

The Slow Swim from Extinction: Saving Turtles in the South Pacific.

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Executive Summary.

- Sea turtles are endangered all over the world, including the South Pacific.
- In addition to numerous international and regional initiatives, a Regional Marine Turtle Conservation Program (RMTCP) has been established in the South Pacific, and this is the platform from which enhanced regional agreement will come.
- The RMTCP has very good objectives for the collection of marine turtle information and is clearly consistent with international best practice.
- The balance between sovereign rights to exploit natural resources and the obligation to conserve endangered species is well entrenched in international law and the regional conventions of the South Pacific.
- The movement towards a CMS negotiated agreement is consistent with international best practice.
- The RMTCP fails to deal comprehensively with the issue of the incidental capture of sea turtles despite clear principles from international environmental, fisheries and trade law. The active support for appropriate technologies and principles in this area needs to be seriously considered.
- The RMTCP needs to emphasise full compliance with CITES.
- The RMTCP is largely consistent with best practice and is notably innovative with regards to the customary take of sea turtles by traditional peoples'. However, the bottom line that any subsistence take must ultimately not operate to the disadvantage of the species needs to be enhanced.
- The RMTCP is broadly consistent with recognition of the overall threats facing sea turtles in terms of habitat destruction. However, certain priority areas, such as nesting beaches and cross-cutting concerns like scientific links between climatic change and migratory species should be stronger.
- Although the RMTCP is consistent with international best practice in terms of recognition of the threats of pollution to sea turtles it could advance itself further by linkages to the already elaborate network of treaties and policy documents already operative in the South Pacific on this overlapping problem.
- The RMTCP is correct to recognise the tourist potential from sea turtles, but this must be buttressed by international and regional guidelines which will act to keep any tourism ecologically and socially sustainable.
- The RMTCP is fully cognizant of the necessity of strong linkages to the local community as a prerequisite for turtle conservation.
- Reviews and evaluation of all sovereign legislation in this area, including enforcement, as envisaged by the RMTCP are commendable. However, enforcement and compliance needs to be given enhanced attention.

Abstract.

The purpose of this paper is to set out the essential requirements for a successful regional agreement for sea turtles in the South Pacific. To achieve this, the current Regional Marine Turtle Conservation Program (RMTCP)² which runs under the auspice of the South Pacific Regional Environmental Program (SPREP) will be juxtaposed against the 'best practice' in this area, as evinced by current development in international environmental law and a number of other regional agreements which focus exclusively on sea turtles.

1. Sea Turtles.

The order of *chelonina* encompasses terrapins, tortoises and turtles. Although all three are slow moving reptiles, the first two typically live on land or in fresh water. Conversely, turtles typically live in the ocean and only occasionally visit the land. As a group, marine turtles represent an ancient and distinctive part of the world's biological diversity, first appearing more than 100 million years ago. The life cycles of marine turtles are extraordinarily complex. Their life history evolution has been constrained by the morphological limits imposed by a rigid shell and the need to deposit eggs in a safe terrestrial site. After incubating for about two months, the hatchlings run to the sea where they virtually disappear. Some turtles may spend decades on the high seas before returning to coastal waters. Dispersing across ocean basins is routine for many marine turtles, as part of their normal maturation process. Once the turtle has reached a threshold size, its shell becomes its only effective defence against predation.³ On reaching maturity, which may take as much as half a century for some populations, the adults make migrations between feeding and breeding grounds. Marine turtles are excellent navigators, frequently migrating hundreds of even thousands of kilometers between foraging and nesting grounds. They spend their lives at sea but return to land to reproduce. Adult females nest in multiyear cycles, coming ashore several times to lay hundreds of eggs during a nesting season.

Sea turtles devolve into seven (or eight) distinct species. The olive ridley (*Lepidochelys olivacea*) plies the high seas in the tropics of the Pacific, Atlantic and Indian oceans. The Kemp's ridley (*Lepidochelys kempi*) takes to the shallows of the Gulf of Mexico and North American Atlantic. The behemoth leatherback (*Dermochelys coriacea*) adapts to both Arctic and tropical waters while making the longest seasonal migration of any sea turtle. The loggerhead (*Caretta caretta*) populates the world's subtropics, and coral reefs attract the hawksbill (*Eretmochelys imbricata*). The green turtle (*Chelonia mydas*) grazes sea grasses in the tropics. The east Pacific black turtle (*Chelonia agassizi*) perhaps a subspecies of the green,⁴

² The updated version of the RMTCP was set down at the 6th Regional Meeting for the Regional Marine Turtle Conservation Programme (RMTCP) 24-26 February 2003, Apia, Samoa.

³ See Gans, C & Huey, R. (1985). *The Biology of Reptilia*. (Wiley, NY). Volume 16. 389-421.

⁴ Pritchard, P. (1999). 'The Status of the Black Turtle.' *Conservation Biology*. 13(5): 1000-03.

ranges from Baja California to the Galapagos. Only the Australian flatback is not found in the Western Hemisphere.

The Pacific area supports the world's largest remaining populations of green, hawksbill and loggerhead turtles. There are six marine turtle species that feed and migrate through the Pacific waters. These are the green, hawksbill, leatherback, loggerhead, Pacific Ridley and the flatback. There is also one record of the subspecies *Chelonia mydas agassi* from Papua New Guinea.⁵ These species often criss-cross the region. For example, green turtles migrate 1600km from American Samoa to Fiji (a 34-45 day trip at 1.8 km per hour)⁶ as well as French Polynesia (2,000 km away in a different direction).⁷ Loggerhead turtles go even further, and are recorded as being involved in trans-Pacific migration.⁸

2. A Declining Species.

Turtles have a very long history of being utilised by humanity. Records of their utilisation date back to the Bronze age,⁹ and by the time of Hellenistic Greece, Aristotle had made detailed studies of them.¹⁰ Despite this long history, the relationship between humanity and sea turtles has ended up being one of a very poor management. The depth of this problem has rapidly increased as humanity has both increased its numbers and consumption in exponential terms over the last few centuries. As recently as the 18th and 19th centuries marine turtles appear to have been abundant, with some populations numbering well into the millions. However, barely 100 years later, all eight species of turtle are endangered or threatened. Their eggs are taken for food and aphrodisiacs. Their nesting sites go for development. They are ground up by dredges, run over by pleasure boats, poisoned by pollution, strangled by trash and drowned in fishing nets. Finally, they are killed for food. The practice was so prevalent that the commercial exploitation (as opposed to ongoing non-commercial take) of sea turtles as fisheries only ended in Ecuador in 1982¹¹ and Guatemala in the early 1990s.¹² Likewise, before the killing of ridley's turtles was outlawed in Mexico in 1990, nearly 75,000 were being killed annually for their leather.¹³

Cumulatively, the result for sea turtles is a depressing one. The populations of the marine turtles frequenting the territorial waters and beaches of the Atlantic coast of Africa, from the Strait of Gibraltar to the Cape of Good Hope, including Macaronesia, are "seriously threatened."¹⁴ The sea turtles of around the Americas are: "threatened

5 See Craig, P. (1993). 'Sea Turtles: A Vanishing Resource in American Samoa.' *Marine Turtle Newsletter*. 61: 13-15. James, R. (1977). 'Olive Ridley Turtles and Leatherbacks Found in the Solomons.' *Marine Turtle Newsletter*. 2: 2-3. Naughton, J. (2001). 'Sea Turtle Survey in the Federated States of Micronesia.' *Marine Turtle Newsletter*. 55: 9-12.

6 Craig, P. (1994). 'Sea Turtles Migrate from American Samoa to Fiji.' *Marine Turtle Newsletter*. 66: 7-8.

7 Craig, P. (1995). 'Turtle Travels From American Samoa to French Polynesia.' *Marine Turtle Newsletter*. 70: 5-6.

8 CMS. (1994). *Proceedings of the Fourth Meeting of the Parties*. (Secretariat, Bonn). 115.

9 Mosseri, C. (1998). 'Marine Turtle Exploitation in Bronze Age Oman.' *Marine Turtle Newsletter*. 81: 7-9.

10 See Aristotle. *History of Animals*. Books VII-X. (Trans D. Balme, Harvard UP, NY), 149-151. Aristotle. *History of Animals*. Books I-III. (Trans Peck, A. Harvard UP, NY). 70-75, 82-85.

11 Frazier, J. (1982). 'Ecuador Closes Commercial Turtle Fishery.' *Marine Turtle Newsletter*. 20: 5-6. Anon. (1987). 'Ecuador Takes A Giant Step Backwards.' *Marine Turtle Newsletter*. 40: 1.

12 Higginson, J. (1989). 'Sea Turtles in Guatemala.' *Marine Turtle Newsletter*. 45: 1-5.

13 Rudloe, A. (1994). 'In A Race for Survival.' *National Geographic*. 97, 101.

14 The Memorandum of Understanding Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa. 39 *International Legal Materials*. (2000). 1. Preamble.

or endangered, and .. some of these species may face an imminent risk of extinction.”¹⁵ Likewise, it has been accepted that the sea turtles of the Caribbean coast Of Costa Rica, Nicaragua and Panama, in the absence of adequate protection and management: “will not survive commercial exploitation, due to the increasing demand by human populations and other economic activities of the Caribbean coast of the three countries.”¹⁶

Since World War II, egg production in the shared nesting grounds between Malaysia and the Philippines had dropped by 88% owing to overexploitation for trade and local consumption.¹⁷ The overall situation was well summarised by the Convention on the International Trade in Endangered Species of Flora and Fauna (CITES):

“As a general rule, use of sea turtles has not been conducted in a sustainable manner and has led to the decline of sea turtle populations.”¹⁸

This may be an understatement. Although a number of documented cases of recovering populations exist, these stand out as exceptions against a background of decimated populations. Thus, in late 2,000 the revised IUCN Red List of Threatened Species, listed 24 turtle species worldwide as critically endangered, compared to only 10 species in 1996. In the Asian region alone, 66 of the 90 species of Asian freshwater turtles and tortoises are threatened. Half (45) are endangered, including 18 critically endangered species. One is already extinct (the Yunnan box turtle).¹⁹

With regard to the applicable international conventions, the olive ridley, Kemp’s ridley, leatherback, loggerhead, hawksbill and green turtle have been listed as endangered migratory species on Appendix I of the Convention of Migratory Species since 1985.²⁰ Likewise, CITES has had all seven species of sea turtle listed on their Appendix I since 1981.

These listings are, in part, justified by multiple case studies which are continually documenting declines in numbers. For example, Leatherbacks are in decline in multiple locations.²¹ Breeding populations of leatherbacks have fallen by more than 90% in the Pacific Ocean over the last two decades.²² The US Virgin Islands, parts of Costa Rica,²³ Malaysia²⁴ and Indonesia²⁵ are particularly pronounced with some leatherback groupings thought to be on the brink of extinction. Consider, at Terengganu in Malaysia, nesting declined from 10,000 nests in the 1950s to less than

15 Inter-American Convention For The Protection And Conservation Of Sea Turtles This Convention is reprinted in the 2002 Journal of International Wildlife Law and Policy. 5(1): 157-163. Preamble.

16 Cooperative Agreement for the Conservation of Sea Turtles of the Caribbean Coast Of Costa Rica, Nicaragua and Panama. Reprinted in Journal of International Wildlife Law and Policy. 3(2) 179-189.Preamble.

17 Anon. (1996). ‘Transfrontier Turtle Sanctuary.’ Traffic Bulletin. 16 (2): 41.

18 CITES. Conf. 9.20 (Rev.). Guidelines for evaluating marine turtle ranching proposals.

19 See Editor. (2000). ‘More Endangered Freshwater Turtle Species.’ TRAFFIC Dispatches. 15:1-2.

20 CMS. (1985). Proceedings of the First Meeting of the Conference of the Parties (CMS Secretariat, Bonn). 10-12, 28, 112. Note, many of these were also split listings, and as such, were also listed on Appendix II.

21 Sarti, L. (1996). ‘Decline of World’s Largest Nesting Assemblage of Leatherback Turtles.’ Marine Turtle Newsletter. 74: 2-5.

22 Recommendation 7.6. Improving the Conservation Status of the Leatherback Turtle. CMS. CMS (2002). Proceedings of the Seventh Meeting of the Parties. (CMS, Secretariat).

23 Marcovaldi, M. (2003). ‘Marine Turtles in Latin America and the Caribbean.’ Marine Turtle Newsletter. 100: 38-42.

24 Chan, E. (1988). ‘An Update on The Leatherback Turtles of Malaysia.’ Marine Turtle Newsletter. 42: 4.

25 Betz, W. (2001). ‘Once Thriving Colony in Decline.’ Marine Turtle Newsletter. 56: 8-9.

20 by 2002.²⁶ Green turtles are declining in multiple areas around the world. Evaluations of 34 index sites in 2002 indicated extensive subpopulation declines in all major ocean basins over the last 140 years. Sub-population declines of over 80% have been shown for populations in the Eastern Pacific Ocean, western Pacific Ocean, Southeast Asia, northern Indian Ocean, western Indian Ocean and the Mediterranean sea.²⁷ Particular areas of concern involve Pakistan,²⁸ Costa Rica and Mexico,²⁹ Madagascar³⁰ and are critically endangered in the Mediterranean.³¹ Olive ridleys are declining around South and Southeast Asia,³² Pakistan,³³ Madagascar,³⁴ Surinam,³⁵ Brazil and Mexico.³⁶ Trends in Hawksbill abundance show strong declines in South and Southeast Asia,³⁷ Yucatan,³⁸ Madagascar³⁹ and the Caribbean show strong decreases (although there may be a potential for some recoveries).⁴⁰ Loggerheads maintain a critically endangered status in the Mediterranean.⁴¹ The amount of nesting females of Kemp's ridley sea turtle at its sole rookery in Mexico have fallen from 40,000 in 1947 to 500 in the mid 1980s.⁴² Surveys at the turn of the century in Fiji showed an 80% decline in major nesting sites and no new nesting in some areas. In one extreme example, a key Solomon Islands rookery appears to be down to its last few cycles of young breeding females.⁴³ Given such scenarios, it is not surprising that the International Union for the Conservation of Nature (IUCN) proclaimed that:

“without active intervention and management, marine turtle populations are expected to continue to decline to extinction.”⁴⁴

3. Scientific Gaps.

Despite the growing certainty that a number of species of sea turtles are under serious threat, large gaps in scientific knowledge of marine turtles in terms population dynamics, life histories and threats continue, and new information is continually coming to light. For example, major nesting beaches for green turtles were only discovered in India in the early 1980s,⁴⁵ Turkey in the late 1980s,⁴⁶ Libya in the mid 1990s⁴⁷ and on Cape Verde islands in 2001.⁴⁸ Comprehensive surveys of what is now

26 Shanker, K. (2003). 'Marine Turtle Conservation in South and Southeast Asia: Hopeless Cause or Cause for Hope ?' *Marine Turtle Newsletter*. 100: 43-51.

27 See IUCN (2002). *IUCN Red List Status Assessment: Green Turtle*. (IUCN, Gland). 2.

28 Asrar, F. (1999). 'Decline of Marine Turtle Nesting Populations Around Pakistan.' *Marine Turtle Newsletter*. 83: 13-14.

29 Marcovaldi, M. (2003). 'Marine Turtles in Latin America and the Caribbean.' *Marine Turtle Newsletter*. 100: 38-42.

30 Rakotonirina, B. (1994). 'Sea Turtles of Madagascar: Status, Exploitation and Conservation.' *Oryx* 28(1): 51-60.

31 Broderick, A. (2002). 'Estimating the Number of Green and Loggerhead Turtles Nesting Annually in the Mediterranean.' *Oryx*. 36(3): 227-240.

32 Shanker, K. (2003). 'Marine Turtle Conservation in South and Southeast Asia: Hopeless Cause or Cause for Hope ?' *Marine Turtle Newsletter*. 100: 43-51.

33 Asrar, F. (1999). 'Decline of Marine Turtle Nesting Populations Around Pakistan.' *Marine Turtle Newsletter*. 83: 13-14.

34 Rakotonirina, B. (1994). 'Sea Turtles of Madagascar: Status, Exploitation and Conservation.' *Oryx* 28(1): 51-60.

35 Hoekert, W. (1996). 'Is the Surinam Olive Ridley On the Brink of Extinction ?' *Marine Turtle Newsletter*. 75: 1-4.

36 Marcovaldi, M. (2003). 'Marine Turtles in Latin America and the Caribbean.' *Marine Turtle Newsletter*. 100: 38-42.

37 Shanker, K. (2003). 'Marine Turtle Conservation in South and Southeast Asia: Hopeless Cause or Cause for Hope ?' *Marine Turtle Newsletter*. 100: 43-51.

38 Marcovaldi, M. (2003). 'Marine Turtles in Latin America and the Caribbean.' *Marine Turtle Newsletter*. 100: 38-42.

39 Rakotonirina, B. (1994). 'Sea Turtles of Madagascar: Status, Exploitation and Conservation.' *Oryx* 28(1): 51-60.

40 See CITES. (2003). 'Hawksbill Turtles. Background.' <<http://www.cites.org/eng/prog/HBT/intro.shtml>>

41 Broderick, A. (2002). 'Estimating the Number of Green and Loggerhead Turtles Nesting Annually in the Mediterranean.' *Oryx*. 36(3): 227-240.

42 Balazs. (1979). 'An Additional Strategy for Preventing the Extinction of Kemp's Ridley.' *Marine Turtle Newsletter*. 12: 3-4. Carr, A. (1977). 'Crisis for the Atlantic Ridley.' *Marine Turtle Newsletter*. 4: 2-3. Woody, J. (1985). 'Kemp's Ridley Continues Decline.' *Marine Turtle Newsletter*. 35: 4-5.

43 Anon. (2000). 'Sea Turtles Wanted: The Campaign to Save the Pacific's Sacred Fish.' *Tok Blong Pasifik* (June). 5-8.

44 IUCN. (1995). *A Global Strategy for the Conservation of Marine Turtles*. (IUCN, Geneva). 3.

45 Kar, C. (1982). 'Discovery of Second Mass Nesting Ground for Pacific Ridley Sea Turtles in Orissa.' *Marine Turtle Newsletter*. 23: 3.

46 Gerosa, G. (1998). 'Green Turtle Nesting at Akyatan Beach, Turkey.' *Marine Turtle Newsletter*. 81: 4-5.

47 Anon. (1995). 'Important Mediterranean Nesting Beaches Discovered.' *Marine Turtle Newsletter*. 71: 9-10.

recognised as some of the most important nesting colonies on the Atlantic coast of Africa were only completed early in the new century.⁴⁹ Even where the grounds are known, the tracking of these species is surprisingly slow. Although some of the more popular tourist locations began tagging sea turtles to track them as early as the 1950s, key countries in the Caribbean only began doing so in the 1980s⁵⁰ and the South Pacific did not begin a comprehensive sea-turtle tag scheme until 2001.⁵¹

Such gaps prevent effective conservation management. In addition, poorly managed scientific research can lead to non-useful focusing upon areas which are not critical or priority, duplication of effort, and loss of collaborative and co-ordinated opportunities. Failure to achieve the necessary scientific information in any of these areas may result in incomplete management plans.

A large amount of the information that needs to be collected can be determined by Convention on Migratory Species listing requirements.⁵² The requirements fall into three categories. Firstly, basic biological data (distribution, population numbers and trends, habitat and migrations) is required. With specific regard to sea turtles coordinated, ongoing and regular research and monitoring programmes need to be based on population identification and knowledge of population distribution (especially in terms of habitat and location of nesting, feeding and transit zones), size, structure and trends (especially in terms of reproduction, longevity). Reliable estimates of growth rates, fecundity and mortality rates are also needed across the board. The second category of CMS scientifically based requirements is data on the threats that sea turtles face. This category covers direct threats, habitat destruction, indirect threats, threats concerned specifically with migration and utilisation patterns. This second area is multifaceted and often requires difficult to obtain from diverse groups ranging from local communities practising a customary harvest upon sea turtles, through to fishing operators and their knowledge of bycatch problems.⁵³ Finally, the protection status, institutional recognition and additional protection needs - all within national, regional and international connections with regard to the species in question need to be addressed.

In regard to such scientific and policy needs, the RMTCP shapes up admirably.⁵⁴ In addition to assessing key stocks, such as the green turtles of Fiji, the leatherbacks of PNG/Solomons and the hawksbills of the Solomon Islands, the RMTCP also calls for the establishment of regional turtle databases, shared tag data and standardised field data. The plan also calls for genetic stock identification and composition; population structure: (including morphometric characteristics, sex ratio, age class, reproductive status). Required information also involves location of nesting and foraging areas; timing of breeding and nesting; species/population distribution, abundance and trends; significance, nature and extent of local use of turtles

48 See UNEP. (2001). 'New Insight Into Africa's Rich But Threatened Sea Turtle Resource.' Press Release. 01/92.

49 Catry, P. (2002). 'First Census of the ... The Most Important Nesting Colony on the Atlantic Coast of Africa.' *Oryx*. 36(4): 400-409.

50 Hurtadogo, M. (1982). 'Need for A Regional Program in the East Pacific.' *Marine Turtle Newsletter*. 21: 1-2. Balazs, G. (1989). 'New Initiative to Study Sea Turtles in the Eastern Pacific.' *Marine Turtle Newsletter*. 47: 19-21.

51 Balazs, G. (2001). 'Sea Turtle Tag Centre for the Pacific.' *Marine Turtle Newsletter*. 52: 14-15.

52 See Resolution 1.5, Format for Proposals for Amendment of the Appendices. Reprinted in CMS. (1985). *Proceedings of the First Meeting of the Conference of the Parties*. (Secretariat, Bonn). 47. Resolution 3.2. Appendix 1 Species. CMS. (1991). *Proceedings of the Third Meeting of the Parties*. (Secretariat, Bonn). 18-19, 37-38.

53 IUCN. (1995). *A Global Strategy for the Conservation of Marine Turtles*. (IUCN, Geneva). 5-7.

54 RMTCP, supra note 2. See sections 1-3.

(according to species, sex ratio, age class, reproductive status); migration (where, why & when including satellite tracking); impacts on populations from subsistence consumptive use & determination of sustainable estimates for subsistence use (according to nesting/foraging populations). Data on bycatch is also to be collected. Historical records of sightings of marine turtles will be collected as will historical catch and by-catch records; historical records of species occurrence, distribution and abundance; any past research and assessments of marine turtles in the region and documented evidence of current conservation status of marine turtles in SPREP member countries. The RMTCP also aims to review and evaluate the effectiveness of local and national marine turtle and habitat protection legislation and regional/international agreements currently in force in SPREP member countries.

Despite these positive orientations, the weakness in the plan is that the primary responsibility falls upon each country. Given the socio-economic constraints that some of these countries operate under, it may be necessary to have strong supplemental support to ensure that the above information is obtained. Such support may come from a variety of sources ranging from intergovernmental organizations, such as the Global Environment Fund or the Convention on Migratory Species, through to the expertise offered by universities and/or non-governmental organizations. Without the strong cohesion offered by such outside assistance, the overall programme may be as limited by the pace set by the most slack participant.

4. An Animal of Multiple Legal Personality.

In 1968 at the fourth meeting of the International Union for the Conservation of Nature, the Congress debated what to do about sea turtles. However, from the outset, they were aware of the difficulties in this field. For although they urged governments to begin substantive conservation measures for the protection of marine turtles they added that such attempts were “futile” without first having an adequate knowledge of their migrations.⁵⁵ At this early point, the difficulties involved in saving sea turtles began to become apparent. The first problem was that states in which populations of sea turtles resided did not all have turtle conservation legislation. Unfortunately, this is not only a historical problem, as a number of countries continue to only consider turtles as a small subset within fisheries legislation. For example, although Mexico was the first country to protect turtle eggs in 1927,⁵⁶ the United States only introduced the first meaningful conservation plan for sea turtles in 1978.⁵⁷ Conversely, at least at the end of the twentieth century, countries such as Israel, despite having ecologically small communities of turtles, had no specific sea turtle legislation.⁵⁸

The second, even larger impediment is that sea turtle migrate – and as such, they do not fall under the jurisdiction of any one state. Worse than this, given its migratory nature, they often goes between both multiple countries and the high seas, in areas of which there is no effective international guardianship. The obvious difficulty is that a lack of co-ordination across an entire species or population geographical range may

55 IUCN, 1968 Resolutions. Reprinted in Ruster, A. (ed). *International Protection of the Environment*. (Oceana, NY). Volume V. 2448, 2449.

56 Namnum, S. (2002). 'The Inter-American Convention and Its Implementation in Mexico.' *Journal of International Wildlife Law and Policy*. 5(1) 87-185.

57 Anon. (1978). 'USA Sea Turtle Protection Plan.' *Marine Turtle Newsletter*. 9: 4-5.

58 Kuller, Z. (1999). 'Current Status and Conservation of Marine Turtles in... Israel.' *Marine Turtle Newsletter*. 86: 3-5.

result in one countries management and conservation regime being negated as soon as it swims out of the EEZ.

These difficulties were formidable enough at the outset of the 1970s, when treaties on the trade in endangered species, let alone migratory species or biodiversity in general were even on the drawing board. Conversely, by 2000, not only were sea turtles implicated in all of these treaties, they also became indirectly involved in fishing fora due to their incidental catch, debates on customary use by traditional peoples, for a that deal with oceanic pollution, and even repeated litigation at the World Trade Organisation. The overt irony is that despite all of these indirect connections, there is no singular overarching international treaty dealing specifically with the conservation of sea turtles.⁵⁹ Accordingly, whenever a turtle agreement is concluded it is necessary to tie it in to a number of international and regional co-operation and agreements which have overlapping considerations.

5. An Evolving Picture of Sea Turtle Management.

Despite the the plethora of international agreements and forums mentioned above, a blueprint for international and regional management regimes for the conservation of sea turtles is beginning to emerge. This process begins with the United Nations Convention on the Law of the Sea, which guaranteed coastal states their 200 mile Exclusive Economic Zones.⁶⁰ Within this area, the Coastal State has “sovereign rights for the purpose of... exploiting, conserving and managing natural resources...”⁶¹ The coastal State therefore has extensive powers to determine the allowable catch of the living resources in the EEZ.⁶² A complimentary provision is located with the 1992 Convention on Biological Diversity (which would apply when the turtles were on land) which stipulates that:

“States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies.”⁶³

Given that sea turtles are living natural resources that commonly reside either on a country’s territory or within their EEZs, this could have been a rather quick ending to the problem at hand. However, this is not the case as neither the sovereign right to exploit natural resources or the EEZ or the sovereign rights within the CBD are absolute. With regard to the CBD, the rider on the sovereign right to exploit their own resources is that they also have:

“the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”

In a similar fashion, with regard to EEZs, a number of specific exemptions listed in the UNCLOS, such as with the management of marine mammals in both EEZs⁶⁴ and

59 See Wold, C. (2002). ‘The Status of Sea Turtles Under International Environmental Law.’ *Journal of International Wildlife Law and Policy*. 5(1): 11-49.

60 Official Text of the United Nations convention on the Law of the Sea. (1983). 21 ILM. (1982). 1261. Article 51.

61 Article 56. (1)(a).

62 See Yturriaga, J. (1998). *The International Regime of Fisheries: From UNCLOS 1982 to the Presential Sea*. (Nijhoff, London). 115.

63 Convention on Biodiversity. UNEP/Bio Div/CONF 12 (1992). *International Legal Materials*. 31:954. Article 3.

the high seas⁶⁵ limit the rights of the coastal state. Similar constraints over the highly migratory stocks (as listed in Annex 1 of UNCLOS), of which international co-operation is required, are contained within the UNCLOS.⁶⁶ In part, this principle helped lead to the development of the 1995 *Agreement For The Implementation of the Provisions of the UNCLOS Relating To The Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (my italics).⁶⁷ Although sea turtles were not listed on the Annex of the UNCLOS as highly migratory species, and the 1995 Agreement was clearly for fish stocks, the broad principles of UNCLOS with regard to migratory stocks still merit consideration. This is axiomatic as the highly migratory status of sea turtles has been clearly reflected in the convention directly on this point: the CMS (see above). Accordingly, assuming such a recognition, Article 64 of the UNCLOS stipulates that the:

“Coastal State and other States whose nationals fish in the region for the highly migratory species ... *shall* co-operate directly or through appropriate *international organisations* with a view to ensuring conservation and promoting the optimum utilisation of such species throughout the region...”⁶⁸ (my italics).

The importance of Article 64 is twofold. Firstly, the obligation to cooperate is mandatory. Secondly, the emphasis is upon international co-operation, not necessarily bilateral or purely regional efforts (which fall more under Article 63, pertaining to stocks which are more dependent on only one or two other countries). In addition to the obligation to work together on highly migratory species, the UNCLOS established a clear bottom line with regard to what a state can and cannot do – in conservation terms – within its own waters. Specifically, states are also obliged to protect marine species from extinction by making sure that through proper conservation and management measures that “the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation.” Subsection 4 adds:

“... the coastal State shall take into consideration the effects on species associated with or dependent on harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.”

To help achieve these goals: “As appropriate, the coastal State and competent international organisations, whether sub-regional, regional, or global, shall co-operate to this end.”⁶⁹ Article 61 adds extra weight due to the consideration that shall be given to all marine living resources (not just the listed highly migratory stocks). The end result of all of the UNCLOS provisions with regard to sea turtles is threefold. Firstly, states must co-operate with highly migratory species. Secondly, they shall make sure any takes of living resources does not endanger the resource. Finally, they need to factor in considerations of incidental catch of non-target species when such effects seriously threaten the status of the non-target species.

64 See Article 65.

65 See Article 120.

66 Johnston, D. (1988). *The International Law of Fisheries: A Framework for Policy Orientated Inquiries*. (Nijhoff, New Haven). LXXI.

67 A/CONF.164/37. 8 September 1995.

68 Article 64 (1). See also Dahmani, M. (1987). *The Fisheries Regime of the Exclusive Economic Zone*. (Nijhoff, London). 42-50.

69 Article 61 (2).

Within the South Pacific, similar obligations are found in the 1976 Apia Convention on the Conservation of Nature⁷⁰ and in the South Pacific and the 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region.⁷¹ Article V of the Apia Convention stipulated:

“The Contracting Parties shall, in addition to the protection given to indigenous fauna and flora in protected areas, use their best endeavours to protect such fauna and flora (special attention being given to migratory species) so as to safeguard them from unwise exploitation and other threats that may lead to their extinction.”

Moreover:

“Each Contracting Party shall protect as completely as possible as a matter of special urgency and importance the species included in the list it has established in accordance with the provisions of the last preceding paragraph. The hunting, killing, capture or collection of specimens (including eggs and shells) of such species shall be allowed only with the permission of the appropriate authority. Such permission shall be granted only under special circumstances, in order to further scientific purposes or when essential for the maintenance of the equilibrium of the ecosystem or for the administration of the area in which the animal or plant is found.”

Article 14 of the Noumea Convention added: “The Parties shall, individually or jointly, take all appropriate measures to protect and preserve ... threatened or endangered flora and fauna”

Attempts to address these obligations with regard to sea turtles began in 1989 with the programme run under the auspice of the South Pacific Regional Environment Programme (see below) and the first Action Plan For The Conservation Of Mediterranean Marine Turtles (revised in 1999).⁷² Seven years later two agreements were concluded in 1996. These were the Inter-American Convention for the Protection and Conservation of Sea Turtles⁷³ and the Memorandum Of Agreement Between the Government of the Republic of the Philippines and the Government of Malaysia on the Establishment of the Turtle Islands Heritage Protected Area.⁷⁴ These agreements were followed in 1998 with the Cooperative Agreement for the Conservation of Sea Turtles of the Caribbean Coast of Costa Rica, Nicaragua and Panama;⁷⁵ in 1999 with the Memorandum of Understanding Concerning Conservation

70 Apia Convention. Reprinted in Kiss, C. (ed). Selected Multilateral Treaties in the Field of the Environment. (Cambridge University Press, 1980). 463.

71 The Noumea Convention. Reprinted in Rummel-Bulska, I. (ed). Selected Multilateral Treaties in the Field of the Environment. (Cambridge University Press, 1990). Volume II.

72 <http://www.oceanlaw.net/texts/medturtles.htm>

73 This Convention is reprinted in the 2002 Journal of International Wildlife Law and Policy. 5(1): 157-163.<http://www.oceanlaw.net/texts/turtles1.htm>. Naor, E. (1998). ‘The Inter-American Convention: An Historical Overview.’ Journal of International Wildlife Law and Policy. 1(1): 169-170.

74 This agreement is reprinted in the 2002 Journal of International Wildlife Law and Policy. 5(1): 157-163. Anon. (1996). ‘Transfrontier Turtle Sanctuary.’ Traffic Bulletin. 16 (2): 41.

75 Also reprinted in Journal of International Wildlife Law and Policy. 3(2) 179-189. <http://www.oceanlaw.net/texts/turtles2.htm>. Chacon, D. (1998). ‘Central American Workshop on Sea Turtle Conservation.’ Marine Turtle Newsletter. 79: 24-25. See Eckert, K. (2001). ‘Caribbean Nations Vote to Protect Turtles.’ Marine Turtle Newsletter. 54: 3-4. Eckert, K. (2001). ‘Marine Turtle Conservation in the Wider Caribbean Region.’ Marine Turtle Newsletter. 94: 12-13.

Measures for Marine Turtles of the Atlantic Coast of Africa;⁷⁶ and finally in 2000 with the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia.⁷⁷

The primary instrument through which these three considerations are being resolved, with regard to sea turtles, is the 1979 Bonn Convention on the Conservation of Migratory Species of Wild Animals (CMS)⁷⁸ which has been the primary conduit for the Article IV⁷⁹ regional turtle agreements.⁸⁰ The possibilities for linkages between the CMS and sea turtles first appeared in 1991, when it was suggested that marine turtles would be good candidates for multilateral co-operation.⁸¹ The support for such endeavours “at the political level” for a number of regional agreements was again voiced in 1994⁸² and 1997 (by which time regional workshops on sea turtles had been held in a number of countries).⁸³ In 1999, the CMS called for the Regional Co-ordination for Marine Turtles of the Indian Ocean and South East Asia.⁸⁴ The following year, the MOU for the Indian Ocean And South-East Asia recognised itself as an agreement under Article IV, paragraph 4, of the CMS.⁸⁵ The same process was followed with the CMS recommendation for an “urgent” meeting for the Conservation of Marine Turtles in the Atlantic Coast of Africa, including Macronesia.⁸⁶ Once more, the following year, an MOU concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa was concluded.⁸⁷ Although the Inter-American Agreement was not an Agreement Under Article IV of the CMS, it was hoped that it would be brought into: “the CMS family.”⁸⁸ Cumulatively, by the end of the century, the clear vision of the CMS was to continue assisting in the formation of regional agreements for sea turtles: “in such a way that these initiatives may eventually be linked to form a comprehensive global framework.”⁸⁹

6. The South Pacific Endeavour.

Although the above agreements represent a clear growth in terms of turtle specific arrangements, there are still distinct gaps in the geographical coverage. One of the most important of these gaps involves the South Pacific. This omission is important because the Pacific island region is a globally significant area for marine turtle

76 39 International Legal Materials. (2000). 1.

77 Reprinted in *Journal of International Wildlife Law and Policy*. 3(2) 188-190. Also available from: <http://www.oceanlaw.net/texts/turtles_mou2.htm>

Trono, R. (1995). ‘ASEAN Symposium Workshop on Sea Turtle Conservation.’ *Marine Turtle Newsletter*. 71: 22-23.

78 (1990). UKTS. No. 87.

79 “Parties are encouraged to take action with a view to concluding AGREEMENTS for any population or any geographically separate part of the population of any species or lower taxon of wild animals, members of which periodically cross one or more national jurisdictional boundaries.” Article IV(4). Article V sets out the guidelines for any such AGREEMENT.

80 See Hykle, D. (2002). ‘The Convention on Migratory Species and Other Instruments Relevant to Marine Turtle Conservation.’ *Journal of International Wildlife Law and Policy*. 5(1): 105-121.

81 CMS. (1991). *Proceedings of the Third Meeting of the Parties*. (Secretariat, Bonn). 50.

82 CMS. (1994). *Proceedings of the Fourth Meeting of the Parties*. (Secretariat, Bonn). 17, 115-116.

83 CMS. (1997). *Proceedings of the Fifth Meeting of the Parties*. (Secretariat, Bonn). 135.

84 Recommendation 6.6. *Regional Co-ordination for Marine Turtles of the Indian Ocean and South East Asia*. CMS (1999). *Proceedings of the Sixth Conference of the Parties*. (Secretariat, Bonn). 43.

85 Basic Principle 1.

86 Recommendation 6.7. *Conservation of Marine Turtles in the Atlantic Coast of Africa, Including Macronesia*. CMS (1999). *Proceedings of the Sixth Conference of the Parties*. (Secretariat, Bonn). 45.

87 See Basic Principle 1.

88 CMS. (1999). *Proceedings of the Sixth Meeting of the Conference of the Parties*. (Secretariat, Bonn). 17.

89 CMS. (1999). *Proceedings of the Sixth Meeting of the Conference of the Parties*. (Secretariat, Bonn). 46.

breeding and migration. It is also ironic as the South Pacific was one of the first regions to develop a distinct concern for the conservation of sea turtles. This concern was reflected in the establishment of the RMTCP in 1989 and associated active network of government and NGO agencies working together to effect turtle conservation and sustainable use.⁹⁰ The RMTCP was/is anchored in a vision aimed at ensuring the long term survival of turtle resources to meet the cultural, economic and nutritional needs of the peoples of the South Pacific. These actions were embodied in the 1997-2001 RMTCP Strategic Plan which articulated:

“We see a future where generations of Pacific Island people will have choices about how they use and interact with sea turtles. This dream will come true if we take action now to ensure that the sea turtle population recovers to become healthy, robust and stable. Turtles will be fulfilling their ecological role and be harvested by Pacific Islanders on a sustainable basis to meet their cultural, economic and nutritional needs.”⁹¹

The RMTCP started off with great enthusiasm, and soon after the Pacific Islands' first region-wide conservation campaign was the Year of the Sea Turtle in 1995.⁹² By 1998, the RMTCP had ongoing turtle conservation projects in Fiji, Marshall Islands, New Caledonia, Samoa, Solomon Islands and Vanuatu. By 1999, Papua New Guinea, Tuvalu and other countries were being brought into the programme.⁹³ Given such progress, the CMS reported in 1997 that: “no initiative” was required on part of the CMS to enhance activities to protect sea turtles in the region.⁹⁴

Despite this progress, and the fact that the RMTCP was the first regional attempt to conserve sea turtles, by 2000 it was clear that the programme was slowing down, and had to be reinvigorated (via renewed support from Canadian official assistance)⁹⁵ before being fully reviewed.⁹⁶ The reinvigoration process coincided with an idea which was first articulated in 1991, whereby the regional protection of marine turtles could be both strengthened through a regional agreement. Although the original proposal suggested this could be done in the form of a Protocol to the Convention for the Protection of the Environment and Natural Resources of the South Pacific,⁹⁷ later suggestions suggested that this should be done under the CMS auspice.⁹⁸ The arguments for the CMS position have evolved from Australia in 1999.⁹⁹ In the same year at the sixth CMS conference of the Parties, it was noted that despite the long standing turtle conservation programme in the South Pacific, a number of countries

90 By 2003, 6 review meetings of the programme had been undertaken. The purpose of the reviews was to put together action strategies and to update the region on the progress of the last actions. The sixth meeting occurred in 2003, and established a revised RMTCP STRATEGIC ACTION PLAN 2003-2005 (which is drawn from in this paper).

91 1997-2001 Strategic Plan. As noted in SPREP (1996) Annual Report 1995/96. (SPREP, Apia). 14. This vision is also the vision of the Working Draft: RMTCP Strategic Action Plan : 2003-2005.

92 See SPREP (1996) Annual Report 1995/96. (SPREP, Apia). 14.

93 See SPREP. (1999). Annual Report 1998. (SPREP, Apia). 4-5.

94 CMS. (1997). Proceedings of the Fifth Meeting of the Parties. (Secretariat, Bonn). 135.

95 SPREP. (2000). ‘Canada Continues Efforts to Save the Pacific’s Sea Turtles.’ Press Release. Sep 11.

96 See SPREP. (2002). Report of the 12th SPREP Meeting of Officials. (SPREP, Apia). 12-13.

97 Resolutions of the Second Meeting and Workshop of the Regional Turtle Conservation Programme (RMTCP). Reprinted in Marine Turtle Newsletter 2001, 57: 12-15.

98 For the debate about the virtues of a CMS Agreement or Memorandum of Understanding, as opposed to initiatives based under more regional legislation, see Gillespie, A (forthcoming). ‘The Dynamics of a Regional Whale Sanctuary.’ Asia Pacific Journal of Environmental Law.

99 CMS. (1999). Proceedings of the Sixth Meeting of the Conference of the Parties. (Secretariat, Bonn). 16. Hykle, D. (2000). Hykle, D. (2000). ‘The Convention on Migratory Species and Marine Turtle Conservation.’ Marine Turtle Newsletter. 87: 1-3.

were not partaking in the process. It was also considered essential to start to move from generic principles to specific action.¹⁰⁰

Australia reiterated its calls for regional co-operation for sea turtles again in 2001. The Australian Minister for the Environment called upon its neighbours in the region to consider greater regional co-operation to conserve sea turtles in the area, given that the migratory nature of the animal in question, protections in one country not complimented in another could quickly undermine any conservation regime.¹⁰¹ For example, up to 90% of marine turtles harvested in Papua New Guinea (which has weak turtle conservation laws) originated in Australia (which has strong ones).¹⁰² The final push in the momentum for a South Pacific turtle agreement came from the CMS in 2002 when the CMS Secretariat was authorised: “to explore the development of an instrument for marine turtles of the Pacific ocean within the context of the CMS Strategic Plan...”¹⁰³ With such support, by 2003 there discussion at SPREP of regional turtle management plans, similar to those being advocated for cetaceans.¹⁰⁴

These developments, for a regional agreement under the CMS auspice should be seen as consistent with international best practice for the management of sea turtles. Moreover, a South Pacific agreement in this area would strongly compliment the growing mosaic of other regional agreements for the conservation of sea turtles.

7. The Threats to Turtle Conservation & the Conditions of Successful Management.

Any agreement which attempts to confront the declining numbers of sea turtles has to successfully confront five distinct problems. The problems are incidental catch, international trade, subsistence use, habitat destruction and aspects of oceanic pollution. In addition, any successful management regime must be able to create sustainable tourism, achieve compliance with its regime and fully integrate the local community.

8. Incidental Catch.

International attention on the problem of incidental catch, or ‘by-catch’ began with general calls to improve fishing methods and restrict the detrimental impacts upon associated (non-target) species in 1982 with United Nations Convention on the Law of the Sea. This Convention set out clear (but general) principles of conservation which stipulated that in seeking to maintain maximum sustainable (in terms of stock status) harvests, states have the duty to make sure that species associated with or dependent on harvested species are not depleted to levels at which they would become seriously threatened.¹⁰⁵ This was followed up in 1992 at the Earth Summit¹⁰⁶ and the

100 CMS. (1999). Proceedings of the Sixth Meeting of the Conference of the Parties. (Secretariat, Bonn). 106.

101 Editor. (2001). ‘Australian Minister for Environment Calls on Australian Neighbours to Help Save Turtles.’ Marine Turtle Newsletter. 54: 37.

102 CMS. (1994). Proceedings of the Fourth Meeting of the Parties. (Secretariat, Bonn). 116.

103 CMS. (2003). Proceedings of the Seventh Meeting of the Parties. (Secretariat, Bonn). 23.

104 See SPREP. (2003). ‘Officers to Meet Over Marine Threat.’ Press Release. Feb. 21.

105 Article 61, paragraph 4. See also Article 119. 1(b).

106 Agenda 21. Chapter 17. Paragraph 17.46.(c); 17.50; 17.74; 17.87. This call was repeated at the UNCED’s five year review in 1997 Programme for Further Implementation of Agenda 21. This is reprinted in Osborne, Supra note 3. Paragraph 36 (e) & (f).

1995 Agreement for the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks¹⁰⁷ which strengthened the same general principle. Within the same period framework, the necessity for consideration of fishing impacts upon non-target species became a prominent concern in regional and international oceanic resources covering multiple oceans¹⁰⁸ including the South Pacific which is a particularly notable area due to its ground-breaking recognition of such problems, such as with drift nets,¹⁰⁹ through to its typical inclusion of such consideration in its regional fishing agreements.¹¹⁰

The other forum where bycatch of non-target species has become prominent is the Convention on Migratory Species (CMS).¹¹¹ In 1999 the Conference of the Parties of CMS passed Resolution which recognized bycatch as an ongoing problem which required further direction action. Accordingly: “as a matter of gravity” it was requested that “all Parties... strengthen the measures taken to protect migratory species against by-catch by fisheries” with a view to “minimize as far as possible the incidental mortality of migratory species listed in Appendices I & II.”¹¹² The urgency of this situation was reiterated in 2002 by the CMS. At the latter point, they called upon the Parties to the agreement to compile information on bycatch by fishing activities within their jurisdiction, complete further research on the topic, and implement appropriate schemes, to determine the impact of fisheries bycatch on migratory species.¹¹³ With such a strong emphasis, it is not surprising that a number of CMS regional agreements place a high priority in confronting this problem. This is clearly reflected in the specific Agreements for the Harbour Porpoise of the Baltic Sea and North Sea (ASCOBANS)¹¹⁴ as well as the agreement for Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS).¹¹⁵

107 1995 United Nations Conference on Straddling Stocks and Highly Migratory Fish Stocks. 34 International Legal Materials. 1542. Article 6(5).

108 For a full list of all of the applicable conventions and instruments, see Gillespie, A. (2003). ‘Environmental Threats to Cetaceans and the Limits of Existing Management Structures.’ 6 NZ Journal of Environmental Law. 97-139.

109 See Convention for the Prohibition of Fishing with Long Driftnets in the South Pacific. 29 International Legal Materials. 1454. For discussion, see Anon. (1989). ‘Drift Net Peril Moves to South Pacific.’ New Scientist. June 17. 9.

110 With the Convention on the Conservation of the Southern Bluefin Tuna <http://www.oceanlaw.net/texts/npas.htm> See article 2 & 9(c). CCSBT. Report of the Third Annual Meeting. Canberra. 24-28 September. 1996. Agenda Item 8. CCSBT. Report of the Third Resumed Annual Meeting. Canberra. 18-22 February. 1997. Agenda Item 5 & Attachment E. See also the 2000 Framework Agreement for the Conservation of Living Resources of the High Seas of the South Pacific. (the ‘Galapagos Agreement’) This is available from <http://www.oceanlaw.net/texts/galapagos.htm> Articles 4(5) & 5(1)(c) & (f).

111 From the outset of this relationship in 1985, the working group on Marine Animals. In 1988, the Scientific Committee of CoPI included a Working Group on Marine Animals which drew up a list of ‘Special points to be considered for Agreements for cetaceans, seals, turtles and sirenians.’ CMS/Com.I/7/Rev.1., p. 8. These points included, inter-alia, incidental takes. See CMS/Com.I/7/Rev.1., p. 8. It was added that “Conservation and management plans need to extend to international waters where appropriate, and include incidental and direct take (Art. V5(b)).” CMS/Com.I/7/Rev.1., p. 9. Such matters were also to include “Harmful substances for marine species, ghost nets and other non-degradable debris (Art.V.5(i)).” CMS/Com.I/7/Rev.1., p. 9. The proposed Agreement would adopt measures to enhance conservation such as, inter-alia, obtaining research on “Exact levels of incidental catch.”

112 Resolution 6.2. Bycatch. Reprinted in Proceedings of the Sixth Meeting of the Conference of the Parties. (CMS, Bonn). Volume 1. pp. 36. For further discussions about this Resolution, see pp. 20. Note, The problem of accidental catches was first noted at the second COP of the CMS. See UNEP/CMS.Conf.2.16, Resolution 2.3, p.21.

113 CMS. Resolution 7.15. Bycatch. UNEP/CMS/Res.7.15.

114 See Annex II of the report to the Secretariat (UNEP/CMS/Conf.5.9). ASCOBANS focuses upon 14 species of small cetaceans, in a joint effort by signatories to reduce pollution, by-catches in fishing nets, disturbances due to recreation and other human activities, and strandings. Bycatch has been recognised as “the most important threat to porpoises and dolphins in the Baltic and North Seas.” CMS Bulletin. No 8. 1998 (Nov). 4. That is, at the turn of the new century, it was estimated that around 4,450 porpoises are killed annually in the North Sea and Baltic because of by-catch problems. This figure probably exceeds 4% of the total population, and given their relatively low reproductive rates, coincides with a continuing decline in stock numbers. ASCOBANS. Fact Sheet: Threats to Whales and Dolphins in European Waters (2000). In 2000, all parties who were range states for the Baltic Harbor porpoise, were invited to contribute to a recovery plan for it. CMS Bulletin. No 10. 2000 (April). 16. The figure came from the Report of the Second Meeting of the Parties to ASCOBANS (1997). 59. cf. Vinther, M. (1999). ‘Bycatches of Harbour Porpoises in Danish Set Net Fisheries.’ Journal of Cetacean Research and Management. 1(2): 123-135. The figure here is put at 6,785 for the period 1994-98.

115 The Agreement on the Conservation of Cetaceans of the Black Seas, Mediterranean Sea. (1997). 36 International Legal Materials. 777.

Both the CITES¹¹⁶ and the CMS have recognised the incidental capture of sea turtles as a major problem.¹¹⁷ As such, with the CMS 2002 resolution on bycatch, they called for, inter alia, scientific research to be done with long-line fisheries in the Pacific Ocean and impacts of incidental catch upon Olive ridley turtles in South Asia.¹¹⁸ This followed recommendations in 1999 that effective mitigation measures that address the incidental mortality of marine turtles from fishing operations in the Indian Ocean and South East Asia be factored into any future regional agreement.¹¹⁹

The CMS interest in this area has followed a growing body of evidence which suggests that in some instances, the level of incidental catch is believed to be a key catalyst for overall declining numbers of sea turtles. Sea turtles been recorded as incidental catch with long line fishing (typically for shark, swordfish and/or tuna) off Australia,¹²⁰ Oman,¹²¹ in the Mediterranean,¹²² and Chile.¹²³ They have also been caught with hand lines in various places.¹²⁴ The worst cases of bycatch of sea turtles typically involve net fishing. For example, off Orissa, fishery related mortality has resulted in over 90,000 dead turtles between 1994 and the turn of the century.¹²⁵ Such high figures are usually reserved for the shrimping industry, which has been implicated in the incidental catch of sea turtles far and wide.¹²⁶ In the mid 1990s, incidental capture in shrimp trawls was found to be the most important human-derived cause of turtle mortality by far in the United States, affecting as many as 55,000 animals per year.¹²⁷ To prevent the unnecessary drowning of these air breathing reptiles, Turtle Excluder Devices (TEDS) were developed. TEDS are hard metal grids or soft webbing panels that can be placed in shrimp nets, and act effectively as trapdoors by which sea turtles and other large animals can escape. Correctly employed, TEDS can effectively reduce shrimp related sea turtle mortality by about 97%.¹²⁸

With such strong results, the technology was quickly made compulsory for United States shrimping vessels. The compulsion element spread from being area specific in the late 1980s (from Federal waters off the Texas coast, through to offshore waters involving the Gulf of Mexico and southern North Atlantic), to full coverage by

116 The 12th COP in 2002 called for further regional meetings and co-operation with the Hawksbill turtle, that would need to consider, inter alia, bycatch mitigation options . COP XII. Decision 12.44. Hawksbill Turtle. **TRAFFIC Bulletin**. 2003. 19 (3): 125.

117 CMS. (1999). Proceedings of the Sixth Meeting of the Parties. (Secretariat, Bonn). 106-07.

118 CMS. Resolution 7.15. Bycatch. UNEP/CMS/Res.7.15.

119 Recommendation 6.6. Regional Co-ordination for Marine Turtles of the Indian Ocean and South East Asia. CMS (1999). Proceedings of the Sixth Conference of the Parties. (Secretariat, Bonn). 43.

120 Guinea, M. (1992). 'Sea Turtles Killed in Australian Shark Fin Fishery.' *Marine Turtle Newsletter*. 57: 5-6.

121 Hare, S. (1991). 'Turtles Caught Incidental to Demersal Finfish Fishery in Oman.' *Marine Turtle Newsletter*. 53: 14-16.

122 Venizelos, L. (1991). 'Incidental Catch a Continuing Problem in the Mediterranean.' *Marine Turtle Newsletter*. 53: 10.

123 Frazier, J. (1990). 'Incidental Capture of Marine Turtles in Chile.' *Marine Turtle Newsletter*. 49: 8-13.

124 White, M. (2002). 'Observation of Accidental Capture of a Loggerhead Turtle By Hand-Line Fishing in Greece.' *Marine Turtle Newsletter*. 98: 8.

125 Pandav, B. (1997). 'Mortality of Olive Ridley Turtles Due to Incidental Capture in Fishing Nets Along the Orissa Coast.' *Oryx*. 31(1): 32-35. Shanker, K. (2003). 'Marine Turtle Conservation in South and Southeast Asia: Hopeless Cause or Cause for Hope ?' *Marine Turtle Newsletter*. 100: 43-51.

126 Guinea, M. (1997). 'Sea Turtle Deaths Coincide With Trawling In Australia.' *Marine Turtle Newsletter*. 77: 11-14.

127 See Lutz, P.L. & Musick, J.A. (1996). *The Biology of Sea Turtles* (Allen and Unwin, London). 385-387.

128 See Weber, M. et al. (1995). *Delay and Denial: A Political History of Sea Turtles and Shrimp Fishing*. (Earth Island, San Francisco) 1-46. Also, Anon. (2001). 'Porpoise Built Nets.' *New Scientist*. January 6. 7.

1992,¹²⁹ following a National Academy Report, recommending the mandatory utilisation of TEDs¹³⁰ and IUCN recommendations that TEDs be utilised on all shrimp trawlers in all turtle sensitive areas.¹³¹ By the turn of the century, although some limited exceptions do apply, the process has extensive coverage within the United States.¹³² Complimenting the domestic agenda, in 1989 federal legislation was introduced in the United States which prohibited the importation of shrimp by countries that did not have sea turtle conservation measures comparable to those utilised domestically.¹³³ This requirement led to the US being actively involved in the transfer of TED technology to other regions. However, when other regions did not adopt such measures and the US attempted to stop the importation of related shrimp products, the debate ended up at the World Trade Organisation with three separate cases.¹³⁴ After these landmark decisions effectively went against the ability of one country to unilaterally set the environmental standards of another, a number of negotiated standard setting arrangements for the prevention of the incidental catch of sea turtles developed.

The extent of these attempts to confront the incidental catch of sea turtles differ with each agreement. For example, at one extreme the Agreement between the Philippines and Malaysia, in parallel with a number of national policies,¹³⁵ prohibits the use of all fishing gears which contributed to mortality or disturbance of turtles within the sanctuary area.¹³⁶ The other extreme is the Atlantic Coast of Africa Agreement, where although the problem was noted, no mechanism to confront has yet been established.¹³⁷ More forceful attempts to reduce the incidental capture of sea turtles, through a commitment to consider measures such as TEDs and/or the closure of certain waters, is the Plan for the Indian Ocean and South-East Asian Region.¹³⁸ Elsewhere, the Mediterranean plan has noted that TEDs (and modified longlines) should only be introduced if “appropriate.”¹³⁹ The strongest of these documents is the Inter-American Convention through which the parties, whilst being highly conscious of the necessity to be acting in accordance with the WTO,¹⁴⁰ committed themselves to:

“The reduction, to the greatest extent practicable, of the incidental capture, retention, harm or mortality of sea turtles in the course of fishing activities, through the appropriate regulation of such activities,

129 Crouse, D. (1993). ‘TEDs Required in all US Shrimping Vessels.’ *Marine Turtle Newsletter*. 61: 3-5. Mitchell, J. (2001). ‘TEDs: Technology Transfer to Latin American Shrimp Fisheries.’ *Marine Turtle Newsletter*. 56: 5-7. Editor. (1986). ‘More Good News on TED.’ *Marine Turtle Newsletter*. 37: 10-11. Oravetz, C. (1984). ‘The TED Technology Transfer Programme.’ *Marine Turtle Newsletter*. 27: 6-7.

130 National Research Council. (1990). *The Decline of Sea Turtles: Causes and Prevention*. (National Academy Press, Washington).

131 The 1989 IUCN Resolution is reprinted in *Marine Turtle Newsletter*. 44: 1-3.

132 Crouse, D. (2001). ‘TEDs Fall Victim to Election Year Politics.’ *Marine Turtle Newsletter*. 59: 1-12.

133 See the 1989 Conservation of Sea Turtles: Importation of Shrimp Law. This was a rider to the 1989 Appropriations Bill, and required foreign nations to be certified as having sea turtle conservation standards comparable to the USA in order to import shrimp. For a discussion of the development of this area, see Benson, E. (2003). ‘Sea Turtle Conservation: An Illegal Trade Barrier?’ *Environmental Policy and the Law*. 33(2): 75-78.

134 See United States: Import Prohibition of Certain Shrimp and Shrimp Products. Recourse to Article 21.5 of the DSU By Malaysia. 41 *International Legal Materials*. (2002) 149. United States: Import Prohibition of Certain Shrimp and Shrimp Products. 38 *International Legal Materials*. (1999) 118. United States: Import Prohibition of Certain Shrimp Products. 37 *International Legal Materials*. (1998): 834.

135 See for example, Zame, R. (2001). ‘Moratorium Declared on Trawling in Kenyan Waters.’ *Marine Turtle Newsletter*. 91: 14.

136 This agreement is reprinted in the 2002 *Journal of International Wildlife Law and Policy*. 5(1): 157-163.

137 Preamble.

138 Paragraph O.

139 <http://www.oceanlaw.net/texts/medturtles.htm>. Paragraphs 2, 8, 10. A3.

140 See Article XV of the Inter-American Convention. *Supra* n15.

as well as the development, improvement and use of appropriate gear, devices or techniques, including the use of turtle excluder devices (TEDs) pursuant to the provisions of Annex III.”¹⁴¹

In addition to the growing principles pertaining to the necessity to at least actively consider the utilisation of technology that will stop the incidental catch of sea turtles, it is also necessary to recognise the complimentary principle whereby a disincentive for the capture of by-catch is utilised.¹⁴² The primary consideration for this is that it is essential that no incentives exist for the capture of incidental catch. The best way to remove incentives is to make sure that the incidental catch cannot be retained and utilised for personal gain. At a minimum, this necessitates that any incidental catch of sea turtles are not sold. Accompanying this bottom line, it is necessary to have the obligation to attempt to free sea turtles if they are captured alive. For example, the Inter-American Convention begins with the obligation that to the greatest extent possible, inter alia, “harm” to sea turtles shall be avoided. As such, incidentally captured turtles shall be “released alive... to the maximum extent practicable.”¹⁴³ Likewise, the Inter American Tropical Tuna Commission (IATTC) in dealing with bycatch¹⁴⁴ in general and marine turtles in particular, stipulates that efforts shall be made to disentangle, release and resuscitate these creatures if necessary.¹⁴⁵

With regard to the RMTCP, the issue of by-catch receives scant attention. Although the collection of further data on this problem is called for, the strength of the plan to confront this international problem is restricted to implementing “appropriate” mitigation schemes which may include, mitigation of bycatch.¹⁴⁶ The overt difficulty with this commitment is that it fails to take seriously what has become a touchstone of debate in international environmental law, international fisheries law, and even international trade law. The RMTCP should endeavour to confront bycatch through the active utilisation of appropriate technologies and appropriate principles (which create a disincentive to the utilisation of bycatch). These principles should be applied in a manner which is fully cognisant of the obligations already imposed upon all countries of the SPREP region through multiple fisheries agreements. In addition, the RMTCP should establish processes so as to ensure that the countries of region do not become embroiled in trade debates, due to the incidental capture of turtles. Thus, all incidental catch considerations must be consistent with international trade law. Even if the current trend against unilateral actions in international trade over the incidental capture of turtles is maintained, it is essential to continue work in this area because of the bilateral pressure that can be applied to achieve this goal. On a positive side, such pro-active steps may open up prized access to a number of countries whose consumers of fish products are willing to pay a premium for turtle safe catch.

9. International Trade.

¹⁴¹ See Article IV of the Inter-American Convention. *Supra* 15.

¹⁴² For a full discussion of the problems in this area, see Gillespie, A. (2002). Wasting the Oceans: Searching For Principles to Control Bycatch in International Law.’ *International Journal of Marine and Coastal Law*. 17 (2). (2002): 161-193.

¹⁴³ Article VI.2.h & 3.

¹⁴⁴ See IATTC. Resolution on Bycatch. June 2000. Point 3.

¹⁴⁵ See IATTC. Resolution on Bycatch. June 2000. Point 5.

¹⁴⁶ RMTCP. *Supra* note 2. Section 3.e.

The legal and illegal trade of tortoises, and both fresh and salt water turtles is vast. Accordingly, this trade has been the subject of substantive debate at CITES. However, with regard to sea turtles, apart from lengthy debates surrounding the Hawksbill turtle and the Guidelines for evaluating marine turtle ranching proposals,¹⁴⁷ there has been little specific attention spend on the overall problem pertaining to the conservation of sea turtles. In contrast, the trade of tortoises and freshwater turtles (which involved “millions of specimens each year”) is regulated by generic guidelines have been laid down by CITES to help enhance the conservation status (especially in Asia) of the implicated species.¹⁴⁸ Despite this recognition, it should not be assumed that strong conservation programmes for tortoises and fresh water turtles have received universal support at CITES.¹⁴⁹

The linkage between CITES and sea turtles began in the 1970s, when it became apparent that a large trade in turtle shell was occurring. The trade was occurring because the shell is very desirable because the turtle shell is a highly complex anatomical construction. An open-ended box is formed from a combination of elements of the primary reptilian skeleton with a mosaic of dermal bony plates and a differently patterned epidermal shield cover.¹⁵⁰ Unfortunately, such unique ecological achievements have also made them highly prized for human carving purposes. For example, between 1971 and 1975, Japan imported (approximately) 240,000 Hawksbill turtles (from Panama, Cuba, Indonesia & Singapore).¹⁵¹ The international community responded to such numbers of this (and other sea turtles in trade) by placing the Green, Olive Ridley and Hawksbill on Appendix I of CITES in 1977. This movement was supplemented by powerful NGOs who were arguing for the full CITES listings and complete CITES compliance.¹⁵² This was clearly successful as, by 1981, all seven species of marine turtle were on Appendix I. Despite these listings, a number of countries maintained reservations to them (by which they could still trade) including France, Italy, Suriname and most notably, Japan.¹⁵³ Over the following years, simultaneous debates occurred with regard to both the reservations and the suitability of the Appendix I listings. The focus on the reservations was very important as despite the CITES listing, by the early 1990s Japan was importing over 30,000 hawksbill shells per year¹⁵⁴ from 15 different countries. Notably, Fiji and the Solomon islands, were its fourth and second biggest suppliers, respectively.¹⁵⁵ Slowly, the

147 Conf. 9.20 (Rev.). Guidelines for evaluating marine turtle ranching proposals submitted pursuant to Resolution. Conf. 11.16

148 Conservation of and trade in tortoises and freshwater turtles. Conf. 11.9 (Rev. CoP12). See also Jenkins, M. (1995). *Tortoises and Freshwater Turtles: The Trade in Southeast Asia*. (Traffic, Cambridge).

149 For example, although all nine species of Asian Box Turtles were moved to Appendix II in 2000. However, the Spotted Turtle could not obtain the necessary two thirds majority to gain an Appendix II listing. Attempts to move the Spurred Tortoise and the Pancake Tortoise to Appendix I from Appendix II also failed. See Editor. (2000). ‘Report of the Eleventh CITES Meeting.’ *Traffic Bulletin*. 18(3): 110.

A similar outcome was reflected at the 12th COP, although a working group was established to examine the problem. See Editor. (2003). ‘The 12th Meeting of the Conference of the Parties.’ *TRAFFIC*. 19(3): 122, 127. The CITES Decision is 12.43.

150 See Gans, C & Huey, R. (1973). *The Biology of Reptilia*. (Wiley, NY). Volume 1.311-337.

151 Uchida, I. (1977). ‘Imports of Hawksbill Turtle Shell Into Japan.’ *Marine Turtle Newsletter*. 2:1-2.

152 IUCN, 1978 Meeting in the USSR. Resolutions. Reprinted in Ruster, A. (ed). *International Protection of the Environment*. (Oceana, NY). Volume XXIII. 313, 318.

153 See Mack, D. (1983). ‘World Wide Trade in Wild Sea Turtle Products: An Update.’ *Marine Turtle Newsletter*. 24: 10-15.

154 Rudloe, A. (1994). ‘In A Race for Survival.’ *National Geographic*. 97, 118 .

155 Canin, J. (1991). ‘The Japanese Hawksbill Shell Industry.’ *Marine Turtle Newsletter*. 54: 17-21.

reservations fell away over the 1980s.¹⁵⁶ Following the threat of trade sanctions by the United States, Japan stopped the importation of Hawksbill shell from abroad 1991.¹⁵⁷ This broadly coincided with domestic efforts from countries like Fiji to prohibit the export of all raw or unworked turtle shell to Japan.¹⁵⁸

Despite this success, the listing of the Hawksbill and in particular the Cuban trade of this species to Japan, continued to be a source of heated debate at the CITES meetings in 2000¹⁵⁹ (where the down-listing proposal was again rejected).¹⁶⁰ By way of progress a regional wide Caribbean meeting to strengthen regional cooperation on the Hawksbill Turtle followed. The plan was to discuss and, if possible, reach consensus on possible utilization of this species under CITES regulation. These meetings were held in 2001 and 2002, and further regional meetings were mandated following the 12th COP in 2002.¹⁶¹ Following these meetings, the proposal to move Hawksbill from Appendix I to II was withdrawn¹⁶² and further regional meetings were established.¹⁶³

Despite the relative success in controlling the legal international trade of sea turtles it is important to note that the illegal trade in turtle products continues in a number of areas.¹⁶⁴ The demand for turtles in Asia is particularly high.¹⁶⁵ The possibilities of the illegal trade in turtles are stupendous. In one day in 1999, it was estimated that at 10,000 live turtles were for sale in one market alone. The market in China alone is believed to be so large that a demand of up to one ton of turtles per week may be being facilitated.¹⁶⁶ In late 2001 and early 2002, two separate shipments of over each over 9,000 live turtles were intercepted entering into Hong Kong. Elsewhere, authorities in Indonesia foiled attempts to export over 1,500 live turtles, and authorities in Japan also foiled some importation of turtle attempts.¹⁶⁷

The important differences of this trade compared to the CITES debates on the Hawksbill is that the latter is an illegal trade which is not only massive, it covers many of the other sea turtles which are desired for products other than their shell.

From the South Pacific perspective, the CITES connection is twofold. Firstly, there were strong links with the Hawksbill trade to Japan. Accordingly, when Japan

156 Mrosovsky, M. (1987). 'Report on the 6th CITES Meeting.' *Marine Turtle Newsletter*. 41: 3. Editor. (1989). 'How CITES Benefits Sea Turtles.' *Marine Turtle Newsletter*. 46: 11-14. Canin, J. (1990). 'Reflections on the 1989 CITES Meeting.' *Marine Turtle Newsletter*. 48: 11-12. Mrosovsky, N. (1990). 'Report from Lausanne.' *Marine Turtle Newsletter*. 48: 10-11.

157 Donnelly, M. (1991). 'Japan Bans Import of Hawksbill Shell.' *Marine Turtle Newsletter*. 54: 1-3. Editor. (1991). 'CITES Update.' *Marine Turtle Newsletter*. 55: 14. Steiner, T. (2001). 'Japan Hawksbill Import Ban: Too Early to Rest on Our Laurels.' *Marine Turtle Newsletter*. 56: 24-26. Editor. (1994). 'Japan Withdraws CITES Reservation.' *Marine Turtle Newsletter*. 67: 2/

158 Daly, T. (1991). 'Fiji Bans Export of Turtle Shell.' *Marine Turtle Newsletter*. 52: 1.

159 See Editor. (2000). 'CITES Proposals.' *Traffic Bulletin*. 18(2): 6062. Pearce, F. (2000). 'Worth Protecting.' *N. Sci. Apr* 22. 19.

160 See Editor. (2000). 'Report of the Eleventh CITES Meeting.' *Traffic Bulletin*. 18(3): 110.

161 COP XII. Decision 12.44. Hawksbill Turtle. See Reuter, A. (2001). 'Common Ground Found At First CITES Wider Caribbean Hawksbill Turtle Dialogue.' *TRAFFIC Dispatches*. 17: 1-2.

162 Editor. (2002). 'CITES Proposals.' *Traffic Bulletin*. 19 (2): 62-63.

163 COP XII. Decision 12.44. Hawksbill Turtle. Editor. (2003). 'The 12th Meeting of the Conference of the Parties.' *TRAFFIC*. 19(3): 123, 125.

164 Lopez, M. (2001). 'New Kind of Illegal Trade of Marine Turtles in Uruguay.' *Marine Turtle Newsletter*. 91: 10. Steiner, T. (1994). 'Illegal Trade In Sea Turtle Products Between the United States and Mexico.' *Marine Turtle Newsletter*. 66: 15-16. Fisher, S. (1995). 'Illegal Turtle Trade in Sri Lanka.' *Marine Turtle Newsletter*. 71: 10-11.

165 See Hoover, C. (2000). 'More Protection Needed for Turtles in Asia.' *TRAFFIC Dispatches*. 13: 1-2.

166 See Anon. (1999). 'Turtle Tragedy.' *Scientific American*. June. 22.

167 Editor. (2002). 'Seizures & Prosecutions.' *Traffic Bulletin*. 19 (2): 76-79.

reviewed its reservation on the importation of Hawksbills', from the perspective of turtle conservation in the South Pacific, the region was relieved.¹⁶⁸ Secondly, the market – and subsequently demand - for the illegal trade in turtle products in Asia remains very high. In countries with limited incomes, the temptations of a lucrative exchange of a natural resource, even if endangered, will remain high. In addition to dealing with the issues which blur the effectiveness of CITES (such as the domestic trade of sea turtles and/or their parts which remains a problem in many areas,¹⁶⁹ including the South Pacific)¹⁷⁰ the threat represented by both instances of the legal trade in Hawksbills or the illegal trade in all sea turtles can only be met by the same response: full compliance with the CITES treaty. As such, any regional agreements designed to protect sea turtles must be built around a solid recognition of the needs of strict compliance with CITES.¹⁷¹ However, the RMTCP fails to even register the existence of CITES or linkages with legal or illegal trade in sea turtles. This is a large omission.

10. Customary Use of Sea Turtles.

The interrelationship between culture and the environment is well established in both Western and non-Western traditions.¹⁷² The necessity to support and facilitate the non-western, and specifically, indigenous traditions is becoming well recognized in international environmental law.¹⁷³ For example, the 2002 World Summit on Sustainable Development recognized that “respect for cultural diversity” and the “vital role of indigenous peoples” were both essential elements of sustainable development. Accordingly, they concluded it was necessary to:

“Develop policies and ways and means to improve access by indigenous people and their communities to economic activities ... [and]... Recognize that traditional and direct dependence on renewable resources and ecosystems, including sustainable harvesting, continues to be essential to the cultural, economic and physical well-being of indigenous people and their communities.”¹⁷⁴

The international recognition of such principles are mirrored in specific regional legislation in the South Pacific. For example, Article VI of the Apia convention allows the general obligation to conserve threatened species to be subject to the provision that.

168 Resolutions of the Second Meeting and Workshop of the Regional Turtle Conservation Programme (RMTCP). Reprinted in *Marine Turtle Newsletter* 2001, 57: 12-15.

169 Anon. (1996). 'Sea Turtle Products A Burning Issue.' *Traffic Bulletin*. 16 (1): 7. Highfield, A. (1996). 'The Trade in Tortoise Derived Products in Morocco.' *Traffic Bulletin*. 16 (1): 33-35.

170 See SPREP. (2003). 'Officers to Meet Over Marine Threat.' Press Release. Feb. 21.

171 Inter-American Convention For The Protection And Conservation Of Sea Turtles This Convention is reprinted in the 2002 *Journal of International Wildlife Law and Policy*. 5(1): 157-163.<http://www.oceanlaw.net/texts/turtles1.htm>. Article IV. See also Paragraph 1 of the Conservation and Management Plan for Marine Turtles in the Indian Ocean and South-East Asian Region

172 For a full examination, see Gillespie, A. (1997). *International Environmental Law, Policy and Ethics*. (Oxford University Press, Oxford). Chapter 8.

173 See Gillespie, A. (2001). 'Aboriginal Subsistence Whaling: A Critique of the Inter-Relationship Between International Law and the International Whaling Commission.' 21 (1) *Colorado Journal of International Environmental Law and Policy*. (2001) 79-139.

174 World Summit on Sustainable Development. Plan of Implementation. A/CONF.199/L1. Paragraph 6 (e). The 'vital role' quote comes from paragraph 25 of the Johannesburg Declaration on Sustainable Development.

“A Contracting Party may make appropriate provision for customary use of areas and species in accordance with traditional cultural practices.”

In many instances, the linkages between indigenous peoples and sea turtles and turtle eggs¹⁷⁵ are long standing. This is especially the case with the South Pacific, where turtle has been a staple source of food for many indigenous peoples throughout the region, with it being the only source of red meat traditionally available in some places.¹⁷⁶

Due to such long standing relationships, aside the Action Plan for the Conservation of Mediterranean Marine Turtles¹⁷⁷ and the Agreement between the Philippines and Malaysia¹⁷⁸ all of the other turtle arrangements, largely following IUCN recommendations¹⁷⁹ have some component related to the recognition of the needs of the traditional users of sea turtles. The extent of this recognition is commonly reflected in the detail of the agreement. For the smaller documents, such as those pertaining to the Atlantic Coast of Africa,¹⁸⁰ the Caribbean Coast Of Costa Rica, Nicaragua And Panama¹⁸¹ the necessity to take into account the needs of the local populations and socio-economic considerations is noted. The two turtle agreements which are variations on this are those for the Indian Ocean and South-East Asian Region, and the Inter-American Convention. The variations consist in base line from which the limits on customary use are set. For example, the Indian Ocean and South-East Asian Region agreement allows for a:

“customary harvest by traditional communities ..., provided that such harvests are sustainable, are consistent with an established management regime and have taken into account the view of regional neighbours and range states.”¹⁸²

The Inter-American Convention¹⁸³ replicated this idea, through which the: “economic subsistence needs of traditional communities” may be met provided that such practices do not undermine efforts to achieve the objective of this Convention. To achieve this goal, a management plan must be instigated and approved by a special committee. Moreover, this plan and its implementation must be monitored and reported on in national reports. Accordingly, an absolute bottom line is set in place: In some instances, such as when a practice is clearly unsustainable from the perspective of the survival of the species, it may be necessary to have complete protection for the management of marine turtles – irrespective of cultural

175 All marine turtle eggs have pliable, parchment like shells and are typically spherical although not turgid at oviposition. When laid, they are typically creamy white, and if left to their own devices usually have a fertility rate in excess of 80%. Unfortunately for them, they are also usually quite rich in protein and attractive to eat. See Gans, C & Huey, R. (1985). *The Biology of Reptilia*. (Wiley, NY). Volume 14. 275-317. However, from the ecological perspective, it has not become apparent that turtle eggs are very important and cannot be ignored in recovery plans. Accordingly, if cultural exceptions for the lethal utilisation of sea turtles or their eggs are to exist, the issue of tight limits on the collection of eggs needs to be closely scrutinised. Heppel, S. (1997). ‘On the Importance of Eggs.’ *Marine Turtle Newsletter*. 76: 6-8.

176 CMS. (1994). *Proceedings of the Fourth Meeting of the Parties*. (Secretariat, Bonn). 115.

177 This plan prohibits all lethal exploitation. <http://www.oceanlaw.net/texts/medturtles.htm>. Paragraphs 2, 8. A18 & 19.

178 This plan contains a commitment to protect all adult turtles but says nothing about eggs. This agreement is reprinted in the 2002 *Journal of International Wildlife Law and Policy*. 5(1): 157-163.

179 The 1989 IUCN Resolution is reprinted in *Marine Turtle Newsletter*. 44: 1-3.

180 Reprinted in the 2002 *Journal of International Wildlife Law and Policy*. 5(1): 189-193. Basic Principle 3.

181 Reprinted in *Journal of International Wildlife Law and Policy*. 3(2) 179-189. Fifth Principle.

182 Paragraph 1.

183 Inter-American Convention, *supra* note 15. Article IV (3)..

considerations.¹⁸⁴ These approaches are consistent with the CMS which allows for the taking of Appendix I species:

“to accommodate the needs of traditional subsistence users of such species... provided that such exceptions are precise as to content and limited in space in time. Such taking should not operate to the disadvantage of the species.”¹⁸⁵

Such limitations are essential, as when the traditional takes are added to the other threats facing sea turtles, the practice may quickly become unsustainable. This is currently the conclusion with regard to a number of the traditional subsistence takes around Africa’s Atlantic coasts.¹⁸⁶ The CMS has specifically identified such subsistence takes of leatherback turtles by many coastal communities along the eastern Pacific, Indian and eastern Atlantic oceans as also requiring direct attention. Accordingly, the CMS has recommended the careful monitoring of all such traditional harvests, with a view to the development of guidelines for making any such taking of turtles or their eggs sustainable.¹⁸⁷

Within the South Pacific context, despite a long history of apparently sustainable utilisation,¹⁸⁸ it appears that a number of current traditional takes, when taken in conjunction with additional pressure factors, have become unsustainable. The RMTCP has made a good attempt has been made to come to terms with the dimensions of this issue. In particular, national and regional research to examine the impacts on populations from sustainable consumptive use and determination of sustainable estimates for sustainable use are clear priorities. Moreover, management for sustainable subsistence harvest is a clearly envisaged possibility. Finally, it innovative conservation strategies involving traditional users with a reorientation of utilisation are envisaged. For example,

“[N]ational governments and community leaders, [may] develop mechanisms for maintaining the essential elements of cultural activities involving marine turtles while at the same time reducing the number of turtles killed. For example, in some island cultures where captured marine turtles are required to be presented to chiefs, it may be possible to maintain the capturing and presentation components but for the turtles to be tagged by the chiefs and released as a ceremonial investigation for future generations.”¹⁸⁹

Accordingly, in this area, the RMTCP is largely consistent with best practice and is notably innovative. The one weakness is to categorically incorporate the bottom line that any subsistence take should, ultimately, not operate to the disadvantage of the species.

11. Habitat Management.

¹⁸⁴ IUCN. (1995). *A Global Strategy for the Conservation of Marine Turtles*. (IUCN, Geneva). 3.

¹⁸⁵ CMS. Article III(5)(c).

¹⁸⁶ See UNEP. (2001). ‘New Insight Into Africa’s Rich But Threatened Sea Turtle Resource.’ Press Release. 01/92.

¹⁸⁷ Recommendation 7.6. Improving the Conservation Status of the Leatherback Turtle. CMS. CMS (2002). *Proceedings of the Seventh Meeting of the Parties*. (CMS, Secretariat).

¹⁸⁸ See UNEP. (1999). *Cultural and Spiritual Values of Biodiversity*. (IT Publishers, London). 162-63.

¹⁸⁹ RMTCP. *Supra* note 2. See sections 3 E,G & 5. A.

Coastal zones are valuable in every sense of the word. These are the areas where the oceanic upwelling systems collide as the cold, nutrient rich deep water currents run up against continental margins. They are centres for social and economic wealth, hotbeds for marine biodiversity, filters for marine pollution and form part of a number of intricate ecological webs. With regard to sea turtles, seagrass beds where green turtles graze regularly are more productive than where green turtles do not graze, nutrients are cycled more rapidly and the grass blades have a higher protein count, thus benefiting other species. Furthermore, some species of marine turtles whose feeding areas may be hundreds of thousands of kilometres from their nesting beaches, serve an important role in nutrient recycling by transporting quantities of nutrients from one feeding ground to typically more nutrient poor coastal and inshore habitats in the vicinity of the nesting beaches.¹⁹⁰ In addition to being keystone species in a number of coastal habitats, sea turtles are often highly dependent upon a number of specific features such as coral reefs and mangroves.¹⁹¹ The closely related seagrasses (especially sargassum seaweed), and algae also play an important role in the life cycle (i.e. for food) of some sea turtles.¹⁹² In addition, sea turtles are also often highly dependent upon key habitats for migration, mating, resting, feeding and most notably, nesting. Indeed, as the IUCN pointed out in 1968, the most vulnerable time for turtles, in terms of human predation, is when they emerge from the seas to narrow zones of shore to breed. They warned that no animal can survive if its reproduction is prevented. As such, protection of the nesting process must always be a primary consideration.¹⁹³

Despite the importance of coastal habitats these ecosystems are often under direct threat. Currently, two thirds of the world's largest cities are coastal. More than 2 billion people live within 100km of a coastline.¹⁹⁴ The global impact of this problem is such that 34% of the world's coastal zones are deemed to be at high risk and a further 17% are believed to be at moderate risk. This can be expected to worsen as human population doubles within the next 30 years. These problems are well illustrated by two examples. Firstly, mangroves around the world are regressing at an alarming rate - these shrubs and trees of the inter-tidal and super-tidal zones shelter many bird and mammal species, offering nursery and breeding grounds for freshwater and marine life. Despite their importance, the harvesting and destruction of mangroves worldwide is estimated at 1 million hectares per year.¹⁹⁵ Secondly, coral reefs are under assault from dozens of anthropogenic influences. The cumulative result of these impacts is that globally, 58% of the world's reefs are at medium risk from human activities and 27% of these reefs are deemed to be at 'high or very high risk.' In some regions, - such as South-East Asia- the percentage of reefs at moderate risk is over 80%; including 55% at high risk.¹⁹⁶

190 IUCN. (1995). A Global Strategy for the Conservation of Marine Turtles. (IUCN, Geneva). 3.

191 Limpus, C. (2000). 'Mangroves in the Diet.' Marine Turtle Newsletter. 89: 13-15. Pendoley, K. (1999). 'Browsing of Mangroves by Green Turtles in Western Australia.' Marine Turtle Newsletter. 84: 10.

192 Evans, D. (2000). 'US NMFS Rejects Proposed Ban on the Harvest of Sargassum Seaweed.' Marine Turtle Newsletter. 87: 3. Frick, M. (2000). 'How Will the Harvest of Sargassum Seaweed Impact?' Marine Turtle Newsletter. 90: 11-13. Fritts, T. (1981). 'Pelagic Feeding Habits of Turtles in the Eastern Pacific.' Marine Turtle Newsletter. 17: 4-5.

193 IUCN, 1968 Resolutions. Reprinted in Ruster, A. (ed). International Protection of the Environment. (Oceana, NY). Volume V. 2448, 2449.

194 See Claussen, E. (1997). 'Critical Coastlines.' Our Planet. 8(5). 1-5.

195 The Ocean Our Future. Supra n150. 177. UNEP, (2000). UNEP. (2000). GEO 2000. (Earthscan, London). 86, 130.

196 UNEP. (1995). Global Biodiversity Assessment. (Cambridge University Press, Cambridge). 381-387. MacKenzie, D. (2000). 'Coral is Dying to Tell Us Something.' N.Sci.. September 16. Anderson, I. (1999). 'Great Barren Reefs.' N.Sci.. July 10. 12. Pearce, F. (1999). 'Coral Crumbles.' N. Sci. April 24. 13.

Protecting key coastal ecosystems such as coral reefs is becoming increasingly complicated as the solutions lie outside of the coastal communities. For example, climatic change is now a primary reason why coral reefs are dying. Their death is often caused by advanced bleaching due to reduced calcification rates caused by higher greenhouse gas levels. This problem is connected to the fact that coral reefs require highly stable environments and temperature fluctuations of just one or two degrees above normal can have a devastating impact upon them. Episodes of coral bleaching over the past 20 years have been associated with several causes, including increased ocean temperatures. As of 2002, an estimated 16% of the world's coral reefs have died from bleaching since 1998.¹⁹⁷ It is likely that future sea surface warming will increase stress on coral reefs and will result in the increased frequency of marine diseases.¹⁹⁸

The impacts of climatic change are not restricted to coral reefs. With particular regard to the oceanic habitat of sea turtles, it is important to note that the oceans sequester and store larger amounts of carbon than land-based (typically forests) reserves. In doing so, they retain heat storage and control thermal inertia. Accordingly, oceans are the 'flywheel' of the climate system. Although the biological consequences of a changing climate upon the oceans are far from being fully understood, it is believed that the change may bring about detrimental results by raising the temperatures of the oceans. This will probably change migratory patterns for a number of ocean species, facilitate habitat destruction especially in critical areas for dependent species and may lead to drastic changes in ocean circulation, vertical mixing and overall climatic stability. Such effects could have strong implications in terms of nutrient availability, biological productivity and the structure and functions of marine ecosystems most critically affected. Mangroves, sea grass beds and other coastal ecosystems may be adversely affected by rising temperatures and accelerated sea-level rise. Declines in coastal ecosystems will probably have a negative impact upon reef fisheries. For the species which are already endangered, the effects may be terminal. This is especially so where the species are endemic and have few options regarding migration.¹⁹⁹

The exact way which climate change will impact upon turtle populations can only be guessed at. The evidence currently suggests that extreme weather events can be very detrimental to sea turtles. For example, hurricanes in Mexico in 1997 affected over 50% of the (Ridley) nests in one critical habitat, destroying over 40 million sea turtle eggs and 10 million hatchlings.²⁰⁰ Likewise, extreme storms around the southeast coast of Florida are believed to have impacts upon (Loggerhead) reproductive success at various points.²⁰¹ Despite these initial findings, this area needs to be the subject of intensive scientific work. The initial work in this area is isolated and is focused upon

Watson, M. 'Too darn Hot.' N.Sci., November 4: 24. Commission on Sustainable Development. Oceans and Seas: Report of the Secretary General. E/CN.17/1999/4. See World Resources Institute. (1998). Reefs at Risk: A Map Based Indicator of Threats to the World's Coral Reefs. (WRI, Washington DC).
197 Pearce, F. (2002). 'Grief on the Reef.' New Scientist. Apr 20. 11. Schrope, M. (2000). 'Corals Face Catastrophe.' New Scientist. May 27. 8. Pearce, F. (2002). 'Its Started.' New Scientist. March 30. 11. Anon. (1999). 'The World's Coral Reefs In Hot Water.' Ecologist. 29 (3): 1. Cocker, M. (1999). 'Coral Reefs Don't Like It Hot.' Guardian Weekly. Dec 19. 32.

198 Dicks, L. (2003). 'Worm Brings Death to Coral.' New Scientist. Apr 12. 16.

199 IPCC. (2003). Climate Change and Biodiversity. (IPCC, Technical Paper V, Geneva). 31-34. IPCC. (2001). Third Assessment Report: Summary for Policy Makers. (Geneva, IPCC). 2, 11. Broecker, W. (1997). 'Thermohaline Circulation: The Achilles Heel of our Climate System?' Science. 278: 1582-1588.
200 Editor. (1997). 'Hurricane Pauline Destroyed 40 Million Sea Turtle Eggs.' Marine Turtle Newsletter. 78: 26.

201 Martin, E. (1996). 'Storm Impacts on Loggerhead Turtle Reproductive Success.' Marine Turtle Newsletter. 73: 10-12.

increased storm surges (which are not yet conclusively linked to climate change). Unfortunately, the manifestations of climatic change may be much larger than this area alone.

The broad response to the threats posed by loss of habitat in international environmental law is found in the Convention on Biological Diversity (CBD), by which each party promised, as far as possible and as appropriate, to, *inter alia*: “Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings.”²⁰² This obligation has been specifically tailored with regard to coastal habitat through the CBD²⁰³ and the Convention on Wetlands (RAMSAR).²⁰⁴ From these obligations the concept of Integrated Coastal Zone Management (ICZM) has developed. ICZM is an idea which is directly linked to controlling the habitat destruction of coastal environs. The general goal became clearly articulated in the the 1995 Global Programme of Action for the Protection of the Marine Environment from Land Based Activities (GPA).²⁰⁵ The broad objective is to:

“[s]afeguard the ecosystem function, maintain the integrity and biological diversity of habitats which are of major socio-economic and ecological interest through integrated management of coastal States.”²⁰⁶

With such considerations in mind attempts to achieve ICZM management schemes have been attempted by regional seas organizations covering the Black Sea, the Mediterranean, the wider Caribbean and the South Pacific. With regard to specifics, the regional examples of directives seeking the protection of habitats of marine life can be seen in organizations ranging from the International Whaling Commission²⁰⁷ through to CMS Regional agreements pertaining to seals²⁰⁸ and small cetaceans.²⁰⁹

The necessity to protect critical habitats for sea turtles has been recognised through international agreements since 1989 with the Action Plan for the Conservation of Mediterranean Marine Turtles.²¹⁰ This plan was the first to recognise that habitat destruction was a serious threat to sea turtles. The plan divided the habitat threat into two areas: nesting and other habitat protection, such as feeding ground and/or migration routes. This basic division and recognition of the need to protect both habitats is reflected in the Agreement for the Caribbean Coast of Costa Rica,

202 CBD, Article 8.

203 Decision II/10 on Conservation and Sustainable Use of Marine and Coastal Biodiversity. For the follow up to this within the CBD, see 1997 YBIEL. 8: 287. In 1998, at the fourth CBD COP, decision IV/5 entitled Conservation and Sustainable Use of Marine and Coastal Biological Diversity was passed. This was based primarily on the Jakarta Mandate. The Jakarta Mandate was supported at the World Summit on Sustainable Development. See Paragraph 31 (b) & 31(e).

204 The International Convention on Wetlands of International Importance. 11 ILM 693. In 1996, RAMSAR passed a series of recommendations on the conservation and wise use of coral reefs and related ecosystems, (Recommendation 6.7) the importance of strategic planning in coastal zones, (Recommendation 6.11) as well as some specific recommendations on the conservation of coastal wetlands in the Mediterranean and Pacific Islands. (Recommendation 6.18).

205 The Global Programme of Action for the Protection of the Marine Environment from Land Based Activities. A/51/116 Annex II. Available from UNEP. 1995 YBIEL. 6: 245.

206 GPA, *ibid.* Paragraph 151.

207 Resolution 2001-11. Resolution on the Importance of Habitat Protection and Integrated Coastal Zone Management. IWC. 53rd Report. (2002). 59.

208 The 1990 Agreement on the Conservation of Seals in the Wadden Sea. Reprinted in Austen, M. (2002). *Basic Legal Documents on International Animal Welfare and Wildlife Conservation*. (Kluwer, the Netherlands). 292-296. Article VII.

209 See the Agreement on the Conservation of Cetaceans of the Black Seas, Mediterranean Sea and Contiguous Area. (1997). 36 ILM. 777. Article II.3.

210 <http://www.oceanlaw.net/texts/medturtles.htm>. Paragraphs 2,8, 10. Note, the plan was revised in 1999.

Nicaragua and Panama,²¹¹ the Management Plan for the Indian Ocean and South-East Asian Region,²¹² the Inter-American Convention²¹³ and the MOU for the Atlantic Coast of Africa.²¹⁴

The identification, adequate legal protection and restoration of the nesting areas of sea turtles is always an uppermost consideration. Accordingly, as CITES has States which control nesting grounds: “have a special responsibility to protect marine-turtle nesting habitat and nesting females during the breeding season.”²¹⁵ This special responsibility is clearly recognised in all of the turtle specific agreements to one extent or another. Following the basic obligations to identify, protect and restore, any number of restrictions may apply. For example, the Agreement between Malaysia and the Philippines, in which the jointly managed area was designated a sanctuary in which coral and sand excavation was prohibited, beach vegetation protected and rehabilitated.²¹⁶ The 1996 Inter-American Convention required any of the signatories in possession of nesting grounds to carry out environmental impact assessments for any activities (including: dredging of canals and estuaries; construction of sea walls, piers and marinas; extraction of raw materials; operation of aquaculture facilities; siting of industrial facilities; use of reefs; deposit of dredged materials and trash; and other related activities) that may affect the nesting habitats.²¹⁷

With regard to the second level of habitat protection, aside the protection of the nesting areas, it is necessary to protect the areas for feeding, (benthic and pelagic), wintering and migration routes.²¹⁸ With regards to routes, in addition to incidental catch it is necessary to consider vessel strikes. For example, the Inter-American Convention suggested serious consideration of establishing protected areas (in addition to those around nesting sites) which could involve restriction on fishing activities and on vessel traffic.²¹⁹

A key point of note here is the idea of establishing a marine sanctuary around some of these interconnecting key habitats. Although this process has been followed in the Agreement between Malaysia and the Philippines, as a rule, the decision to establish sanctuaries to protect sea turtles and their related habitats is decided domestically. Accordingly, in 2000, after substantial EC pressure, Zakynthos was finally granted a marine park to help protect their turtles.²²⁰ Marine parks have also been established in Australia,²²¹ Indonesia,²²² Mexico,²²³ India²²⁴ (although the sanctuary around Orissa

211 Annex 6 & 7.

212 Paragraphs j-k.

213 ANNEX II . PROTECTION AND CONSERVATION OF SEA TURTLE HABITATS

214 Memorandum of Understanding Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa. 39 ILM. 1 (2000). Paragraph 1, following preamble.

215 Conf. 9.20 (Rev.). Guidelines for evaluating marine turtle ranching proposals submitted pursuant to Resolution. Conf. 11.16

216 ANNEX A. Conservation And Research Programmes For the Turtle Islands Heritage Protected Area

217 ANNEX II . PROTECTION AND CONSERVATION OF SEA TURTLE HABITATS

218 See the 1989 IUCN Resolution in reprinted in Marine Turtle Newsletter. 44: 1-3.

219 ANNEX II . PROTECTION AND CONSERVATION OF SEA TURTLE HABITATS

220 Dimopoulos, D. (2001). 'The National Marine Park of Zakynthos.' Marine Turtle Newsletter. 93: 5-9.

221 Anon. (1992). 'Woongarra Marine Park is Declared to Protect Turtles.' Marine Turtle Newsletter. 57: 28. Limpus, C. (1980). 'New National Parks Protecting Turtle Habitat in Queensland.' Marine Turtle Newsletter. 15: 11-12.

222 Hutabaret, H. (1994). 'Hawksbill Turtle in Kepulauan Marine National Park.' Marine Turtle Newsletter. 64: 12-13. Anon. (1981). 'Turtle Park in Bali.' Marine Turtle Newsletter. 17: 8.

223 Woody, J. (1986). 'Mexico Establishes Sea Turtle Refuge.' Marine Turtle Newsletter. 39: 9.

224 Anon. (1996). 'Gahirmatha Beach Declared a Sanctuary.' Marine Turtle Newsletter. 79: 3-4.

has been a source of conflict over development within the area for decades)²²⁵ for the same purpose.

Finally, with regard to the possibilities of habitat change caused by climate change, it is important to note that it has been recognised in fora such as the CMS that there is a clear overlap of interests between climate change and its detrimental effects on both a number of countries (such as small island states in the South Pacific) and, inter alia, migratory species.²²⁶ Such considerations should be built into any regional agreements which aim to conserve migratory species. Although the problem of climatic change will not be solved within this setting, linkage to an area of uppermost concern – even if it just for scientific research on the effects of climate change on migratory species in the region – is important for scientific and political reasons.

With regard to the South Pacific broader documents such as the Ocean Policy for the Pacific Islands emphasise the importance of habitat protection and incorporation of climate change (which is a free standing concern of large importance in the South Pacific)²²⁷ considerations into the development of policies relating to the ocean.²²⁸ In addition, as noted above, both the Apia and Noumea Conventions contain strong obligations to protect threatened ecosystems. Specifically, the Noumea Convention obligated its signatories to:

“[I]ndividually or jointly, take all appropriate measures to protect and preserve rare or fragile ecosystems and depleted, threatened or endangered flora and fauna as well as their habitat in the Convention Area. To this end, the Parties shall, as appropriate, establish protected areas, such as parks and reserves, and prohibit or regulate any activity likely to have adverse effects on the species, ecosystems or biological processes that such areas are designed to protect.”²²⁹

In terms of the RMTCP, the broad obligation to protect critical habitats is recognised. In addition, major threats to marine turtle conservation, such as vessel collisions; climate change and natural disasters such as cyclones are also to be identified and prioritised. Finally, the plan intends to review national and regional applicable habitat protection legislation, including, inter alia, total and/or partial protection in closed seasons.²³⁰ Accordingly, the RMTCP is broadly consistent with recognition of the overall threats facing sea turtles in terms of habitat destruction. However, the mandate to act over certain priority areas, such as nesting beaches or over related concerns like scientific links between climatic change and migratory species could be stronger. This would not only be in line with the current state of practice of the other turtle agreements, it would also be furthering an already established body of policy within the South Pacific area.

225 Pandav, B. (1999). 'The Mortality of Olive Ridley Sea Turtles At Orissa.' *Marine Turtle Newsletter*. 83: 10-12. Anon. (1994). 'Concern Rises Over Threat To Indian Turtles.' *Marine Turtle Newsletter*. 64: 1-3. Anon. (2001). 'Nesting Ground of Turtles Threatened.' *Marine Turtle Newsletter*. 63: 3-4. Singh, C. (1996). 'Ecosystem Protected By Courts Decision.' *Marine Turtle Newsletter*. 73: 1-2.

226 Recommendation 5.5. Climate Change and Its Implications for the Bonn Convention. CMS. (1997). *Proceedings of the Fifth Meeting of the Conference of the Parties*. (Secretariat, Bonn). 122. 'Climate Change and Migratory Species.' *CMS Bulletin*. 14 (2001) 2-3.

227 See Gillespie, A (forthcoming). 'Small Island States and Climate Change' *UCLA Journal of Environmental Law*.

228 See the Ocean Policy for the Pacific Islands. (SPREP, 2001). 22-23, 29-32.

229 Noumea Convention. *Supra* note 71. Article 14.

230 RMTCP. *Supra* note 2. Section 3 (e) & (d).

12. Pollution & Debris.

The pollution of the oceans is a multi-faceted problem. The threats range from nuclear contamination right down to litter. In between range difficulties from persistent organic pollutants, oil spills, heavy metals, sewage, bio-invasions and nitrogen pollution. With regard to sea turtles, the pollution problems that affect them are less than those that affect marine mammals.²³¹ Nevertheless, in some locations, some species of turtles have shown increases in incidences in tumours,²³² and in other places, they have at time been victim to mysterious deaths.²³³ In addition, heavy metals and PCBs have been recorded in leatherback turtles (but not of a significant amount when compared to birds and mammals).²³⁴ Low levels of DDE has also been detected in the (sterile) eggs of some loggerheads.²³⁵ Finally, intentional oil spills (as in the 1991 Gulf War²³⁶ and unintentional oil spills have represented distinct threats to sea turtles.²³⁷

The one exception on marine pollution, in which sea turtles are detrimentally affected compared to other species appears to be with the ingestion of marine debris. In the early 1990s it was estimated that some 6.5 million tons of litter was finding its way into the sea.²³⁸ In the past, much of it disintegrated quickly, but resistant substances have replaced many natural, more easily degradable materials. The key, and most problematic, replacement has been plastic which makes up 50-80% of the rubbish in some oceans.²³⁹ The detrimental linkage between this waste and sea turtles has been evident since the early 1980s²⁴⁰ and is a particular problem with loggerheads and leatherbacks.²⁴¹ This is partly due to the fact that the loggerhead is almost entirely carnivorous, and the leatherback, lives almost exclusively on jellyfish. The difficulty is that plastic litter often look like jellyfish.²⁴² In one survey, 44% of all leatherbacks examined, had some form of plastic in their stomachs.²⁴³ Hawksbill's have also been recorded as victims of plastic litter.²⁴⁴

Due to such concerns, some international agreements have attempted to confront some of the primary difficulties in this area. For example, in 2002, the Convention on Migratory Species called upon Parties to implement a monitoring process to assess the cumulative environmental impacts of oil pollution on migratory species, and to

231 See Gillespie, A (2003). 'Environmental Threats to Cetaceans and the Limits of Existing Management Structures.' 6 NZ Journal of Environmental Law. 97-139.

232 Editor. (2001). 'Incidence of Turtles With Tumors Increasing.' Marine Turtle Newsletter. 51: 8-9.

233 Ruenda, J. (1990). 'Dying Turtle in Columbian Waters Still A Mystery.' Marine Turtle Newsletter. 50: 4-6.

234 Davenport, J. (1990). 'Metal and PCB Concentrations in the Leatherback.' Marine Turtle Newsletter. 48: 1-6.

235 Fletemeyer, J. (1980). 'A Preliminary Analysis of Sea Turtle Eggs for DDE.' Marine Turtle Newsletter. 15: 6-7.

236 Editor. (1991). 'Oil Spill in Persian Gulf Threatens Sea Turtles.' Marine Turtle Newsletter. 53: 32. Oza, G. (2001). 'Gulf War Strikes Catastrophe for

Turtles.' Marine Turtle Newsletter. 53: 4-5. Meakins, R. (2000). 'Sea Turtles After the Gulf War.' Marine Turtle Newsletter. 88: 7-8. Thomas, T. (2001).

'Turtles Rehabilitated After Persian Gulf Oil Spills.' Marine Turtle Newsletter. 55: 26-27. Editor. (1995). 'Clean Up At Karan Island.' Marine Turtle Newsletter.' Marine Turtle Newsletter. 68: 35.

237 Editor. (1994). 'Tampa Bay Oil Spill Threatens Turtles.' Marine Turtle Newsletter. 64: 29.

238 Tolba, M. (ed). (1992). The World Environment: 1972-1992, Two Decades of Challenge. (UNEP, Chapman Hall, London). 120.

239 Tolba. Ibid. CCAMLR XVII-1998. Commission Report. Paragraph 6.6-6.10.

240 Editor. (1985). 'Sea Turtles and Debris.' Marine Turtle Newsletter. 32: 8-9.

241 Allen, W. (1992). 'Loggerhead Dies After Ingesting Marine Debris.' Marine Turtle Newsletter. 58: 10. Bentivenga, F. (1995). 'Removal of a Polyethylene

Cord From a Loggerhead.' Marine Turtle Newsletter. 71: 5. Editor. (1994). 'Loggerhead Turtles Consume Tar and Plastic.' Marine Turtle Newsletter. 64: 30.

242 Chatto, R. (1995). 'Sea Turtle Killed by Flotsam.' Marine Turtle Newsletter. 69: 17-18.

243 Mrosovsky, N. (1981). 'Plastic Jellyfish.' Marine Turtle Newsletter. 17: 5-7.

244 Almengor, M. (1994). 'Ingested Plastic Implicated in Death of Hawksbill.' Marine Turtle Newsletter. 64: 13.

develop guidelines for the treatment of oil affected wildlife.²⁴⁵ With specific regards to sea turtles, the threat of pollution to resident populations was recognised in the Mediterranean action plan²⁴⁶ and the Agreement between the Philippines and Malaysia.²⁴⁷ The RMTCP has followed this pattern, in listing, inter alia, pollution (such as plastics and fishing gear) and toxics (such as heavy metals and pesticides) as problems to be investigated.²⁴⁸ However, as with all other turtle agreements on this point, no specific recommendations with regard to oceanic pollution are offered. Rather, the best practice that can be achieved is seeking compliance with all of the relevant international and regional commitments at hand. With regard to oceanic pollution in the South Pacific region, this will necessitate full compliance with the various international commitments, such as the International Conventions for the Prevention of Pollution from Ships (MARPOL)²⁴⁹ and their associated Annexes as well as the web of regional Protocols which aim to prevent ocean pollution in the South Pacific²⁵⁰ and the Pacific Ocean Pollution Prevention Programme.²⁵¹ In addition, in order to confront land-based pollution which ends up in the ocean, compliance with SPREP's Regional Waste Management Strategy should be promoted.

13. Sustainable Tourism.

'Sustainable Tourism' is currently one of the most promoted initiatives designed to achieve sustainable development. For example, the participants of the 2002 World Summit on Sustainable Development agreed to promote, especially in special cases such as with Small Island States:²⁵²

“[s]ustainable tourism development, including non-consumptive and eco-tourism, ... in order to increase the benefits from tourism resources for the population in host communities while maintaining the cultural and environmental integrity of the host communities and enhancing the protection of ecologically sensitive areas and natural heritages.”²⁵³

The potential for sustainable tourism and sea turtles is axiomatic. This is because sea turtles have one very strong advantage for conservation purposes that many other species do not so readily possess. This is their potential to be a strong magnet for tourists who are willing to pay a premium to see live turtles and visit their nesting grounds.²⁵⁴ The large scale premium has already been collected in Mexico, India and Greece. In addition, French Guiana,²⁵⁵ Costa Rica,²⁵⁶ Papua New Guinea²⁵⁷ and

245 See CMS Resolution Offshore Oil Pollution and Migratory Species. UNEP/CMS/Res.7.11.

246 Mediterranean Action Plan. Paragraph 2.

247 The Philippine-Malaysia Agreement.

248 RMTCP. Supra note 2. Section 3.c.

249 International Convention for the Prevention of Pollution from Ships, 1973. 12 ILM. (1973). 1319. Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships. 17 ILM. (1978). 1546.

250 The 1986 Protocol Concerning Co-Operation in Combating Marine Pollution Emergencies in the South Pacific Region. In Rummel-Bulcka. Supra n71. 386-388. The Protocol for the Prevention of Pollution of the South Pacific Region By Dumping. In Rummel-Bulcka. Supra n71. 381-385.

251 Pacific Ocean Pollution Prevention Programme. (2001, SPREP, Apia).

252 WSSD. Paragraph 52(g).

253 WSSD. Paragraph 41.

254 Mrosovsky, N. (1978). 'Tourists Pay for Turtle Watching in Malaysia.' *Marine Turtle Newsletter*. 9: 5. Cosijn, J. (1995). 'Using Sea Turtles For Tourism Marketing.' *Marine Turtle Newsletter*. 71: 12-14.

255 Godfrey, M. (2001). 'Developing Sea Turtle Ecotourism in French Guiana.' *Marine Turtle Newsletter*. 91: 1-4.

Malaysia²⁵⁸ have also reaped these benefits. Unsurprisingly, with such available benefits, the RMTCP has the evaluation and promotion of turtles as a tourist attraction and as a primary consideration within the South Pacific region as:

“This type of non-destructive, sustainable utilization of marine turtles, if correctly managed, has the potential for contributing to both the regional economy and the conservation of marine turtles.”²⁵⁹

Despite the clear possibilities of this industry, it is important to note that as with multiple other examples revolving around so called ‘eco-tourism,’ such operations can produce the antithesis of the results they profess. This is not surprising as the tourist market (some 700 million individuals in 2000 alone) can easily destroy the resource it goes to visit.²⁶⁰ This is particularly so with sea turtles.²⁶¹ The damage non-selective tourism can bring ranges from stimulating illegal trade in turtle products²⁶² through to simple incompatibility with the conservation of sea turtles. The flip side of this problem is that such bad management of sea turtle populations can be linked to tourist boycotts.²⁶³

The possible problems associated with large scale, badly managed tourism, were linked to sudden declines of sea turtle populations in the Maldives in the 1970s,²⁶⁴ Sri Lanka in the 1980s²⁶⁵ and Taiwan in the 1990s.²⁶⁶ The case of the Greek Island of Zakynthos is perhaps the most interesting example of all. Here, what was once 7km of deserted sandy beach, has now been largely swallowed up (only 3km deserted beach remains) by the accompaniments of mass tourism, being hotels, tavernas, sun-beds, umbrellas, throngs of people, music and bright light (at night). Although the critical habitat of the 1-2,000 nesting turtles is protected there is a clear tension between the conservation of the area (which was only discovered in the early 1960s) and the expansion of the lucrative tourist industry (receiving over 380,000 visitors per year at the turn of the century).²⁶⁷

The solution to the above problem is to make sure that any tourism based around sea turtles is sustainable. To achieve this it is necessary to seek broad compliance with the “spirit” of the WSSD directives on this topic, along with the guidance documents

256 Gutic, J. (1994). ‘Sea Turtle Eco Tourism Brings Economic Benefit to Community.’ *Marine Turtle Newsletter*. 64: 10-12.

257 Bedding, S. (1989). ‘Sea Turtle Conservation Emerging in Papua New Guinea.’ *Marine Turtle Newsletter*. 47: 13.

258 Leh, C. (1985). ‘Marine Turtles in Sarawak.’ *Marine Turtle Newsletter*. 35: 1-3. Aikanathan, S. (1996). ‘Malaysian Sea Turtles: What Future.’ *Marine Turtle Newsletter*. 73: 23-24.

259 RMTCP. *Supra* note 2. Section 3.G.

260 See Gosling, S. (2002). ‘Global Environmental Consequences of Tourism.’ *Global Environmental Change*. 12: 283-302. Honey, M. (2003). ‘Protecting Eden: Setting Green Standards for the Tourism Industry.’ *Environment*. 45(6): 9-21. Honey, M. (1999). ‘Treading Lightly: Ecotourism’s Impact Upon the Environment.’ *Environment*. 41(5): 22-33.

261 Godley, B. (1996). ‘Turtles and Tourist Marketing.’ *Marine Turtle Newsletter*. 74: 16-17.

262 Editor. (1992). ‘Turtle Business Obscures Protection Effort in Bali.’ *Marine Turtle Newsletter*. 57: 28-29. Editor. (1991). ‘Tourists and Turtles.’ *Marine Turtle Newsletter*. 52: 25-26. Balazc, G. (1977). ‘Sale of Turtle Products Promoted in Hawaii.’ *Marine Turtle Newsletter*. 4:4.

263 Peter, B. (1990). ‘German Conservation Organisation Calls for Bali Boycott.’ *Marine Turtle Newsletter*. 51: 28.

264 Editor. (1977). ‘Indian Ocean Tourists Wiping Out Sea Turtles.’ *Marine Turtle Newsletter*. 5: 4-5.

265 Dattatri, S. (1982). ‘Beach Development in Sri Lanka.’ *Marine Turtle Newsletter*. 22: 4-5.

266 Cheng, I. (1995). ‘Tourism and the Green Turtle in Conflict on Taiwan.’ *Marine Turtle Newsletter*. 68: 4-6.

267 Dimopoulos, D. (2001). ‘The National Marine Park of Zakynthos.’ *Marine Turtle Newsletter*. 93: 5-9. Editor. (2001). ‘Turtles Versus Tourists.’ *Marine Turtle Newsletter*. 57: 31. Dimopoulos, D. (2001). ‘Zakynthos.’ *Marine Turtle Newsletter*. 54: 21-23. Editor. (1991). ‘Problems For Turtle Protection on Zakynthos.’ *Marine Turtle Newsletter*. 52: 6-7. Margaritoulis, D. (1990). ‘Successes and Failures in ... Zakynthos.’ *Marine Turtle Newsletter*. 49: 13-14. Sutherland, J. (1985). ‘Marine Turtles in Greece and Their Conservation.’ *Marine Turtle Newsletter*. 32: 6-8.

offered by the Convention on Biological Diversity²⁶⁸ and South Pacific guidance on the topic, as encapsulated in the Ocean Policy for the South Pacific²⁶⁹ and the SPREP handbook to assist sustainable tourism.²⁷⁰ In addition to these guidelines and broad principles, it is essential to consider a few basic restrictions which seem relevant specifically to sea turtles, such as preventing light pollution.²⁷¹ Additional restrictions which may be necessary to include pertain to noise pollution, and access to habitat. The latter considerations, as built into a number of turtle agreements²⁷² range from maintaining critical habitat in a natural state (i.e. no mechanical beach cleaners)²⁷³ through to location and design of buildings, controlled use of vehicles on land and coastal areas, and boats in the important migration zones.²⁷⁴

14. The Link To Community.

The RMTCP is fully cognizant that sustainable tourism, without strong linkages to the local community is often a doomed project in conservation cultural and socio-economic terms. The local community includes, inter alia, school children, teachers, decision makers, those working with oceanic products (typically fishing people) and even tourists. At one level or another, it is often these groups that help the scientific endeavour, provide information on traditional management regimes and are often the first ones who are aware when changed management techniques are not working. It is also the locals who are key to maintaining and enforcing any selected management regime. As such, it is clear that local communities associated with threatened species or habitats are a key consideration in achieving conservation success. This is especially so for conservation projects in more remote places, such as often is the case with turtles.²⁷⁵ Turtle conservation can also form an integral part of community development, whereby avenues for the direct benefit to local communities are facilitated and locally owned and operated ventures benefit from sea turtles present winning scenarios. The success of local communities working together to protect the ploughshare tortoise in Madagascar is a good example of this process, whereby a flagship species can stimulate environmental conservation and sustainable development.²⁷⁶ Given such overall benefits, it is not surprising that the participation of local communities and the need to incorporate sea turtle conservation into socio-

268 See CBD Decisions V/25 Biological diversity and tourism & VI/14. Biological diversity and tourism. See also the Guidelines on Sustainable Tourism. UNEP/CBD/SBSTTA/7/5. 20 Sep, 2001.

269 Ocean Policy for the South Pacific. See Thirty Third Pacific Island Forum (Fiji, August 2002). PIFS (02) 8. Annex 2. p23.

270 SPREP. (2003). Indicator Handbook: A guide to the development and Use of Samoa's Sustainable Tourism Indicators. (SPREP, Apia).

271 Limpus, C. (1981). 'Lights and Hatchling Turtles.' 19: 11. Huff, A. (1994). 'Coastal Urban Lighting and Conservation of Sea Turtles.' Marine Turtle Bulletin. 66: 10-12.

272 See the Philippines-Malaysia Agreement. ANNEX A. Conservation And Research Programmes Forthe Turtle Islands Heritage Protected Area. See also the Inter-American Convention. ANNEX II . PROTECTION AND CONSERVATION OF SEA TURTLE HABITATS

273 Leitch, K. (1997). 'No To Beachcleaners.' Marine Turtle Bulletin. 77: 19-20.

274 Venizelos, L. (1993). 'Speedboats Kill Turtles.' Marine Turtle Newsletter. 63: 15. Dimitrios, D. (1994). 'Speedboat Ban at Zakynthos.' Marine Turtle Newsletter. 67: 23-24.

275 Vietias, C. (1999). 'Local Community Involvement in Conservation: Sea Turtles in Brazil.' 33 (2): Oryx. 127-131. Moreira, E. (2001). 'Helping the People Help the Turtles.' Marine Turtle Newsletter. 91: 7-9. Frazer, N. (1985). 'The Cost of Solutions, Who Pays ?' Marine Turtle Newsletter. 33: 15-16. Habhan, G. (1999). 'Sea Turtle Workshop for the Indigenous Seri Tribe.' Marine Turtle Newsletter. 86: 14. Hill, G. (1991). 'Villagers in Thailand Protect Turtle Eggs.' Marine Turtle Newsletter. 53: 8-9. Das, I. (1986). 'Marine Turtle Conservation: The Tribal Connection.' Marine Turtle Newsletter. 36: 2-3. Nichols, W. (2000). 'Community Based Research and Its Application to Sea Turtle Conservation.' Marine Turtle Newsletter. 89: 4-7. Miller, J. (2000). 'Listening to the Elders.' Marine Turtle Newsletter. 88: 1-2. IUCN (1995). Supra n14, p14.

276 See Durbin, J. (1996). 'Local People and Project Angonoka: Conservation of the Ploughshare Tortoise in Madagascar.' Oryx. 30(2): 113-118. cf. Pearce, F. (1995). 'Galapagos Tortoises Under Siege.' N. Sci. Sep 16.

economic development is a recurring theme with the IUCN Global Strategy for Marine Turtles.²⁷⁷ Such incorporation ranges from the provision of information, education and training, through to direct ownership of sustainable tourism operations. With regard to similar ventures, such as tourist ventures built around whale-watching, some of the most successful exemplars (from ecological to economic terms) have come from indigenously owned enterprises.²⁷⁸

15. Enforcing the Law.

The final set of considerations which need to be factored into any successful turtle conservation agreement pertain to both adequate law and its enforcement. The modalities that need to be in any adequate turtle conservation law are all noted above. As such, reviews and evaluation of all sovereign legislation in this area, as envisaged by the RMTCP are commendable. However, as with many conservation initiatives, the problem is not with regard to the formation of the law, but with its compliance. Lack of enforcement of existing laws and regulations designed to protect sea turtles is a very common problems and has been identified in Egypt,²⁷⁹ Sri Lanka,²⁸⁰ Mexico,²⁸¹ India,²⁸² Peru,²⁸³ Indonesia,²⁸⁴ Egypt,²⁸⁵ Antigua and Barbuda,²⁸⁶ Myanmar (Burma)²⁸⁷ and Costa Rica.²⁸⁸ Similar failures have been recorded in the South Pacific. For example, Federal and Territorial laws exist in Samoa that protect turtles and their eggs. The law imposes a \$10,000 penalty for killing a turtle, or importing any turtle products. However, it has been suggested that the law is poorly enforced, and an underground demand for both the meat and eggs of turtles exists.²⁸⁹ Papua New Guinea,²⁹⁰ Fiji²⁹¹ and New Caledonia²⁹² have all experienced similar problems. As such, although the RMTCP is correct in noting that penalties and enforcement

277 IUCN (1995). *Supra* n14, p12.

278 See Gillespie, A. (2001). 'The Evolving Bicultural Relationship With the Management of Cetaceans in New Zealand.' 6 *Asia Pacific Journal of Environmental Law*. 13-47.

279 Nada, M. (2001). 'Status of Sea Turtle Trade in Alexandria's Fish Market.' *Marine Turtle Newsletter*. 95: 5-8.

280 Hewavisenthi, S. (2001). 'Turtle Hatcheries in Sri Lanka: Boon or Bane?' *Marine Turtle Newsletter*. 60: 19-22. Hewavisenthi, S. (1990). 'Exploitation of Marine Turtles in Sri Lanka.' *Marine Turtle Newsletter*. 48: 14-19.

281 Aridjis, H. (1990). 'Mexico Proclaims Total Ban on Harvest of Turtles and Eggs.' *Marine Turtle Newsletter*. 50: 1-3.

282 Sivakumar, K. (2002). 'Sea Turtles in the South Bay of Great Nicobar Island.' *Marine Turtle Newsletter*. 96: 17-18. Kumar, P. (2001). 'Sea Turtle Arribadas: Massacre or Conservation?' *Marine Turtle Newsletter*. 56: 11-13. Vikaya, J. (1982). 'Turtle Slaughter in India.' *Marine Turtle Newsletter*. 23: 2. Mohanty, P. (1983). 'SOS From Sea Turtles From Orissa.' *Marine Turtle Newsletter*. 25: 2.

283 Morales, V. (1996). 'Legislation Protecting Marine Turtles in Peru.' *Marine Turtle Newsletter*. 75: 22-23. Aranda, C. (1989). 'Marine Turtles in Peru.' *Marine Turtle Newsletter*. 45: 8-9.

284 Barr, C. (2001). 'Current Status of Trade and Legal Protection for Sea Turtles in Indonesia.' *Marine Turtle Newsletter*. 54: 4-7. Bunt, P. (2001). 'Exploitation of Sea Turtles in Sumatra.' *Marine Turtle Newsletter*. 51: 19-20. Putrawidjaja, M. (2000). 'Marine Turtles in Indonesia.' *Marine Turtle Newsletter*. 90: 8-10. Salm, R. (1982). 'Trennanu Meets Competition.' *Marine Turtle Newsletter*. 20: 10-11. Suwelo, I. (1985). 'Marine Turtle Problems in Bali Island.' *Marine Turtle Newsletter*. 32: 1-2.

285 Venizelos, L. (2000). 'Exploitation of Loggerhead and Green Turtles in Egypt.' *Marine Turtle Newsletter*. 87: 12-13.

286 Hoyle, M. (1994). 'Continuing Sea Turtle Exploitation in Antigua and Barbuda.' *Marine Turtle Newsletter*. 64: 21-22.

287 Thorbjarnarson, J. (2000). 'Sea Turtles in Myanmar: Past and Present.' *Marine Turtle Newsletter*. 88: 10-11/

288 Opay, P. (1998). 'Legal Action Taken to Stop The Hunting of Green Turtles in Costa Rica.' *Marine Turtle Newsletter*. 79: 12-16.

289 See Craig, P. (1993). 'Sea Turtles: A Vanishing Resource in American Samoa.' *Marine Turtle Newsletter*. 61: 13-15.

290 Bedding, S. (1989). 'Sea Turtle Conservation Emerging in Papua New Guinea.' *Marine Turtle Newsletter*. 47: 13.

291 Troeng, S. (1996). 'Sea Turtle Conservation in Fiji.' *Marine Turtle Newsletter*. 73: 22-23.

292 In 1991, the Second Meeting of the RMTCP urged the authorities of New Caledonia to combat poaching in their territories, and to strictly enforce statutory provisions relating to turtle conservation. Resolutions of the Second Meeting and Workshop of the Regional Turtle Conservation Programme (RMTCP). Reprinted in *Marine Turtle Newsletter* 2001, 57: 12-15.

protocols may be part of the legislative review, the point about enforcement needs to be given special attention.

16. Conclusion.

Sea turtles are endangered all over the world, including the South Pacific. In response to this problem a number of regional and international endeavours are underway to protect them. Within the South Pacific, a Regional Marine Turtle Conservation Plan has been operative since 1989, and this forms the current platform from which it is hoped that a regional agreement on sea turtles may evolve. In a number of areas, the Plan is largely consistent with international best practice such as with the mandated collection of marine turtle information and formation of strong linkages to the local community. It is broadly consistent with best practice in a number of other areas, but could use supplementing in some of these. For example, the RMTCP is largely consistent with best practice and is notably innovative with regards to the customary take of sea turtles by traditional peoples'. However, the bottom line is that any subsistence take must ultimately not operate to the disadvantage of the species needs to be enhanced. Likewise, the RMTCP is broadly consistent with recognition of the overall threats facing sea turtles in terms of habitat destruction. However, the mandate to act over certain priority areas, such as nesting beaches or over cross cutting concerns like scientific links between climatic change and migratory species should be stronger. In addition, although the RMTCP is consistent with international best practice in terms of recognition of the threats of pollution to sea turtles it could advance itself further by linkages to the already elaborate network of treaties and policy documents already operative in the South Pacific on this overlapping problem. In a similar vein, the RMTCP is correct to recognise the tourist potential from sea turtles, but this must be buttressed by international and regional guidelines which will act to keep any tourism ecologically and socially sustainable. Finally, reviews and evaluation of all sovereign legislation in this area, including enforcement, as envisaged by the RMTCP are commendable. However, enforcement and compliance needs to be given special attention. Despite these positive points, the two areas where the RMTCP fails to come up to scratch are with incidental catch and the international trade in sea turtles. In regard to these two concerns, the RMTCP fails to comprehensively deal with the issue of the incidental capture of sea turtles despite clear principles from international environmental, fisheries and trade law. The active support for appropriate technologies and principles in this area needs to be seriously considered. Finally, the RMTCP needs to emphasise full compliance with CITES.