns to reflections on responses received to the initial presentation of a related paper at a workshop convened in conjunction with the 21st Annual Symposium on Sea Turtle Biology and Conservation, the nature of the scalar mismatch between the IAC and its objectives, recommendations for overcoming the mismatch, and some concluding thoughts on this evaluation.

5.1. Response at the Symposium workshop

Following the authors' presentation of a related paper at the workshop described previously, there was an extended discussion. The feedback and criticisms received informed the revision of that presentation into the current paper. Two comments made in the discussion, however, warrant directed response here, as they relate to the scalar mismatch of concern. The first comment was that the authors' concerns for communities living in signatory countries are misplaced. The second was that the detail of the treaty's language, and lack of detail in certain cases, is relatively unimportant compared to the overall message or spirit, and that the authors were getting too "hung up" on language. These are addressed individually below.

The first comment was justified by both the support the IAC has in Latin American countries and the role NGOs have been given on the Consultative Committee. For example, the exception clause (Article VI, 3.a cited in full in Section 4.1) can be applied by States unilaterally, taking into consideration the recommendations of the Consultative Committee, whereas in initial drafts consensus among Parties was required. The clause has been described as a compromise that satisfies the needs of nations where subsistence uses are on-going and "fundamental."[69] In the discussion at the Symposium workshop, this clause was presented as a means to ensure control is maintained by signatory States; the Consultative Committee can make recommendations on cases of marine turtle use, but States can choose to ignore these in the interests of communities. Article VI, 3.a focuses on national governments, however, and while it ensures that State sovereignty is not compromised through the IAC, it says nothing about the role of communities in deciding to

[69] Frazier, *Guest Editorial: Inter-American Convention for the Protection and Conservation of Sea Turtles, supra* note 2.

invoke the article. This is hardly surprising in an international treaty, an agreement between sovereign States. However, this is where one element of the scalar mismatch occurs; this international treaty extends its influence to domestic conservation practices and, by including the elimination of all domestic use of turtles as the first of its "measures," to the local level. Unless mechanisms exist for community consultation and active involvement (and they may exist at the national level), the exception clause is a "top-down" tool.

Regarding NGOs, while their inclusion on the consultative committee is laudable, caution in assuming their function *vis-a-vis* communities is warranted. First of all, there is no statement regarding the purpose of NGO inclusion in the IAC. Secondly, "NGO" is a term applied to widely different organizations; they can be large or small, local, national or international, and conservation or development oriented. If NGOs are environmental NGOs, their goals may conflict with those of communities. Thus, the specific NGOs selected to sit on the Consultative Committee will be critical. Regardless, three NGOs cannot be expected to represent communities throughout the region, or within an individual country, even if their inclusion is directed towards such a goal. The same could be said of the national representatives, but at least these are, theoretically at least, representatives of democratically elected governments. Again, this is evidence of the scalar mismatch. The inclusion of NGOs on the Consultative Committee is a good thing, but an expectation of their representing communities is unreasonable.[70]

The second comment regarding language also requires consideration. Following the workshop, one audience member told the authors not to worry about the impacts of the IAC on local use of marine turtles. S/he was confident that, due to the exception clause, the "measure" for eliminating the "intentional capture, retention or killing of, and domestic trade in, sea turtles, their eggs, parts or products" was relatively toothless and that its value was in its message. The exception clause means that the first of the IAC's measures should not dissuade countries where use is ongoing from ratifying the agreement.[71] The situation does call into question the effectiveness of the IAC in this regard, however, and may in fact be the strongest evidence that a scalar mismatch exists. While there is a goal to eliminate domestic use, it will be difficult to achieve in practice via this international agreement. If there are "no teeth" in the first measure, then its message is indeed most important. Environmental discourses and/or narratives have impacts on both policy formation and project implementation.[72] The analysis above suggests that the overriding message in the IAC is that the use of marine turtles should be eliminated, and that the role of local people is to be educated about and then support predetermined conservation objectives.

[70] One anonymous reviewer of this paper questioned why community-based conservation may have been absent from the text and made some suggestions, e.g., opposition from some delegations, difficulty in writing adequate text, difficulty in devising implementation measures, or lack of wide support among the delegations for the concept. Without having participated in negotiations, the authors are unable to answer this. If there was lack of widespread support, this would negate the claim that communities will be taken care of by State representatives and NGOs.

[71] At least two countries where legal use is ongoing (Nicaragua and Belize) and that signed the IAC have yet to ratify it.

[72] See J.S. Dryzek, THE POLITICS OF THE EARTH: ENVIRONMENTAL DISCOURSES (1997).

5.2. Ways forward for the IAC

Three recommendations for overcoming some of the limitations in the text of IAC are provided. While the analysis presented above is based on the text, recommendations are geared toward implementation activities. As the text of the treaty has been ratified, any improvements are likely to come most easily through implementation, although there are provisions for adding annexes and protocols to the treaty.

1. *Seeking a balance between natural and social sciences.* The most obvious way to overcome some of the textual limitations (those of omission) in the IAC and to promote the integration of social sciences into its implementation is to adopt a wide interpretation of science and scientists. While current language of the IAC is unspecific about social and economic issues (in contrast to biological issues), attention to the composition of the Scientific Committee and to the scientific representatives on the Consultative Committee can ensure that social scientists and their concerns are included. More specifically, if social scientists are included on the Scientific Committee they are likely to expand the committee's mandate to include the — at the moment omitted — studies of social and economic impacts of measures on affected communities (Article VIII, 2.a and 2.b).

2. *Including NGOs and local communities.* Again, care in the selection of NGOs sitting on the Consultative Committee is called for. While three NGOs will not be able to represent the region, some regional representation can be incorporated. Furthermore, the Parties need to have a frank discussion regarding the purpose of NGO inclusion. Will NGOs represent the interests of other NGOs interested in marine turtle conservation, or will they represent the interests of communities living in the region and potentially impacted by the treaty? The answer to this question will (or at least should) impact on NGO selection. If NGOs are to represent communities, then the mechanics of the selection process become more difficult. Selecting representatives of regional NGOs that act as umbrella groups or NGO networks might be one way to increase the diversity of coverage.

3. *Using the flexibility afforded in the IAC.* Article VII, 4 allows the Consultative Committee to establish expert committees as needed, and Article V, 3.c allow the Parties to adopt additional measures as deemed appropriate, which may be included in an Annex. These two clauses provide opportunities that hold promise in several ways. Firstly, should the Scientific Committee turn out to be a committee of natural scientists, the Consultative Committee could presumably invoke Article VII, 4 to establish a complimentary committee geared toward the social sciences. While the committee would lack the formal status accorded via inclusion the Articles of the agreement, and a separate committee would do little to promote the integration of natural and social sciences in decision making, it would be superior to ignoring social sciences altogether. Secondly, Article VII, 4 could be used to form committees to evaluate applications under the exception clause, and the membership of such committees could include community representatives. This would overcome the limitation identified above regarding community access to this process. Thirdly, the Consultative Committee could, more generally, call for the formation of a committee to

address the problems of responding to community level needs via this agreement. Any recommendations forthcoming from such a committee could be considered by the Parties and possibly included as an Annex.

5.3. Conclusions

There are two important repercussions of focusing on the IAC's response to four specific issues in conservation. The first is that other issues have been overlooked. The IAC does many good things, some of which are appropriate to, or "match," an international treaty. For example, Article XII on International Cooperation raises the issues of the transfer of resources and expertise and of cost sharing between member countries. Article XIII on Financial Resources addresses the need of finding funds to implement treaty objectives. That one government might transfer resources and/or technology for TEDs compliance to other governments in response to the IAC, for example, is conceivable. These two articles together reflect a recognition that international conservation efforts often experience yet another mismatch, i.e., that the costs of protecting internationally valued resources are often borne by those who can least afford it.[73] Naro-Maclel[74] points out that these Articles were included at the request of Latin American countries, a result of negotiations, and Frazier cites the original intention of non-government conservationists was to introduce a concept of "user pays."[75]

The second repercussion is that the "selectivity" of an issues-based analysis influences the interpretation, and focusing on different issues might lead to very different concerns than those presented here. For example, Frazier has critiqued the IAC with regards to its TEDs objectives and raises concerns regarding whether or not the Scientific Committee might be able to operate independently, without being subjected to undue political influence. In his analysis, the Scientific and Consultative Committees are less powerful than the commercialized fishing industry, and the IAC might prove ineffective in combating destructive fishing practices. Frazier's analysis contrasts with the analysis presented in this paper, where local communities are the focus and are seen as less powerful than the marine turtle conservation lobby, united in its resolve to restrict (and preferably eliminate) domestic use of marine turtles.

In spite of the limitations on an issues-based approach, the argument presented above suggests that the IAC, while holding the potential to make significant contributions to marine turtle conservation on many fronts, does not adequately reflect current conservation thinking regarding locally responsive conservation activities. To accept this argument, one must accept that the components of such thinking — the shift away from exclusionary protection, the potential for sustainable use and community-based conservation, and rethinking conservation agents — are reasonable objectives to pursue. These ideas arose through experiences in the field, where top-down, exclusionary conservation projects have

[73] A. Schöitz, *Conserving Biological Diversity: Who is Responsible?*, 18(8) AMBIO 454 (1989).
[74] Naro-Maciel, *supra* note 2.
[75] Frazier, *Guest Editorial: Inter-American Convention for the Protection and Conservation of Sea Turtles, supra* note 2.

often failed to meet their objectives and have had considerable negative impacts on local communities.[76] As Hackel[77] states, "no matter how much protection is needed, ... it cannot be the protection of the past."

This is not to suggest that national parks be abandoned, science ignored, or the state has no role to play in conservation. Rather, a mixed approach to conservation is needed. Just as there may be limited opportunities for establishing more national parks, community-based conservation may not always be appropriate. International conventions will be good at achieving some things and ineffective at others. The scalar mismatch of concern here arises from the use of an international treaty to eliminate local use of marine turtles. That the IAC allows for unilateral exceptions to the measure aimed at eliminating domestic use arguably ensures that it will be ineffective at achieving this goal. The more important argument, however, is that the goal may be inappropriate. The importance of locally-based and responsive programs has been recognized by marine turtle biologists in other contexts, including major policy documents,[78] but these sentiments are not reflected in the existing text of the IAC. Nevertheless, there is opportunity for them to reemerge in its implementation.

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[76] Anderson and Grove, *supra* note 27; Ghimire and Pimbert, *supra* note 25; Western and Wright, *supra* note 37.

[77] Hackel, *supra* note 23, at 474.

[78] See K.L. Eckert, *Designing a Conservation Program*, in RESEARCH AND MANAGEMENT TECHNIQUES FOR THE CONSERVATION OF SEA TURTLES 6 (K.L. Eckert et al., eds., 1999); See also J.G. Frazier, *Community-Based Conservation*, in RESEARCH AND MANAGEMENT TECHNIQUES FOR THE CONSERVATION OF SEA TURTLES 15 (K.L. Eckert et al., eds., 1999).