REVIEW REPORTS

CONCERTED ACTION SPECIES

# PART IV: MARINE TURTLES

# INTRODUCTION

The present Rapid Review of Concerted Action Species was conducted by UNEP-WCMC and follows on from the exercise presented to the consideration of the CMS Scientific Council at its 12th Meeting. This version of the review sheets takes on board some of the feedback received at that meeting, and in particular it has reduced its reliance on information from the grey literature in favour more exclusively of peer-reviewed content. Similarly, following the advice received from the Council, the review sheets have been complemented with summary sheets, which indicate the overall perceived trend of the species in each country. A synopsis of the status and level of action for each species is also provided in each section.

As explained at the 12th meeting of the Council, there are a number of characteristics and methodological considerations that need to be kept in mind in order to understand the nature and purpose of the review sheets. In particular, it should be noted that these reviews are not intended as comprehensive compilations of the existing information on the species reviewed, nor are the analyses of trends and conservation status provided intended to supersede the global assessments produced by IUCN (which are included in each sheet for information). Instead, these reviews are produced with three goals in mind:

1. to examine **at the country level** the status and the known level of action for the species protected by the CMS (at this stage, the Species in Appendix I subject of Concerted Actions – Resolution 7.1)
2. to compile in a single document a **summary of the main sources of information accessible to the CMS** via the CMS Information Management System (CMS IMS) in general (including the expert information systems to which it is interconnected) and at UNEP-WCMC;
3. to provide a draft of the possible primary format and content of the **CMS Rolling Papers**, which once in electronic format on the internet (if they are indeed developed as such) could be used by Councillors and other appointed authorities to share and manage knowledge on the status and conservation actions concerning the species protected by the Convention.

The summary of actions reported for each species and contained in each review refers to the information provided in the National Reports to the CMS submitted by the Parties to the Convention in 2002 (COP7), as at the moment of producing these Reviews, the 2005 Reports had not been produced yet. In addition to the information on actions available through the CMS Reports, the Reviews also make reference to any other recent action reported by other actors identified during the review of literature. Importantly, it should also be noted that these Reviews do not include yet the action reported by Agreements and MoUs of the CMS which, needless to say, represent a fundamental component of the conservation effort orchestrated by totality of the CMS family.

**These Reviews are thus only produced as working documents, for discussion at CMS meetings only, and should not be circulated elsewhere without prior permission.**

Anyone wishing to use this information elsewhere should contact the Species Programme at UNEP-WCMC for advice on appropriate use of the information and on citation.

**Members and observers of the Scientific Council are invited to:**

a) contribute any relevant information they may with to share which may improve the content of these Reviews;
b) advise on the usefulness of the exercise in general, and on the convenience of extending the model to other species protected by the CMS;
c) advise on the convenience of making this information and format available online, within the CMS environment, as a tool for CMS users to share and manage knowledge on the status of ,and conservation actions for CMS species.

## Key to general synopsis

IUCN Status:

As reported from the IUCN Red List of Threatened Species (www.redlist.org).

IUCN Trend:

The population is either increasing (↑), stable (→) or decreasing (↓). When no information about population trend is provided, there is a blank space in that column.

CMS Listed Range States:

The list of States in the distribution range of the taxon, according to the CMS Range List (2003). All range States were reviewed, including those marked as (Ex), (Ex?) and (?). When the European Union (EU) is listed as a range state by CMS, this is not included in the count but all the individual EU countries that are listed in brackets are counted.

All Range States:

The number of range states including range states reported in the literature reviewed, such as the Species Data Base (UNEP-WCMC), BirdLife International, IUCN/SSC publications, and other reliable publications. If a range state is included, which CMS does not currently list, a reference is provided.

CMS Parties Reporting Action:

This number represents the proportion of CMS Parties in the range that report conservation actions being undertaken for the taxon. This includes any actions reported in National Reports to CMS in 2002.

Range States Reporting Action:

This number represents the fraction of all range States (including those range States not included in the CMS range list but reported in the literature) in which conservation action was identified to be taking place.

Range States in Which Species Occurs in Protected Areas:

The fraction of all range states in which the species occurs in a protected area (P. A.). If a species has been reintroduced to a protected area, then this is still counted.

## Key to specific synopses

The species summary sheets provide a concise overview of the information included in the more detailed Reviews. For each species, the summary sheet contains information on status, trends and conservation actions at the national level in each range state. These summary sheets do not intend to provide a comprehensive account of each taxon in question, but instead they are designed to produce a concise overview of the information on population status, trends and on conservation actions, that are readily available through the CMS IMS and in the literature.

**Information contained in the summary sheets:**

**Range States**
The range state list included range states registered in the CMS Range List as well as additional range States for which there are reliable references (e.g. BirdLife International, IUCN/SSC publications, etc.). CMS Parties are identified by use of upper-case font.

**Status**
The status at the national level is not represented using threat categories such as the IUCN Red List classification, since these categories are not standardised across different countries. A species is registered under a generic category of threat in a particular range state if it is included in a National Red List (or equivalent publication). Absence of information, however, should not be interpreted as an indicator that the species is not threatened in that country. Range states in which the species is registered as nationally threatened have a dot (●) in the 'Status' column, and range states for which the species is reported as extinct have an "**ex**" in the status column (or "**ex?**" if it is supposed to be extinct but information is lacking).

**Trend**
The apparent population trend in that range state is included, based on the information reviewed. The population is either increasing in that range state (↑), stable (→) or decreasing (↓). Intermediate trends stages are recorded using the symbols (↗) for stable to increasing, and (↘) for stable to decreasing. Range states for which no information on status was available or where the status is uncertain, are represented by an ? in the 'Trends' column.

**CMS Actions**
If conservation action(s) in a CMS Party range state were reported to CMS through National Reports in 2002 (note that at the time of producing this reports, 2005 National Reports had not been submitted), this is represented by a ✓ in the 'CMS Actions' column. If no action is reported this is represented with a ×. Range states that are not CMS Parties, have a blank space in that column section.

**Other Actions**
If recent conservation actions other than those reported to CMS were reported in the literature for a range State, whether this be a Party or not to CMS, a ✓ is used. If no other conservation action is reported, then the range state has a blank space in this column.

# General Synopsis

| Name | IUCN Redlist | IUCN Trend | Countries in CMS Range List | All Range States reported in literature | CMS Parties reporting action | Range States reporting action | Range States in which species occur in P.A. |
|---|---|---|---|---|---|---|---|
| *Caretta caretta* | EN | | 125 | 131 | 8/57 | 44/131 | 13/131 |
| *Chelonia mydas* | EN | ↓ | 125 | 129 | 12/51 | 49/129 | 20/129 |
| *Dermochelys coriacea* | CR | | 132 | 134 | 21/56 | 59/134 | 19/134 |
| *Eretmochelys imbricata* | CR | | 116 | 120 | 7/45 | 37/120 | 9/120 |
| *Lepidochelys kempii* | CR | | 13 | 18 | 2/13 | 6/18 | 3/18 |
| *Lepidochelys olivacea* | EN | | 92 | 98 | 12/37 | 35/98 | 10/98 |
| *Natator depressus* | DD | | 3 | 3 | 0/1 | 2/3 | 1/3 |

***Caretta caretta* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| ALBANIA | | ? | × | |
| Algeria | | ? | | |
| ARGENTINA | ● | ? | | |
| Angola | | ? | | ✓ |
| Antigua and Barbuda | | ? | | |
| AUSTRALIA | | ↓ | ✓ | ✓ |
| Bahamas | | ? | | |
| Bahrain | | ? | | |
| Bangladesh | | ? | | |
| Barbados | | ? | | |
| BELGIUM | | ? | × | |
| Belize | | ? | | |
| BENIN | | ? | × | |
| Brazil | | ? | | ✓ |
| Brunei Darussalam | | ? | | |
| Canada | | ? | | |
| Cambodia | | ? | | |
| CAMEROON | | ? | | |
| Cape Verde | | ? | | ✓ |
| CHILE | | ? | ✓ | |
| China | ● | ? | | |
| Colombia | ● | ? | | |
| CONGO | | ? | × | |
| D.R.C.CONGO | | ? | × | |
| Costa Rica | | ↑ | | ✓ |
| Comoros | | ? | | |
| COTE D' IVOIRE | | ? | × | |
| CROATIA | | ? | × | |
| Cuba | | ? | | ✓ |
| CYPRUS | | ? | | |
| DENMARK | | ? | | |
| DJIBOUTI | | ? | | |
| Dominica | | ? | | |
| Dominican Republic | | ? | | |
| ECUADOR | | ? | × | ✓ |
| EGYPT | | ↓ | × | |
| El Salvador | | ? | | ✓ |
| Equatorial Guinea | | ? | | |
| Eritrea | | ? | | |
| Fiji | | → | | |
| FRANCE | | ? | × | ✓ |
| GAMBIA | | ? | × | ✓ |
| Gabon | | ? | | |
| GHANA | | ? | × | |
| GREECE | | ? | × | ✓ |
| Guatemala | | ? | | |
| GUINEA | | → | ✓ | |
| GUINEA- | | ? | × | ✓ |

| | | | | |
|---|---|---|---|---|
| BISSAU | | | | |
| Guyana | | ? | | |
| Haiti | | ? | | |
| Honduras | | ? | | ✓ |
| INDIA | ● | ↓ | × | ✓ |
| Indonesia | | ? | | ✓ |
| I.R. Iran | | ? | | |
| Iraq | | ? | | |
| IRELAND | | ? | × | |
| ISRAEL | | ? | ✓ | |
| ITALY | | ? | × | ✓ |
| Jamaica | | ? | | |
| Japan | | ? | | |
| KENYA | | ? | ✓ | ✓ |
| D.P.R. Korea | | ? | | |
| Republic of Korea | | ? | | |
| Kuwait | | ? | | |
| Lebanon | | ? | | |
| LIBERIA | | ? | × | |
| LIBYAN ARAB JAMAHIRIYA | | ? | × | |
| Madagascar | | ? | | ✓ |
| Malaysia | | ? | | |
| Maldives | | ? | | |
| MALTA | | ? | × | |
| MAURITANIA | | ? | × | ✓ |
| MAURITIUS | | ? | × | |
| Mexico | | ↓ | | ✓ |
| F.S. Micronesia | | ? | | |
| MONACO | | ? | × | |
| MOROCCO | | ? | × | |
| Mozambique | | ? | | ✓ |
| Myanmar | | ? | | |
| Namibia | | ? | | ✓ |
| NETHERLANDS | | ? | × | |
| NEW ZEALAND | | ? | × | |
| Nicaragua | | ? | | ✓ |
| NIGERIA | | ? | × | |
| NORWAY | | ? | × | |
| Oman | | ? | | |
| PAKISTAN | | ? | × | |
| PANAMA | | ? | × | |
| Papua New Guinea | | ? | | ✓ |
| PERU | ● | ? | × | ✓ |
| PHILIPPINES | ● | ? | × | ✓ |
| POLAND | | ? | × | |
| PORTUGAL | | ↑ | ✓ | |
| Qatar | | ? | | |
| Russian Federation | | ? | | |
| St. Kitts and Nevis | | ? | | |
| St. Lucia | | ? | | |
| St. Vincent and the Granadines | | ? | | |
| Samoa | | ? | | ✓ |
| SAO TOME | | ? | × | |

| | | | | |
|---|---|---|---|---|
| AND PRINCIPE | | | | |
| SAUDI ARABIA | | ? | × | |
| SENEGAL | | ? | ✓ | ✓ |
| Serbia and Montenegro | | ? | | |
| Seychelles | | ? | | ✓ |
| Sierra Leone | | ? | | |
| SLOVENIA | | ? | × | |
| Solomon Islands | | ? | | |
| SOMALIA | | ? | × | |
| SOUTH AFRICA | ● | ? | × | ✓ |
| SPAIN | | ? | × | ✓ |
| SRI LANKA | | ? | × | ✓ |
| Sudan | | ? | | |
| Suriname | | ? | | ✓ |
| Syrian Arab Republic | | ? | | |
| U.R. TANZANIA | | ? | ✓ | ✓ |
| Thailand | | ? | | ✓ |
| Tonga | | ? | | |
| TOGO | | ? | × | |
| Trinidad and Tobago | | ? | | |
| TUNISIA | | ? | × | |
| Turkey | | ? | | ✓ |
| Tuvalu | | ? | | |
| United Arab Emirates | | ? | | |
| U.K. (Anguilla) | | ? | × | |
| UNITED KINGDOM | | ? | | |
| United States | | ↑ | | |
| URUGUAY | | ? | × | |
| Vanuatu | | ? | | ✓ |
| Venezuela | ● | ? | | ✓ |
| Viet Nam | ● | ↓ | | ✓ |
| Yemen | | ? | | |

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: CHELONIIDAE

SPECIES: *Caretta caretta* (Linnaeus, 1758)

SYNONYMS: -

COMMON NAME: Loggerhead (English); Caouanne; Cayunne; Coffre; Tortue à bahut; Tortue Caouanne; Tortue caret (French); Cayuma; Tortuga boba (Spanish)

RANGE STATES: ALBANIA; Algeria; ARGENTINA; Angola; Antigua and Barbuda; AUSTRALIA; Bahamas; Bahrain; Bangladesh; Barbados; Belize; BENIN; Brazil; Brunei Darussalam; Canada; Cambodia; CAMEROON; Cape Verde; CHILE; China; Colombia; CONGO; CONGO, DEMOCRATIC REPUBLIC OF THE; Costa Rica; Comores; COTE D`IVOIRE; CROATIA; Cuba; CYPRUS; DJIBOUTI; Dominica; Dominican Republic; ECUADOR; EGYPT; El Salvador; Equatorial Guinea; Eritrea; Fiji; FRANCE (including Corsica, French Guiana, New Caledonia, Réunion); GAMBIA; Gabon; GHANA; GREECE; Guatemala; GUINEA; GUINEA-BISSAU; Guyana; Haiti; Honduras; INDIA; Indonesia; Iran (Islamic Republic of); Iraq; IRELAND; ISRAEL; ITALY; Jamaica; Japan; KENYA; Korea Democratic People`s Republic of; Korea, Republic of; Kuwait; Lebanon; LIBERIA; LIBYAN ARAB JAMAHIRIYA; Madagascar; Malaysia; Maldives; MALTA; MAURITANIA; MAURITIUS; Mexico; MONACO; MOROCCO; Mozambique; Myanmar; Namibia; NETHERLANDS (Aruba, Saba, Sint Eustatius, Sint Maarten); NEW ZEALAND; Nicaragua; NIGERIA; Oman; PAKISTAN; PANAMA; Papua New Guinea; PERU; PHILIPPINES; PORTUGAL; Qatar; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Samoa; SAUDI ARABIA; SENEGAL; Serbia and Montenegro; Seychelles; Sierra Leone; SLOVENIA; Solomon Islands; SOMALIA; SOUTH AFRICA (Natal); SPAIN; SRI LANKA; Sudan; Suriname; SYRIAN ARAB REPUBLIC; TANZANIA, UNITED REPUBLIC OF; Thailand; Tonga; TOGO; Trinidad and Tobago; TUNISIA; Turkey; Tuvalu; United Arab Emirates; United Kingdom (Anguilla); UNITED KINGDOM (Cyprus); United States (including Puerto Rico); URUGUAY; Vanuatu; Venezuela; Viet Nam; Yemen; international waters (Mediterranean Sea, Atlantic Ocean, Indian Ocean, Pacific Ocean)

RED LIST RATING: EN A1abd (Marine Turtle Specialist Group, 1996)

CONSERVATION STATUS AND ACTIONS:

Loggerheads are widely distributed in coastal waters, mainly in subtropical and temperate regions and travel large distances following major warm currents such as the Gulf Stream and

California Current. Loggerheads are highly migratory, making some of the longest journeys known of all marine turtle species. Nesting beaches are distributed in more temperate latitudes than those of other marine turtles (McLellan *et al.*, 2004). They are also the most common species in the Mediterranean, with nesting reported from numerous countries in the region. The species also nests in Oman in the Indian Ocean and throughout Southeast Asia to Australia, but rarely in the Pacific islands (Kemf, *et al.*, 2000). In the Pacific Ocean, nesting populations of loggerheads have suffered an 80-86% decline over the last 20 years (Lewison *et al*., 2004).

Although world wide population numbers for sea turtle species do not exist, there are an estimated 60,000 nesting females of this species based on nesting beach monitoring reports and publications from the early to mid 1990s (Caribbean Conservation Corporation and Sea Turtle Survival League, 2004). Other sources put the figure at perhaps 100,000 adult females (NatureServe, 2003).

Loggerhead populations in Honduras, Mexico, Colombia, Israel, Turkey, Bahamas, Greece, Japan and Panama have been declining. This decline continues and is primarily attributed to shrimp trawling, coastal development, increased human use of nesting beaches, and pollution (NOAA, 2005).

Loggerheads are less likely to be hunted deliberately than other marine turtles: their meat is considered less desirable than that of the green turtle, and the shell is less prized than that of the hawksbill. However there is some direct exploitation, and loggerheads' eggs are collected and eaten in many parts of the world. The main cause of mortality is believed to be through fisheries bycatch (McLellan *et al.*, 2004). Populations of loggerheads are sometimes threatened with disease, particularly tumours, which may be caused by pollution (Kemf, *et al.*, 2000). Other threats include loss of habitat due to coastal development, artificial light on coasts causing disorientation of nesting females, beach sand mining and collision with motorboats (Lambert, 1999; EuroTurtle, 2004).

**ALBANIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*
**Algeria:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**ARGENTINA:**
*Status:* Catalogued as Vulnerable in the List of Argentinean Vertebrates threatened with extinction (Bertonatti and Gonzalez, 1993).

*CMS actions:* None reported.
*Other actions:*
**Angola:**
*Status:* Occurrence reported (Carr & Carr, 1991). Nesting of loggerheads requires confirmation and study (Fretey, 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will be implemented in South Africa, Namibia and Angola, and will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the

conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Antigua and Barbuda:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**AUSTRALIA:**

*Status:* The Australian nesting populations are genetically distinct from those in other countries. Within Australia there are two genetically independent breeding populations. The eastern Australian population is the only significant population for the species for the entire South Pacific Ocean. This population is centred in the southern Great Barrier Reef and adjacent mainland near Bundaberg with an estimated population size of 1,000 females, with 300 breeding annually (Australia National Report, 2002).

The western population is estimated to contain among 1,500-2,000 females, with breeding mainly centred on Dirk Hartog Island within Shark Bay, and Muiron Islands (North West Cape). A small population feeds within Northern Territory waters, and the loggerhead is known as an occasional visitor to the island state of Tasmania (Australia National Report, 2002).

The population has declined by 50-80% since the 1970s, from about 1,000 breeding females, to a few hundred. This combined with their long maturation and low reproductive rate, means that the remaining loggerhead population is at serious risk of extinction from any increases in mortality. An annual loss of only a few loggerhead turtles could result in the extinction of the Queensland population (Great Barrier Reef Marine Park Authority, 2004).

*CMS actions:* Nesting sites are being monitored and research has been carried out on GIS-based models for indigenous management, effects of commercial fishing activities and ecotourism. In future additional habitat protection will be provided if required (Australia National Report, 2002).

*Other actions:* The GBR Marine Park, until recently, had not been well protected with respect to marine turtle habitats. However, the GBR Marine Park Authority is in the process of establishing a network of no-take zones throughout all 70 bioregions of the GBR, which will benefit marine turtle conservation enormously (McLellan *et al.*, 2004).

A principal focus of WWF's work in the Great Barrier Reef is the prevention of unregulated land-based pollution, caused by agricultural land clearing and poor land management practices upstream in the rivers that discharge into the Marine Park (McLellan *et al.*, 2004).

Over 80% of the northern coastline of Australia is owned and managed by indigenous Aboriginal people. WWF is working in partnership with Indigenous Sea Rangers on joint projects that include marine debris surveys and turtle research and monitoring. WWF assists Aboriginal communities to establish their own marine turtle monitoring programmes by providing training, equipment, additional funding and professional support. This enables Aboriginal communities, via their Sea Rangers, to monitor their own marine turtle resources and in so doing, provide valuable scientific data about the turtles in their region. Sea rangers from Dhimurru Land Management Aboriginal Corporation have been conducting helicopter-based turtle monitoring along the Cape Arnhem coastline since 1996 (McLellan *et al.*, 2004).

WWF's involvement with marine turtle conservation at Ningaloo Reef, one of the longest fringing coral reefs in the world, began with its participation in

a campaign to halt a proposed beachside marina and hotel. WWF has supported a community-monitoring project involving the local community, local government, and state government conservation agencies since 2002. WWF staff is also working with all other stakeholders in the region, in order to develop a coordinated and collaborative Conservation Strategy for marine turtles on the Ningaloo Reef and adjacent beaches. WWF is also extending its community turtle conservation work to other sites along the northwest coast of Western Australia, including into the Kimberley region, where the focus will be on community participation and sustainable catch by indigenous Aboriginal people (McLellan *et al.*, 2004).

**Bahamas:**

*Status:* The Florida loggerheads migrate to the Bahamas in the winter (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bahrain:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bangladesh:**

*Status:* The major breeding and nesting areas are concentrated in the eastern coastal region. The Western coastline in the Sundarban mangrove forest area is a important nesting ground. Major threats for the turtles and their nesting grounds are obstruction by fishing trawlers and fishing nets, poaching eggs and loss of nesting beach (Ahmed *et al*., 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Barbados:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**BELGIUM (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**Belize:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**BENIN:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Brazil:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* Until the end of the 1970s, there were no marine conservation programmes in Brazil. Marine turtles were in grave danger of local extinction through capture in fishing nets, adult females killed for meat and nests being destroyed. In 1980, the Brazilian Institute of Forestry created the TAMAR Programme, to save and protect marine turtles through research, conservation actions and community

involvement. The work was soon extended nationwide from the original project sites, and it focuses on the identification of species, the main nesting sites, the nesting seasons, and the socio-economic reasons for the overexploitation of marine turtles by coastal communities. Accompanying this has been a large education and awareness-raising campaign (McLellan *et al*., 2004).
Among the most visible achievements are the following: the declaration of two Federal Biological Reserve (which were created to protect sea turtles); the creation of a Marine National Park; a nationwide prohibition of the capture of sea turtles or their eggs; and total control of the beaches which fall within the boundaries of the stations of TAMAR (Marcovaldi *et al*., 1999).

**Brunei Darussalam:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Canada:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Cambodia:**

*Status:* The loggerhead turtle is rarely found in Cambodia (Seafdec, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CAMEROON:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Cape Verde:**

*Status:* On Boavista and Sal islands, a significant reproductive stock of *Caretta caretta* was recently discovered and has been identified as being of Global Importance. The islands of Sal, Boa Vista and Maio, where an estimated 3,000 loggerheads nest annually, are thought to be the second most important nesting site for the species the whole of the western Atlantic (Wilson & Humphrey, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is supporting loggerhead tagging and monitoring at Boa Vista. The site is likely to be eventually designated as a Marine Protected Area, but requires proactive planning and regulation development now. This will be beneficial to not only safeguard the turtle nesting beaches, but also to set in place initiatives that can capitalize on the economic benefits of turtle related tourism (McLellan *et al.*, 2004).
In 2004, nine loggerhead turtles living around the Cape Verde Islands were fitted with satellite trackers by scientists from the University of Exeter, UK, and a local organisation, Natura 2000 (Wilson and Humphrey, 2004).

**CHILE:**

*Status:* It is relatively abundant (Chile National Report, 2002).

*CMS actions:* There has been research on marine turtles in the Chilean littoral and their interaction with swordfish. SERNAPESCA and CPPS 2001 Workshop was held in Valparaíso to define priority action guidelines of a programme for the conservation of marine turtles. Future plans include determining the distribution of the various species and, once known, initiating more complex research (Chile National Report, 2002).

*Other actions:*

**China:**

*Status:* The incidental capture of loggerheads by various types of fishing gear in waters of Taiwan is considered a major threat to the survival of their populations (Cheng & Chen, 1997). Catalogued as Endangered in the China Red Data Book of Endangered Animals (Wang & Zhao, 1998).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Colombia:**

*Status:* Catalogued as Critically Endangered in the Colombian Reptiles Red Data Book (Castaño-Mora, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* As part of its trans-Pacific marine turtle conservation efforts, WWF has been involved with training for marine turtle conservation and management in the Colombian Pacific. Additionally, WWF's ecoregional programme for the Colombian and Ecuadorian Pacific includes planning that takes into account important turtle nesting sites (McLellan *et al.*, 2004).

**CONGO:**

*Status:* The presence of *Caretta caretta* in the area remains to be confirmed (Fretey, 2001).

*CMS actions:* None reported.

*Other actions:*

**D.R.C. CONGO:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Costa Rica:**

*Status:* Tortuguero National Park, on the Atlantic coast of Costa Rica, is a nesting site for loggerhead turtles. There have been recent increases in turtle numbers at Tortuguero (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**Comoros:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**COTE D'IVOIRE:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**CROATIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Cuba:**

*Status:* Some direct exploitation (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has supported habitat protection in a key marine protected area, Jardines de la Reina, and supported enforcement action to aid in the decommissioning of turtle nets within the park. Turtle nesting monitoring has also been carried out in conjunction with Centre for Molecular Immunology (CIM) at Guanahacabibes (McLellan *et al.*, 2004).

**CYPRUS:**

*Status:* *Caretta caretta* breeds here (Anon., 2002).

*CMS actions:* None reported.

*Other actions:*

**DENMARK (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**DJIBOUTI:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Dominica:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Dominican Republic:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**ECUADOR:**

*Status:*

*CMS actions:* None reported.

*Other actions:* Working closely with the IATTC and NOAA, WWF is undertaking a pioneering effort in the Eastern Pacific to test such gear fixes for their efficiency and conservation impact. This work is designed to facilitate the shift of the Ecuadorian artisanal fisheries fleet from traditional j-hooks to circular hooks and provide them with dehooking equipment and training (McLellan *et al.*, 2004).

**EGYPT:**

*Status:* The species nests on the Mediterranean coast of the Sinai peninsula, primarily to the east, in the region surrounding the resort town of El Arish. This population is small and under intense pressure from human activities. Capture of adult turtles, human predation of eggs and rapid beach development threaten to eradicate this population in the near future (Clarke *et al*., 2000). In addition to loss of habitat, fisheries in this country have been responsible for killing large numbers of turtle over many years. Bottom trawls operated by Egyptian fleets also kill large numbers (Kemf, *et al*., 2000). Although illegal, it is estimated that several thousand adult turtles (which make up part of the by-catch for many trawlers operating of Egypt's Mediterranean coast) are slaughtered for food each year and sold at the fish markets in Alexandria (Clarke *et al*., 2000).

*CMS actions:* None reported.
*Other actions:*
**El Salvador:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**Equatorial Guinea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**Eritrea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**Fiji:**
*Status:* The species is uncommon in Fiji with recorded sightings in Nasese (Suva), Aiwa (Lau) and Taveuni. The Department of Fisheries estimates that there are some 50-69 loggerheads in Fiji. There are no reports of nests, although there is anecdotal evidence for nests in Yadua island. Their distribution in Fiji is patchy and is likely to reflect both their preferred habitat and possibly the lack of hunting (WWF South Pacific Programme, 2005).

*CMS actions:* Not a Party to CMS.
*Other actions:*
**FRANCE:**
*Status:* ***French Guiana***
The loggerhead nests in French Guiana (McLellan *et al.*, 2004).

***Guadeloupe****
Breeding reported (Fretey, 1984).

***New Caledonia***
Knowledge of the loggerhead populations in southern New Caledonia has been identified as a major information gap in the management and conservation of Pacific populations of loggerheads — which are possibly down to as few as 2,000 nesting females. New nesting sites have been located. A few hundred loggerhead females were estimated from the monitoring of nesting sites (McLellan *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* ***French Guiana***
Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan developed by WWF and partners has recently been technically finalised and been submitted for official endorsement nationally and regionally (McLellan *et al.*, 2004).

***New Caledonia***
Monitoring has been conducted (McLellan *et al.*, 2004). WWF conducted a turtle-tagging programme on the Entrecasteaux Reefs in 2002 and produced

educational materials for local communities and is working with various provinces to improve the conservation legislation aimed at protecting endangered species such as marine turtles (McLellan *et al.*, 2004).

**GAMBIA:**

*Status:* The Gambia is mainly a marine turtle-feeding zone, but the Bijol islands, which have been included in a protected area since 1993, harbour some nesting individuals (Wilson & Humphrey, 2004).

*CMS actions:* None reported.

*Other actions:* Preliminary beach censuses have been conducted, and an analysis of the potential of beaches for nesting turtles. This provides a baseline for future work (Wilson & Humphrey, 2004).

**Gabon:**

*Status:* All species of turtle on the Gabon coast are threatened by direct harvesting and as a bycatch of multinational fishing fleets. There are no laws to protect sea turtles (other than leatherbacks) in Gabon (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**GHANA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**GREECE:**

*Status:* Despite its relatively small length (650m), Sekania beach on Zakynthos island (Ionian sea) is the single most important *Caretta caretta* nesting beach in the Mediterranean Sea. The average numbers of clutches deposited on Zakynthos over 16 years (1984-1999) is 1301 nests, which accounts for 25,9% of all loggerhead nests recorded in the Mediterranean (Karavas *et al*., 2005).
Bottom trawls operated by Greek fleets kill large numbers of loggerheads (Kemf, *et al.*, 2000).

*CMS actions:* None reported.

*Other actions:* There is a LIFE Project 99/72588 on the conservation and management of the wetlands of Amvrakikos in Greece involving *Caretta caretta*. WWF and IUCN have been highly active in Greek Islands since the early 1980s, especially Zakynthos, surveying the beaches for turtles and promoting ecologically sound tourism (Kemf, *et al*., 2000).

In 1999, the Greek government declared a Marine National Park in Zakynthos. WWF contributed to the completion of restoration works for the long-term protection of this important loggerhead marine turtle nesting beach in the Mediterranean against erosion and siltation (McLellan *et al.*, 2004).

**Guatemala:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**GUINEA:**

*Status:* The species is plentiful in the coastal area, particularly on the shores of the Islands of Loos (Kassa, Tamara, Room, Soro, Rogbanè, Rio Pongo and in the north west of the country) (Guinea National Report, 2002). Other nesting sites for marine turtles are: Sobané, Goret, Tougnifilidi, Kountousadé, Khoundindé, Belair, Koukoudé, Böngölön, Poukhoun, and the islands of the Cape Verga (Wilson & Humphrey, 2004).

*CMS actions:* Future plans include restoration of the habitat following the guidelines of the National Strategic Action Plan for Biological Diversity concerning species of Marine Turtle; training administrators of said habitats; raising the awareness of fishermen and sailors who must assist with the conservation of Marine Turtles, and raising the awareness of local coastal communities (Guinea National Report, 2002).

*Other actions:*

**GUINEA-BISSAU:**

*Status:* There are important nesting and feeding grounds for loggerhead turtles in the region (McLellan *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* Nesting and feeding grounds for loggerheads in the region have been supported by WWF since 1976. A regular tagging programme is now needed to build on these initial telemetry studies and clarify the movement of these turtles. As a first measure towards this, WWF and partners will conduct a training workshop on turtle tagging and census techniques at the beginning of the 2004 nesting season (McLellan *et al.*, 2004). Overall, 4,764 turtles were ringed between 1993 and 2003. The long-term aim is to determine the number of turtles in Guinea Bissau and to identify migration routes, concentration sites and feeding areas, issues that are as yet little known in West Africa (Wilson & Humphrey, 2004).

**Guyana:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Haiti:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Honduras:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**INDIA:**

*Status:* The major problems those sea turtles faces along the Indian coastline include: incidental capture in fishing nets, loss of nesting habitats, non-human predation and artificial illumination (artificial illumination from development activities near nesting beaches has resulted in disorienting adult nesting sea turtles as well as hatchlings, leading to heavy hatchling mortality) (Choudhury *et al*., 1999). The species is catalogued as Endangered in the Red Data Book of Indian Animals (Ghosh, 1994).

*CMS actions:* None reported.

*Other actions:* The Indian Government launched the 'National Marine Turtle Conservation Project' in 1998; the Project envisaged activities encompassing both on-shore and offshore critical habitats for sea turtles. In spite of the legal protection given

to all sea turtles species in India, in recent years the populations migrating to Indian waters are in decline (Choudhury *et al*., 1999).

**Indonesia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has been involved in various turtle conservation projects in Indonesia. In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary-protected areas was recommended. Areas proposed included Berau Island (Kemf, *et al.*, 2000).

**I.R. Iran:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Iraq:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**IRELAND:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**ISRAEL:**

*Status:* In the 2000 nesting survey, 69 nests were found along the Mediterranean coast, and about 4200 hatching turtles were released. In 2001, 65 nests were found (Israel National Report, 2002).

*CMS actions:* Nesting surveys are being conducted along the Mediterranean coast. Nest sites are protected and stranded and injured turtles are rehabilitated (Israel National Report, 2002).

*Other actions:*

**ITALY:**

*Status:* Fisheries in this country have been responsible for killing large numbers of turtle over many years (Kemf, *et al.*, 2000). There is a little doubt about the importance of the North Adriatic Sea, especially the northeast part, both as a foraging area and as an over wintering habitat for sea turtles; the impact of trawlers on loggerheads is important, even in areas with the lowest catch rates (Casale *et al*., 2004).

*CMS actions:* None reported.

*Other actions:* There is a LIFE project dealing with the conservation of *Caretta caretta*, which concerns urgent conservation measures on the islands of Lampedusa and Linosa (99/72198) (Anon., 2002). WWF is conducting a campaign to decrease mortality of marine turtles due to bycatch. WWF has supported the presence of independent observers on Italian long line fishing fleets to monitor fish catches and document the extent of marine turtle and shark bycatch and mortality. This type of monitoring programme is limited by the high costs involved, and the alternative is to involve the fishing industry in collecting the data. These data will provide valuable information about the rate and nature of fishing interactions, in order to guide future mitigation measures. WWF is also creating a management plan for their five Italian Rescue Centres, the goal of which is the veterinary treatment, rehabilitation and release at sea of marine turtles (McLellan *et al.*, 2004).

**Jamaica:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**Japan:**
*Status:* There are numerous nesting beaches for loggerhead turtles around the main islands of Japan and the Japanese archipelago is an important nesting ground for the loggerhead turtle in the North Pacific Ocean (Sato *et al*., 1997). Japan has the largest loggerhead population in the Northwest Pacific (Cheng & Chen, 1997). The loggerhead is the predominant species of sea turtle nesting in the hole of the Ryukyus archipelago (Kikukawa *et al*., 1999).

*CMS actions:* Not a Party to CMS.
*Other actions:*
**KENYA:**
*Status:* Along most areas of the Kenyan coast, with higher concentrations in the northern parts and there is strong seasonal variations in distribution (Kenya National Report, 2002). Fisheries statistics and data collected by KESCOM (Kenya Sea Turtle Conservation Committee) indicate that between 54 and 75% of all turtles caught in artisanal fisheries are either slaughtered for home consumption or traded (Wilson & Humphrey, 2004).

*CMS actions:* *Caretta caretta* is monitored and its habitat protected within the framework of coastal zone and biodiversity monitoring and management strategies (Kenya National Report, 2002).

*Other actions:* In 1996, WWF joined forces with the Kenya Wildlife Service, the Fisheries and Forest Departments and local communities to develop a long-term management strategy integrating conservation and development priorities of the Kiunga Marine National Reserve. The project has focused on developing sustainable and equitable methods of using the reserve's resources. Community participation in protecting nesting marine turtles is fostered through an incentive scheme for nests discovered and protected throughout the season (McLellan *et al.*, 2004).

The community has also actively participated in ongoing monitoring of marine turtles and their habitats. In order to broaden this expertise base, WWF has recently hosted a training marine turtle course for KESCOM (McLellan *et al.*, 2004).

WWF has recently hosted a training marine turtle course for KESCOM (McLellan *et al.*, 2004). WWF is working with national committees for marine turtle to ensure that marine resources are used sustainably by local communities and that critical habitats for marine turtles, as well as coral fish and dugongs, are protected (McLellan *et al.*, 2004). The overall aim of a new KESCOM project is to provide information for decision-makers to develop a regional strategy for the conservation of marine turtles in Eastern Africa (Wilson & Humphrey, 2004).

**D.P.R. Korea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**Republic of Korea:**
*Status:* Not a Party to CMS.
*CMS actions:*
*Other actions:*
**Kuwait:**
*Status:*

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Lebanon:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**LIBERIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**LIBYAN ARAB JAMAHIRIYA:**
*Status:* *Caretta caretta* nests here (Anon., 2002). Between 1995 and 1998 WWF survey teams found unknown and significant loggerhead turtle nesting beaches, especially along the northeast coast. Fisheries in this country have been responsible for killing large numbers of turtle over many years (Kemf, *et al.*, 2000).

*CMS actions:* None reported.
*Other actions:*

**Madagascar:**
*Status:* This species nests in Madagascar (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* Community-based conservation projects have been set-up in the Fort Dauphin area (Kemf, *et al.*, 2000). In 2002/2003 WWF initiated tagging activities in northern Madagascar, and commenced a trade assessment at two high-risk sites together with small-scale awareness activities (McLellan *et al.*, 2004).
A new WWF initiative in Madagascar is involving industrial shrimp trawl fisheries in tagging and monitoring marine turtles accidentally caught as by-catch (Wilson & Humphrey, 2004).

**Malaysia:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Maldives:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**MALTA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**MAURITANIA:**
*Status:* The Banc d'Arguin National Park is an important nesting and feeding ground for this species of turtle. Several thousand turtles per year are killed as by-catch in the local shark fishery (Kemf, *et al.*, 2000).

*CMS actions:* None reported.

*Other actions:* Turtles enjoy some protection in the Banc d'Arguin National Park, which is supported by WWF (Kemf, *et al.*, 2000). This important nesting and feeding ground for loggerhead turtles has been supported by WWF since

1976. A regular tagging programme is now needed to build on these initial telemetry studies and clarify the movement of these turtles. As a first measure towards this, WWF and partners will conduct a training workshop on turtle tagging and census techniques at the beginning of the 2004 nesting season (McLellan *et al.*, 2004).

**MAURITIUS:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Mexico:**

*Status:* Loggerhead turtles experience high levels of trawl-related mortality in the Gulf of Mexico (Lewison *et al*., 2003)

*CMS actions:* Not a Party to CMS.

*Other actions:* The main strategies for sea turtle conservation in Mexico include a complete ban on exploitation of sea turtles and their eggs, and the protection of nesting beaches. Management has mainly focused on nest protection in centralized beach hatcheries. Recurrent problems related to lack of funds include insufficient beach protection and inadequate management of nest removal to hatcheries have resulted in poor overall success of the conservation programs (Garcia et al., 2003).

WWF started a campaign to protect all of Mexico's turtles in the 1980s and 1990s. Public awareness, research, the setting up of protected areas, etc were all facets of the conservation project (Kemf, *et al.*, 2000).

**F.S. Micronesia*:**

*Status:* Occurrence reported (Herring, 1986).

*CMS actions:*

*Other actions:*

**MONACO:**

*Status:* *Caretta caretta* is rarely and fleetingly present (Monaco National Report, 2002).

*CMS actions:* None reported.

*Other actions:*

**MOROCCO:**

*Status:* Nesting by *Caretta caretta* appears to be confirmed (Fretey, 2001).

*CMS actions:* None reported.

*Other actions:*

**Mozambique:**

*Status:* Loggerhead turtles are found in the waters of Mozambique and also come ashore to nest (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Work has been conducted by WWF in 2001 on turtle bycatch in shrimp fisheries and on the use of turtle excluder devices (TEDs) (McLellan *et al.*, 2004). A WWF online public advocacy campaign urging Mozambique's Ministers to take action to prevent further losses of turtles was launched in February 2003. As a result of this, and WWF's work with the relevant Ministers, a new Regulation for Marine Fisheries was approved by the Council of Ministers in October 2003, which made TEDs compulsory in trawl nets in Mozambique (McLellan *et al.*, 2004).

In an effort to reduce long-line turtle by-catch by illegal and unlicensed longline fishing vessels in Mozambique waters, the Government

has begun to intercept these vessels, through a military team based at Bazaruto Archipelago National Park (McLellan *et al.*, 2004). Marine turtles are among the species benefiting from a number of marine protected areas set up on the coast (Kemf, *et al.*, 2000).
The creation in 2001 and 2002 of two new marine protected areas (Bazaruto Archipelago National Park and Quirimbas National Park) in Mozambique is a critical limestone in global marine conservation (Wilson & Humphrey, 2004).
In a partnership between WWF and local fishermen, two islands of the Primeiras and Segundas Archipelago are being patrolled for the protection of its wildlife, in particular marine turtles (IOSEA Marine Turtle, 2004).

**Myanmar:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Namibia:**
*Status:* *Caretta caretta* has been reported in Namibia's waters (Fretey, 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the by-catch of threatened seabirds, sharks and turtles on long-line fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**NETHERLANDS:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**NEW ZEALAND:**
*Status:* None reported.
*CMS actions:*
*Other actions:*

**Nicaragua:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**NIGERIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**NORWAY (v)*:**
*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.
*Other actions:*

**Oman:**
*Status:* The world's largest nesting aggregation (30,000 nesting females/year) is on Masirah Island (NatureServe, 2003). The principal threats to loggerheads on

Masirah were flooding of nests and lights near the beach distracting hatchlings.

*CMS actions:* Not a Party to CMS.
*Other actions:*

**PAKISTAN:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**PANAMA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Papua New Guinea:**
*Status:* Few quantitative data are available about important marine turtle habitats in Papua New Guinea.

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF and other partner organisations are currently investigating the potential of establishing a marine turtle monitoring programme that will provide valuable data as well as involve local communities. It is anticipated that the data generated from these surveys will become the baseline upon which national policies for the conservation and protection of marine turtles will be formulated (McLellan *et al.*, 2004).

**PERU:**
*Status:* Catalogued as Vulnerable in the Peruvian Red Data Book (Pulido Capurro, 1991).

*CMS actions:* None reported.

*Other actions:* WWF has worked in Peru with local partners on various initiatives, including a turtle conservation project south of Lima, law enforcement on land and at sea, initiatives against by-catch and illegal consumption, and environmental education and awareness campaigns with local fishermen, villagers and public authorities. One of the outstanding achievements of this work was the recent reduction (by two thirds) of the number of commercial establishments selling turtle meat in the Pisco Paracas area. This was a direct result of numerous control operatives set-up to prevent both the capture and sale of marine turtles (McLellan *et al.*, 2004).

**PHILIPPINES:**
*Status:* Reported as Vulnerable in the Philippine Red Data Book (Wildlife Conservation Society of the Philippines, 1997).

*CMS actions:* None reported.

*Other actions:* In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held funded by WWF, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary protected areas was recommended. Areas proposed included the Phillippine-Sabah Turtle Islands, Sipadan Islands, and the Berau Island (Kemf, *et al.*, 2000).

**POLAND (v)*:**
*Status:*
*CMS actions:* None reported.

*Other actions:*

**PORTUGAL:**

*Status:* Individuals observed in Portuguese waters are mainly juveniles. The EEZs of the Azores and Madeira harbour mainly US-born animals (Atlantic population). Population size seems to be increasing slightly. The origin and status of the Algarve (southern Portugal) population is unknown: animals can originate from the Atlantic (US), from Cape Verde or from the Mediterranean populations and are probably a mixture, with predominant Atlantic (US) origin (Portugal National Report, 2002).

*CMS actions:* Research is conducted at Madeira into the behaviour, ecology, population structure of loggerheads, and the effects of fisheries. On the mainland, stranded animals are rehabilitated. Plans for the future include a central database; a stranding and rescue network; a tagging program and satellite telemetry project; and genetic sampling to separate the three populations (Atlantic, Mediterranean and Cape Verde) (Portugal National Report, 2002). This species is present at Natura 2000 protected sites in the Macaronesian region (Anon., 2002).

*Other actions:*

**Qatar:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Russian Federation (v)*:** Occurrence reported (UNEP-WCMC, 2004).

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**Saint Kitts and Nevis:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**Saint Lucia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Vincent and the Grenadines:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Samoa:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* The Samoan Government has declared its political commitment to establishing its 120,000km$^2$ Economic Exclusive Zone as a Whale, Shark and Turtle Sanctuary in 2002 (McLellan *et al.*, 2004).

**SAO TOME AND PRINCIPE*:**

Status: Male and female adult loggerheads have been captured around the island of Sao Tome, but nesting has not been proven (Fretey, 2001).

CMS actions: None reported.
Other actions:

**SAUDI ARABIA:**

*Status:*
*CMS actions:*
*Other actions:*

**SENEGAL:**

*Status:* *Caretta caretta* is common in the centre of the country and it has been spotted in the north in the Park of the Barbary Coast, but there has been no precise information about the size of the population (Senegal National Report, 2002). Feeding grounds in Sine Saloum are considered to be regionally important for marine turtles. However, turtles are under many threats here, including local consumption of both turtle meat and eggs. Artisanal fishermen sometimes purposefully capture adult turtles in known foraging grounds on days when their fishing captures are low (McLellan *et al.*, 2004).

*CMS actions:* A National Strategy for the conservation of turtles will be put in place (Senegal National Report, 2002).

*Other actions:* WWF has funded a number of protected areas for turtles in Senegal (Kemf, *et al.*, 2000). WWF has worked with partners "le village des tortues" on raising awareness of the need for marine turtle conservation in Senegal. As a result, the consumption of turtles has stopped in some villages where turtles were traditionally eaten (McLellan *et al.*, 2004).

The Government of Senegal recently announced the establishment of a network of four marine protected areas in Senegal's coastal zone, which will protect regionally important feeding and nesting grounds for five species of marine turtles (McLellan *et al.*, 2004).

Activities have been carried out in the delta of Saloum Biosphere Reserve. These included a local awareness campaign and the long term monitoring of nesting beaches at Leba Island, Birds Island, Kossos, Senghor Island, Ansoukala, Fandiong, beach of Niodor, Pointe of Sangomar, and Pointe of Djakonsa (Wilson & Humphrey, 2004).

**Serbia and Montenegro:**

*Status:* Not a Party to CMS.
*CMS actions:*
*Other actions:*

**Seychelles:**

*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* The Banyan Tree Resort, in partnership with the Marine Conservation Society, Seychelles (MCSS), is implementing a project of Integrated Marine Turtle and Beach Management at Anse Intendance. This project focuses on the management of the beach, dune structure and associated vegetation to enhance turtle nesting and mitigate the impacts of tourism activities on the beach and dunes (IOSEA Marine Turtle Mou, 2004).

Another project is funded by the British Foreign and Commonwealth Office and is being implemented by the Marine Conservation Society Seychelles (MCSS). It brings together stakeholders, from throughout Seychelles, who currently manages turtle rookeries into a partnership where they share data through an on-line database that informs the development of a Strategy and Action Plan (IOSEA Marine Turtle MoU, 2004).

A different project launched by the Marine Conservation Society Seychelles (MCSS) in February 2004, focuses on the turtle rookeries on the three main islands of Mahe, Praslin and La Digue (IOSEA Marine Turtle MoU, 2004).

**Sierra Leone:**

*Status:* The loggerhead has been recorded in Sierra Leone waters, but nesting has not been reported (Fretey, 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**SLOVENIA:**

*Status:*

None reported.

*CMS actions:*

*Other actions:*

**Solomon Islands:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**SOMALIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**SOUTH AFRICA (Natal):**

*Status:* The species nests on Northern Natal (Kemf, *et al.*, 2000). South African nesting area is intensively protected with numbers of nesting female showing upward trend. Catalogued as Vulnerable in the South African Red Data Book (Branch, 1988).

*CMS actions:* None reported.

*Other actions:* The loggerhead turtles of the Tongaland beaches of KwaZulu-Natal have been the subject of a monitoring and patrol programme, led by KZN, that has been running since 1969 (McLellan *et al.*, 2004).

WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will be implemented in South Africa, Namibia and Angola, and will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**SPAIN:**

*Status:* Fisheries in this country have been responsible for killing large numbers of turtle over many years, especially as a bycatch in Spanish longline fisheries that were estimated to kill 4,000 animals per year (Kemf, *et al.*, 2000). Loggerheads are a common by-catch around the Balearics archipelago, most turtles being taken by drifting longlines or lobster trammel nets. The relevance of lobster trammel nets becomes more even more evident when the high mortality rate of loggerhead turtles in the gear is considered (Carreras *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* There is a LIFE project (00/7303) dealing with the conservation of *Caretta caretta*, which foresees measures to manage the habitats of this species around the Balearic islands, while giving particular attention to incidental catches. This species is present at Natura 2000 protected sites in the Macaronesian region (Anon., 2002).

**SRI LANKA:**
*Status:*
*CMS actions:* None reported.

*Other actions:* The Turtle Conservation Project (TCP) in Sri Lanka was established in 1993 to address the issue of marine turtle conservation. The TCP aims to devise and facilitate the implementation of sustainable marine turtle conservation strategies through education, research and community participation. Major programmes initiated by TCP are the Rekawa environmental education programme, school lecture program and research and tagging programme (Kaparusinghe, 1999).

**Sudan:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Suriname:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan developed by WWF and partners has recently been technically finalised and been submitted for official endorsement nationally and regionally (McLellan *et al.*, 2004).

WWF is currently supporting most marine turtle conservation initiatives that are coordinated under the Foundation for Nature Conservation (Stinasu) – a semi-government organisation. Local Amerindian organisations are becoming increasing involved in managing, and benefiting from, marine turtle conservation initiatives. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**SYRIAN ARAB REPUBLIC:**
*Status:* *Caretta caretta* breeds here (Anon., 2002).

*CMS actions:* None reported.
*Other actions:*

**U.R. TANZANIA:**
*Status:* Population size and trends are not known. There is no nesting record of loggerhead turtle in Tanzania. Three loggerhead turtles tagged in South Africa in 1985, 1992 and 1999 have been captured in Mafia over past two years (U.R.

Tanzania National Report, 2002).

*CMS actions:* Mortalities are monitored in Mafia Islands. A technical committee will be formed to coordinate all turtle conservation programmes in Tanzania (U.R. Tanzania National Report, 2002).

*Other actions:* An area of 820 km² around southern Mafia, including several smaller islands, was designated as the Mafia Island Marine Park (MINO) in 1995 (Wilson & Humphrey, 2004).
Marine turtles are among the species benefiting from a number of marine protected areas set up on the coast (Kemf, *et al.*, 2000). WWF is working with local communities on Mafia Island on a variety of natural resource management topics, including fisheries management, alternative non-destructive fishing ventures and marine turtle conservation. Additional support for the turtle conservation programme is provided by the Wildlife Conservation Society (WCS) and Born Free Foundation, amongst others (McLellan *et al.*, 2004).

Over the last nesting season on Mafia Island, over 10,000 hatchlings were produced from nest protection, and the rate of human poaching fell to 4% of previous levels. Part of WWF's work in this area has also been to support the new zoning measures in Mafia Island Marine Park, which are anticipated to reduce bycatch levels of marine turtles in no-fishing zones (McLellan *et al.*, 2004).

**Thailand:**

*Status:* By the 1970s, all turtle species in Thailand were subject to commercial egg collection and the harvest was in decline. Drift nets in coastal waters were, and remain, a major threat causing accidental drowning (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1980 there have been various WWF sponsored conservation activities to protect Thailand's turtles, including surveys, anti-poaching patrols, and village-based projects (Kemf, *et al.*, 2000).

**Tonga:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**TOGO:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Trinidad and Tobago:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**TUNISIA:**

*Status:* *Caretta caretta* nests here (Anon., 2002). Fisheries in this country have been responsible for killing large numbers of turtle over many years (Kemf, *et al.*, 2000).

*CMS actions:* None reported.

*Other actions:*

**Turkey:**

*Status:* Surveys indicate that there are 17 important loggerheads nesting beaches on Turkey's Mediterranean coast (Kemf et al., 2000). Fethiye and Kizolot beaches

are amongst the most important sites for loggerhead turtle nesting in Turkey. Increasing human activities and beach development threaten the turtle populations at both beaches (Türkozan, 2000).
Fisheries in this country have been responsible for killing large numbers of turtle over many years. Bottom trawls also kill significant numbers of loggerheads (Kemf, *et al.*, 2000).
Nesting grounds in Turkey face two major problems. Some beaches are exposed to tourism-related problems. In many areas, certain activities of the local people are also of concern, such as illegal sand removal and the use of heavy vehicles on the beach. Nesting beaches where there is no human activity are exposed to relatively high predation rates (Canbolat, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1978 there have been nesting surveys initiated by WWF and IUCN. In 1987 the Turkish Society for the Protection of Nature (DHKD) launched a successful campaign to prevent a huge tourism development project for the Dalyan/Koycegiz region (Kemf, *et al.*, 2000). WWF is working to establish a fully representative network of protected areas in the Mediterranean and is collaborating with governments and local conservation organizations to protect loggerheads nesting beaches in Turkey and Greece (McLellan *et al.*, 2004).

The first systematic surveys of nesting beaches for the two marine turtle species breeding on the Turkish coasts of the Mediterranean Sea — the loggerhead and green turtle — started in 1979 with the support of WWF and IUCN. In 1988, 17 sites were designated as Marine Turtle Nesting Sites. However, a recent report from WWF indicated that 64 per cent of these sites are not adequately protected (McLellan *et al.*, 2004).

The First Turkish National Marine Turtle Symposium was held in December 2003 in Istanbul, Turkey and organized by WWF-Turkey. A draft National Action Plan for Marine Turtles was formulated during the Symposium. It included recommendations to prepare a final National Action Plan for the conservation of marine turtles and their habitats as soon as possible; to establish marine turtle rescue and rehabilitation centres; and to standardize methods employed in conservation and monitoring of the nesting sites (McLellan *et al.*, 2004).

**Tuvalu:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**United Arab Emirates:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**United Kingdom (Anguilla):**
*Status:*
*CMS actions:* Anguilla is not a Party to CMS.
*Other actions:*

**UNITED KINGDOM:**
*Status:* ***British Virgin Islands****
Breeding reported (UNEP-WCMC, 2004).

***Cayman Islands****

Historically, nesting marine turtles were abundant in the Cayman Islands, with a large migrant population reproducing between May and October. By the early 1800s, however, Caymanian turtle fishermen had exhausted the local nesting populations. Although many authors found no evidence of marine turtle nesting activity in the Cayman Islands and concluded they were locally extinct, recent observations and reports suggest that marine turtles were not extirpated, and four different species of marine turtles nest in the islands, including *Caretta caretta* (Aiken *et al*., 2001).

***Cyprus***

***Grenada****
Breeding reported (Finley, 1984).

***Montserrat****
Breeding reported (UNEP-WCMC, 2004).

***Turks and Caicos islands****
Breeding reported (Fletemeyer, 1984).

*CMS actions:* None reported.

*Other actions:*

**United States (including Puerto Rico):**

*Status:* The largest nesting population of the loggerhead sea turtle in the Atlantic Ocean is that of the south-eastern USA where an estimated 74,000 nests are laid annually and currently occurs as far north as New Jersey and 2,200 km southwards to the Caribbean (Hawkes *et al*., 2005).

The major nesting grounds are off the coast of Florida and South Carolina (Kemf *et al.*, 2000). These Florida loggerheads migrate to the Bahamas in the winter. Small populations of the Atlantic loggerhead are also found on barrier islands off the Texas coast (Lambert, 1999). Currently, numbers of loggerheads are increasing but it is likely that all sea turtle populations are well below historical levels (Salmon *et al*., 1999). Most recent evidence suggests that the number of nesting females in South Carolina and Georgia may be declining, while the number of nesting females in Florida appears to be stable (NOAA, 2005).

The most concentrated population is in the Greater Antilles and the eastern United States with about 15,000 individuals frequenting the eastern U.S. yearly. However, the Carolinas record a three percent decrease in the occurrence of *C. caretta* each year (Lambert, 1999).

The number of loggerhead nests in the South Florida subpopulation, considered the primary source for loggerheads encountered by trawlers in the Gulf of Mexico, is believed to be increasing 3-4% annually (Lewison *et al*., 2003). Most recent evidence suggests that the number of nesting females in South Carolina and Georgia may be declining, while the number of nesting females in Florida appears to be stable (NOAA, 2005).

Threats to sea turtles in the marine environment of North America come from diverse fishing operations (including extensive trawling and gill netting), dredging, pollution, power-plant entrapment, entanglement and marina and dock development (Hawkes *et al*., 2005)

*CMS actions:* Not a Party to CMS.

*Other actions*

**URUGUAY:**

*Status:* No information available (Uruguay National Report, 2002).

*CMS actions:* Four future research lines have been established: genetic, impacts from fisheries, environmental education, and feeding areas (Uruguay National Report, 2002).

*Other actions:*

**Vanuatu:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF supported (together with the South Pacific Regional Environmental Programme) a local theatre group to give performances to raise awareness of marine turtle conservation, and invite local communities to participate in marine turtle monitoring. The marine turtle conservation theatre programme involves the collection of information and stories upon which the theatrical group base their performances, and the recruitment of "turtle monitors" to provide a network of people concerned about turtle conservation. By 2003, as many as 150 turtle monitors in approximately 80 Vanuatu coastal villagers and the "Turtle Monitors Network" were participating in the programme. As a result of the post-theatre discussions, some villages imposed 10 year bans on turtle killing (McLellan *et al.*, 2004).

**Venezuela:**

*Status:* It is not very frequent in Venezuela. It is more abundant in the east of the country, from the Miranda State to Paria peninsula in Sucre, as well as in Nueva Esparta and Los Testigos Island. The nesting population is estimated between 75 and 230 females. The most important threat in Venezuela is overexploitation of wild populations, and heavy traffic in Tacarigua National Park has been reported to be an important mortality factor. Catalogued as Vulnerable in the Venezuelan Red Data Book (Rodriguez and Suarez-Rojas, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* Research projects have been conducted in Dos Mosquises Biological Station and in Los Roques Archipelago National Park, where the Fundación Científica los Roques in collaboration with FUDENA are breeding captive populations since 1980 (Rodriguez & Suarez-Rojas, 1999).

**Viet Nam:**

*Status:* Populations of loggerhead turtles are in serious decline (Kemf, *et al.*, 2000). It is included as a Vulnerable species in the Vietnamese Red Data Book (Viet Nam, Ministry of Science, Technology and Environment, 1992)

*CMS actions:* Not a Party to CMS.

*Other actions:* There are proposals for a network of protected areas (Kemf, *et al.*, 2000).

**Yemen:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

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* Range State not yet included in the CMS range list for this species.

***Chelonia mydas* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| Algeria | | ? | | ✓ |
| Angola | | ? | | ✓ |
| Antigua and Barbuda | | ? | | |
| AUSTRALIA | | ↓ | ✓ | ✓ |
| Bahamas | | ? | | |
| Bahrain | | ? | | |
| Bangladesh | | ? | | |
| Barbados | | ? | | |
| BELGIUM | | ? | × | |
| Belize | | ? | | |
| BENIN | | ? | ✓ | |
| Brazil | | ? | | ✓ |
| Brunei Darussalam | | ? | | |
| BULGARIA | | ? | × | |
| Cambodia | | ? | | |
| CAMEROON | | ? | × | |
| Canada | | ? | | |
| Cape Verde | | ? | | |
| CHILE | | ? | ✓ | |
| China | ● | ? | | |
| Colombia | ● | ? | | |
| Comoros | | ? | | |
| CONGO | | ? | × | |
| D.R. CONGO | | ? | × | |
| Cook islands | | ? | | ✓ |
| Costa Rica | | ? | | |
| COTE D'IVOIRE | | ? | × | |
| Cuba | | ? | | ✓ |
| CYPRUS | | ? | × | |
| DJIBOUTI | | ? | × | |
| Dominica | | ? | | |
| Dominican Republic | | ? | | |
| ECUADOR | | ? | × | ✓ |
| EGYPT | | ↓ | ✓ | |
| El Salvador | | ? | | ✓ |
| Equatorial Guinea | | ? | | |
| Eritrea | | ? | | |
| Fiji | | ? | | ✓ |
| France | | ↓ | | ✓ |
| Gabon | | ↓ | | ✓ |
| GAMBIA | | ? | × | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| GHANA | | ? | × | |
| GREECE | | ? | × | |
| Grenada | | ? | | |
| Guatemala | | ? | | |
| GUINEA | | ? | ✓ | |
| GUINEA-BISSAU | | ? | ✓ | |
| Guyana | | ? | | ✓ |
| Haiti | | ? | | |
| Honduras | | ? | | ✓ |
| INDIA | ● | ? | × | ✓ |
| Indonesia | | ↓ | | ✓ |
| I.R. Iran | | ? | | |
| Iraq | | ? | | |
| IRELAND | | ? | × | |
| ISRAEL | | ? | ✓ | |
| ITALY | | ? | × | ✓ |
| Jamaica | | ? | | |
| Japan | | ? | | |
| KENYA | | ? | ✓ | ✓ |
| Kiribati | | ? | | |
| Kuwait | | ? | | |
| Kebanon | | ? | | |
| LIBERIA | | ? | × | |
| LIBYAN ARAB JAMAHIRIYA | | ? | × | |
| Madagascar | | ? | | ✓ |
| Malaysia | | → | | ✓ |
| Maldives | | ? | | ✓ |
| MALTA | | ? | × | |
| Marshall Islands | | ? | | |
| MAURITANIA | | ? | × | ✓ |
| MAURITIUS | | ? | × | |
| Mexico | | ↓ | | ✓ |
| F.S. Micronesia | | ? | | |
| MOROCCO | | ? | × | |
| Mozambique | | ? | | ✓ |
| Myanmar | | ? | | |
| Namibia | | ? | | ✓ |
| Nauru | | ? | | |
| NETHERLANDS | | ? | × | |
| NEW ZEALAND | | ? | × | |
| Nicaragua | | ? | | ✓ |
| NIGERIA | | ? | × | |
| Niue | | ? | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| Oman | | ? | | ✓ |
| PAKISTAN | | ? | × | |
| Palau | | ? | | |
| PANAMA | | ? | × | |
| Papua New Guinea | | ? | | |
| PERU | ● | ? | × | ✓ |
| PHILIPPINES | ● | ? | × | ✓ |
| PORTUGAL | | ? | ✓ | |
| Qatar | | ? | | |
| Saint Kitts and Nevis | | ? | | |
| Saint Lucia | | ? | | |
| Saint Vincent and the Granadines | | ? | | |
| Samoa | | ? | | |
| SAO TOME AND PRINCIPE | | ? | × | |
| SAUDI ARABIA | | ? | × | |
| SENEGAL | | ? | ✓ | ✓ |
| Seychelles | ● | ↓ | | ✓ |
| Sierra Leone | | ? | | |
| Singapore | | ? | | |
| SLOVENIA | | ? | × | |
| Solomon islands | | ? | | |
| SOMALIA | | ? | × | |
| SOUTH AFRICA | ● | ? | × | ✓ |
| SPAIN | | ? | × | |
| SRI LANKA | | ? | × | ✓ |
| Sudan | | ? | | |
| Suriname | | ? | | ✓ |
| SYRIAN ARAB REPUBLIC | | ? | | |
| U.R. TANZANIA | | ↓ | ✓ | ✓ |
| Thailand | | ? | | ✓ |
| TOGO | | ? | × | |
| Tonga | | ? | | |
| Trinidad and Tobago | | ? | | |
| TUNISIA | | ? | × | ✓ |
| Turkey | | ? | | ✓ |
| Tuvalu | | ? | | |
| United Arab Emirates | | ? | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| U. K. (Anguilla) | | ? | | |
| UNITED KINGDOM | | ? | × | |
| United States | | ↑ | | |
| URUGUAY | | ? | ✓ | |
| Vanuatu | | ? | | ✓ |
| Venezuela | ● | ↓ | | ✓ |
| Viet Nam | ● | ↓ | | ✓ |
| Yemen | | ? | | |

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: CHELONIIDAE

SPECIES: *Chelonia mydas* (Linnaeus, 1758)

SYNONYMS: -

COMMON NAME: Green Turtle (English); Tortue comestible; Tortue franche; Tortue verte (French); Tortuga blanca; Tortuga verde (Spanish)

RANGE STATES: Algeria; Angola; Antigua and Barbuda; AUSTRALIA; Bahamas; Bahrain; Bangladesh; Barbados; Belize; BENIN (?); Brazil; Brunei Darussalam; Cambodia; CAMEROON; Canada; Cape Verde (?); CHILE (including Easter Island); China (including Taiwan); Colombia; Comoros; CONGO (?); CONGO, DEMOCRATIC REPUBLIC OF THE (?); Cook Islands; Costa Rica; Cuba; CYPRUS; DJIBOUTI; Dominica; Dominican Republic; ECUADOR (including Galapagos Islands); EGYPT; El Salvador; Equatorial Guinea; Eritrea; Fiji; France* (including French Guiana, French Polynesia, Guadeloupe, Martinique, New Caledonia, Réunion, Society Islands, Tuamotu Islands, Wallis and Futuna Islands (?)); Gabon (?); GAMBIA (?); GHANA; GREECE; Grenada; Guatemala; GUINEA; GUINEA-BISSAU; Guyana; Haiti; Honduras; INDIA (including Andaman Islands, Laccadive Islands, Nicobar Islands); Indonesia; Iran (Islamic Republic of); Iraq; IRELAND; ISRAEL; ITALY; Jamaica; Japan; KENYA; Kiribati; Kuwait; Lebanon; LIBERIA; LIBYAN ARAB JAMAHIRIYA; Madagascar; Malaysia; Maldives; MALTA; Marshall Islands; MAURITANIA; MAURITIUS (including Rodrigues); Mexico; Micronesia (Federated States of); MOROCCO (?); Mozambique; Myanmar; Namibia; Nauru (?); NETHERLANDS (Aruba, Bonaire, Curaçao, Saba, Sint Eustatius, Sint Maarten); NEW ZEALAND (Tokelau); Nicaragua; NIGERIA (?); Niue (?); Oman; PAKISTAN; Palau; PANAMA; Papua New Guinea; PERU; PHILIPPINES; PORTUGAL (?); Qatar; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Samoa; SAO TOME AND PRINCIPE; SAUDI ARABIA; SENEGAL; Seychelles; Sierra Leone; Singapore; SLOVENIA; Solomon Islands; SOMALIA; SOUTH AFRICA; SPAIN; SRI LANKA; Sudan; Suriname; SYRIAN ARAB REPUBLIC; TANZANIA, UNITED REPUBLIC OF; Thailand; TOGO (?); Tonga; Trinidad and Tobago; TUNISIA; Turkey; Tuvalu; United Arab Emirates; United Kingdom (Anguilla); UNITED KINGDOM (Ascension Island, Bermuda, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Montserrat, Pitcairn (?), Turks and Caicos Islands); United States (including American Samoa, Caroline Islands, Guam, Hawaiian Islands, Northern Mariana Islands, Puerto Rico, United States Virgin Islands); URUGUAY; Vanuatu; Venezuela; Viet Nam (?); Yemen; international waters (Mediterranean Sea, Atlantic Ocean, Indian Ocean, Pacific Ocean)

RED LIST RATING: EN A2bd (Seminoff, 2004)

CONSERVATION STATUS AND ACTIONS:

The Green Turtle has a circumglobal distribution, occurring throughout tropical and, to a lesser extent, subtropical waters. Green turtles are highly migratory and they undertake complex movements and migrations through geographically disparate habitats. Nesting occurs in more than 80 countries worldwide. Their movements within the marine environment are less understood but it is believed that green turtles inhabit coastal waters of over 140 countries (Seminoff, 2004).

Although world wide population numbers for sea turtle species do not exist, there are an estimated 203,000 nesting females of this species based on nesting beach monitoring reports and publications from the early to mid 1990s (Caribbean Conservation Corporation and Sea Turtle Survival League, 2004). Analysis of subpopulation changes at 32 Index Sites (these Index Sites include all of the known major nesting areas as well as many of the lesser nesting areas for which quantitative data are available) distributed globally show a 48% to 67% decline in the number of mature females nesting annually over the last three generations. Because many of the threats that have led to these declines are not reversible and have not yet ceased, it is evident that green turtles face a measurable risk of extinction (Seminoff, 2004), although in a few areas, strong conservation measures have led to a recovery in the species (e.g. Sabah, Malaysia and Florida, USA) (Kemf, *et al.*, 2000). There has been a decrease of 80% or more in the Mediterranean population (Seminoff, 2004).

Major threats to marine turtles include unsustainable exploitation, destruction of nesting and feeding habitats, and incidental mortality in fishing operations (IOSEA Marine Turtle MoU, 2004). Perhaps the most detrimental human threats to green turtles are the intentional harvests of eggs and adults from foraging grounds. Harvest remains legal in several countries despite substantial subpopulation declines (Seminoff, 2004).

A partial list of the international instruments that benefit green turtles include the Inter-American Convention for the Protection and Conservation of Sea Turtles, The Memorandum of Understanding on the Conservation and Management of Marine Turtles and Their habitats of the Indian Ocean and South-East Asia (IOSEA), the MoU on ASEAN Sea Turtle Conservation and Protection, the Memorandum of Agreement on the Turtle Islands Heritage Protected Area (TIHPA) and the MoU Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa (Seminoff, 2004).

**Algeria:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* Between 1989 and 1993, WWF supported a project to survey the extent of mortality and to identify key breeding, feeding and over wintering areas for green turtle (Kemf, *et al.*, 2000).

**Angola:**

*Status:* The green turtle has been reported to occur in Cabinda, Luanda and Bahia dos Tigres, formerly nesting frequently in Angola but now rare (Carr & Carr, 1991).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will be implemented in South Africa, Namibia and Angola, and will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and

government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Antigua and Barbuda:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**AUSTRALIA:**

*Status:* The Australian nesting populations of green turtles are genetically independent stocks. In addition, there are green turtles that feed in Australia that are part of stocks that breed in other countries (e.g. Indonesia, Papua New Guinea, New Caledonia and Pacific Mexico). Green turtles are found in Australian waters off the Northern Territory, Queensland, and Western Australia; and are occasional visitors to the island state of Tasmania. Green turtles are the most predominant species within foraging populations of 3,250 at Nigaloo, 4,250 at Exmouth Gulf and 8,400 at Shark Bay (Australia National Report, 2002). There is reasonable evidence to indicate that the Australian population may be declining (Seminoff, 2004)

*CMS actions:* Numerous research papers on subjects including monitoring nesting sites, GIS-based models for indigenous management, effects of commercial fishing activities, ecotourism (Australia National Report, 2002).

*Other actions:* Despite its World Heritage status, the Great Barrier Reef Marine Park (GBRMP), until recently, had not been well protected with respect to marine turtle habitats. However, the GBR Marine Park Authority is in the process of establishing a network of no-take zones throughout all 70 bioregions of the GBR. (McLellan *et al.*, 2004).

A principal focus of WWF's work in the Great Barrier Reef is the prevention of unregulated land-based pollution, caused by agricultural land clearing and poor land management practices upstream in the rivers that discharge into the Marine Park. Over the past 150 years, the volume of sediment and nutrients flowing into the Marine Park has quadrupled, and has been shown to degrade many inshore marine ecosystems, including marine turtle habitats (McLellan *et al.*, 2004).

A report released by WWF in 2001 was pivotal in raising government and public awareness of this issue. The Australian and Queensland governments recently jointly released a Reef Water Quality Plan. This plan sets out measures to reduce land-based sources of sediment, nutrient and pesticide pollution that threaten in-shore reefs and critical habitats (McLellan *et al.*, 2004).

Over 80% of the northern coastline of Australia is owned and managed by indigenous Aboriginal people. WWF is working in partnership with Indigenous Sea Rangers on joint projects that include marine debris surveys and turtle research and monitoring. Sea Rangers are Aboriginal community representatives who have the responsibility of managing their natural resources. WWF assists Aboriginal communities to establish their own marine turtle monitoring programmes by providing training, equipment, additional funding and professional support. This enables Aboriginal communities, via their Sea Rangers, to monitor their own marine turtle resources and in so doing, provide valuable scientific data about the turtles in their region. Sea rangers from Dhimurru Land Management Aboriginal Corporation have been conducting helicopter-based turtle monitoring along the Cape Arnhem coastline since 1996 (McLellan *et al.*, 2004).

At Ningaloo Reef, WWF has supported a community- monitoring project involving the local community, local government, and state government conservation agencies since 2002. WWF staff is also working with all other stakeholders in the region, in order to develop a coordinated and collaborative Conservation Strategy for marine turtles on the Ningaloo Reef and adjacent beaches. WWF is also extending its community turtle conservation work to other sites along the northwest coast of Western Australia, including into the Kimberley region, where the focus will be on community participation and sustainable catch by indigenous Aboriginal people (McLellan *et al.*, 2004).

Tracking studies will investigate the post- nesting movements of green turtles in the southern Gulf of Carpentaria and will build on previous telemetry studies (McLellan *et al.*, 2004).

The Western Australia Marine Turtle Project (WAMTP) started in 1983, with the aim of providing a better conservation and management of the Western Australia regions sea turtle populations and their environment (Prince, 1999).

**Bahamas:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bahrain:**

*Status:* Significant populations of green turtles depend on the seagrasses of the Persian Gulf (Pilcher *et al*., 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bangladesh:**

*Status:* The major breeding and nesting areas are concentrated in the eastern coastal region. The Western coastline in the Sundarban mangrove forest area is an important nesting ground. Major threats for the turtles and their nesting grounds are obstruction by fishing trawlers and fishing nets, poaching eggs and loss of nesting beach (Ahmed *et al*., 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Barbados:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**BELGIUM (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**Belize:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**BENIN (?):**

*Status:*

*CMS actions:* Sites that are thought to be egg-laying areas are being protected against anthropological pressures such as lighting, housing development and the taking of sand. Future activities will include raising the awareness of the public at large, and the installation of "Eco-gardes" (Eco-monitors) over the whole of Benin (Benin National Report, 2002).

*Other actions:*

**Brazil:**

*Status:* There is a distinct green turtle population breeding in Suriname and feeding occurs in waters off the Brazilian coast (Kemf, *et al.*, 2000), notably in the Island Fernando de Noronha Marine National Park (McLellan *et al*., 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Until the end of the 1970s, there were no marine conservation programmes in Brazil. Marine turtles were in grave danger of local extinction through capture in fishing nets, adult females killed for meat and nests being destroyed. In 1980, the Brazilian Institute of Forestry created the TAMAR Programme, to save and protect marine turtles through research, conservation actions and community involvement. The work was soon extended nationwide from the original project sites, and focuses on the identification of species, the main nesting sites, the nesting seasons, and the socio-economic reasons for the overexploitation of marine turtles by coastal communities. Accompanying this has been a large education and awareness-raising campaign (McLellan *et al.*, 2004).

Among the most visible achievements are the following: the declaration of two Federal Biological Reserve (which were created to protect sea turtles); the creation of a Marine National Park; a nationwide prohibition of the capture of sea turtles or their eggs; and total control of the beaches which fall within the boundaries of the stations of TAMAR (Marcovaldi *et al.*, 1999).

**Brunei Darussalam:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* The Government has set up the National Marine Turtle Conservation and Management Committee. All efforts are currently towards the first step of instilling awareness among the public, especially school children and those involved in the collection and selling of turtle eggs (Seafdec, 2005).

**BULGARIA (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**Cambodia:**

*Status:* Green turtles have often been found in the coastline of Cambodia, especially

*CMS actions:* in Kompong Som Bay around Koh Rong, Koh Rong Salem, Koh Tang and

*Other actions:* Koh Pring islands

Not a Party to CMS.

**CAMEROON:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Canada:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Cape Verde (?):**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**CHILE (including Easter Island):**

*Status:* Its distribution range in the Chilean Pacific goes from Arica to Chiloé, Region X; however, the southern limit has been identified for Desolación island, in Region XII. It is a common species in Chilean waters. The population size is unknown (Chile National Report, 2002).

*CMS actions:* A SERNAPESCA and CPPS 2001 Workshop was held in Valparaíso to define priority action guidelines of a programme for the conservation of marine turtles. There is no future activity planned, however the desire to conduct research is always present (especially research into green turtle distribution and migration) through satellite monitoring (Chile National Report, 2002).

*Other actions:*

**China (including Taiwan):**

*Status:* More than 90% of the sea turtle populations of China are distributed along the South China Sea. The slaughter and incidental capture of sea turtles are well-known and serious threats throughout the South China Sea (I-Jiunn, 1999). Catalogued as Endangered in the China Red Data Book of Endangered Mammals (Wang & Zhao, 1998).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Colombia:**

*Status:* The population in this country is estimated in 50 nesting females. It is catalogued as Endangered in the Colombian Red Data Book (Castaño-Mora, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* As part of its trans-Pacific marine turtle conservation efforts, WWF has been involved with training for marine turtle conservation and management in the Colombian Pacific. Additionally, WWF's ecoregional programme for the Colombian and Ecuadorian Pacific includes planning that takes into account important turtle nesting sites (McLellan *et al.*, 2004).

**Comoros:**

*Status:* Currently, one of the largest nesting rookeries in the western Indian Ocean (Seminoff, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CONGO (?):**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**D.R. CONGO:**

*Status:* Occurrence reported (D.R. Congo National Report, 2002).

*CMS actions:* None reported.

*Other actions:*

**Cook Islands:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is working with communities in the Cook Islands to ensure that local people do have access to the information they require to sustainably manage their natural resources, including marine turtles. Part of this is through supplying tags to those communities in the outer islands who want to participate in a tagging programme, as well as directly tagging and releasing turtles caught in Rarotonga Lagoon. Additionally, WWF has run awareness programmes including through a migrating green turtle tagged in Palmerston Atoll. The whole community became involved with the schoolchildren plotting the migration route of the turtle as it travelled across the sea (McLellan *et al.*, 2004).

**Costa Rica:**

*Status:* Tortuguero, on the Atlantic coast of Costa Rica, is the largest nesting site of the green turtle in the Atlantic Ocean (Kemf, *et al.*, 2000).
Green turtle nest numbers display large interannual variation at the Tortuguero rookery. However, the long-term nesting trend is clearly positive. Nesting along the entire beach has increased with an estimated 61% since 1986. The Tortuguero green turtle population's main nesting, feeding and mating grounds are located in Costa Rica, Nicaragua, and Panama. Therefore, events and policy decisions in these countries are likely to have had the greatest impact on green turtle use and survivorship (Troëng and Rankin, 2005).

*CMS actions:*

Not a Party to CMS.

*Other actions:*

Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000). After a time in the 1960s when nearly every green turtle coming to nest there was taken for the export market for turtle soup, Tortuguero is now a success story in demonstrating the economic benefits of live turtles versus dead ones. Each year, some 50,000 tourists visit Tortuguero to see the nesting turtles and other wildlife. The local community benefits directly from the tourism, for example through serving as certified guides to lead tourists on nightly turtle watching excursions (McLellan *et al.*, 2004).

**COTE D'IVOIRE (br?)*:**

*Status:*

Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:*

*Other actions:* None reported.

**Cuba:**

*Status:* Cuba and Dominica are proposing to reopen international trade in green turtle products (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is active in marine turtle conservation in Cuba on a number of fronts. WWF has supported habitat protection in a key marine protected area, Jardines de la Reina, and supported enforcement action to aid in the decommissioning of turtle nets within the park. Turtle nesting monitoring has also been carried out in conjunction with Centre for Molecular Immunology at Guanahacabibes (McLellan *et al.*, 2004).

**CYPRUS:**

*Status:* Canbolat (2004) estimated that 32% of the green turtle annual nestings in the Mediterranean are in northern Cyprus and 7% in Southern Cyprus.

*CMS actions:* None reported.

*Other actions:*

**DJIBOUTI:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Dominica:**

*Status:* Cuba and Dominica are proposing to reopen international trade in green turtle products (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Dominican Republic:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**ECUADOR (including Galapagos Islands):**

*Status:* Foreign fishing fleets threatened marine turtles (Kemf, *et al.*, 2000). Currently, the largest nesting congregation in eastern Pacific Ocean is located in the Galapagos Islands (Seminoff, 2004).

*CMS actions:* None reported.

*Other actions:* WWF funded research is conducted at the Galapagos Islands (Kemf, *et al.*, 2000). Studies carried out by NOAA in the Atlantic Ocean suggest that adaptations to the fishing gear can significantly reduce by-catch of marine turtles. Working closely with the IATTC and NOAA, WWF is undertaking a pioneering effort in the Eastern Pacific to test such gear fixes for their efficiency and conservation impact. This work is designed to facilitate the shift of the Ecuadorian artisan fisheries fleet from traditional j-hooks to circular hooks and provide them with dehooking equipment and training (McLellan *et al.*, 2004).

**EGYPT:**

*Status:* Green turtles are found in both Red Sea and Mediterranean Egyptian waters. The Red Sea population is larger than that in the Mediterranean (Egypt National Report, 2002). The species nests on the Mediterranean coast of the Sinai peninsula, primarily to the east, in the region surrounding the resort town of El Arish. It is a very small population under intense pressure from human activities. The combined effects of the capture of adults at sea, predation of eggs, coastal pollution and development of beaches, threaten to exclude nesting turtles from the Mediterranean coastline of Egypt (Clarke *et al*., 2000).

*CMS actions:* Nesting monitoring along the Red Sea coast between Hurghada and Ras Banas has been carried out, and a protected area has been proposed at Wadi el Gemal, Red Sea (Egypt National Report, 2002).

*Other actions:*

**El Salvador:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**Equatorial Guinea:**
*Status:* Bioko Island hosts almost all of nesting in this country (Seminoff, 2004).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Eritrea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Fiji:**
*Status:* The waters off Fiji provide important foraging grounds for marine turtles, especially green turtles which have been recorded travelling from as far as French Polynesia, American Samoa and Eastern. The species is known to nest in Fiji, and the majority of the green sea turtles nesting in French Polynesia, American Samoa, Cook Islands &Tonga spend almost all of their adult life in Fiji's marine systems. Turtle hunting was a traditional activity and many Fijians, Indians and Rotumans now consider turtles to be common property. Turtles are targeted for general consumption as well as for sale in local markets. The eggs are also targeted for subsistence purposes. In addition, turtle shells are still sold for both ornamental curios and jewellery McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Export of turtle shells has been prohibited since 1990, although a number of exemptions have been granted. A five-year moratorium was imposed on the killing of turtles, the taking or destroying of eggs, and the trade of turtle meat and eggs from 1995 to December 2000. This was not totally renewed immediately, after the first five years. However, partly through WWF's recent participation in a collaborative national survey of the status of marine turtles, and lobbying of the government by WWF, other organisations and community members, the government has extended the moratorium from 2004 for another five years (McLellan *et al.*, 2004).

In Fiji, WWF is helping the customary resource owners of Ono Island to set up a community-based Marine Protected Area (MPA). There is a current ban on the catching of turtles within their MPA. To enforce the rules developed by the community, a number of villagers have been appointed and trained as honorary fisheries'wardens (McLellan *et al.*, 2004).

The same approach is being used to develop a strategy to integrate turtle conservation into community-based marine protected areas in the Great Astrolabe Reef, Kadavu (McLellan *et al.*, 2004).

**France:**
*Status:*

***French Polynesia***
Numbers of green turtle have decreased by more than half in French Polynesia since the 1940s (Kemf, *et al.*, 2000).

***French Guiana***
Green turtles nest on French Guiana's beaches. Egg poaching and incidental

capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS for this species.

*Other actions:* ***French Guiana***
Since 2000,WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan developed by WWF and partners has recently been technically finalised and been submitted for official endorsement nationally and regionally (McLellan *et al.*, 2004).
It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

***New Caledonia***
WWF conducted a green turtle tagging programme on the Entrecasteaux Reefs of New Caledonia in 2002. New nesting sites were located and 232 green turtles were tagged. Approximately 1,500 green turtle females were estimated from the monitoring of nesting sites (McLellan *et al.*, 2004).
To accompany the tagging effort, educational materials for local communities were produced, and WWF is working with various provinces to improve the conservation legislation aimed at protecting endangered species such as marine turtles (McLellan *et al.*, 2004).

**Gabon (?):**
*Status:* Offshore seagrass is important green turtle feeding ground (Kemf, *et al.*, 2000).
All species of turtle on the Gabon coast are threatened by direct harvesting and as a bycatch of multinational fishing fleets. There are no laws to protect sea turtles (other than leatherbacks) in Gabon (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Gamba Complex of Protected Areas in Gabon is an ideal place for long-term monitoring of marine turtle nesting sites. In the 2002-2003 turtle nesting season, which goes from October to March, a pilot study within the Gamba Complex was carried out by WWF, Ibonga (A local environmental education NGO active in the Gamba Complex) and EU funded Central African marine turtle protection programme PROTOMAC. In 2003-2004, monitoring continued with the technical assistance of a Dutch environmental NGO called Biotopic that focuses on marine turtle research in Suriname and Gabon (Wilson & Humphrey, 2004).
The partners of the Gamba Marine Turtle Programme continue their research and monitoring to improve understanding and knowledge of the status, life histories and threats to marine turtles in the area, in order to ensure a regionally coherent approach to conservation management (Wilson & Humphrey, 2004).

**GAMBIA (?):**
*Status:*
*CMS actions:* None reported.
*Other actions:*
**GHANA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*
**GREECE:**
*Status:*

*CMS actions:* None reported.
*Other actions:*

**Grenada:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Guatemala:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**GUINEA:**
*Status:* From the third quarter of the rainy season (July to mid-October), green turtles are plentiful and spread out over the whole of the coastal area of Guinea (Guinea National Report, 2002).

*CMS actions:* The Boussara National Centre of Halieutic Research (CNRHB) has carried out preliminary research (Guinea National Report, 2002).

*Other actions:*

**GUINEA-BISSAU:**
*Status:* Satellite telemetry studies in Guinea Bissau with the support of the International Foundation for the Banc D'Arguin (FIBA), indicate that green turtles move between nesting areas in Guinea Bissau and feeding grounds in The Banc D'Arguin National Park in Mauritania (McLellan *et al.*, 2004). An estimated 7,000-10,000 green turtles nest annually in the islands of Poilão in the Bijagos Archipelago (Wilson & Humphrey, 2004).

*CMS actions:* In 2001 and 2002, CMS funded a study on the distribution and migration pattern of the Green Turtle population nesting at Poilão.

*Other actions:* Important nesting and feeding grounds for green turtles in the region have been supported by WWF since 1976.A regular tagging programme is now needed to build on these initial telemetry studies and clarify the movement of these turtles. As a first measure towards this, WWF and partners will conduct a training workshop on turtle tagging and census techniques at the beginning of the 2004 nesting season (McLellan *et al.*, 2004).

**Guyana:**
*Status:* Green turtles nest on this country's beaches. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan developed by WWF and partners has recently been technically finalised and been submitted for official endorsement nationally and regionally (McLellan *et al.*, 2004).

Shell Beach in Guyana is the last remaining section of natural coastline and mangrove forests in the country. It hosts green turtle nests. WWF and UNDP are providing the technical and financial support to the extensive consultation that is needed to formally declare and manage this beach as a reserve (McLellan *et al.*, 2004).

Under the coordination of the Guyana Marine Turtle Conservation Society,

WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**Haiti:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Honduras:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**INDIA:**

*Status:* The major problems those sea turtles faces in Indian coastline include: incidental capture in fishing nets, loss of nesting habitats, non-human predation and artificial illumination (artificial illumination from development activities near nesting beaches has resulted in disorienting adult nesting sea turtles as well as hatchlings, leading to heavy hatchling mortality) (Choudhury *et al.*, 1999). Classified as Endangered in the Indian Red Data Book (Ghosh, 1994).

*CMS actions:* None reported.

*Other actions:* The Indian Government launched the 'National Marine Turtle Conservation Project' in 1998; the Project envisaged activities encompassing both on-shore and offshore critical habitats for sea turtles. In spite of the legal protection given to all sea turtles species in India, in recent years the populations migrating to Indian waters are in decline (Choudhury *et al*., 1999).

**Indonesia:**

*Status:* Numbers of green turtle in Indonesia have decreased tenfold since the 1940s (Kemf, *et al.*, 2000) and the population is just a fraction of its former size (Seminoff, 2004).

***Bali***

Bali has been called "the centre of the most intensive exploitation of green marine turtles for human consumption in the world". The total number of green turtles traded in Bali during 1969 – 1994 averaged about 20,000 per year. WWF, amongst other international organisations, raised international awareness of this situation and undertook an initial investigation into the turtle trade in Bali in 1984. Despite local and national laws and regulations being issued in the late 1980s, the turtle harvest did not change markedly from the mid 1980s to the mid 1990s (McLellan *et al.*, 2004).

Other species of marine turtle were afforded complete protection, but the green turtle was still subject to a quota system of 5,000 turtles per year, officially for religious purposes only. However, more than 20,000 green turtles were still caught each year. Recent research has indicated that this turtle fishery affects most of the genetically distinct populations of green turtles in the Indo-Australasian region (McLellan *et al.*, 2004).

***Berau***

The Berau islands support the largest aggregations of the species in the Asia

Pacific region (Kemf, *et al.*, 2000).

***Kalimantan***

The nesting population of green turtles in the Derawan Islands, East Kalimantan, Indonesia, with more than 5,000 females per year, is one of the largest in Southeast Asia. However, numbers of turtles have been decimated (over a 90% decline) in the last 50 years, mainly due to egg collection. The sale of egg concessions is under local government control and is one of the major sources of income for the local government. Despite this dramatic decline in the nesting population, the numbers of eggs harvested annually have been rising, but this simply reflects an increase in collecting effort. Unfortunately, this increasing egg collection, and the regular presence of turtles in the water around the Islands, masks the fact that the population faces an imminent and irreversible crash (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* ***Bali***

WWF initiated a large marine turtle campaign in 1995, focusing on awareness raising and education using traditional daily events to deliver the messages. Additionally, WWF formed an alliance with the Hindu High Council to investigate the roles of marine turtles to other life on earth, in the Veda (the holy Hindu script). The Hindu High Council has undertaken much work to persuade Balinese people to replace turtle meat with alternatives during religious festivals (McLellan *et al.*, 2004).

The green turtle was finally totally protected by law in 1999, and the earlier Governor's Decree setting the quota was repealed. However, when the law was enforced through turtle confiscations and fines, the fishermen protested. WWF and the Bali government have collaborated on many recent initiatives to curb the consumption level and provide alternatives, including developing a national action plan and local turtle monitoring and enforcement teams — the Turtle Task Forces (McLellan *et al.*, 2004).

WWF is now concentrating on developing a sustainable financing scheme for the Turtle Task Forces, protected areas for critical habitats and a network of turtle based tourism that includes Bali, Berau and East Java. WWF, the government and several other conservation organisations are working towards a target of 90% reduction of current green turtle trade levels by 2005 (McLellan *et al.*, 2004).

***Kalimantan***

Existing conservation measures included a requirement for setting aside 10% of nests and a government supervised head-start programme, however these are considered insufficient to stabilize or restore the population levels (McLellan *et al.*, 2004). In 2000, WWF started a monitoring and outreach programme on Sangalaki Island, to build local support for conservation through partnerships and to demonstrate that an ageing female population with little current recruitment will not support any turtle based industry into the future, whether egg-collection or tourism. After six months of data-collection and lobbying, WWF succeeded in having the set-aside quota for conservation doubled to 20% and was invited to provide technical advice on turtle resource management efforts (McLellan *et al.*, 2004).

Additionally, a multi stakeholder workshop conducted recently by WWF Indonesia and partners developed a common vision, strategies and action plans for sustainable use of marine turtles in the islands. The most critical outcome was the target of full protection from turtle egg harvesting for Sangalaki (the

major turtle rookery) and Derawan Islands (McLellan *et al.*, 2004).

Currently, WWF and the local government are working to strengthen and expand the partnership between key local government decision makers, the private sector, including local and national tourism industries, to create a sustainable financing scheme for managing the turtle population in the region, and to promote the designation of 70,000 hectares of waters surrounding Sangalaki and Panjang Island (in Derawan Islands) as marine turtle sanctuary areas (McLellan *et al.*, 2004).

***Aru archipielago (Southeast Moluccas)***

The Aru Tenggara Marine Reserve (ATMR), encompassing six inhabited islands, was established in 1991 based primarily on the presence of a relatively large stock of both nesting and foraging green turtles. A strategic plan to control the exploitation in and around the reserve is lacking, as exploitation of sea turtles is considerable and threatens the survival of the turtle populations (Dethmers, 1999)

**I.R. Iran:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Iraq:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**IRELAND:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**ISRAEL:**

*Status:* Eight nests were found in the Mediterranean shore during the 2000 season, and about 800 hatchlings were released. In 2001, three nests were found (Israel National Report, 2002).

*CMS actions:* Nesting surveys are being conducted and nests are being translocated locally to protected enclosures. Hatching turtles are then released. Stranded and injured turtles are cared for at a rehabilitation centre (Israel National Report, 2002).

*Other actions:*

**ITALY:**

*Status:*

*CMS actions:* None reported.

*Other actions:* WWF is conducting a campaign in Italy to decrease mortality of marine turtles due to bycatch (McLellan *et al.*, 2004).

**Jamaica:**

*Status:* The green turtle has been prized for its meat since the 1500s, especially in Caribbean islands like Jamaica (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Japan:**

*Status:* The nesting period of the green turtles in the central Ryukyus ranges at least from mid May to mid July, but there have been no quantitative data for the status of nesting sea turtles in these islands (Kikukawa et al., 1999)

*CMS actions:* Not a Party to CMS.
*Other actions:*

**KENYA:**

*Status:* Green turtles are found along entire Kenyan coastline though with seasonal variations in the distributions (Kenya National Report, 2002).

*CMS actions:* Green turtles are monitored by aerial surveys. Fishermen have been detailed in some areas to file reports on sighting. Hatchlings reintroduced. Future plans include protection of nesting sites through community participation and enforcement of relevant laws and more public education and awareness (Kenya National Report, 2002).

*Other actions:* In 1996, WWF joined forces with the Kenya Wildlife Service, the Fisheries and Forest Departments and local communities to develop a long-term management strategy integrating conservation and development priorities of the Kiunga Marine National Reserve. The project has focused on developing sustainable and equitable methods of using the reserve's resources. Community participation in protecting nesting marine turtles is fostered through an incentive scheme for nests discovered and protected throughout the season. The community has also actively participated in ongoing monitoring of marine turtles and their habitats (McLellan *et al.*, 2004).

WWF has recently hosted a marine turtle training course for KESCOM (Kenya Sea Turtle Committee) (McLellan *et al.*, 2004). WWF is working with national committees for marine turtle to ensure that marine resources are used sustainably by local communities and that critical habitats for marine turtles, as well as coral fish and dugongs, are protected (McLellan *et al.*, 2004).

**Kiribati:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Kuwait:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Lebanon:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**LIBERIA:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**LIBYAN ARAB JAMAHIRIYA:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**Madagascar:**

*Status:* This species nests in Madagascar (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* Community-based conservation projects have been set-up in the Fort Dauphin area. In 2002/2003 WWF initiated tagging activities in northern Madagascar

(Iranja islands), and commenced a trade assessment at two high-risk sites together with small-scale awareness activities (McLellan *et al.*, 2004). So far, the monitoring programme has been strengthened, and new collaboration has been also developed with industrial shrimp trawling fisheries to initiate monitoring programme on sea turtles incidentally caught.

**Malaysia:**

*Status:*

***Sabah***

The state of Sabah plays host to several important marine turtle populations, and has taken an active role in their conservation with the establishment of the Turtle Island Park (ARBEC, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:*

***Sarawak***

Annual egg production in Sarawak dropped from 2,200,000 eggs in the mid 1930s to 175,000 in 1995 (McLellan *et al.*, 2004).

***Sabah***

Strong conservation management regimes in Sabah Turtle Islands National Park has led to a recovery in numbers (Kemf, *et al.*, 2000).

The Turtle Islands are major rookeries for green and hawksbill turtles in Southeast Asia. They comprise three Sabah, Malaysia islands, and six Philippines islands. Tagging activities, egg production monitoring and genetic studies have shown that this group of islands is a single well-defined marine turtle rookery with one population of green turtles. As a result, it was agreed that this island group needed to be treated as one management unit, despite both sets of islands being protected independently under their individual country's legislation. In 1996, a bilateral agreement was signed, establishing the Turtle Islands Heritage Protected Area (TIHPA), the world's first transboundary protected area for marine turtles (McLellan *et al.*, 2004).

The islands continue to be managed by their respective country's management authorities, but under a uniform set of guidelines developed by the Joint Management Committee - comprised of representatives from each of the two countries (McLellan *et al.*, 2004).

***Peninsular Malaysia***

WWF conducts the Community Education and Awareness Programme on Turtle Conservation in partnership with the Department of Fisheries at the recently established Ma' Daerah Turtle Sanctuary Centre, a hatchery and interpretation centre, in the Terengganu state on the east coast of peninsular Malaysia. This Sanctuary is a nesting site primarily of green turtles, although some olive ridley and leatherback also nest here. The programme aims to establish local community interest and action groups for the conservation of turtles in Ma'Daerah, to build the capacity of local communities on turtle conservation, and to lobby for the gazettal of Ma'Daerah as a turtle sanctuary (McLellan *et al.*, 2004).

**Maldives:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* Eight years ago, the Government of the Maldives had the foresight to impose a ban on catching turtles in Maldivian waters. However, this ban did not cover the harvesting of eggs from the highly endangered sea turtles. Seacology, in cooperation with Four Seasons Resort, has provided a critically needed preschool for the island of Kendhoo in return for a ban on the taking of turtle eggs. The

turtle ban is holding well, with the Kendhoo villagers continuing to express their full support for sea turtle protection (Seacology, 2005).

**MALTA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Marshall Islands:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**MAURITANIA:**

*Status:* The Banc d'Arguin National Park is an important nesting and feeding ground for this species of turtle. Several thousand turtles per year are killed as by-catch in the local shark fishery (Kemf, *et al.*, 2000). Satellite telemetry studies in Guinea Bissau with the support of the International Foundation for the Banc D'Arguin (FIBA), indicate that green turtles move between nesting areas in Guinea Bissau and feeding grounds in The Banc D'Arguin National Park in Mauritania (McLellan *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* Turtles enjoy some protection in the Banc d'Arguin National Park, which is supported by WWF (Kemf, *et al.*, 2000).
This important nesting and feeding ground for green turtles has been supported by WWF since 1976. A regular tagging programme is now needed to build on these initial telemetry studies and clarify the movement of these turtles. As a first measure towards this, WWF and partners conducted a training workshop on turtle tagging and census techniques at the beginning of the 2004 nesting season (McLellan *et al.*, 2004).

**MAURITIUS (including Rodrigues):**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Mexico:**

*Status:* The East Pacific green (or black) turtle had almost disappeared by the 1977 (Kemf, *et al.*, 2000). There has been a more than 80% decrease in the population in Pacific Mexico; Historically, the most important *C. mydas* nesting rookery in the Eastern Pacific Ocean was located in Colola, Michoacán (Seminoff, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* The main strategies for sea turtle conservation in Mexico include a complete ban on exploitation of sea turtles and their eggs, and the protection of nesting beaches. Management has mainly focused on nest protection in centralized beach hatcheries. Recurrent problems related to lack of funds include insufficient beach protection and inadequate management of nest removal to hatcheries have resulted in poor overall success of the conservation programs (Garcia et al., 2003).
WWF started a campaign to protect all of Mexico's turtles in the 1980s and 1990s. Public awareness, research, the setting up of protected areas, etc were all facets of the conservation project (Kemf, *et al.*, 2000).

**F.S. Micronesia:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**MOROCCO (?):**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Mozambique:**
*Status:* Shallow coastal areas such as the Sofala Bank, rich in seagrasses, are prime feeding grounds for green turtles that make them especially vulnerable to by-catch in the shrimp trawl fishery (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* In October 2003, Mozambique's Council of Ministers approved legislation making Turtle Excluder Devices (TEDS) compulsory in trawl nets. The new law has taken effect from January 2005, and applies to all motorized fishing vessels in Mozambique waters (Wilson & Humphrey, 2004).
The Mozambique Marine Turtle Working Group (MMTWG) is devising, facilitating and promoting research, monitoring and conservation of marine turtles in Mozambique. A tagging programme, training courses, promotion of the use of TED's (Turtle Excluder Devices) and a workshop on TED's are planned (IOSEA Marine Turtle MoU, 2004).
In a partnership between WWF and local fishermen, two islands of the Primeiras and Segundas Archipelago are being patrolled for the protection of its wildlife, in particular marine turtles (IOSEA Marine Turtle MoU, 2004).
The creation in 2001 and 2002 of two new marine protected areas (Bazaruto Archipielago National Park and Quirimbas National Park) is a critical milestone in global marine conservation (Wilson & Humphrey, 2004).

**Myanmar:**
*Status:* Myanmar is a notable nesting area in the northeast Indian Ocean region. Thamihla Kyun hosts the largest nesting congregations in this area (Seminoff, 2004).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Namibia:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Nauru (?):**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**NETHERLANDS:**
*Status:* Reported as breeding in the Netherlands Antilles (van Buurt, 1984).

*CMS actions:* None reported.
*Other actions:*

**NEW ZEALAND (Tokelau):**

*Status:* Reported as breeding (UNEP-WCMC, 2004).

*CMS actions:* None reported.
*Other actions:*

**Nicaragua:**

*Status:* It is uncertain whether the current increase in the nesting female numbers in Tortuguero, Costa Rica, will be hampered by the ongoing catch of thousands of green turtles for their meat in Nicaragua (McLellan *et al.*, 2004).
Thousands of indigenous and ethnic people living on the Caribbean Coast of Nicaragua depend on green turtles for income and as a source of protein. A minimum of 11,000 green turtles per year are captured and consumed locally. This economically important artisanal fishery spans the entire coast of Nicaragua. Currently in Nicaragua the uncontrolled harvest of both sea turtles, from the water and beaches, and their eggs posses a serious threat to the long-term survival of these endangered species; green turtles now face commercial extinction and a potentially viable local fishery for the region is threatened (WCS, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).
WCS uses an integrated natural and social science approach to promote sea turtle conservation in Nicaragua. This includes scientific research as: conducting population assessments, studying population demography and nesting ecology, conducting genetic stock assessments and tracking movements and migration patterns (WCS, 2005).

**NIGERIA (?):**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**Niue (?):**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Oman:**

*Status:* The Masirah Channel and Sawqirah Bay were major green turtle nesting areas. The harvest of eggs and meat that had proceeded for generations was in severe decline (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* The government of Oman has been concerned to protect the remaining green turtle. Surveys have been undertaken (Kemf, *et al.*, 2000).

**PAKISTAN:**

*Status:* Sandspit and Hawkes bay (near Karachi) are the major green turtles nesting areas. In Pakistan, sea turtles are not part of the local diet due to religious customs, and as a result, except for occasional poachers and curious tourists, the main cause of destruction is feral dogs that dig up the nests for food. Other

factors that threaten sea turtles are the destruction of nesting habitat due to construction of houses/beach huts all along the beaches, pollution, and disturbance on the beach by tourists, all of which interfere with the nesting cycle of the turtles (Firdous, 1999)

*CMS actions:* None reported.
*Other actions:*

**Palau:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**PANAMA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Papua New Guinea:**
*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF and other partner organisations are currently investigating the potential of establishing a Marine Turtle Monitoring Programme that will provide valuable data as well as involve local communities. It is anticipated that the data generated from these surveys will become the baseline upon which national policies for the conservation and protection of marine turtles will be formulated (McLellan *et al.*, 2004).

**PERU:**
*Status:* Catalogued as Vulnerable in the Red Data Book of Peru (Pulido Capurro, 1991).

*CMS actions:* None reported.

*Other actions:* WWF has worked in Peru with local partners on various initiatives, including a turtle conservation project south of Lima, law enforcement on land and at sea, initiatives against by-catch and illegal consumption, and environmental education and awareness campaigns with local fishermen, villagers and public authorities. One of the outstanding achievements of this work was the recent reduction (by two thirds) of the number of commercial establishments selling turtle meat in the Pisco Paracas area. This was a direct result of numerous control operatives set-up to prevent both the capture and sale of marine turtles (McLellan *et al.*, 2004).

**PHILIPPINES:**
*Status:* Nesting on the Philippine islands adjacent to those of Turtle Islands Park in Sabah mirrors in a large way that of the Sabah nesting. The Philippine islands, unlike those on the Malaysian side, are inhabited by fishing communities who currently rely on the sale of turtle eggs as a significant portion of their income. At present, the balance that has been struck between conservation officers and the islanders lies at 30% for conservation and 70% for local consumption or sale (ARBEC, 2002). Classified as Endangered in the Philippine Red Data Book (Wildlife Conservation Society of the Philippines, 1997).

*CMS actions:* None reported.

*Other actions:* The Turtle Islands are major rookeries for green and hawksbill turtles in Southeast Asia. They comprise three Sabah, Malaysia islands, and six

Philippines islands. Tagging activities, egg production monitoring and genetic studies have shown that this group of islands is a single well-defined marine turtle rookery with one population of green turtles. As a result, it was agreed that this island group needed to be treated as one management unit, despite both sets of islands being protected independently under their individual country's legislation. WWF was instrumental in the facilitation of cooperation between the two countries, leading to the signing in 1996 of a bilateral agreement establishing the Turtle Islands Heritage Protected Area (TIHPA), the world's first transboundary protected area for marine turtles (McLellan *et al.*, 2004).

The islands continue to be managed by their respective country's management authorities, but under a uniform set of guidelines developed by the Joint Management Committee - comprised of representatives from each of the two countries (McLellan *et al.*, 2004).

**PORTUGAL (?):**

*Status:* *Chelonia mydas* is a rare visitor to Portuguese waters. Most individuals observed at Madeira and the Azores are juveniles (Portugal National Report, 2002).

*CMS actions:* Monitoring activities for *Caretta caretta* will detect *Chelonia mydas*. Future activities targeting *Caretta caretta* will benefit this species indirectly (Portugal National Report, 2002).

*Other actions:*

**Qatar:**

*Status:* Green turtles nest on the coast of Ras Laffan (Tayab & Quiton, 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:* Ras Laffan Industrial City has initiated a programme to protect marine turtles including identification of nesting sites on beaches and monitoring trends in nesting activity, ensuring long-term protection of nesting beaches, and increasing environmental awareness. In 1999/2000, based on the recommendation of this programme, the City erected a 6 km long sand/dirt barrier parallel to the northern beach to stop vehicular movement on the beach. It also cleaned the beaches of debris (timber, plastic, nylon ropes, glass and metal scraps), and set up continuous surveillance of the area to deter any egg poaching (Tayab & Quiton, 2003).

**Saint Kitts and Nevis:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**Saint Lucia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Vincent and the Grenadines:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Samoa:**

*Status:* Some juveniles reside year-round in the Samoan Archipelago and thus must be able to find food there (Craig *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Samoan Government declared its political commitment to establishing its 120,000km2 Economic Exclusive Zone as a Whale, Shark and Turtle Sanctuary in 2002 (McLellan *et al.*, 2004).

**SAO TOME AND PRINCIPE:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**SAUDI ARABIA:**

*Status:* In the Arabian Gulf, the primary nesting sites for these turtles are the islands of karan, Jana, Juraid and Kurain. The small islands lie off the Saudi Arabian east coast between 27º 43' N, 49º 49' E and 27º 11' N, 49º 59' E, and collectively host several thousand turtles each year (Pilcher, 2000). Some 1,000 females/year nest on Karan and Jana islands of the Saudi Arabian coast. Threats to the turtle populations in the Gulf include moderate egg and adult harvesting, mortality in commercial and artisanal fishing gears, loss of nesting habitats, and significant loss or alteration of foraging grounds (Pilcher *et al.*, 2003).

*CMS actions:* None reported.

*Other actions:* The 1991 and 1992 nesting seasons on Karan, Jana and Kuraid were monitored as part of an assessment of the status of marine turtles by the National Commission for Wildlife Conservation and Development (NCWCD), in part to determine the immediate effects of the 1991 oil spill that resulted from the Iraq-Kuwait war, and as a part of the Saudi Arabian ongoing commitment to wildlife conservation (Pilcher, 2000).

**SENEGAL:**

*Status:* This species is present in abundance in the National Park of Delta of the Saloum. There is also a presence in the north of the country in the National Park of the Barbary Coast (Senegal National Report, 2002).

Feeding grounds in Sine Saloum, are considered to be regionally important for marine turtles. However, turtles are under many threats here as elsewhere, including through local consumption of both turtle meat and eggs. Artisan fishermen sometimes purposefully capture adult turtles in known foraging grounds on days when their fishing captures are low (McLellan *et al.*, 2004).

*CMS actions:* Intensive conservation and protection work is carried out. There will be in future, consolidation of current work by putting in place a national strategy for the conservation of turtles (Senegal National Report, 2002).

*Other actions:* WWF has worked with partners "le village des tortues" on raising awareness of the need for marine turtle conservation in Senegal. As a result, the consumption of turtles has stopped in some villages where turtles were traditionally eaten (McLellan *et al.*, 2004).

Through consultation with WWF and other NGOs and the local communities, the Government of Senegal recently announced the establishment of a network of four marine protected areas in Senegal's coastal zone, effectively protecting fisheries and biodiversity covering more than 7,500 sq. km. These represent a doubling of the marine protected areas for Senegal, and will protect regionally important feeding and nesting grounds for five species of marine turtles. Local communities strongly

support the protected areas as a means to safeguard these important natural resources for the future (McLellan *et al.*, 2004).

**Seychelles:**

*Status:* In Seychelles, numerous nesting beaches have been abandoned following excessive exploitation for meat since the colonisation of the islands. Breeding grounds in the outer islands remain in use although the number of beaches used and the number of females emerging to lay has decreased significantly. Catalogued as Critically Endangered in the Seychelles Red Data Book (Gerlach, 1997).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Banyan Tree Resort, in partnership with the Marine Conservation Society, Seychelles (MCSS), is implementing a project of Integrated Marine Turtle and Beach Management at Anse Intendance. This project focuses on the management of the beach, dune structure and associated vegetation to enhance turtle nesting and mitigate the impacts of tourism activities on the beach and dunes (IOSEA Marine Turtle Mou, 2004).
Another project is funded by the British Foreign and Commonwealth Office and is being implemented by the Marine Conservation Society Seychelles (MCSS). It brings together stakeholders, from throughout Seychelles, who currently manage turtle rookeries into a partnership where they share data through an on-line database that informs the development of a Strategy and Action Plan (IOSEA Marine Turtle MoU, 2004).
A different project launched by the Marine Conservation Society Seychelles (MCSS) in February 2004, focuses on the turtle rookeries on the three main islands of Mahe, Praslin and La Digue (IOSEA Marine Turtle MoU, 2004).

**Sierra Leone:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Singapore:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**SLOVENIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Solomon Islands:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**SOMALIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**SOUTH AFRICA:**

*Status:* There are limited nesting areas in the region but most are well protected and have large populations. Catalogued as Vulnerable in the South African Red Data Book (Branch, 1988).

*CMS actions:* None reported.

*Other actions:* WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**SPAIN:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**SRI LANKA:**

*Status:* This species is the most abundant in this island (Kaparusinghe, 1999)

*CMS actions:* None reported.

*Other actions:* The Turtle Conservation Project (TCP) in Sri Lanka was established in 1993 to address the issue of marine turtle conservation. The TCP aims to devise and facilitate the implementation of sustainable marine turtle conservation strategies through education, research and community participation. Major programmes initiated by TCP are the Rekawa environmental education programme, school lecture program and research and tagging programme (Kaparusinghe, 1999).

**Sudan:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Suriname:**

*Status:* There is a distinct green turtle population breeding in Suriname and feeding in waters off the Brazilian coast (Kemf, *et al.*, 2000). Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since the 1980s WWF has supported research and successful antipoaching projects in Suriname and Brazil. Protected areas have been set up (Kemf, *et al.*, 2000). Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan developed by WWF and partners has recently been technically finalised and been submitted for official endorsement nationally and regionally (McLellan *et al.*, 2004).

In Suriname, WWF is currently supporting most marine turtle conservation initiatives that are coordinated under the Foundation for Nature Conservation (Stinasu) – a semi-government organisation. WWF has been involved in building field stations on remote beaches, training rangers, supporting sustainable tourism initiatives, and promoting fishing closures in front of a nesting beach reserve. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**SYRIAN ARAB REPUBLIC:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**U.R. TANZANIA:**

*Status:* The population size is not known. It was estimated to be about 300 individuals nesting annually in 1982 in Tanzania. The population trend is not known, however, there is much evidence that a number of former turtle nesting areas have been vacated and those suitable nesting sites are in decline. Reported to be breeding at Saadani, Bagamoyo, Kilwa (?), Mtwara, Pemba, Zanzibar and Mafia Islands and adjacent smaller islands. Recent estimates in two sites are of 50 nesting females in Mafia and 30 in Mnemba Island, Zanzibar (U.R. Tanzania National Report, 2002). Monthly nesting frequency for green and hawksbill turtles since January 2001 shows that green turtles nest throughout the year peaking during the cooler, south-east monsoon months between March and June (Wilson & Humphrey, 2004).

*CMS actions:* Mafia Island Turtle and Dugong Conservation Programme monitor seventeen active nesting beaches on Mafia Island regularly. The Mafia Island District has developed a proposal with assistance from the Mafia Island Turtle and Dugong Conservation Programme to close Nyoro, Shung-mbili and Mbarakuni Islands adjacent to Mafia for temporary settlements part or whole year for turtle nesting to recover. A technical committee that will coordinate all turtle conservation programmes in The United Republic of Tanzania has been formed (U.R. Tanzania National Report, 2002).

*Other actions:* WWF is working with local communities on Mafia Island on a variety of natural resource management topics, including fisheries management, alternative non-destructive fishing ventures and marine turtle conservation. The Wildlife Conservation Society (WCS) and Born Free Foundation provide additional support for the turtle conservation programme, amongst others (McLellan *et al.*, 2004).

Over the last nesting season on Mafia Island, over 10,000 hatchlings were produced from nest protection, and the rate of human poaching fell to 4% of previous levels. Part of WWF's work in this area has also been to support the new zoning measures in Mafia Island Marine Park, which are anticipated to reduce bycatch levels of marine turtles in no-fishing zones (McLellan *et al.*, 2004).

**Thailand:**

*Status:* There is near total egg harvest in this country (Kemf, *et al.*, 2000). By the 1970s, all turtle species in Thailand were subject to commercial egg collection and the harvest was in decline. Drift nets in coastal waters were, and remain, a major threat causing accidental drownings (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* Phra Thong island was chosen as base of a sea turtle conservation project in 1996, and in April 2003, the project was approved for an extension of three years by the National Research Council of Thailand (NRCT) as 'Conservation Project: sea turtles, mangrove forest and coral reef' run by Naucrates in collaboration with the Pukhet Marine Biological Center (PMBC) and the Ranong Coastal resource Rsearch Station (RCRRS) (IOSEA Marine Turtle MoU, 2004).

The Wild Animal Rescue Foundation of Thailand (WAR) has established a Turtle Research & Conservation Project at Baan talae Nork, along the

Andaman coastline, to work towards the conservation and rehabilitation of Andaman sea turtle populations in Southern Thailand (IOSEA Marine Turtle MoU, 2004).

**TOGO (?):**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Tonga:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Trinidad and Tobago:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**TUNISIA:**

*Status:* The extensive seagrasses of the Gulf of Cabes are a major foraging area for green turtle. Until the late 1980s around 3,000 were being killed annually in the Gulf, and a total of 6,000 in Tunisia as a whole (Kemf, *et al.*, 2000).

*CMS actions:* None reported.

*Other actions:* Between 1989 and 1993, WWF supported a project to survey the extent of mortality and to identify key breeding, feeding and overwintering areas (Kemf, *et al.*, 2000).

**Turkey:**

*Status:* The Turkish coast is thought to be one of the last strongholds of green turtles in the Mediterranean, but even there the decline of turtles has been accentuated by damage caused to breeding beaches as a result of increasing tourism. Furthermore, a World Wide Fund for Nature (WWF) survey discovered that nest predation (foxes and jackals) was a regular occurrence on 10 of the 13 major Turkish breeding beaches (Brown & Macdonald, 1995). According to Canbolat (2004), the Turkish coastline contains 61% of total annual *Chelonia mydas* nesting in the Mediterranean.

*]*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF and other NGOs are working to protect Turkey's nesting turtles. Many of the nesting beaches are now protected areas (Kemf, *et al.*, 2000). The first systematic surveys of nesting beaches for the two marine turtle species breeding on the Turkish coasts of the Mediterranean Sea — the loggerhead and green turtle — started in 1979. In 1988, 17 sites were designated as Marine Turtle Nesting Sites. However, a recent report from WWF indicated that 64 per cent of these sites are not adequately protected. The report, In the Tracks of Marine Turtles: Assessment of Marine Turtle Nesting Sites 2003,was distributed during the First Turkish National Marine Turtle Symposium, which was held in December 2003 in Istanbul, Turkey and organized by WWF-Turkey. A draft National Action Plan for Marine Turtles was formulated during the Symposium. It included recommendations to prepare a final National Action Plan for the conservation of marine turtles and their habitats as soon as possible; to establish marine turtle rescue and rehabilitation centres; and to standardize methods employed in conservation and monitoring of the nesting sites (McLellan *et al.*, 2004).

**Tuvalu:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**United Arab Emirates:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**United Kingdom (Anguilla):**

*Status:* Reported as breeding (Richardson and Gumbs, 1984). Numbers of green turtle are starting to recover in Anguilla since a 5-year moratorium on harvesting the species was imposed in 1995 (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**UNITED KINGDOM:**

*Status:*

***Cayman Islands***

Historically, nesting marine turtles were abundant in the Cayman Islands, with a large migrant population reproducing between May and October. By the early 1800s, however, Caymanian turtle fishermen had exhausted the local nesting populations. Although many authors found no evidence of marine turtle nesting activity in the Cayman Islands and concluded they were locally extinct, recent observations and reports suggest that marine turtles were not extirpated, and four different species of marine turtles nest in the islands, including *Chelonia mydas.* Despite the fact that the heavy exploitation of nesting turtles occurred centuries ago, the population has still not recovered to any great degree (Aiken *et al*., 2001).
A traditional marine turtle fishery still exists in Cayman Islands. Estimates made by marine enforcement officers and marine turtle fishermen suggest that since 1986 approximately 10 adult turtles are taken legally and more than 10 are taken illegally per year (Aiken *et al*., 2001).

***Saint Helena****

Breeding reported (Mortimer and Carr, 1987).

***Ascension Island***

Godley *et al*. (2001) suggest that the status of the population is favourable, and it is clear that this remains a key rookery for green turtles in the Atlantic. Although there is a long history of exploitation of the turtle population on Ascension for meat, both by seafarers and island residents, since the 1930s, the population has been afforded almost fully protection on the nesting beaches, and few, if any turtles, have been killed by man since 1957. However, turtles only spend a small proportion of their lives at Ascension, and hence mortality occurring away from the island may have important impacts on the population size (Godeley *et al*., 2001)

*CMS actions:* None reported.

*Other actions:*

***Cayman Islands***

The Cayman Turtle Farm released 26,995 green turtle hatchlings between 1980 and 1991, and continues to release more annually (Aiken *et al*., 2001).

**United States:**

*Status:* Total population estimates for the green turtle are unavailable, and trends are particularly difficult to assess because of wide year-to-year fluctuations in numbers of nesting females, difficulties of conducting

research on early life stages, and long generation time. Prsent estimates range from 200 to 1,100 females nesting on U.S. beaches. The numbers of nests has increased on Hutchinson Island, Florida, over the period 1971-1989, although nesting levels have been low on other nesting beaches. Population estimates given are for the number of nesting females in Florida (NOAA, 2005).
In the southeastern United States, green turtles are found around the U.S. Virgin Islands, Puerto Rico, and the continental U.S. from Texas to Massachusetts. Important feeding grounds in Florida include Indian river Lagoon, the Florida Keys, Florida Bay, Homosassa, Crystal River and Cedar Key (NOAA, 2005).
In the United States, killing of nesting green turtles is infrequent. However, in a number of areas, egg poaching is still a concern (NOAA, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* In the United States, green turtles are protected by the Endangered Species Act (Animal Diversity Web, 2004). Strong conservation management regimes in Florida have led to a recovery in green turtle numbers (Kemf, *et al.*, 2000).

**URUGUAY:**

*Status:* No information available (Uruguay National Report, 2002).

*CMS actions:* Four future research lines have been established: genetic, impacts from fisheries, environmental education, and feeding areas (Uruguay National Report, 2002).

*Other actions:*

**Vanuatu:**

*Status:* It is likely that Vanuatu is a important foraging area for turtles from central Pacific islands (Craig *et al*., 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF supported (together with the South Pacific Regional Environmental Programme) a local theatre group to give performances to raise awareness of marine turtle conservation, and invite local communities to participate in marine turtle monitoring (McLellan *et al.*, 2004).

**Venezuela:**

*Status:* The species nests in low densities along the entire coast of the country, especially in Falcón, Sucre, Nueva Esparta, Los Roques Archipelago and La Blanquilla. The biggest nesting site is in Aves Island, where approximately 500 females nest every year. It is protected in this island, but the populations are decreasing drastically in the rest of the country. Catalogued as Endangered in the Venezuelan Red Data Book (Rodriguez and Suarez-Rojas, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Aves island population has been investigated and has received intensive conservation efforts since 1979 (Rodriguez and Suarez-Rojas, 1999).

**Viet Nam (?):**

*Status:* Populations of green turtles are in serious decline (Kemf, *et al.*, 2000). Up to 300 green turtles nest in Con Dao National Park annually (McLellan *et al.*, 2004). Catalogued as Endangered in the Viet Nam Red Data Book (Viet Nam, Ministry of Science, Technology and Environment, 1992).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has been working at one of the biggest nesting sites of green turtles since 1995, in Con Dao National Park, an archipelago 60km off the south coast of Viet Nam. In 2000, a national Asian Development Bank (ADB) /WWF project used Con Dao National Park as a demonstration site aimed at integrating marine biodiversity conservation into the overall environmental management of the island system. Following this and other studies, the Ministry of Fisheries, in consultation with national specialists and other organisations including WWF and IUCN, drafted a formal plan for the establishment of a representative system of MPAs (covering a proposed 17% of the EEZ). The network currently comprises 15 proposed sites, with a focus on tropical island ecosystems, some of which host other turtle nesting populations, and provide critical offshore turtle habitats (McLellan *et al.*, 2004).

**Western Sahara (br?)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Yemen:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

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* Range State not yet included in the CMS range list for this species.

***Dermochelys coriacea* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| ALBANIA | | ? | × | ✓ |
| Algeria | | ? | | |
| Angola | | ? | | ✓ |
| Antigua and Barbuda | | ? | | |
| ARGENTINA | ● | ? | × | ✓ |
| AUSTRALIA | | ? | ✓ | ✓ |
| Bahamas | | ? | | |
| Bahrain | | ? | | |
| Bangladesh | | ? | | |
| Barbados | | ? | | ✓ |
| BELGIUM | | ? | × | |
| Belize | | ? | | |
| BENIN | | ? | ✓ | |
| Brazil | | ? | | ✓ |
| Brunei Darussalam | | ? | | |
| Cambodia | | ? | | |
| CAMEROON | | ↓ | ✓ | |
| Canada | | ? | | ✓ |
| Cape Verde | | ? | | |
| CHILE | | ? | ✓ | ✓ |
| China | ● | ? | | |
| Colombia | ● | ? | | ✓ |
| Comoros | | ? | | |
| CONGO | | ? | ✓ | ✓ |
| D.R CONGO | | ? | × | ✓ |
| Costa Rica | | ↓ | | ✓ |
| COTE D'IVOIRE | | ? | ✓ | |
| CROATIA | | ? | × | |
| Cuba | | ? | | ✓ |
| CYPRUS | | ? | × | |
| DJIBOUTI | | ? | × | |
| Dominica | | ? | | |
| Dominican Republic | | ? | | |
| ECUADOR | | ? | × | |
| EGYPT | | ? | × | |
| El Salvador | | ? | | ✓ |
| Equatorial Guinea | | ? | | ✓ |
| Eritrea | | ? | | ✓ |
| Fiji | | ? | | ✓ |
| FRANCE | | ↓ | × | ✓ |
| Gabon | | ? | | ✓ |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| GAMBIA | | ? | ✓ | |
| GHANA | | ? | ✓ | |
| GREECE | | ? | × | |
| Guatemala | | ? | | ✓ |
| GUINEA | | ? | ✓ | |
| GUINEA-BISSAU | | ? | | |
| Guyana | | ↑ | | ✓ |
| Haiti | | ? | | |
| Honduras | | ? | | ✓ |
| Iceland | | ? | | |
| INDIA | ● | ? | × | ✓ |
| Indonesia | | ↓ | | ✓ |
| Iran | | ? | | |
| Iraq | | ? | | |
| IRELAND | | ? | × | |
| ISRAEL | | ? | ✓ | |
| ITALY | | ? | × | |
| Jamaica | | ? | | |
| Japan | | ? | | |
| JORDAN | | ? | × | |
| KENYA | | ? | ✓ | ✓ |
| Kiribati | | ? | | |
| D.P.R Korea | | ? | | |
| Republic of Korea | | ? | | |
| Kuwait | | ? | | |
| Lebanon | | ? | | |
| LIBERIA | | ? | × | |
| LIBYAN ARAB JAMAHIRIYA | | ? | × | |
| Madagascar | | ? | | |
| Malaysia | | ↓ | | ✓ |
| Maldives | | ? | | ✓ |
| MALTA | | ? | | |
| Marshall Islands | | ? | | |
| MAURITANIA | | ? | ✓ | |
| MAURITIUS | | ? | × | |
| Mexico | | ↓ | | ✓ |
| F.S. Micronesia | | ? | | |
| MOROCCO | | ? | × | |
| Mozambique | | ↑? | | ✓ |
| Myanmar | | ? | ✓ | ✓ |
| Namibia | | ? | | |
| Nauru | | ? | | |
| NETHERLANDS | | ? | × | ✓ |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| NEW ZEALAND | | ? | × | |
| Nicaragua | | ? | | ✓ |
| NIGERIA | | ? | × | |
| NORWAY | | ? | × | |
| Oman | | ? | | |
| PAKISTAN | | ? | × | |
| Palau | | ? | | |
| PANAMA | | ? | × | |
| Papua New Guinea | | ↓? | | ✓ |
| PERU | | ? | × | ✓ |
| PHILIPPINES | ● | ? | ✓ | ✓ |
| PORTUGAL | | ? | ✓ | |
| Russian Federation | | ? | | |
| Qatar | | ? | | |
| Saint Kitts and Nevis | | ? | | ✓ |
| Saint Lucia | | ? | | |
| Saint Vincent and the Grenadines | | ? | | |
| Samoa | | ? | | |
| SAO TOME AND PRINCIPE | | ↓? | × | ✓ |
| SAUDI ARABIA | | ? | | |
| SENEGAL | | ? | ✓ | ✓ |
| Serbia and Montenegro | | ? | | |
| Seychelles | | ? | | |
| Sierra Leone | | ? | | |
| SLOVENIA | | ? | | |
| Solomon Islands | | ? | | |
| SOMALIA | | ? | × | |
| SOUTH AFRICA | ● | ↑ | × | ✓ |
| SPAIN | | ? | × | ✓ |
| SRI LANKA | | ↓ | ✓ | ✓ |
| Sudan | | ? | | |
| Suriname | | ↑ | | ✓ |
| SWEDEN | | ? | × | |
| SIRYAN ARAB REPUBLIC | | ? | × | |
| U.R. TANZANIA | | ? | ✓ | ✓ |
| Thailand | | ↓ | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| TOGO | | ? | ✓ | |
| Tonga | | ? | | |
| Trinidad and Tobago | | ↑ | | |
| TUNISIA | | ? | × | |
| Turkey | | ? | | |
| Tuvalu | | ? | | |
| United Arab Emirates | | ? | | |
| UNITED KINGDOM | | ? | ✓ | |
| United States | | ? | | ✓ |
| URUGUAY | | ? | ✓ | ✓ |
| Vanuatu | | ? | | ✓ |
| Venezuela | ● | ? | | ✓ |
| Viet Nam | | ? | | ✓ |
| Yemen | | ? | | |

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: DERMOCHELYIDAE

SPECIES: *Dermochelys coriacea* (Vandelli, 1761)

SYNONYMS: -

COMMON NAME: Leatherback; Leathery Turtle; Luth; Trunkback turtle (English); Tortue luth (French); Canal; Tinglada; Tortuga laud (Spanish)

RANGE STATES: ALBANIA; Algeria; Angola; Antigua and Barbuda; ARGENTINA; AUSTRALIA; Bahamas; Bahrain; Bangladesh; Barbados; Belize; BENIN; Brazil; Brunei Darussalam; Cambodia; Canada; CAMEROON; CHILE; China; Colombia; Comores; CONGO; CONGO, DEMOCRATIC REPUBLIC OF THE; Costa Rica; COTE D'IVOIRE; CROATIA; Cuba; CYPRUS; DJIBOUTI; Dominica; Dominican Republic; ECUADOR; EGYPT; El Salvador; Eritrea; Equatorial Guinea; Fiji; FRANCE (including Corsica, French Guiana, Guadeloupe); Gabon; GAMBIA; GHANA; GREECE; Grenada; Guatemala; GUINEA; GUINEA-BISSAU; Guyana; Haiti; Honduras; Iceland; INDIA (including Andaman Islands, Laccadive Islands, Nicobar Islands); Indonesia; Iran (Islamic Republic of); Iraq; IRELAND; ISRAEL; ITALY; Jamaica; Japan; KENYA; Kiribati; Korea, Democratic People`s Republic of; Korea, Republic of; Kuwait; Lebanon; LIBERIA; LIBYAN ARAB JAMAHIRIYA; Madagascar; Malaysia; Maldives; MALTA; Marshall Islands; MAURITANIA; MAURITIUS; Mexico; Micronesia (Federated States of); MONACO; MOROCCO (?); Mozambique; Myanmar; Namibia; Nauru; NETHERLANDS (Aruba); NEW ZEALAND; Nicaragua; NIGERIA; NORWAY; Oman; PAKISTAN; Palau; PANAMA; Papua New Guinea; PERU (?); PHILIPPINES; PORTUGAL; Russian Federation; Qatar; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Samoa; SAO TOME AND PRINCIPE; SAUDI ARABIA; SENEGAL; Serbia and Montenegro; Seychelles; Sierra Leone; SLOVENIA; Solomon Islands; SOMALIA; SOUTH AFRICA; SPAIN; SRI LANKA; Sudan; Suriname; SYRIAN ARAB REPUBLIC; TANZANIA, UNITED REPUBLIC OF; Thailand; TOGO; Tonga; Trinidad and Tobago; TUNISIA; Turkey; Tuvalu; United Arab Emirates; UNITED KINGDOM (including British Virgin Islands); United States (including Alaska, Hawaiian Islands, Puerto Rico, United States (Virgin Islands); URUGUAY; Vanuatu; Venezuela; Viet Nam; Yemen; international waters (Mediterranean Sea, Atlantic Ocean, Indian Ocean, Pacific Ocean)

RED LIST RATING: CR A1abd (Sarti Martinez, 2000)

CONSERVATION STATUS AND ACTIONS:

The leatherback turtle has a worldwide distribution. Very little is known about the distribution of post-hatchlings and juveniles. Nesting occurs on beaches of tropical seas in the Atlantic, Indian and Pacific oceans and occasionally in the subtropics and Mediterranean (Pritchard, 1980). Most sites are located between 30°N and 20°S (Groombridge, 1982). Away from the nesting site, individuals are known to move into temperate waters to feed. Major non-breeding leatherback areas include, the New England area of north-east U.S.A., including the Gulf of Maine (Lazell, 1980); the eastern Atlantic, notably parts of the Bay of Biscay (Duron and Duron, 1980); the east Pacific between Peru and Ecuador (G. M. Hurtado, pers. comm. to M. R. Márquez in Groombridge, 1982), and the east coast of Australia (Cogger, 1979; Limpus and McLachlan, 1979).

The Leatherback turtle was widely considered to be on the brink of extinction in the mid 20th century. However, in the early 1980s, although the total population of leatherbacks was found to be much larger than had previously been thought, and no evidence for an overall decline in the species was found, breeding populations were mostly of relatively small size (with only a few hundred, or fewer, females nesting annually), were widely scattered through the tropics, and were often subject to heavy exploitation for food (Pritchard and Cliffton, 1981; Ross, 1982a). Perhaps half a dozen sites appeared to hold a few hundred females per year, and many held only a few individuals.

The first attempt to evaluate the world population was done by Ross in 1979 (Ross 1982), estimating that 29,000 to 45,000 adult leatherback existed in the world, not counting the rookeries of the Eastern Pacific that had not been discovered yet. Pritchard estimated in 1982 that the world population consisted of 115,000 adult females, and considered that the Mexican population supports up to 60% of the global total. In 1996, Spotila and collaborators provided the most recent global estimation, compiling published data, unpublished information and personal comments from 28 leatherbacks nesting sites, estimating that 20,000 to 30,000 adult females existed at that time in the world. This represents a reduction of the global population of 78% from Pritchard's estimation in 14 years, less than a single generation (Sarti Martinez, 2000). Regional population estimates for nesting adult leatherback turtles are as follows: 18,800 in the Western Atlantic, 4,021 in the Caribbean, 4,787 in the Eastern Atlantic, 445 in the Indian Ocean, 1,838 in the Western Pacific (Spotila *et al.*, 1996) and 1,690 in the Eastern Pacific (Spotila *et al.*, 2000).

Recently, there have been only four major Leatherback nesting areas where over 1,000 females have been recorded nesting annually: the Pacific coast of Mexico, French Guiana (with a population that is apparently partly shared with Suriname), Terengganu (Peninsular Malaysia) (which has experienced huge declines), and the Kepala Burung (Vogelkop) region of Irian Jaya, Indonesia. A nesting population on the coast of Gabon would appear to be a fifth nesting population of global significance (UNEP-WCMC, 2003).

The main threats for the species have been a prolonged harvest of eggs and the incidental capture in oceanic fisheries. In some areas the egg harvest and illegal poaching has removed more than 95% of the clutches, and fishing activities using longline and driftnets are an important threat since juveniles and adults are captured in migratory routes. In some areas, females are killed on the nesting beaches for oil extraction. Leatherback hunts, which have been stripped of their traditional customs and controls, are also serious threats. Oceanic pollution, basically by plastics, is another cause of mortality (Sarti Martinez, 2000). Habitat destruction is one of the greatest threats to the survival of the leatherback (NOAA, 2005).

The discovery of narrow migration corridors used by the leatherbacks in the Pacific Ocean has raised the possibility of protecting the turtles by restricting fishing in these key areas. Conservation efforts should focus on hot spots frequented by this species (Ferraroli *et al*., 2004).

**ALBANIA:**

*Status:* One specimen was caught in the 1960s (Haxhiu, 2002).

*CMS actions:* None reported.

*Other actions:* The University of Tirana and the Natural Sciences Museum are updating information on marine turtles in Albania, including their status along the Albanian coasts, and are developing awareness programmes among Albanian people and fishermen (Haxhiu, 2002).

**Algeria:**

*Status:* Leatherback turtles have been recorded here (Groombridge, 1990)

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Angola:**

*Status:* The leatherback has been reported south of Luanda and nesting. The species has been reported along the coast of Angola by direct observations or by the presence in collections of hatchlings (or specimens taken from the eggs) (Carr & Carr, 1991).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will be implemented in South Africa, Namibia and Angola, and will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al*., 2004).

**Antigua and Barbuda:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**ARGENTINA:**

*Status:* Leatherback turtles have been reported to occur here (Chebez, 1987; Richard, 1988). Reported as Endangered in the List of Argentinean Vertebrates threatened with extinction (Bertonatti & Gonzalez, 1993).

*CMS actions:* None reported.

*Other actions:* The Peyu Project is an NGO that promotes community education and awareness of the issues marine turtles are facing, as well as scientific research on Argentinean coasts. The project also seeks to promote research funding for people and institutions interested in the conservation of marine turtles. The Peyu Project also integrates with other regional projects, such as Kerumbé in Uruguay and Tamar in Brazil (Proyecto Peyu, 2003).

**AUSTRALIA:**

*Status:* Only a small population of leatherback turtles has been found breeding and nesting in eastern Australia, mainly from December to January, and they do not nest in Australia in any significant numbers. Animals from populations in Papua New Guinea, Malaysia and Indonesia use the continental waters of Australia to feed and migrate to temperate waters. While a small number of females nest in scattered sites in Queensland, New South Wales and the Northern Territory, there have only been a small number of sightings off the mid-west coast of Australia, and very rarely there are sightings off Victoria and Tasmania (Australia National Report, 2002).

Only one or two females were recorded nesting annually along l00km of Queensland coast from Mon Repos beach at Bundaberg north to Round Hill Head (Limpus, 1982, 1984, 1994a; Limpus and McLachlan, 1979). Leatherbacks were also recorded as nesting in northern New South Wales by Tarvey (1993).

*CMS actions:* Various research topics including development of GIS-based models for indigenous management, monitoring the impact of trawling and other commercial fisheries, population studies are mentioned in the Australia National Report (2002).

*Other actions:* Despite its World Heritage status, the Great Barrier Reef Marine Park (GBRMP), until recently, had not been well protected with respect to marine turtle habitats. However, the GBR Marine Park Authority is in the process of establishing a network of no-take zones throughout all 70 bioregions of the GBR. (McLellan *et al.*, 2004).

Firstly, GBRMP has adopted a scientific recommendation that a minimum of 25-30% of the Marine Park be protected from fishing, and that the green zones network will protect critical nesting, foraging and migration habitats of marine turtles, amongst other endangered species.

WWF is working in partnership with Indigenous Sea Rangers on joint projects that include marine debris surveys and turtle research and monitoring. Sea Rangers are Aboriginal community representatives who have the responsibility of managing their natural resources. WWF assists Aboriginal communities to establish their own marine turtle monitoring programmes by providing training, equipment, additional funding and professional support. Sea rangers from Dhimurru Land Management Aboriginal Corporation have been conducting helicopter-based turtle monitoring along the Cape Arnhem coastline since 1996 (McLellan *et al.*, 2004).

**Bahamas:**

*Status:* Leatherback turtle nesting has been recorded here (Anon., 2001), but in small numbers (Anon., 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bahrain:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bangladesh:**

*Status:* Leatherback nesting has been recorded here (Islam, 2002). One confirmed nest was observed in Shill Banyar Gula in May 2001 (Islam, 2002). Major threats identified to the turtles and their nesting grounds are obstruction by fishing

trawlers and fishing nets, poaching of eggs and loss of nesting beach (Ahmed *et al*., 1999)

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Barbados:**

*Status:* Leatherback nesting has been recorded here, but only a few each year (Horrocks, 1987, 1992).

*CMS actions:* Not a Party to CMS.

*Other actions:* In 1992, the NGO Widecast produced the 'Sea Turtle Recovery Plan for Barbados' for the UNEP- Caribbean Environmental Program. The plan was produced in response to the objectives of the Specially Protected Areas and Wildlife Protocol (SPAW protocol), an instrument derived from the Cartagena Convention (a regional convention for the Great Caribbean region), and was part of a series of plans developed in the Caribbean for the protection and conservation of marine turtles. The plan determines the status and distribution of marine turtles in Barbados, identifies threats to marine turtles in the region and proposes solutions for such threats; it also sets out recommendations for governmental and non-governmental organisations (Horrocks, 1992).

**BELGIUM (v)*:**

*Status:* Leatherback turtles have been reported from Belgium (UNEP-WCMC, 2004). The first record was noted by van Gompel (1990) and the species was subsequently recorded by Haelters and Kerckhof (1999).

*CMS actions:* None reported.

*Other actions:*

**Belize:**

*Status:* Leatherback turtles have been reported here (Stafford, 1998). This species is rare, found in low densities it is unlikely to be seen, and only known from a few localities (Ministry of Natural Resources' Land Information Centre, 1998).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**BENIN:**

*Status:* Leatherback turtles are second most frequently observed species of marine turtle after the olive ridley (Benin National Report, 2002). Nesting has been confirmed in Benin (Dossou-Bodirenou *et al.*, 1999; Abdoulaye, pers. comm.).

*CMS actions:* According to the Benin National Report (2002), conservation activities include safeguarding of supposed egg-laying sites. Future activities will involve raising the awareness of the public.

*Other actions:*

**Brazil:**

*Status:* The species has been recorded nesting in Espirito Santo (Carr *et al.*, 1982; Sternberg, 1981), Rio Grande do Sul and Santa Catarina (Soto *et al.*, 1997), and Rio de Janeiro (Barata and Fabiano, 2002). Until the end of the 1970s, there were no marine conservation programmes in Brazil, and marine turtles were in grave danger of local extinction through capture in fishing nets, adult females killed for meat and nests being destroyed (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* The TAMAR project, initiated by the Brazilian Institute of Forestry in 1980, aims to produce information for the preservation and conservation of turtles. The work was soon extended nationwide from the original project sites, and focuses on the identification of species, the main nesting sites, the nesting seasons and the socio-economic reasons for the overexploitation of marine turtles by coastal communities. Accompanying this has been a large education and awareness-raising campaign (McLellan *et al.*, 2004). The success of the program is based on local participation of the fishing villages, including the employment of former egg poachers to patrol the beaches and protect the nests.

Currently the project involves research on the behaviour and population genetics of turtles, research on turtle reproduction, incubation, and hatchlings as well as on other aspects of their biology (Projeto Tamar, 2003).

**Brunei Darussalam:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Cambodia:**

*Status:* One leatherback was recorded in May 2001 (Stuart *et al.*, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CAMEROON:**

*Status:* Nesting remains to be confirmed on beaches in Northern Cameroon in the area between Kribi and the Nigerian border (Fretey, 2001). Leatherbacks used to nest in Cameroon in greater numbers according to local sources (Fretey, 1999).

*CMS actions:* During 2000, inventories of nesting sites of marine turtles that visit Cameroon's coasts were undertaken in southern Cameroon; tagging activities have been also developed in the Campo-Ma'an and Douala-Edea reserves (UNEP/CMS, 2000).

*Other actions:*

**Canada:**

*Status:* The species occurs in Canada regularly (Goff, 1988; James, 2000a and b).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Canada Wildlife Service is currently developing a recovery plan for this species in the Atlantic Coast. The Strategy of the plan includes the identification of critical habitats for Pacific population recovery and areas of potential conflict, the development of a database and the reporting all sightings of this species. Other activities involving tagging, telemetry and workshops have also been undertaken (Species at Risk, 2003).

On a more local level, the Nova Scotia Leatherback Turtle Working Group is a collaborative conservation and research initiative that involves scientists, fishermen, coastal communities, boat operators and other people interested in the conservation of Leatherbacks. It has operated since 1997 and recuperation and conservation of the species are its aims. Part of the conservation effort is the involvement of commercial fishermen as partners in the research (LTWG, 2003). The Nova Scotia Leatherback Turtle Working Group (LTWG) conducts research in the Canadian Atlantic coast focused in the species' distribution and movement, genetics, necropsy, and histopathology (LTWG, 2003).

**Cape Verde*:**

*Status:* The species has been recorded here by UNEP/CMS (2000) and Lazar and Holcer (1998). López-Jurado *et al.* (2000) noted that there were isolated sightings by fishermen and some non-confirmed references that it nests on Boavista.

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CHILE:**

*Status:* The species is a regular non-breeding visitor to Chile. The population size of leatherbacks in Chile is unknown. Published works indicate, "this is the most abundant marine turtle species in Chilean seas, as it is the most frequently caught by fishermen". In March and April 1990, 14 specimen adults were recorded, one in Valdivia and 13 in Region VIII (Chile National Report, 2002).

Brito (1998) reported on an initiative to collect information on sea turtles and their relationship with the swordfish drift net fishery. A total of 82 new records of this species were obtained for Chilean waters, including four marked individuals from Central America and Mexico, thus indicating the origin of Chilean animals; in addition, the range of the species was extended to 41°S. Frazier (1990) noted an estimate of at least 250 individuals caught annually by the San Antonio swordfish fishery (Brito, 1998).

*CMS actions:* SERNAPESCA and CPPS Workshop 2001 was held in Valparaíso, Chile to define priority action guidelines of a programme for the conservation of marine turtles (Chile National Report, 2002).

*Other actions:* The National History Museum and the National Fisheries Service are promoting the protection of marine turtles by providing information on the protection and care of turtles to artisanal fisheries organisations and small industries. This does not involve specific legal measures (UNEP-WCMC, 2003).

**China:**

*Status:* Márquez (1990) noted that nesting occurred in the provinces of Kuangtung, Fukien, Chekiang, Kiangsu, Shangtung and Liaoning. Leatherback turtles have been recorded in Taiwan (UNEP-WCMC, 2004). The Leatherback Turtle is listed as Critically Endangered in the Chinese Red Data Book and as Category II in the State Protected Wildlife (Zoological Division of Chinese Biodiversity Information Center, 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Colombia:**

*Status:* Madaune (2002) considered Acandi and Playona beaches as the most important nesting sites for leatherback turtles in Colombia. Pinzon (2000) reported that there is biannual nesting of the species in the north of the Colombian Caribbean between Gauchaca Beach and the Buritaca mouth. In 1997, a survey in the Caribbean found only 8 nesting Leatherbacks (Amorocho *et al.*, 1999). It is reported as Critically Endangered in this country (Castaño-Mora, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* There are several conservation initiatives ongoing in Colombia, including the initiatives of the Ministry of the Environment that denominated the marine turtle as a species whose conservation is a priority. A protection program of the Leatherback has been based here since 1993, which focuses on education,

research and protection activities, and on increasing awareness in local communities and national authorities (Madaune, 2002). Other initiatives for turtle conservation include technical workshops to update the information produced in the country (Amorocho, 2002).

On the Caribbean coast of Colombia, WWF is providing support to a community-based leatherback turtle conservation project in the Urabá Gulf. This project includes environmental education on the conservation status of marine turtles and support to protected areas important for the turtles. The Colombian government released its National Marine Turtle Conservation Strategy in 2003. Building upon the National Strategy and current project work, WWF is initiating a proposal to safeguard important nesting beaches and wetland feeding areas of marine turtles in the Chocó and Urabá region (McLellan *et al.*, 2004).

**Comoros:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CONGO:**

*Status:* The 100km section of South Atlantic, between Mayumba (Gabon) and Conkouati (Congo) constitutes the world's second most important egg-laying area for the leatherback turtle. Leatherback turtles have been observed near the beaches of Pointe-Noire. The species is present in the Conkouati National Park (Congo National Report, 2002). An average of 1,000 Leatherbacks nests have been found here each year according to UNEP/CMS (2000).

*CMS actions:* The Program for the Protection of Marine Turtles in Central Africa (PROTOMAC) included a campaign in 2001 to observe marine turtle nesting sites on the Congolese coastline. It concentrated on three areas: south of Pointe-Noire, the beaches of Pointe-Noire, and North Kouilou. South of Pointe-Noire there was substantial evidence that egg-laying sites had been raided and that the shells of turtles had been taken. On the beaches of Pointe-Noire and north of Pointe-Noire, the PROTOMAC team has observed the landing of netted or live turtles by self-employed fishermen who claim that they have been caught accidentally (Congo National Report, 2002).

*Other actions:* The 'Association Congolaise de l'Education pour l'Environnement et la Nature' (ACEN) [Congolese Association for Education on Nature and the Environment] has monitored and evaluated the violation of turtle nests by poachers in the Conkouati National Park. (Congo National report to CMS, 2002).

**D.R. CONGO:**

*Status:* Past literature refers to the leatherback in the country, and there is a museum specimen of an embryo (UNEP/CMS, 2000). Minor and solitary nesting has been recorded (Márquez, 1990). Beaches situated between Mayumba (Gabon) and the Noumbi River in the Democratic Republic of Congo represent some of the most important nesting sites for the leatherback turtle in the world (McLellan *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* IUCN has proposed a trans-border marine reserve between the two countries to include all of the most significant nesting sites (McLellan *et al.*, 2004).

**Costa Rica:**

*Status:* Some nesting occurs along much of the Caribbean coast of the country (Carr *et al*., 1982). An estimated 150-368 females nested in the Parque Nacional

Tortuguero in 1990-1991 (Leslie *et al.*, 1996), but in 1995 just 70 clutches were deposited along 35km of beach (Campbell *et al.*, 1996). On the Pacific coast, the species nests on Playa Naranjo, a 6km beach within Santa Rosa National Park (Groombridge, 1982) and in Las Baulas National Park (Steyermark *et al*., 1996).

The species appeared to have undergone an increase in abundance on Playa Naranjo (UNEP-WCMC, 2003).

In Las Baulas National Park on the Pacific coast leatherback numbers nesting at Playa Grande reached a peak of 1,600 in 1988 and 1989 but declined to 469 in 1994-1995. This was perhaps due to the recent increase in development in the area surrounding nesting beaches, as well as incidental catch of leatherbacks in offshore fisheries (Steyermark *et al.*, 1996).

*CMS actions:* Not a Party to CMS.

*Other actions:* Ecology Project International, established an education and monitoring program in the Pacuare Natural Reserve in 2000, in collaboration with university students from the USA, Costa Rica and other countries of Central and South America, as well as with community participation. The program has trained several students and has created awareness in the community regarding the importance of conserving this species (Ecology Project International, 2003).

There are also several NGOs working specifically in marine turtle conservation and education programmes that are focused on both Costa Rica and other Central American countries. These include PRETOMA and the Parismina Turtle Commission. In Costa Rica, research has been undertaken on the predation of sea turtle by jaguars, fertility assessment projects, nesting activities, reproduction and emergence success (Mosier *et al.*, 2002), reproductive biology and tagging programmes (Byles and Fernandez, 1998).

**COTE D'IVOIRE:**

*Status:* Leatherback nesting has been recorded (UNEP/CMS, 2000).

*CMS actions:* A preliminary inventory of nesting sites between Abidjan and the border with Liberia has been undertaken. Nesting sites are monitored and protected in the Azagny National Park (UNEP/CMS 2000).

*Other actions:*

**CROATIA:**

*Status:* The species is recorded as an occasional visitor to this country (Lazar and Tvrtkovic, 1998).

*CMS actions:* None reported.

*Other actions:*

**Cuba:**

*Status:* The species nests at Guantanamo Bay (Anon., 2003a) and occasionally in the Peninsula de Guanahacabibes, Cayo Blanco and Cayo Caguama (Moncada and Rodriguez, 1996).

*CMS actions:* Not a Party to CMS.

*Other actions:* Research has been undertaken on turtle interactions with fisheries and on occasional catches of leatherback turtles by Cuban fishermen (Keinath *et. al*, 1996).

**CYPRUS:**

*Status:* Several individuals have been recorded off the west coast (Demetropoulos and Hadjichristophorou, 1989).

*CMS actions:* None reported.
*Other actions:*

**DJIBOUTI:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Dominica:**
*Status:* Leatherback nesting here has been described as "occasional to sporadic" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Dominican Republic:**
*Status:* Leatherbacks have been recorded nesting in the Dominican Republic (Ross and Ottenwalder, 1983), although this is reportedly uncommon according to local informants. The species was thought to nest occasionally in very low densities on suitable beaches anywhere in the Republic, but four areas of more concentrated leatherback nesting were identified on information from locals: Playa del Muerto, Playa Macao (both in Altagracia Province), Playa San Luis and Playa des Aguilas (Pedernales Prov.). Based on interviews with local informants, and assuming that each turtle nests three times during a 60 days season, it was tentatively estimated that 300 leatherbacks nested annually in the Dominican Republic (Ross and Ottenwalder, 1983). An estimate of 500 nests per year was given by Márquez (1990).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**ECUADOR:**
*Status:* ***Mainland***
The species is recorded nesting in small numbers along most of the mainland coast (Green and Ortiz-Crespo, 1982).

***Galapagos Islands***
Leatherback turtles reportedly occur in the Galapagos Islands (UNEP-WCMC, 2003), and nesting is reported (Green and Ortiz-Crespo, 1982).

*CMS actions:* None reported.
*Other actions:*

**EGYPT:**
*Status:* Leatherback turtles reportedly occur in Egypt (Frazier and Salas, 1984)

*CMS actions:* None reported.
*Other actions:*

**El Salvador:**
*Status:* Low density of leatherback nesting probably occurs sporadically (Hasbún and Vásquez, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Project Ayutzin for the conservation of marine turtles has worked, since 1994, for the protection of the species that visit Playa Toluca in La Libertad Department. The project is a joint effort between the community inhabiting the coast and the NGO, CESTA (CESTA, 2003). CESTA and the University of El

Salvador have conducted research into the hatching success of marine turtles at the Toluca Beach (CESTA, 2003).

**Equatorial Guinea:**

*Status:* Leatherback turtles reportedly nest both on the continent to the south (Mba *et al.*, 1998a; 1998b) and on Bioko island (Tomás *et al.*, 1999). Nesting has been confirmed on the islands of Corisco Bay, but not on Annobón (Fretey, 2001). The species nests regularly and in significant numbers in Equatorial Guinea, both on the continent (Mba *et al.*, 1998a, b) and on Bioko island (Tomás *et al.*, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* Conservation activities developed by CUREF-Cardiff University and ECOFAC include coastal surveys, captures, turtle consumption monitoring, awareness campaigns and park guards training (Formia *et al.*, 2003).

**Eritrea:**

*Status:*

*CMS actions:* None reported.

*Other actions:* There is a GEF funded project that aims to ensure the conservation and sustainable use of the globally significant biodiversity of the State of Eritrea's coastal, marine and island ecosystems. Development of a marine turtle conservation programme, and conservation of important turtle habitats (partly through development of Marine Protected Areas) has been identified as a first step in establishing species conservation programmes in the Eritrean Red Sea (IOSEA Marine Turtle Mou, 2004).

**Fiji:**

*Status:* Leatherback turtles nest here according to Márquez (1990). Leatherback nestings and sightings have been recorded for Savusavu region, Qoma, Yaro passage, Vatulele and Tailevu (WWF Pacific, 2003). The number of leatherbacks is likely to be around 20-30 individuals (WWF Pacific, 2003). According to WWF Pacific (2003) this species is not common in Fiji but there have been recorded sightings and four nesting attempts in Fiji. Although the numbers are low in Fiji, the significance of the population is likely to be high, due to the very low numbers in the region. It has been suggested that most leatherbacks are merely passing through Fiji on westerly moving ocean currents, and may represent the remains of a relic population.

*CMS actions:* Not a Party to CMS.

*Other actions:* In 1998, the Government, in collaboration with the University of the South Pacific and NGOs, developed "The Fiji Sea Turtle Conservation Strategy" This is being used to manage the species' conservation efforts although it has not been formally adopted by the government. The strategy identifies a number of actions for turtle conservation, namely institutional capacity building, limitation and regulation of the harvest, education and awareness, marine conservation workshops, protection of nesting sites and nesting turtles, protection of foraging areas and foraging turtles, captive turtles, pollution, by-catch, and a regional strategy (WWF Pacific, 2003).

**FRANCE:**

*Status:* ***French Guiana***

Eight beaches between the estuaries of the Maroni (Marowijne) River on the Suriname border and the Organabo River in the east provided a major nesting area for Leatherback (J. Fretey, *in litt.* to IUCN CMC, 26 May 1981; Pritchard,

1971a; Pritchard, 1979).

The historically most important leatherbacks nesting beach in the world is located at Awala-Yalimapo beach. One of the continual natural disturbances to nesting beaches is coastal erosion. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

However, at least some of the French Guiana leatherbacks have shifted their nest sites westward toward the Suriname border, and most nesting subsequently occurred at Les Hattes-Awara (at the junction of the Maroni and Mana Rivers), with some nesting occurring on beaches that did not exist in 1960-1970 (Fretey and Lescure, 1979; P. C. H. Pritchard, in litt. to IUCN CMC, 2 February 1982).

Girondot and Fretey (1996) summarised the nesting records for the period 1978-1995. More than 50,000 nestings were recorded annually in 1988 and 1992, but only 10,000-15,000 annually in 1978-1986, 1993, and 1995, with intermediate numbers of 20,000-30,000 annually in 1987, 1989, 1991 and 1994. In 1998, 7,800 nestings were counted on the Hattes beach (Talvy et al., 2002). Girondot et al. (2002) examined density-dependent nest destruction of Leatherbacks in French Guiana and Suriname. They found that the proportion of successful nests was very low (10%) on the Yalimapo-Awala (= Hattes) beach, compared with Costa Rica (57%), Puerto Rico (75%) and the US Virgin Islands (67%), but the reasons for this were not clear.

***French Polynesia***
Leatherback turtles are recorded from French Polynesia (Fretey, 1987; Fretey and Lebeau, 1985)

***Guadeloupe***
Leatherback nesting here has been described as “occasional to sporadic” by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

***Martinique***
Occasional to sporadic leatherback turtle nesting has been recorded in Martinique according to UNEP-WCMC (2003), although others claim it is frequent (Delaugerre, 1988; Duguy, 1989; Fretey, 1996; Oliver, 1986; National Marine Fisheries Service and U.S. Fish and Wildlife Service, 2001; Thiebaut and le Milinarie, 1992).

***New Caledonia*** Leatherback turtles are rarely recorded in New Caledonia (IFRECOR, 1998).

*CMS actions:* None reported.

*Other actions:* ***French Guiana***
According to WWF-Guianas, in French Guiana there are several initiatives being undertaken by universities, NGOs, governmental agencies, research centres and in protected areas that involve marine turtle conservation. Indigenous communities and fishermen are involved in the projects’ activities. These activities include: raising of awareness in tourists and school children, tourism management, tagging female turtles, producing surveys of nesting activities, patrolling and assessing turtle and fisheries interactions (WWF-Guianas, 2003). Research has been carried out on sea turtle nesting activity and behaviour (Mosier *et al.*, 2002), nesting seasons (Kalb and Wibbels, 2000) and density dependence and sex ratio of hatchlings (Byles, *et al.* 1998).

In French Guiana, WWF works with a local Amerindian organisation,

Kulalasi, in monitoring, poaching mitigation, tourist management, and reinforcing the Amana Nature Reserve management. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**Gabon (?):**

*Status:* Beaches situated between Mayumba (Gabon) and the Noumbi River in the Democratic Republic of Congo represent some of the most important nesting sites for the leatherback turtle in the world (McLellan *et al.*, 2004). *D. coriacea* frequents all of the beaches in Gabon, from the Pointe-Pongara across from Libreville all the way to the Congo (Fretey and Girardin, 1988, 1989).

During the 1999/2000 nesting season, monitoring of a site stretching between Mayumba and the border resulted in the counting of nearly 30,000 nests, representing the coming to shore of between 4,222 and 7,096 females (Billes *et al.*, 2000). These new data place Gabon and the Conkouati region in a position of primary importance, along with French Guiana, for the worldwide conservation of *D. coriacea* (Fretey, 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Smithsonian National Zoological Park conducts health assessments and conservation programmes as part of the FVP's Caribbean/Atlantic Sea Turtle Health Assessment Program (WCS, 2002; Deem, 2003). A tagging programme to study reproductive success, as well as *in situ* protection systems and awareness campaigns have been developed. It has been proposed that the conservation efforts of several agencies, including IUCN, should extend into the Congo in order to protect a greater area. The WCS has also realised conservation activities in Corisco Bay and Pointe Pongara as well as monitoring programmes on the trade of sea turtle meat and eggs in the markets (Formia, 2003).

The Gamba Complex of Protected Areas in Gabon is an ideal place for long-term monitoring of marine turtle nesting sites. In the 2002-2003 turtle nesting season, which goes from October to March, a pilot study within the Gamba Complex was carried out by WWF, Ibonga (A local environmental education NGO active in the Gamba Complex) and EU funded Central African marine turtle protection programme PROTOMAC. In 2003-2004, monitoring continued with the technical assistance of a Dutch environmental NGO called Biotopic that focuses on marine turtle research in Suriname and Gabon (Wilson & Humphrey, 2004).

The partners of the Gamba Marine Turtle Programme continue their research and monitoring to improve understanding and knowledge of the status, life histories and threats to marine turtles in the area, in order to ensure a regionally coherent approach to conservation management (Wilson & Humphrey, 2004).

**GAMBIA (?):**

*Status:* Only one Leatherback shell has been found on the Gambian coast (UNEP/CMS, 2000).

*CMS actions:* According to UNEP/CMS (2002) four coastal protected areas have been identified as being very important for marine turtles. However, UNEP/CMS (2002) do not report any monitoring activities or research undertaken nor do they mention community or NGO participation in conservation.

*Other actions:*

**GHANA:**

*Status:* Márquez (1990) referred to minor and solitary nesting, whereas Carr and Campbell (1995) stated that nesting occurred all along the coast.

*CMS actions:* Community based training programmes have been organised to build national capacity and to set up institutional infrastructure for sea turtle conservation programmes (UNEP/CMS, 2000).

*Other actions:*

**GREECE:**

*Status:* Leatherback turtles have been recorded in Greece (Margaritoulis, 1986).

*CMS actions:* None reported.

*Other actions:*

**Guatemala:**

*Status:* Leatherback turtles reportedly nest here on the Caribbean coast between Cabo de Tres Puntas and Rio Montagua (UNEP-WCMC, 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Wildlife Rescue and Rehabilitation Association is a Guatemalan non-profit organisation created for the preservation of wildlife and wild habitats in the country. Near the village of Hawaii, this Association has developed community-based projects on the conservation of *D. coriacea*, which include the protection of hatcheries against theft and other threats (Juarez and Muccio, 1997). Studies have been carried out on the pivotal temperatures in the production of sexes in leatherback turtles (Mosier *et al.*, 2002).

**GUINEA:**

*Status:* Leatherback turtles are frequently observed and encountered in fishing nets between October and December (the last three months of the rainy season). (Guinea National Report, 2002). Leatherback turtles nests and eggs have been recorded (UNEP/CMS, 2000). The Leatherback occurs widely, particularly in the north-west (Guinea National Report to CMS, 2002).

*CMS actions:* Future activities include restoration of the habitat following the guidelines of the National Strategic Action Plan for Biological Diversity in respect of Marine Turtles, training of administrators of the said habitats, raising the awareness of fishermen and sailors so that they can contribute to the conservation of marine turtles and strengthening of institutional powers (Guinea National Report, 2002).

*Other actions:*

**GUINEA-BISSAU:**

*Status:* Leatherback turtles reportedly nest on the Bijagos Islands in the Orango National Park (Barbosa *et al.*, 1998), but only a few individuals/nests were recorded during two years of surveying (Barbosa *et al.*, 1998). UNEP/CMS (2000) estimate 10 or so leatherbacks nest in the Bijagos Islands

*CMS actions:* None reported.

*Other actions:*

**Guyana:**

*Status:* The beaches of the Guianas (French Guiana, Suriname and Guyana) host the largest Atlantic leatherback turtle nesting beaches in the world. One of the continual natural disturbances to nesting beaches is coastal erosion. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004). Small numbers were found nesting at Shell Beach (Groombridge, 1982) although, according to

Márquez (1990), up to 500 nests per year have been recorded. There have been significant increases in nesting (UNEP-WCMC, 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Guyana Marine Turtle Conservation Society was formed in 2000 with the aim of promoting conservation, management and restoration of marine turtles in Guyana. It develops surveys and protection patrols, education awareness, community empowerment and research. (Guyana Marine Turtle Conservation Society, 2003).

Shell Beach hosts leatherback turtle nests. WWF and UNDP are providing the technical and financial support to the extensive consultation that is needed to formally declare and manage this beach as a reserve. The Guyana Marine Turtle Conservation Society has conducted monitoring, beach protection, and enforcement of fishing bans during the nesting season (McLellan *et al.*, 2004).

In the last few nesting seasons, WWF has supported educational camps for local communities and supported the Almond Bay women's coconut project - an alternative livelihood option to the poaching of turtle eggs. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**Haiti:**

*Status:* The species has been recorded in Haiti (Ottenwalder, 1996).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Honduras:**

*Status:* Leatherback nesting here has been described as "occasional to sporadic" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

*CMS actions:* Not a Party to CMS.

*Other actions:* Projects monitoring the nesting and hatching of *D. coriacea* have been developed in the Plapaya beach by the NGO Mopawi (UNEP-WCMC, 2003).

**Iceland (v)*:**

*Status:* Leatherback turtles have been reported from Iceland (Petersen, 1984; UNEP-WCMC, 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**INDIA:**

*Status:* Moderate-scale nesting has been recorded in the Union Territory of the Andaman and Nicobar Islands (Bhaskar, 1979a; Sivasundar, 1996). Isolated Leatherbacks occasionally nested on the mainland, including part of the west coast, south to Kerala, and the central east coast (Bhaskar, 1979b; Frazier, 1982). Mainland nesting reportedly occurred more frequently around the turn of the century, for example around Quilon in southern Kerala (Bhaskar, 1979b). Granite blocks and embankments, designed as defences against sea erosion, prevent turtles approaching beaches on much of the Kerala coast (Anon., 1981b). *Dermochelys coriacea* has been recorded nesting in small numbers in Lakshadweep (Bhaskar, 1979b). The species is included in the

Indian Red Data Book and reported as Endangered (Ghosh, 1994)

*CMS actions:* None reported.

*Other actions:* The Indian Government launched the 'National Marine Turtle Conservation Project' in 1998; the Project envisaged activities encompassing both on-shore and offshore critical habitats for sea turtles. In spite of the legal protection given to all sea turtles species in India, in recent years the populations migrating to Indian waters are in decline (Choudhury *et al*., 1999).

**Indonesia:**

*Status:* Leatherback populations underwent dramatic declines from the 1970s onwards (Spotila *et al.*, 2000).

***Halmahera***

Some leatherback turtle nesting was recorded at the northern tip of P. Morotai (near Halmahera) (Groombridge, 1982).

***Irian Jaya***

Leatherback turtles nest on the north coast of the Kepala Burong (Vogelkop) part of Irian Jaya (Polunin and Nuitja, 1995; Márquez, 1990). Suárez *et al.* (2000) reported that there were 3,000-5,000 nests annually along the north Vogelkop coast of Irian Jaya, and Putrawidjaja (2000) reported a total of 2,983 nestings on Jamursba-Medi beach in 1999. Additionally, fewer than 20 nested at Inggresau (on P. Yapen, Irian Jaya) (R. V. Salm, *in litt.* to IUCN CMC, 1 October 1981; Salm, 1981).

***Java***

Leatherback turtles occasionally nest on beaches on the south coast of Java (Polunin and Nuitja, 1995; Márquez, 1990). Sukamade Beach in southeast Java was regarded as the most important sea turtle nesting area in Java (Blouch *et al.*, 1981).

***Sulawesi***

Fewer than five female leatherback turtles a year used to nest in southeast Sulawesi (R. V. Salm, *in litt.* to IUCN CMC, 27 January 1982).

***Sumatra***

Leatherback turtles nest in West Sumatra and Bengkulu Provinces in Sumatra (Polunin and Nuitja, 1995; Márquez, 1990). Possibly fewer than 20 female nest per year near Bengkulu (R. V. Salm, *in litt.* to IUCN CMC, 27 January 1982).

*CMS actions:* Not a Party to CMS.

*Other actions:* ***Irian Jaya***

There are tagging and genetic studies of the last large leatherback nesting population in the Pacific at Irian Jaya, Indonesia (McLellan *et al.*, 2004).

**I.R. Iran:**

*Status:* Leatherback turtles have been recorded here (Kinunen and Walczak, 1971).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Iraq:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**IRELAND:**

*Status:* Vagrant leatherback turtles have been recorded here (Smiddy, 1993, 1996, 1999). Migrations of this species along Irish coasts peak in late summer (August-October), but no hard data on numbers are available. Most sightings are off the west and southwest coasts (Ireland National Report to CMS, 2002).

*CMS actions:* None reported.

*Other actions:*

**ISRAEL:**

*Status:* This species is rare. In 2001, one female got stranded and injured in a fisherman net. She was treated at the rehabilitation centre but died (Israel National Report, 2002). Although emergence crawls, or apparent nesting have been recorded no adequately documented instance of *Dermochelys* nesting in the Mediterranean is known (Groombridge, 1990).

*CMS actions:* Israel has turtle rehabilitation centres (Israel National Report, 2002).

*Other actions:*

**ITALY:**

*Status:* Leatherback turtles have been recorded here by Pastorelli (1999), but there is no confirmed instance of the species nesting in the Mediterranean (Groombridge, 1990).

*CMS actions:* None reported.

*Other actions:*

**Jamaica:**

*Status:* Leatherback nesting here has been described as "occasional to sporadic" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Japan:**

*Status:* The Leatherback Turtle was first recorded nesting in Japan in 2001 (Kamezaki *et al.*, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**JORDAN*:**

*Status:* Leatherback turtles have been recorded here (UNEP-WCMC, 2004). The first record was noted by Kinzelbach (1986) and summarised by Disi (1998).

*CMS actions:* None reported.

*Other actions:*

**KENYA:**

*Status:* Leatherback turtles occur regularly in small numbers along most areas of the Kenyan coast, with higher concentrations in the northern parts. Seasonal variations in distribution are a major factor (Kenya National Report, 2002). The species was recorded by Wamukoya and Haller (1996), but no indication of numbers was provided. Although occasional nesting was noted by Márquez (1990), there is no evidence of this from other sources.

*CMS actions:* Monitoring activities have been undertaken within the framework of coastal zone and biodiversity monitoring. However, habitat protection activities within the framework of coastal zone and marine protected areas management and habitat restoration activities have been conducted only when oil spills and pollution had being addressed (Kenya National Report to CMS, 2002).

*Other actions:* In 1996, WWF joined forces with the Kenya Wildlife Service, the Fisheries and Forest Departments and local communities to develop a long-term management strategy integrating conservation and development priorities of the Kiunga Marine National Reserve. The project has focused on developing sustainable and equitable methods of using the reserve's resources. Community participation in protecting nesting marine turtles is fostered through an incentive scheme for nests discovered and protected throughout the season. The community has also actively participated in ongoing monitoring of marine turtles and their habitats (McLellan *et al.*, 2004).

WWF has recently hosted a marine turtle training course for KESCOM (Kenya Sea Turtle Committee) (McLellan *et al.*, 2004). WWF is working with national committees for marine turtle to ensure that marine resources are used sustainably by local communities and that critical habitats for marine turtles, as well as coral fish and dugongs, are protected (McLellan *et al.*, 2004).

TAFMEN (Tana Friends of the Marine Environment), a Community-based organisation, undertakes activities in partnership with KESCOM. The organisation normally engages local communities in habitat protection activities including tagging turtles, beach patrol, data collection on mortality, nesting, and fishermen-focused turtle release programmes (IOSEA Marine Turtle MoU, 2004).

**Kiribati:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**D.P.R. Korea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Republic of Korea:**
*Status:* Not a Party to CMS.
*CMS actions:*
*Other actions:*

**Kuwait:**
*Status:* Leatherback turtles were first recorded here only very recently (Al Mohanna and Meakins, 2000).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Lebanon:**
*Status:* Leatherback turtles have been recorded here according to Groombridge (1990).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**LIBERIA:**
*Status:* Solitary leatherback turtles have been reported to nest here (Márquez, 1990), but this has not been confirmed according to UNEP/CMS (2000).

*CMS actions:* None reported.
*Other actions:*

**LIBYAN ARAB JAMAHIRIYA:**
*Status:* Leatherback turtles have been recorded here (Groombridge, 1990).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Madagascar:**

*Status:* Leatherback turtles have been recorded here as vagrants only (Glaw and Vences, 1994). Three decades of strong protection have led to more than fourfold increase in the small annual nesting population of leatherbacks in neighbouring South Africa. This population is believed to be representative of a larger nesting population in Mozambique and turtles nesting in South Africa are known to forage in the waters between Mozambique and Madagascar. (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Malaysia:**

*Status:*

***Peninsular Malaysia***

Leatherback nesting was noted as concentrated along a 20km beach at Rantau Abang Terengganu State on the east coast, where c. 1,500 females nested annually. However, this population was found to be declining (Siow and Moll, 1982). The yield of *Dermochelys* eggs in Terengganu declined by 66% from 1956 to 1982 (because the number of eggs collected was not the same as the number laid, and because of different sampling techniques, this figure can only be an approximation of population decline). Between 1,000-2,000 females nested annually (1974 data quoted in Ross, 1982a). By 1995 the population was severely depleted, with nestings representing less than 1% of levels recorded in the 1950s (Chan and Liew, 1995, 1996). In 2002 no eggs were laid although three landings were detected. There was a calamitous collapse of the colony at Terengganu, from more than 3,000 females in 1968, to 20 in 1993, and just two in 1995 (UNEP-WCMC, 2003).

***Sabah***

Leatherbacks are not known to nest in Sabah, but have been occasionally sighted at sea in the area (K. Proud, *in litt.* to IUCN CMC, 12 May 1982; De Silva, 1978).

***Sarawak***

Noted as nesting (Tisen and Bali, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:*

***Peninsular Malaysia***

WWF conducts the Community Education and Awareness Programme on Turtle Conservation in partnership with the Department of Fisheries at the recently established Ma' Daerah Turtle Sanctuary Centre, a hatchery and interpretation centre, in the Terengganu state on the east coast of peninsular Malaysia. This Sanctuary is a nesting site primarily of green turtles, although some leatherback also nest here. The programme aims to establish local community interest and action groups for the conservation of turtles in Ma'Daerah, to build the capacity of local communities on turtle conservation, and to lobby for the gazettal of Ma'Daerah as a turtle sanctuary (McLellan *et al.*, 2004).

***Sarawak***

Sarawak has one of the oldest programmes in the world for sea turtle conservation and management; various government agencies as well as five laws are relevant for turtle conservation; despite this the population has decreased by 90% in the past 50 years. The government has undertaken several major steps to avoid further declines, including extensive scientific studies,

total protection of turtle nesting beaches and strengthening of existing laws (Braken and Bali, 2000).

**Maldives:**

*Status:* Leatherback turtles have been recorded as occasional visitors here (Anon., 2003b).

*CMS actions:* Not a Party to CMS.

*Other actions:* Eight years ago, the Government of the Maldives had the foresight to impose a ban on catching turtles in Maldivian waters. However, this ban did not cover the harvesting of eggs from the highly endangered sea turtles. Seacology, in cooperation with Four Seasons Resort, has provided a critically needed preschool for the island of Kendhoo in return for a ban on the taking of turtle eggs. The turtle ban is holding well, with the Kendhoo villagers continuing to express their full support for sea turtle protection (Seacology, 2005).

**MALTA:**

*Status:* Leatherback turtles have been recorded here according to Lanfranco (1983), but there is no confirmed evidence for *Dermochelys* nesting anywhere in the Mediterranean (Groombridge, 1990).

*CMS actions:* None reported.

*Other actions:*

**Marshall Islands:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**MAURITANIA:**

*Status:* Solitary Leatherback turtles have been recorded nesting here (Márquez 1990) although there is little information (UNEP/CMS, 2000). Leatherbacks have been observed several times in Lévrier Bay (UNEP/CMS, 2000) and numerous sightings at sea or on beaches in Mauritania have been made since the 1970s (Maigret, 1983). If regular nesting in Lévrier Bay is confirmed, then this would be the most northern location for the eastern Atlantic. Females, which nested in northern South America, may have visited these waters (Eckert, 1998).

*CMS actions:* According to the UNEP/CMS (2000), preliminary inventories of nesting sites have been developed.

*Other actions:*

**MAURITIUS:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Mexico:**

*Status:* Mexico had c.30,000 females annually, and a total female population of between 50,000 (M. R. Márquez, *in litt.* to IUCN CMC, 26 February 1982) and 75,000 (Pritchard and Cliffton, 1981).

Major nesting beaches were located on the southeast coast of Guerrero between Bahia Dulce and Barra de Teconapa (an estimate of 5,000 females nesting per season) and at Bahia de Chacahua (Márquez *et al.*, 1981).

Sarti *et al.* (1996, 1998) estimated that fewer than 1,000 females nested on the Pacific coast during the 1995-1996 nesting season, based on counts of 5,222 nests and an average annual frequency of 5.3 nests per female. Kemf *et al*. (2000) report that the number of females reported as nesting on the Pacific beaches of Mexico has declined tenfold in less than a decade.

Nesting along the Pacific Coast of Mexico declined at an annual rate of 22% over the last 12 years (NOAA, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* The main strategies for sea turtle conservation in Mexico include a complete ban on exploitation of sea turtles and their eggs, and the protection of nesting beaches. Management has mainly focused on nest protection in centralized beach hatcheries. Recurrent problems related to lack of funds include insufficient beach protection and inadequate management of nest removal to hatcheries have resulted in poor overall success of the conservation programs (Garcia et al., 2003).

Due to a drastic decline of the nesting population of *D. coriacea* in the Mexican Pacific, the Fishing National Institute, in co-ordination with the National University of Mexico (UNAM), started a research project aimed at understanding the causes of such decline and intensifying protection activities. Protection of females and eggs and monitoring activities are constantly maintained at Llano Grande Beach (the third densest Leatherback nesting site). In the five major rookeries for the Leatherback an intensive tagging programme has been implemented (Arenas *et al.*, 1998).

Other activities in the Pacific Coast consist of aerial surveys of the entire Pacific coast of Mexico, workshops for standardisation of terms, definitions and methods, and training of personnel (Arenas *et al.*, 1998).

Research undertaken includes studies on mortality rates, fibropapillomas case studies (Mosier *et al.*, 2002), nest management (Kalb *et al.* 2000), genetic stock identification, genetic population structure (Abreu-Grobois *et al.* 1998), nesting population size in the Mexican pacific (Epperly and Braun, 1998), and analysis of egg composition (Byles, *et al.* 1998).

**F.S. Micronesia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**MOROCCO (?):**

*Status:* Leatherback turtles have been recorded here (UNEP/CMS, 2000), although there is little information available on the presence of Leatherback turtles along the Moroccan coast, including the Western Sahara (Bons and Geniez, 1996). Two females tagged in French Guiana were found in this area (Fretey, 2001).

*CMS actions:* None reported.

*Other actions:*

**Mozambique:**

*Status:* The leatherback turtle is found in Mozambique waters and also come ashore to nest. Shallow coastal areas such as the Sofala Bank, rich in sea grasses, are prime feeding grounds for green turtles that make them especially vulnerable to by-catch in the shrimp trawl fishery (McLellan *et al.*, 2004).

Three decades of strong protection have led to increases in the small annual nesting population of leatherbacks (in neighbouring South Africa) more than fourfold. This population is believed to be representative of a larger nesting population in Mozambique and turtles nesting in South Africa are known to forage in the waters between Mozambique and Madagascar. (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Work has been conducted by WWF in 2001 on turtle by-catch in shrimp fisheries and on the use of turtle excluder devices (TEDs) (McLellan *et al.*, 2004). A WWF online public advocacy campaign urging Mozambique's Ministers to take action to prevent further losses of turtles was launched in February 2003. As a result of this, and WWF's work with the relevant Ministers, a new Regulation for Marine Fisheries was approved by the Council of Ministers in October 2003, which made TEDs compulsory in trawl nets in Mozambique (McLellan *et al.*, 2004).

In an effort to reduce long-line turtle by-catch by illegal and unlicensed longline fishing vessels in Mozambique waters, the Government has begun to intercept these vessels, through a military team based at Bazaruto Archipelago National Park (McLellan *et al.*, 2004). Marine turtles are among the species benefiting from a number of marine protected areas set up on the coast (Kemf, *et al.*, 2000).

The creation in 2001 and 2002 of two new marine protected areas (Bazaruto Archipielago National Park and Quirimbas National Park) is a critical milestone in global marine conservation (Wilson & Humphrey, 2004).

**Myanmar:**

*Status:* One leatherback-nesting attempt is reported (Maxwell, 1911) but no recent data are available.

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Namibia:**

*Status:* Leatherback turtles have been recorded along the entire coast of Namibia and are concentrated in West Bay (UNEP/CMS, 2000).

*CMS actions:* Ninety per cent of the Namibian coast is protected, there does not appear to be any interference between indigenous Namibians and turtles in this country (UNEP/CMS 2000). No conservation actions undertaken by the government or NGOs are reported by UNEP/CMS (2000).

*Other actions:* WWF is starting a project to assess and reduce the by-catch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Nauru:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**NETHERLANDS:**

*Status:*

***Aruba***

Leatherback turtles have been recorded possibly nesting in Aruba (Anon., 1995).

***Netherlands Antilles***

There is evidence of occasional nesting on Bonaire and St Maarten (Sybesma, 1992).

*CMS actions:* None reported.

*Other actions:* ***Netherlands Antilles***
In 1992, the NGO Widecast produced the 'Sea Turtle Recovery Plan for the Netherlands Antilles' for the UNEP-Caribbean Environmental Program. The plan was part of a series of plans developed in the Caribbean for the protection and conservation of marine turtles. The plan's objective is to help marine turtle population recovery in the Antilles and to collect as much information as possible regarding their distribution; the plan also aims to promote public awareness on the species conservation and recovery (Sybesma, 1992).

**NEW ZEALAND:**

*Status:* Leatherback turtles have been recorded here (Gill, 1997).

*CMS actions:* None reported.

*Other actions:*

**Nicaragua:**

*Status:* Leatherback nesting here has been described as "occasional to sporadic" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**NIGERIA:**

*Status:* Leatherback turtles have been recorded here (UNEP/CMS, 2000).

*CMS actions:* None reported.

*Other actions:*

**NORWAY:**

*Status:* Leatherback turtles have been recorded here (Brongersma, 1982; Gulliksen, 1990).

*CMS actions:* None reported.

*Other actions:*

**Oman:**

*Status:* Although Márquez noted occasional nesting (1990), there is no evidence of this from other sources.

*CMS actions:* Not a Party to CMS.

*Other actions:*

**PAKISTAN:**

*Status:* One dead leatherback was recorded here in 1988 (Firdous, 1989).

*CMS actions:* None reported.

*Other actions:*

**Palau:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**PANAMA:**

*Status:* Low-density leatherback nesting probably occurs sporadically on the Pacific coast (Cornelius, 1982; Meylan, 1985). In 1979, two important nesting localities were discovered on the Caribbean coast, at Playa Chiriqui and Playa Changuinola; in addition, a site was already known at Bahia Aglatomate, in the San Blas Islands (Carr *et al*., 1982). Ordoñez *et al.* (2002) recorded 735

Leatherback tracks on Chiriqui Beach, Bocas del Toro province in 1999.

*CMS actions:* None reported.

*Other actions:* Ordoñez et al. (2000) have carried out research into the nesting populations in Bocas the Toro Archipelago where Leatherbacks are the most common species

**Papua New Guinea:**

*Status:* Leatherbacks have nested regularly, but in small numbers, on many parts of the north coast and on some of the larger islands, including sites in West and East Sepik Provinces, Madang, and Milne Bay Province, and on Manus Island, New Britain, New Ireland and others. Although sea turtle populations in general were reported to be slowly declining in most areas of Papua New Guinea (PNG), there appear to be no specific data on Leatherbacks (Spring, 1982). In 1989 a minimum of 76 clutches were laid on a beach near Piguwa (Hirth *et al.*, 1993). Few quantitative data are available about important marine turtle habitats in PNG (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF and other partner organisations are currently investigating the potential of establishing a marine turtle monitoring programme that will provide valuable data as well as involve local communities. It is anticipated that the data generated from these surveys will become the baseline upon which national policies for the conservation and protection of marine turtles will be formulated (McLellan *et al.*, 2004).

As a first step in this programme, a national population survey of leatherbacks in collaboration with the PNG government and the Village Development Trust (a national community conservation organisation) is planned for the next nesting season. The survey aims to identify population distribution and the impacts of coastal development on leatherback feeding and breeding grounds (McLellan *et al.*, 2004).

**PERU (?):**

*Status:* The leatherback turtle possibly nests in Peru (Pritchard, 1971a; Márquez, 1990). The distribution of the species is still unknown in Peru (Peru National Report to CMS, 2002).

*CMS actions:* None reported.

*Other actions:* Alfaro-Shigueto *et al.* (2000) have studied the mortality of marine turtles in fisheries and results have shown this species to be in 16% of the captures between 1993 and 1994, being mostly caught by gillnets.

WWF has worked in Peru with local partners on various initiatives, including a turtle conservation project south of Lima, law enforcement on land and at sea, initiatives against by-catch and illegal consumption, and environmental education and awareness campaigns with local fishermen, villagers and public authorities. One of the outstanding achievements of this work was the recent reduction (by two thirds) of the number of commercial establishments selling turtle meat in the Pisco Paracas area. This was a direct result of numerous control operatives set-up to prevent both the capture and sale of marine turtles (McLellan *et al.*, 2004).

**PHILIPPINES:**

*Status:* Leatherback turtles have been listed as occurring here by CMS and by Kadir (2002). Catalogued as Endangered in the Philippine Red Data Book (Wildlife Conservation Society of the Philippines, 1997).

*CMS actions:* Protection of marine turtle habitats and nesting sites is addressed through a much broader programme on the establishment and management of protected areas. Currently, there are about 31 marine areas being managed as protected areas by the Department of Environment and Natural Resources. In the Philippine Biodiversity Conservation Priority-Setting Program, 12 marine areas have been identified as priority areas for conservation to protect marine turtles (Philippines National Report to CMS, 2002).

Regarding law enforcement, PAWB's Wildlife Monitoring Team is closely monitoring trade and apprehending traders of marine turtle by–products. Trade in this species has been greatly reduced thanks to these measures. The Philippines have also been active in pursuing international partnership for the conservation of marine turtles through a Memorandum of Understanding with the Malaysian government on the joint management of TIHPA. Fieldwork for the expansion of the coverage of the TIHPA to include the Berao Islands of Indonesia has been initiated together with Malaysian government. Training and conservation planning with Indonesian groups had been undertaken. These initiatives will lead to the formalisation of a partnership with the government of Indonesia through a tripartite agreement, which will be done in the near future (Philippines National Report to CMS, 2002).

*Other actions:* The Pakiwan Conservation Project (PCP) of the Department of Environment and Natural Resources (DENR) oversees the conservation of sea turtles in the Philippines. Since 1984, the PCP has been implementing the Government's efforts to conserve turtles in the Turtle Islands, through regulation of egg collection as well as the management of Baguan Island as a strict sanctuary (Palma et al., 1999).

**PORTUGAL:**

*Status:*

***Mainland***

Leatherbacks are rare, though regular visitors. (Portugal National Report, 2002).

***Azores***

Leatherbacks are occasionally captured accidentally at the Azores where they are a regular visitor (Portugal National Report to CMS, 2002).

***Madeira***

Leatherbacks are regular visitors (Portugal National Report to CMS, 2002).

*CMS actions:* Onboard observation at the Azores fishing fleet is being carried out (Portugal National Report to CMS, 2002). According to UNEP-CMS (2000) research projects win the Azores and Madeira Islands include tagging, collection of information on turtle by-catch and its effects, satellite tracking, heavy metal analysis and analysis of stomach contents, autopsies, and growth studies.

*Other actions:*

**Russian Federation:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Qatar:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Kitts and Nevis:**

*Status:* Small-scale leatherback nesting has been reported here (Groombridge, 1982), with 120 nesting events (crawls and pits) recorded in 1999 (Butler, 2002).

*CMS actions:* None reported.

*Other actions:* In 1992, the NGO Widecast produced the 'Sea Turtle Recovery Plan for Saint Kitts and Nevis' for the UNEP-Caribbean Environmental Program. The plan was part of a series of plans developed in the Caribbean for the protection and conservation of marine turtles. The plan determines the status and distribution of marine turtles in Saint Kitts and Nevis, identifies threats to marine turtles in the region and proposes solutions to such threats; the plan enhances information exchange at national and regional levels (Eckert and Honebrink, 1992; Orchard, 1994).

**Saint Lucia:**

*Status:* Leatherback nesting here has been described as "sporadic to occasional" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Vincent and the Grenadines:**

*Status:* Leatherback nesting here has been described as "occasional to sporadic" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Samoa:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**SAO TOME AND PRINCIPE:**

*Status:* Leatherback nesting sites have been recorded on Sao Tome (Graff, 1996) and Principe (UNEP/CMS, 2000; Rosseel in Fretey, 1998). Three juvenile Leatherbacks were accidentally captured on the island of Principe in March (Fretey, 2001). Since 1988, heavy exploitation of sea turtles for meat, eggs, and scutes has been reported (UNEP-WCMC, 2003).

*CMS actions:* None reported.

*Other actions:* In 1994, a collaborative project between the European programme ECOFAC and the Peace Corps confirmed the non-sustainable exploitation of sea turtles and their by-products on the island of São Tome. Following this survey, ECOFAC initiated regular monitoring efforts, relocation of threatened nests, and public awareness programmes. From 1998 to 2001, a specific project dedicated to the conservation of sea turtles called 'Projeto Tàtô' and funded by a National Program (PIN) STP/CE took over this study. Projecto Tàtô carried out complete coastline surveys, regular monitoring of significant nesting beaches and of turtle captures at sea, nest relocation in protected hatcheries, as well as awareness campaigns among locals, students, tourists, government officials and tortoiseshell artisans

(Formia *et al*., 2003). It is now known that *D. coriacea* lays eggs on the beaches of the archipelago and has been observed at sea (males and females are present) (UNEP-WCMC, 2003).

Unfortunately, due to lack of funding and a national institution willing to take over the project, 'Projeto Tàtô' stopped its activities in May 2001. All the actions concerning sea turtles on the archipelago are now being revised, and the goal is to set up a local organization that can carry out these various activities. A local NGO called "Marapa" has been identified to implement all the turtle work (Fretey *et al.*, 2002). Marapa built two new egg hatcheries at the end of 2002 (Formia *at al* 2003).

**SAUDI ARABIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**SENEGAL:**

*Status:* Leatherback turtles are common in central Senegal in the Saloum Delta National Park, and reported in the north in the Barbary Coast National Park. No precise information about the size of the population is available (Senegal National Report to CMS, 2002). Feeding grounds in Sine Saloum, Senegal, are considered to be regionally important for marine turtles. However, turtles are under many threats here as elsewhere, including through local consumption of both turtle meat and eggs. Artisanal fishermen sometimes purposefully capture adult turtles in known foraging grounds on days when their fishing captures are low (McLellan et al., 2004).

*CMS actions:* There are plans for a national strategy for the conservation of turtles (Senegal National Report, 2002).

*Other actions:* According to Fretey *et al.* (2002), there are successful conservation projects in the Joal-Fadiouth and Palmarin region that have stopped the consumption of turtle meat and the sale of carapaces. Local radio stations have contributed broadcasting conservation messages. It has also been proposed that the knowledge of marine turtles in Senegalese waters and their nesting behaviour and the monitoring of beaches should be improved in the near future. Communities should be involved in all processes (McLellan *et al.*, 2004).

WWF has worked with partners "le village des tortues" on raising awareness of the need for marine turtle conservation in Senegal. As a result, the consumption of turtles has stopped in some villages where turtles were traditionally eaten (McLellan *et al.*, 2004).

The Government of Senegal recently announced the establishment of a network of four marine protected areas in Senegal's coastal zone, effectively protecting fisheries and biodiversity covering more than 7,500 sq. km. These represent a doubling of the marine protected areas for Senegal, and will protect regionally important feeding and nesting grounds for five species of marine turtles. Local communities strongly support the protected areas as a means to safeguard these important natural resources for the future (McLellan *et al.*, 2004).

**Serbia and Montenegro:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Seychelles:**

*Status:* Leatherback turtles have been recorded nesting here occasionally by Márquez, (1990) but there is no evidence of this from other sources.

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Sierra Leone:**

*Status:* Although there have been no sightings of the species off the Sierra Leone mainland, a small nesting zone has been confirmed on the island of Sherbro (Fretey and Malaussena, 1991).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**SLOVENIA:**

*Status:*

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Solomon Islands:**

*Status:* Leatherback turtles have been recorded nesting on several islands of the group. The most important areas are on Choiseul and New Georgia, and Ysabel each with 50-100 nests annually, and Ysabel, with over l00 nests (Vaughan, 1981).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**SOMALIA:**

*Status:* Leatherback turtles have been recorded nesting here occasionally by Márquez, (1990) but there is no evidence of this from other sources.

*CMS actions:* None reported.
*Other actions:*

**SOUTH AFRICA:**

*Status:* Medium density leatherback nesting has been recorded along the KwaZulu coast (Tongaland) of Natal (Frazier, 1982; Hughes, 1982a). The numbers of nesting females increased from five in 1966 to 70 in 1977/78 (Hughes, 1982a). Further increases to over 100 per season were observed in 1995 (Hughes, 1996). Catalogued as Vulnerable in the South African Red Data Book (Branch, 1988).

*CMS actions:* None reported.

*Other actions:* Three decades of strong protection have led to increases in the small annual nesting population of leatherbacks more than fourfold. This population is believed to be representative of a larger nesting population in Mozambique and turtles nesting here are known to forage in the waters between Mozambique and Madagascar. This makes the importance of marine protected areas such as the recently extended Bazaruto National Park and newly created Quirimbas National Park in Mozambique extremely important for protecting developmental and feeding grounds of these turtles (McLellan *et al.*, 2004).

As part of the region plan to implement the Sodwana Declaration, The Natal Parks Board initiated a turtle research program at the Turtle Beaches/Coral Reefs of Tongaland, and designated a Ramsar site in October 1986 (Wetlands International, 2003). WWF South Africa has also developed a conservation management project along the coastline of St Lucia Marine Reserve (WWF-ZA, 2003). The Conservation Management and Monitoring is the longest running research project of its kind in southern Africa. It carries out annual surveys, and seeks to determine the size and distribution of nesting

populations of Loggerhead and Leatherback Turtles (WWF-ZA. 2003).

The leatherback turtles of the Tongaland beaches of KwaZulu-Natal, South Africa, have been the subject of a monitoring and patrol programme, led by KZN Wildlife and supported by WWF and others, that has been running since 1969 (McLellan *et al.*, 2004).

WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will be implemented in South Africa, Namibia and Angola, and will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**SPAIN:**

*Status:* Leatherback turtles have been recorded here (Pascual, 1985; Pino, 1996a and b).

***Ceuta***

Stranded leatherback turtles have been recorded here in 1980, 1982 and 1983 (Fernandez and Moreno, 1984).

***Canary Islands***

Leatherback sightings in Macaronesia are rare, except perhaps in the Canary Islands where the bodies of turtles caught accidentally in industrial fishing nets wash up on the shore (Brongersma, 1968; Fretey, 2001).

*CMS actions:* None reported.

*Other actions:* A programme in the Canary Islands is currently being developed for the study and conservation of this species.

The 'Centro Oceanografico de Malaga' has been studying marine turtles for over 20 years. The interactions of *D. coriacea* with fisheries and its migratory patterns have been studied and genetic analysis and tagging programmes have been undertaken (Kasparek, 2001).

**SRI LANKA:**

*Status:* Leatherback populations underwent dramatic declines from the 1970s onwards (Spotila *et al.*, 2000).

Widespread nesting was recorded in the south in 1997-1998 (Amarasooriya, 2001; Amarasooriya and Jayathilaka, 2002). Leatherbacks were noted as nesting on the beaches of Induruwa, Kosgoda, Mavela, Usangoda, Ambalantota, Bundala and Yala (Mutukumara, 1998).

The most widespread form of marine turtle exploitation in Sri Lanka is illegal poaching of turtle eggs. As a result of egg collection alone, the Turtle Conservation project (TCP) predicts that the marine turtle populations of Sri Lanka will decline to near extinction within the next few decades (Kapurusinghe, 1999).

*CMS actions:* IUCN, in collaboration with the Department of Wildlife Conservation, has produced a National Marine Turtle Conservation Action Plan for Sri Lanka and declared a marine sanctuary (Sri Lanka National Report to CMS, 2002).

*Other actions:* The Turtle Conservation project (TCP), established in 1993, has developed conservation programmes in Sri Lanka. Major programmes initiated by TCP are the Rekawa environmental education programme, school lecture

programme and research and tagging programme. All these programs were community based and successfully achieved the goal (Kapurusinghe, 1999).

**Sudan:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Suriname:**

*Status:* The beaches of the Guianas (French Guiana, Suriname and Guyana) host the largest Atlantic leatherback turtle nesting beaches in the world. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

Nesting occurs in the Galibi Reserve on the Suriname side of the Marowijne estuary, and further west in the Bigisanti area (Matapica and Krofajapasi beaches) east of Paramaribo (Groombridge, 1982). Nesting has been reported in the Galibi Reserve on the Suriname side of the Marowijne estuary, and further west in the Bigisanti area (Matapica and Krofajapasi beaches) east of Paramaribo (Groombridge, 1982).

The total number of nests, probably representing virtually all Leatherback nesting in Suriname, rose fairly steadily from 95 in 1964 to 1,625 in 1975 (Schulz, 1975) and to 3,900 in 1979 (Schulz, 1982). This rise in numbers was thought to be due at least in part to nesting females shifting from the French Guiana sites (Schulz, 1982). Assuming a two-year nesting cycle and three nests per female each year, about 650 females nested in 1975 at Bigisanti and 200 at Galibi (Schulz, 1975). In 1999, 4,200 nests were counted and it was estimated that the total number was over 10,000 (Hilterman et al., 2002). Estimates from the Galibi National Park population indicated 1,635 in 1970, which increased to 8,812 in 1980 and the last report from 1985 stated that there were 12,401 individuals.

*CMS actions:* Not a Party to CMS.

*Other actions:* Sea turtle activities are co-ordinated by a local Amerindian organisation, Stinasu, which promotes sustainable development and ecotourism. Organisations involved with turtle conservation are the Biotopic Foundation, the Oceanic Society and the University of Suriname. Stinasu established the first ban on marine turtle eggs harvesting in 1968, since then the organisation, supported by others, has undertaken fieldwork, awareness programmes and international collaboration. Conservation work has been carried out mostly at the Galibi Nature Reserve (WWF, 2003a; Hilterman *et al.*, 2000). Studies have been undertaken in Suriname on nesting ecology (Mosier *et al.*, 2002), nest paternity and genetic variation (Byles *et al.*, 1998).

In Suriname, WWF is currently supporting most marine turtle conservation initiatives that are coordinated under the Foundation for Nature Conservation (Stinasu) – a semi-government organisation. Local Amerindian organisations, such as the community-based Stidunal, are becoming increasingly involved in managing, and benefiting from, marine turtle conservation initiatives. WWF has been involved in building field stations on remote beaches, training rangers, supporting sustainable tourism initiatives, and promoting fishing closures in front of a nesting beach reserve. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**SWEDEN (v)*:**

*Status:* Leatherback turtles have been recorded here (Mathiasson, 1995).

*CMS actions:* None reported.

*Other actions:*

**SYRIAN ARAB REPUBLIC:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**U.R. TANZANIA:**

*Status:* Population size and trends are not known for leatherbacks in Tanzania. Although Márquez (1990) noted occasional nesting, this is contradicted in the Tanzania National Report to CMS (2002), which stated that there is no nesting record.

*CMS actions:* There is monitoring of mortalities in Mafia Islands. There are plans to form a technical committee to coordinate all turtle conservation programmes in Tanzania (U.R. Tanzania National Report, 2002).

*Other actions:* WWF is working with local communities on Mafia Island on a variety of natural resource management topics, including fisheries management, alternative non-destructive fishing ventures and marine turtle conservation. The Wildlife Conservation Society (WCS) and Born Free Foundation provide additional support for the turtle conservation programme, amongst others (McLellan *et al.*, 2004).

Over the last nesting season on Mafia Island, over 10,000 hatchlings were produced from nest protection, and the rate of human poaching fell to 4% of previous levels. Part of WWF's work in this area has also been to support the new zoning measures in Mafia Island Marine Park, which are anticipated to reduce bycatch levels of marine turtles in no-fishing zones (McLellan *et al.*, 2004).

**Thailand:**

*Status:* The leatherback turtle is found in the waters of peninsular Thailand. It breeds on the airport beach in Changwat Phuket, in the Laem Phan Wa marine reserve in Phuket, and in coastal Changwan Phangnga (Bain and Humphrey, 1980). In 1992-1993 at least 28 nests were recorded on the Phuket and Phangnga coastline (Settle, 1995). In 1997-1998 a survey found nine nests at Phra Thong island in the south (Aureggi *et al.*, 1999). The Andaman Sea population was decimated by near-total, long-term egg harvest (Limpus, 1995). Leatherback populations underwent dramatic declines from the 1970s onwards (Spotila *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**TOGO:**

*Status:* Solitary leatherback turtles have been recorded nesting here (Márquez, 1990). Neonates have also been recorded (UNEP/CMS 2000). There are three Leatherback eggs in a museum collection, but no recent data on this species exist (UNEP/CMS, 2000).

*CMS actions:* The Office of Fauna and Hunting (DFC) has labelled/tagged eight turtles of this species that were washed up on the beach (Togo National Report, 2002).

*Other actions:*

**Tonga:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**Trinidad and Tobago:**
*Status:* There may be 1,000 nests per year (Márquez, 1990). In 1991 a minimum of 300 nests were laid in Trinidad and at least 50 nests in Tobago (Godley *et al.*, 1993). There have been significant increases in nesting (UNEP-WCMC, 2003).

*CMS actions:* Not a Party to CMS.
*Other actions:*
**TUNISIA:**
*Status:* Leatherback turtles have been recorded here by Hachaichi (1985) and reported as occurring regularly by Bradai and El Abed (1998).

*CMS actions:* Future activities to be decided (Tunisia National Report, 2002).
*Other actions:*
**Turkey:**
*Status:* Leatherback turtles have been recorded here only very recently (Baran, 1998; Taskavak and Farkas, 1998)

*CMS actions:* Not a Party to CMS.
*Other actions:*
**Tuvalu:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**United Arab Emirates:**
*Status:* Not a Party to CMS.
*CMS actions:*
*Other actions:*
**UNITED KINGDOM:**
*Status:* Leatherback turtles have been recorded here (Langton, 1999a; b; Morgan, 1989). Many reports of its occurrence in UK waters from 1997 to 2003 are described by the British Marine Life Study Society at http://ourworld.compuserve.com/homepages/BMLSS/turtles.htm

***Anguilla***
Leatherback turtles have been recorded nesting on the main island and Scrub Island (Richardson and Gumbs, 1984; Oldfield, 1999; Anguilla National Trust, 2003).

***British Indian Ocean Territory***
Leatherback turtles have been recorded here as vagrants (Oldfield, 1999).

***British Virgin Islands***
Leatherback turtles have been recorded nesting here (Eckert *et al.*, 1992).
Declines in the numbers nesting were reported from 1987 to 1989 (Cambers and Lima, 1990). Only small numbers were nesting in the early 1990s, with fewer than 10 per year on Tortola (Cambers and Lima, 1990; Eckert *et al.*, 1992) It is very clear that although the leatherback nesting population is dangerously small, it appears to be on the increase. From a low of three

reported nesting activities in 1990, numbers had increased to 63 nesting activities in 2001(Hasting, 2003).

***Cayman Islands***
Leatherback turtles have been recorded nesting here during a survey between 1971 and 1991 (Wood and Wood, 1994) but none was found in 1998 and 1999 (Aiken *et al.*, 2001).

***Grenada***
Leatherback nesting here has been described as "occasional to sporadic" by the National Marine Fisheries Service and U.S. Fish and Wildlife Service (2001).

***Montserrat***
Leatherback turtles have been rarely recorded nesting and breeding here (Jeffers and Meylan, 1984; Oldfield, 1999).

***Saint Helena***
A single Leatherback was recorded about 1km off the coast of Ascension Island in December 2001 (White and George, 2002).

*CMS actions:* A Species Action Plan (SAP) for marine turtles in the UK has been published. A three year project investigating the exploitation of marine turtles in the UK Overseas Territories is now underway, funded by DEFRA and co-ordinated by the Marine Turtle Research Group and Marine Conservation Society. The study will provide information on the current conservation status, population trends, exploitation patterns and genetics of marine turtles in these territories, as well as providing recommendations for future conservation, monitoring and management efforts (UK National Report to CMS, 2002).

In October 2001, the DEFRA funded project Turtles in the Caribbean Overseas Territories was launched, to assess the status and exploitation of Hawksbill *Eretmochelys imbricata*, Green *Chelonia mydas*, Leatherback *Dermochelys coriacea*, and Loggerhead *Caretta caretta* Turtles in Anguilla, Bermuda, the British Virgin Islands, the Cayman Islands, Montserrat, and the Turks and Caicos Islands. Assessment will include fieldwork and genetic stock analysis at foraging grounds and nesting beaches, and evaluation of legal/illegal turtle harvesting (UK National Report to CMS, 2002).

***British Virgin Islands***
Since 1988, the Conservation and Fisheries Department of the BVI Government and dedicated volunteers, have conducted annual monitoring surveys of leatherback nesting beaches. The BVI has also benefited significantly from its participation in the Wider Caribbean Sea Turtle Conservation network (WIDECAST), which first provided training in sea turtle biology and management to government biologists in 1986. For the next several years WIDECAST assisted the Government, as well as non-governmental stakeholders, in the development of a national sea turtle recovery action plan (Hasting, 2003).

*Other actions:*

**United States:**

*Status:* The leatherback's turtle range extends from Cape Sable, Nova Scotia, south to Puerto Rico and the U.S. Virgin Islands. Critical habitat for the leatherback includes the waters adjacent to Sandy Point, St. Croix, U.S. Virgin Islands. Leatherbacks are commonly seen by fishermen in Hawaiian offshore waters, generally beyond the 100-fathom curve but within sight of the land. Sightings often take place off the north coast of Oahu and the Kona coast of Hawaii

(NOAA, 2005).

***American Samoa***
Leatherback turtles have been recorded here (Grant, 1994; UNEP-WCMC, 2003).

***Federated States of Micronesia***
Leatherback turtles have been occasionally recorded here (Buden and Edward, 2001).

***Puerto Rico***: Nesting recorded on islands adjacent to Puerto Rico, including Culebra, Mona and Vieques (Carr *et al.*, 1982).
In Puerto Rico, adults are occasionally taken for meat and oil, but poaching of eggs is widespread in this country. The setting of "large mesh suitable for turtling" is common in the waters of Puerto Rico (although the practice was outlawed in 1984, it still continues) (NOAA, 2005).

***U.S. Virgin Islands***: Annual emigration rates averaged 34.1% and the migration interval was 2 years according to Boulon *et al.* (1996). There have been significant increases in nesting and St. Croix (UNEP-WCMC, 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:* The National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service produced a recovery plan in 1992 that was aimed at helping the species recover to self-sustainable levels. The major action to achieve this aim focused on: long term habitat protection and ensuring hatching success in the most important nesting beaches; determination of the distribution and seasonal movements for all life stages; reduction of threats from marine pollution and reduction of incidental catches by commercial fisheries. In 1998 the NMFS produced the action plan for the species recovery in the US Pacific coast (UNEP-WCMC, 2003).

Actions proposed were focused on incidental catches by the US and international fisheries; supporting to other countries in their efforts to census and protect nesting beaches in the Pacific; determination of movement patterns; determination of US population size and determination of stock home ranges. The Caribbean Conservation Corporation Sea Turtle Survival League was founded in 1959 and since then it has been undertaking research and education projects in order to protect marine turtles in the Caribbean (UNEP-WCMC, 2003).

Research has been carried out into familial relationships among nesting females using genetic techniques; genetic structure and relatedness to nesting populations; satellite tracking; reproductive endocrinology; nesting activities; distribution in the eastern coast and Caribbean islands; ontogeny of diving and feeding behaviour in Leatherback hatchlings (Mosier *et al.*, 2002). Scientists from the USA have also carried out research on the acoustic orientation and sound discrimination of hatchlings, body temperature during inter-nesting intervals, aquatic predation of leatherback turtles (Kalb and Wibbels, 2000); Leatherback strandings on the coasts of Georgia; heart rates and diving behaviour (Epperly and Braun, 1998); identification of individual and mating behaviour inferral by means of molecular genetics; hatchling near shore movements (Byles *et al.*, 1998) competition for prey with sunfish, migration patterns (Keinath *et al.*, 1996)

**URUGUAY:**

*Status:* The latest status of the species in Uruguay is not available (Uruguay National Report, 2002), but in the past leatherbacks have been fairly often recorded as strandings or caught in marine fisheries (Fallabrino *et al.*, 2000).

*CMS actions:* Four future research lines have been established: genetic, impacts from fisheries, environmental education, and feeding areas (Uruguay National Report, 2002).

*Other actions:* The Karumbé project involves Uruguayan fishing communities in marine turtle conservation projects, by means of education in schools, communication of the status and threats facing marine turtles in Uruguay and worldwide, and teaching local people techniques to release and resuscitate caught turtles. The project is also aiming to achieve that Uruguay ratifies the Inter-American Convention for marine turtles protection and conservation, as it is the only country that has not ratified it yet (Karumbé, 2003).

**Vanuatu:**

*Status:* Leatherback turtles have been recorded nesting here (Márquez, 1990).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF supported (together with the South Pacific Regional Environmental Programme) a local theatre group to give performances to raise awareness of marine turtle conservation, and invite local communities to participate in marine turtle monitoring. The marine turtle conservation theatre programme involves the collection of information and stories upon which the theatrical group base their performances, and the recruitment of "turtle monitors" to provide a network of people concerned about turtle conservation. By 2003, as many as 150 turtle monitors in approximately 80 Vanuatu coastal villagers and the "Turtle Monitors Network" were participating in the programme. As a result of the post-theatre discussions, some villages imposed 10 year bans on turtle killing (McLellan *et al.*, 2004).

**Venezuela:**

*Status:* Leatherback turtles have been recorded here (National Marine Fisheries Service and U.S. Fish and Wildlife Service, 2001), particularly on the Paria Peninsula (Hedelvy *et al.*, 2000). In 2000 a total of 37 gravid females were tagged (Guada *et al.*, 2002). Catalogued as Endangered in the Venezuelan Red Data Book (Rodriguez and Suarez-Rojas, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Working Group for Marine Turtles from Venezuela and the NGO Widecast have prepared an action plan for marine turtle recuperation in this country. The plan aims to update information, establish guidelines for research and management and contribute to decision-making. Conservation initiatives developed in Venezuela include projects in Miranda, Sucre and Nueva Esparta States, in the Roques Archipelago; and also include conservation and biology courses and workshops (Tierraviva, 2003). Other initiatives for the species conservation include the creation of a sea turtle centre in Cipara, de Paria Peninsula, as recommended by the Action Plan for the Recovery of Sea Turtles in Venezuela. The main objective of this centre is to protect and monitor nests on the beach. Activities will include turtle tagging, beach surveys, interaction with fisheries, and volunteer training (Guada *et al.*, 2000). Studies on the interaction of marine turtles with artisanal fisheries and turtle monitoring

activities have been carried out in Venezuela (Mosier *et al.*, 2002).

**Viet Nam:**

*Status:* Leatherback turtles were recorded here in the 19th century (Stuart *et al.* 2002) but there is little recent information, although Kadir (2002) noted their occurrence.

*CMS actions:* Not a Party to CMS.

*Other actions:* There are proposals for a network of protected areas (Kemf, *et al.*, 2000).

**Yemen:**

*Status:* Leatherback turtles have been recorded as occasionally nesting here by Márquez (1990), but there is no evidence of this from other sources. It is listed as a Range State by CMS (2003).

*CMS actions:* Not a Party to CMS.

*Other actions:*

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**Note:** reference in the text which are not given in full in the REFERENCE section, may be found in the following report:

UNEP-WCMC (2003). Report on the status and conservation of the Leatherback turtle, *Dermochelys coriacea.* UNEP-WCMC, Cambridge, U.K.

* Range State not yet included in the CMS range list for this species.

***Eretmochelys imbricata* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| ALBANIA | | ? | × | |
| Algeria | | ? | | |
| Angola | | ? | | ✓ |
| Antigua and Barbuda | | ↓ | | |
| AUSTRALIA | | ↓ | ✓ | ✓ |
| Bahamas | | ? | | |
| Bahrain | | ? | | |
| Bangladesh | | ? | | |
| Barbados | | ? | | |
| Belize | | ? | | |
| BENIN | | ? | × | |
| Brazil | | ↓ | | ✓ |
| Brunei Darussalam | | ? | | |
| Cambodia | | ? | | |
| CAMEROON | | ? | × | |
| Cape Verde | | ? | | |
| CHILE | | ? | ✓ | |
| China | ● | ↓ | | |
| Colombia | ● | ? | | ✓ |
| Comoros | | ? | | |
| CONGO | | ? | | |
| D.R. CONGO | | ? | | |
| Cook islands | | ? | | ✓ |
| Costa Rica | | ↓ | | |
| COTE D'IVOIRE | | ? | × | |
| Cuba | | ? | | ✓ |
| DJIBOUTI | | ? | × | |
| Dominica | | ? | | |
| Dominican Republic | | ? | | |
| ECUADOR | | ? | × | ✓ |
| EGYPT | | ? | × | |
| El Salvador | | ? | | ✓ |
| Equatorial Guinea | | ? | | |
| Eritrea | | ? | | |
| Fiji | | ? | | |
| FRANCE | | ? | × | ✓ |
| Gabon | | ? | | ✓ |
| GAMBIA | | ? | × | |
| GHANA | | ? | × | |
| Grenada | | ? | | |
| Guatemala | | ? | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| GUINEA | | ? | × | |
| GUINEA-BISSAU | | ? | × | |
| Guyana | | ? | | ✓ |
| Haiti | | ↓ | | |
| Honduras | | ↓ | | ✓ |
| INDIA | ● | ? | × | |
| Indonesia | | ↓ | | ✓ |
| Iran | | ? | | |
| Iraq | | ? | | |
| IRELAND | | ? | × | |
| ISRAEL | | ? | × | |
| ITALY | | ? | × | ✓ |
| Jamaica | | ? | | |
| Japan | | ? | | |
| KENYA | | ? | ✓ | ✓ |
| Kiribati | | ? | | |
| D.P.R. Korea | | ? | | |
| Republic of Korea | | ? | | |
| Kuwait | | ? | | |
| LIBERIA | | ? | × | |
| Madagascar | | ? | | ✓ |
| Malaysia | | ? | | ✓ |
| Maldives | | ? | | |
| MALTA | | ? | × | |
| Marshall Islands | | ? | | |
| MAURITANIA | | ? | × | |
| MAURITIUS | | ? | × | |
| Mexico | | ↑ | | ✓ |
| F.S. Micronesia | | ? | | |
| MOROCCO | | ? | × | |
| Mozambique | | ? | | ✓ |
| Myanmar | | ? | | |
| Namibia | | ? | | ✓ |
| Nauru | | ? | | |
| NETHERLANDS | | ? | × | |
| NEW ZEALAND | | ? | × | |
| Nicaragua | | ? | | ✓ |
| NIGERIA | | ? | × | |
| Oman | | ? | | |
| PAKISTAN | | ? | × | |
| Palau | | ? | | |
| PANAMA | | ↓ | × | ✓ |
| Papua New Guinea | | ? | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| PERU | ● | ? | × | |
| PHILIPPINES | ● | ? | × | ✓ |
| PORTUGAL | | ? | ✓ | |
| Qatar | | ? | | |
| Saint Kitts and Nevis | | ? | | |
| Saint Lucia | | ? | | |
| Saint Vincent and the Grenadines | | ? | | |
| Samoa | | ? | | ✓ |
| SAO TOME AND PRINCIPE | | ? | ✓ | |
| SAUDI ARABIA | | ↓ | × | |
| SENEGAL | | ? | ✓ | ✓ |
| Seychelles | ● | ? | | ✓ |
| Sierra Leone | | ? | | |
| Singapore | ● | ? | | |
| Solomon islands | | ↓? | | ✓ |
| SOMALIA | | ? | × | |
| SOUTH AFRICA | ● | ? | × | ✓ |
| SPAIN | | ? | × | |
| SRI LANKA | | ? | × | |
| Sudan | | ? | | |
| Suriname | | ? | | ✓ |
| U.R. TANZANIA | | ↓ | ✓ | ✓ |
| Thailand | | ? | | ✓ |
| TOGO | | ? | × | |
| Tonga | | ? | | |
| Trinidad and Tobago | | ? | | |
| Tuvalu | | ? | | |
| United Arab Emirates | | ? | | |
| United Kingdom (Anguilla) | | ↑ | | |
| UNITED KINGDOM | | ? | × | |
| United States | | ↑[1] | | |
| URUGUAY | | ? | × | |
| Vanuatu | | ? | | ✓ |
| Venezuela | ● | ? | | ✓ |
| Viet Nam | ● | ↓ | | ✓ |
| Yemen | | ? | | |

1. Increasing population in Mona Island, Costa Rica. No more data available.

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: CHELONIIDAE

SPECIES: *Eretmochelys imbricata* (Linnaeus, 1766)

SYNONYMS: -

COMMON NAME: Hawksbill Turtle (English); Caret; Tortue à bec de faucon; Tortue à écailles; Tortue imbriquée (French); Tortuga carey; Tortuga de carey (Spanish)

RANGE STATES: Algeria; Angola; Antigua and Barbuda; AUSTRALIA; Bahamas; Bahrain (?); Bangladesh; Barbados; Belize; BENIN (?); Brazil; Brunei Darussalam; Cambodia; CAMEROON; Cape Verde; CHILE (Easter Island); China (including Taiwan); Colombia; Comoros; CONGO (?); CONGO, DEMOCRATIC REPUBLIC OF THE; Cook Islands; Costa Rica; Côte d`Ivoire; Cuba; DJIBOUTI; Dominica; Dominican Republic; ECUADOR (including Galapagos Islands); EGYPT; El Salvador; Equatorial Guinea; Eritrea; Fiji; FRANCE (including French Guiana, French Polynesia, Guadeloupe, Martinique, New Caledonia, Réunion, Society Islands, Tuamotu Islands, Wallis and Futuna Islands (?));Gabon (?); GAMBIA; GHANA; Grenada; Guatemala; GUINEA; GUINEA-BISSAU; Guyana; Haiti; Honduras; INDIA (including Andaman Islands, Laccadive Islands, Nicobar Islands); Indonesia; Iran (Islamic Republic of); Iraq; IRELAND; ISRAEL; Jamaica; Japan; KENYA; Kiribati; Korea, Democratic People`s Republic of; Korea Republic of; Kuwait; LIBERIA; Madagascar; Malaysia; Maldives; Marshall Islands (?); MAURITANIA; MAURITIUS (?); Mexico; Micronesia (Federated States of); MOROCCO; Mozambique; Myanmar; Namibia (?); Nauru; NETHERLANDS (Aruba, Bonaire, Curaçao, Saba, Sint Eustatius, Sint Maarten); NEW ZEALAND (Tokelau); Nicaragua; NIGERIA; Oman; PAKISTAN; Palau; PANAMA; Papua New Guinea; PERU; PHILIPPINES; PORTUGAL; Qatar; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Samoa; SAO TOME AND PRINCIPE; SAUDI ARABIA; SENEGAL; Seychelles; Sierra Leone; Singapore; Solomon Islands; SOMALIA (?); SOUTH AFRICA; SPAIN; SRI LANKA; Sudan; Suriname; TANZANIA, UNITED REPUBLIC OF; Thailand; TOGO (?); Tonga; Trinidad and Tobago; Tuvalu (?); United Arab Emirates (?); United Kingdom (Anguilla); UNITED KINGDOM (Ascension Island, Bermuda, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Montserrat, Pitcairn (?), Turks and Caicos Islands); United States (including American Samoa, Guam, Hawaiian Islands, Northern Mariana Islands, Puerto Rico, United States Virgin Islands); Vanuatu; Venezuela; Viet Nam; Yemen; international waters (Atlantic Ocean, Indian Ocean, Pacific Ocean)

RED LIST RATING: CR A1bd (Red List Standards and Petitions Subcommittee, 1996)

CONSERVATION STATUS AND ACTIONS:

The Hawksbill occurs in tropical and subtropical seas of the Atlantic, Pacific and Indian Oceans (NOAA, 2005).

Nesting occurs throughout the range but rarely in large numbers; only five sites have populations of more than 1,000 females nesting annually (Kemf, *et al.*, 2000). Since nesting sites tend to be more dispersed than in other species, breeding colonies are isolated so that as populations are depleted replenishment by immigration from elsewhere is unlikely. Extirpation of a population will result in irreversible loss of genetic diversity (McLellan *et al.*, 2004). Whilst this species is often said to occur in the Mediterranean, nesting has never been reported and documented records of the species at sea are almost non-existent (Groombridge, 1990).

Although global population numbers for sea turtle species do not exist, there are an estimated 8,000 nesting females of this species based on nesting beach monitoring reports and publications from the early to mid 1990s (Caribbean Conservation Corporation and Sea Turtle Survival League, 2004). There is strong evidence for significant worldwide decline (Kemf, *et al.*, 2000). According to Meylan and Donnolly (1999) there have been large declines in many populations distributed throughout the range and there seems to be no evidence to suggest that the recent declines (last 20-40 years) were preceded by a population increase (Red List Standards and Petitions Subcommittee, 1996). Given the current population sizes and the historical levels of exploitation, a decline of 80% can be inferred. However, two petitions have been put forward to the Red List Standards and Petitions Subcommittee (1996), challenging the interpretation of the data and the conclusion that there has been an 80% reduction of the global population in the last three generations.

The hawksbill turtle is the sole source of commercial tortoiseshell (also known as "carey") used in jewellery, and has been hunted for centuries for this reason. Intensive over harvesting for shells probably continues to constitute the major threat to the species. In recent decades, eastern Asia, especially Japan, has been a major consumer of tortoiseshell. Through international conventions and national legislation some countries have managed to restrict trade (Kemf, *et al.*, 2000). Despite this legal protection a large amount of illegal trade in hawksbill shells and products persists, with Southeast Asia remaining one of the major regions of supply (McLellan *et al.*, 2004). As with other species, the hawksbill turtle is also threatened by the loss of nesting and feeding habitats, excessive egg-collection, fishery-related mortality, pollution, and coastal development (Kemf, *et al.*, 2000).

**ALBANIA*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Algeria:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Angola:**

*Status:* The species has been reported in this country (Carr & Carr, 1991).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the by-catch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation

measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Antigua and Barbuda:**

*Status:* Most significant nesting site is Jumby Bay, Antigua. There are an estimated number of 400-500 nests per year, and hawksbill populations in Antigua and Barbuda are considered remnants (Meylan, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**AUSTRALIA:**

*Status:* Hawksbill turtles migrate from New South Wales, Northern Territory, Queensland, Western Australia, Indonesia, and Papua New Guinea to breeding and nesting sites in Western Australia, north Queensland and the Northern Territory. In addition, many migrate to breeding sites in neighbouring countries including PNG, Vanuatu, and the Solomon Islands. Breeding occurs year round in the Northern Territory, the Torres Strait and the northern Great Barrier Reef. The Western Australian stock is centred in the southern northwest shelf, with an annual nesting population of possibly several thousand females. Hawksbill turtles are also occasional visitors to Tasmania (Australia National Report, 2002). The highest density of nesting populations of hawksbill turtles in the Pacific, at Milman Island in the Great Barrier Reef, is declining (McLellan *et al.*, 2004).

*CMS actions:* Nesting sites are being monitored and research has been carried out on GIS-based models for indigenous management, effects of commercial fishing activities and ecotourism (Australia National Report, 2002).

*Other actions:* WWF is working in partnership with Indigenous Sea Rangers on joint projects that include marine debris surveys and turtle research and monitoring. Sea Rangers are Aboriginal community representatives who have the responsibility of managing their natural resources. WWF assists Aboriginal communities to establish their own marine turtle monitoring programmes by providing training, equipment, additional funding and professional support. Sea rangers from Dhimurru Land Management Aboriginal Corporation have been conducting helicopter-based turtle monitoring along the Cape Arnhem coastline since 1996 (McLellan *et al.*, 2004).

The GBR Marine Park, until recently, had not been well protected with respect to marine turtle habitats. However, the GBR Marine Park Authority is in the process of establishing a network of no-take zones throughout all 70 bioregions of the GBR, which will benefit marine turtle conservation enormously (McLellan *et al.*, 2004).

Work is also being carried out in the Great Barrier Reef to prevent unregulated land-based pollution, which has been shown to degrade many inshore marine ecosystems, including marine turtle habitats (McLellan *et al.*, 2004).

**Bahamas:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bahrain (?):**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bangladesh:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Barbados:**
*Status:* There are some 50-60 nesting females, based on public reports, beach surveys and tagging programmes (Meylan, 1999).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Belize:**
*Status:* Most significant nest site is Manatee Bar, with 25 females per year (Meylan, 1999).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**BENIN (?):**
*Status:* A relatively weaker population than that of *Chelonia mydas* is found here (Benin National Report, 2002).

*CMS actions:* Nesting sites are protected (Benin National Report, 2002).
*Other actions:*

**Brazil:**
*Status:* In Brazil, the primary nesting area for hawksbill turtles is the northern part of the coast of Bahia State. Slaughter of nesting females, poaching of eggs, manufacture of shell ornaments, coastal development, and incidental fisheries capture has reduced the species almost to extinction along the Brazilian coast (Marcovaldi *et al*., 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* Until the end of the 1970s, there were no marine conservation programmes in Brazil. Marine turtles were in grave danger of local extinction through capture in fishing nets, adult females killed for meat and nests being destroyed. In 1980, the Brazilian Institute of Forestry created the TAMAR Programme, to save and protect marine turtles through research, conservation actions and community involvement. The work was soon extended nation-wide from the original project sites, and focuses on the identification of species, the main nesting sites, the nesting seasons, and the socio-economic reasons for the overexploitation of marine turtles by coastal communities. Accompanying this has been a large education and awareness-raising campaign (McLellan *et al.*, 2004).

**Brunei Darussalam:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:* The Government has set up the National Marine Turtle Conservation and Management Committee. All efforts are currently towards the first step of instilling awareness among the public, especially school children and those involved in the collection and selling of turtle eggs (Seafdec, 2005).

**Cambodia:**
*Status:* Hawksbills have often been found in the coastline of Cambodia (Seafdec, 2005).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**CAMEROON:**
*Status:*
*CMS actions:* None reported.
*Other actions:*
**Cape Verde:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**CHILE (including Easter Island):**
*Status:* Reported on Easter Island, with a specimen trapped in fishing gear in the central Chilean zone. Its presence on the Chilean coast is doubtful (Chile National Report, 2002).

*CMS actions:* There are future plans to assess distribution in Chile (Chile National Report, 2002).

*Other actions:*
**China (including Taiwan):**
*Status:* More than 90% of the sea turtle populations of China are distributed in the South China Sea (I-Jiunn, 1999). Hawksbill turtles have not been found nesting in Taiwan since 1992, and the closest nesting site is in the southern islands of the Ryukyu Archipelago. The incidental capture of sea turtles by various types of fishing gear is considered a major threat to the survival of their populations (Cheng & Chen, 1997). Hawksbill populations have been sharply reduced in the Xisha Archipielago area mainly due to catching them in the sea, and also catching them on beaches during egg deposition and by digging out the eggs. Catalogued as Critically Endangered in the China Red Data Book (Wang & Zhao, 1998).

*CMS actions:* Not a Party to CMS.
*Other actions:*
**Colombia:**
*Status:* No estimate of number of nests or nesting females per year is available (Meylan, 1999). Its presence is very rare in the coasts of Colombia, and it has been observed in Gorgona Island and Utría Bay; Catalogued as Critically Endangered in the Colombian Red Data Book (Castaño-Mora, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has been involved with training for marine turtle conservation and management in the Colombian Pacific. Additionally, WWF's ecoregional programme for the Colombian and Ecuadorian Pacific includes planning that takes into account important turtle nesting sites (McLellan *et al.*, 2004).
**Comoros:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**CONGO (?):**
*Status:*
*CMS actions:* None reported.
*Other actions:*
**D.R. CONGO:**
*Status:*

*CMS actions:* None reported.
*Other actions:*

**Cook Islands:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is working with communities to ensure that local people have access to the information they require to sustainably manage their natural resources, including marine turtles. Part of this is through supplying tags to those communities in the outer islands who want to participate in a tagging programme, as well as directly tagging and releasing turtles caught in Rarotonga Lagoon (McLellan *et al.*, 2004).

**Costa Rica:**
*Status:* The northern area between Tortuguero and Matina, as well as the segment between Cahuita and Sixaola river are the major breeding areas for the species. Less than 25 nests per year have been recorded in Tortuguero from 1955 to 1998 (Meylan, 1999). The species is declining at a rate of 3,9% per year (Chacón *et al*., 2001).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**COTE D'IVOIRE:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Cuba:**
*Status:* There are an estimated 1,700-3,400 nests per year, and the trends of nesting population are unknown (Meylan, 1999). Harvest for domestic trade continues to occur within the country (Kemf, *et al.*, 2000). Cuba continues to take hawksbills in its waters, and has in the past tried unsuccessfully to obtain permission to trade legally under CITES; however, Cuba is participating in regional dialogues on the species' conservation. Southern Cuba is probably the most important feeding ground (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has supported habitat protection in a key marine protected area, Jardines de la Reina, and supported enforcement action to aid in the decommissioning of turtle nets within the park. Turtle nesting monitoring has also been carried out in conjunction with Centre for Molecular Immunology (CIM) at Guanahacabibes (McLellan *et al.*, 2004). Current research into the genetics of hawksbills in Cuban waters is ongoing with the University of Cuba and CIM (McLellan *et al.*, 2004).

WWF is also studying alternatives to the marine turtle harvest in Cuba with local scientists, including a study of the nutritional and cultural value of the turtles, and seeking partners to address the issue of decommissioning the Cuban hawksbill stockpile (McLellan *et al.*, 2004).

In 1992 the Bekko Association of Japan introduced a fisheries model for hawksbill turtles in Cuba. The model estimated a sustainable yield of 5,500 turtles from Cuban feeding grounds, but the model contained a number of simplifying assumptions, and several of its parameters were unsupported by data, making it unreliable for predicting sustainable yield of hawksbills (Heppell & Crowder, 1996).

**DJIBOUTI:**
*Status:*

*CMS actions:* None reported.
*Other actions:*

**Dominica:**

*Status:* In 2000, Cuba, together with Dominica, proposed to CITES that they reopen international trade with Cuba selling hawksbill turtle shells to Japan. Harvest for domestic trade continues to occur within the country (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Dominican Republic:**

*Status:* The Cabo Rojo area is an important recruitment and foraging ground for hawksbills in the region. In the Dominican republic, the hawksbill turtle has traditionally been exploited for its eggs, meat, and decorative shell. Despite the heavy exploitation this species has received, no population studies have been conducted to assess its current status (León & Diez, 1999).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**ECUADOR (including Galapagos Islands):**

*Status:*
*CMS actions:* None reported.

*Other actions:* Studies carried out by NOAA in the Atlantic Ocean suggest that adaptations to the fishing gear can significantly reduce by-catch of marine turtles. Working closely with the IATTC and NOAA, WWF is undertaking a pioneering effort in the Eastern Pacific to test such gear fixes for their efficiency and conservation impact. This work is designed to facilitate the shift of the Ecuadorian artisan fisheries fleet from traditional j-hooks to circular hooks and provide them with dehooking equipment and training (McLellan *et al.*, 2004).

**EGYPT:**

*Status:* This species is a occasional visitor to this country (Groombridge, 1990).

*CMS actions:* None reported.
*Other actions:*

**El Salvador:**

*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**Equatorial Guinea:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Eritrea:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Fiji:**

*Status:* Harvest of hawksbill turtle shell for domestic trade continues to occur within the

country (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**FRANCE:**

*Status:* ***French Guiana***
Hawksbill turtles nest on French Guiana's beaches. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

***Mayotte (br)****
Occurrence reported (Frazier, 1985).

*CMS actions:* None reported.

*Other actions:* ***French Guiana***
Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action has recently been finalised and submitted for official endorsement nationally and regionally. It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

**Gabon (?):**

*Status:* All species of turtle on the Gabon coast are threatened by direct harvesting and as a by-catch of multinational fishing fleets. There are no laws to protect sea turtles (other than leatherbacks) in Gabon (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Gamba Complex of Protected Areas in Gabon is an ideal place for long-term monitoring of marine turtle nesting sites. In the 2002-2003 turtle nesting season, which goes from October to March, a pilot study within the Gamba Complex was carried out by WWF, Ibonga (A local environmental education NGO active in the Gamba Complex) and EU funded Central African marine turtle protection programme PROTOMAC. In 2003-2004, monitoring continued with the technical assistance of a Dutch environmental NGO called Biotopic, which focuses on marine turtle research in Suriname and Gabon (Wilson & Humphrey, 2004).
The partners of the Gamba Marine Turtle Programme continue their research and monitoring to improve understanding and knowledge of the status, life histories and threats to marine turtles in the area, in order to ensure a regionally coherent approach to conservation management (Wilson & Humphrey, 2004).

**GAMBIA:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**GHANA:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**Grenada:**

*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:*

**Guatemala:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**GUINEA:**

*Status:* Spread out particularly in the northwest zone of Guinea. This species is frequently observed and encountered in fishing nets between October and December (Guinea National Report, 2002).

*CMS actions:* If the technical and financial means are acquired, systematic research on the species will be undertaken (Guinea National Report, 2002).

*Other actions:*

**GUINEA-BISSAU:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Guyana:**

*Status:* Hawksbill turtles nest on this country's beaches. It is somewhat of a mystery why the hawksbill nest on the muddy shores of Guyana; there are only small numbers in the country, with almost none in Suriname and French Guiana (Guyana Marine Turtle Conservation Society, 2002). Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan has been finalised and been submitted for official endorsement nationally and regionally. It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

Shell Beach in Guyana hosts hawksbill nests. WWF and UNDP are providing the technical and financial support to the extensive consultation that is needed to formally declare and manage this beach as a reserve. Under the coordination of the Guyana Marine Turtle Conservation Society, WWF has, over the years, supported most marine conservation initiatives including monitoring, beach protection, and enforcement of fishing bans during the nesting season. In the last few nesting seasons, WWF has supported educational camps for local communities and supported the Almond Bay women's coconut project — an alternative livelihood option to the poaching of turtle eggs. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**Haiti:**

*Status:* No estimate available. Today, populations seem severely reduced and, although nesting numbers are unknown, these are probably low (Meylan, 1999).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Honduras:**

*Status:* Hawksbill population has declined throughout Honduras in last 10-20 years (Meylan, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**INDIA:**

*Status:* Catalogued as Endangered in the Indian Red Data Book (Ghosh, 1994).

*CMS actions:* None reported.
*Other actions:*

**Indonesia:**

*Status:* According to the information from WWF Indonesia, some 30 hawksbill rookeries are known in the Java Sea. Significant declines in nesting activity have been noted over last 10-15 years. The overall regional decline was estimated to be about 70%, and the maximum decline rate at a single rookery was 91%. These declines have been driven by the following factors: (1) export of numerous raw shells (bekko) and stuffed turtles to Japan until 1991; (2) increase in human population and coastal development of the islands, and; (3) increase in the numbers of eggs collected by local people with a rise in economic value (Suganuma *et al*., 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* There is an ongoing project for research and conservation of hawksbill turtles in Indonesia (east Sumatra, North Jakarta and South Sumbawa island) that aims to develop and improve the Indonesian Marine Turtle Centre, establish and maintain an appropriate database referral system which links national and international institutions and agencies holding information relevant to biodiversity conservation, identify the post migration pattern of hawksbill turtles by using radio transmitters, identify the feeding grounds of post juvenile and adult female turtles and map the nesting sites for hawksbills throughout Indonesia. The project is coordinated by the Department of Forestry and Estate Crops and the Fauna and Flora International (FFI) Program (ARCBC, 2005).

**I.R. Iran:**

*Status:*
*MS actions:* Not a Party to CMS.
*Other actions:*

**Iraq:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**IRELAND:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**ISRAEL:**

*Status:*
*CMS actions:* Monitoring activities for other species may detect this one (Israel National Report, 2002).

*Other actions:*

**ITALY (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:* WWF is conducting a campaign to decrease mortality of marine turtles due to by-catch. WWF has supported the presence of independent observers on Italian longline fishing fleets to monitor fish catches and document the extent of marine turtle and shark by-catch and mortality. This type of monitoring programme is limited by the high costs involved, and the alternative is to involve the fishing industry in collecting the data. These data will provide valuable information about the rate and nature of fishing interactions, in order to guide future mitigation measures. WWF is also creating a management plan for their five Italian Rescue Centres, the goal of which is the veterinary treatment, rehabilitation and release at sea of marine turtles (McLellan *et al.*, 2004).

**Jamaica:**

*Status:* During beach surveys conducted between 1991 and 1996, 200-275 nesting females were estimated (Meylan, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Japan:**

*Status:* The species nests scarcely in the Ryukyus (Kikukawa *et al*., 1999). Until acceding to a trade moratorium in 1994, Japan was the world's largest importer of hawksbill shells, primarily form Panama, Cuba and other Caribbean nations (Heppell and Crowder, 1996).

Prior to being certified under the Pelly Amendment, Japan had been importing about 20 metric tons of hawksbill shell per year, representing approximately 19,000 turtles. A negotiated settlement was reached regarding this trade on June 19, 1992 (NOAA, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**KENYA:**

*Status:* It is present along most areas of the Kenyan coast, with higher concentrations in the northern parts and there are strong seasonal variations in distribution (Kenya National Report, 2002).

*CMS actions:* The hawksbill is monitored within the framework of coastal zone and biodiversity monitoring (Kenya National Report, 2002).

*Other actions:* In 1996, WWF joined forces with the Kenya Wildlife Service, the Fisheries and Forest Departments and local communities to develop a long-term management strategy integrating conservation and development priorities of the Kiunga Marine National Reserve. The project has focused on developing sustainable and equitable methods of using the reserve's resources. Community participation in protecting nesting marine turtles is fostered through an incentive scheme for nests discovered and protected throughout the season. The community has also actively participated in ongoing monitoring of marine turtles and their habitats (McLellan *et al.*, 2004).

WWF has recently hosted a marine turtle training course for KESCOM (Kenya Sea Turtle Committee) (McLellan *et al.*, 2004). WWF is working with national committees for marine turtle to ensure that marine resources are used

sustainably by local communities and that critical habitats for marine turtles, as well as coral fish and dugongs, are protected (McLellan *et al.*, 2004).

**Kiribati:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**D.P.R. Korea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Republic of Korea:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Kuwait:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**LIBERIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Madagascar:**
*Status:* This species nests in Madagascar (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* Community-based conservation projects have been set-up in the Fort Dauphin area (Kemf, *et al.*, 2000). In 2002/2003 WWF initiated tagging activities in northern Madagascar, and commenced a trade assessment at two high-risk sites together with small-scale awareness activities (McLellan *et al.*, 2004).

**Malaysia:**
*Status:* In Malaysia, important nesting populations of hawksbills are found in the Sabah Turtle islands with over 600 nestings per year and Melaka with over 300 nestings per year. Low-density nesting occurs in Terengganu (Chan and Liew, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* ***Sabah***
In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary protected areas was recommended. Areas proposed included the Phillippine-Sabah Turtle Islands and Sipadan Island (Kemf, *et al.*, 2000).

The Turtle Islands are major rookeries for hawksbill turtles in Southeast Asia. They comprise three Sabah, Malaysia islands, and six Philippines islands. Tagging activities, egg production monitoring and genetic studies have been conducted. As a result, it was agreed that this island group needed to be treated as one management unit, despite both sets of islands being protected independently under their individual country's legislation. In 1996 a bilateral agreement was signed, establishing the Turtle Islands Heritage Protected Area (TIHPA), the world's first transboundary protected area for marine turtles (McLellan *et al.*, 2004).

The islands continue to be managed by their respective country's

management authorities, but under a uniform set of guidelines developed by the Joint Management Committee - comprised of representatives from each of the two countries (McLellan *et al.*, 2004).

**Maldives:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**MALTA (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**Marshall Islands (?):**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**MAURITANIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**MAURITIUS (?):**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Mexico:**

*Status:* Data from beach surveys conducted in Campeche, Yucatán, and Quintana Roo from 1992 to 1996 suggested an average of 2,828 nests per year. The population increased in the period 1977-1996 (Meylan, 1999). The Yucatán Peninsula is considered one of the most important hawksbill nesting areas in the North Atlantic, and probably in the world (Garduño-Andrade, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF started a campaign to protect all of Mexico's turtles in the 1980s and 1990s. Public awareness, research, the setting up of protected areas, etc were all facets of the conservation project (Kemf, *et al.*, 2000). The main strategies for sea turtle conservation in Mexico include a complete ban on exploitation of sea turtles and their eggs, and the protection of nesting beaches. Management has mainly focused on nest protection in centralized beach hatcheries. Recurrent problems related to lack of funds include insufficient beach protection and inadequate management of nest removal to hatcheries, and have resulted in poor overall success of the conservation programs (Garcia et al., 2003).

**F.S. Micronesia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**MOROCCO:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Mozambique:**

*Status:* Hawksbills are found in Mozambique waters and also come ashore to nest (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Work has been conducted by WWF in 2001 on turtle bycatch in shrimp fisheries and on the use of turtle excluder devices (TEDs) (McLellan *et al.*, 2004). A WWF online public advocacy campaign urging Mozambique's Ministers to take action to prevent further losses of turtles was launched in February 2003. As a result of this and WWF's work with the relevant Ministers, a new Regulation for Marine Fisheries was approved by the Council of Ministers in October 2003, which made TEDs compulsory in trawl nets in Mozambique (McLellan *et al.*, 2004).

In an effort to reduce long-line turtle bycatch by illegal and unlicensed longline fishing vessels in Mozambique waters, the Government has begun to intercept these vessels, through a military team based at Bazaruto Archipelago National Park (McLellan *et al.*, 2004). Marine turtles are among the species benefiting from a number of marine protected areas set up on the coast (Kemf, *et al.*, 2000).

The creation in 2001 and 2002 of two new marine protected areas (Bazaruto Archipielago National Park and Quirimbas National Park) is a critical milestone in global marine conservation (Wilson & Humphrey, 2004).

**Myanmar:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Namibia (?):**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the bycatch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Nauru:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**NETHERLANDS:**

*Status:* Reported as breeding in the Netherlands Antilles (van Buurt, 1984).

*CMS actions:*

*Other actions:* None reported.

**NEW ZEALAND (Tokelau):**

*Status:* Breeding reported (Balazs, 1982).

*CMS actions:* None reported.

*Other actions:*

**Nicaragua:**

*Status:* Uncontrolled development on the nesting beaches of the Pearl Cays threatens the recovery of Nicaragua's globally important hawksbill nesting populations (WCS, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).
The WCS Nicaragua Sea Turtle Conservation Program and the National Marine Fisheries Service (NMFS) are collaborating on a program to follow post-nesting hawksbill sea turtles from the Pearl Cays rookery using satellite-tracking devices. The principal purpose is to determine their long range movements and identify important feeding areas (WCS, 2005).

**NIGERIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Oman:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**PAKISTAN:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Palau:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**PANAMA:**
*Status:* Playa Chiriqui, a beach in western Panama, was historically the most important nesting site of hawksbills in the Caribbean, but now hosts only occasional nesting (Meylan, 1999). However, overexploitation of the turtles for the international shell trade has reduced the population by over 85% (McLellan *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* Research has been conducted into hawksbill turtles in Panama and in the Leeward and Windward Islands (Kemf, *et al.*, 2000). Recently, one of the two communities Amerindians, custodians of the beach and its natural resources, has decided to protect the turtles. WWF is working in partnership with the Caribbean Conservation Corporation to secure the recovery of the hawksbills at Playa Chiriqui, by building capacity among the Amerindians for the design and implementation of a tourist scheme that translates conservation efforts into tangible community benefits (McLellan *et al.*, 2004).

**Papua New Guinea:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* The potential of establishing a marine turtle monitoring programme that will provide valuable data as well as involve local communities is being investigated. It is anticipated that the data generated from these surveys will become the baseline upon which national policies for the conservation and protection of marine turtles will be formulated (McLellan *et al.*, 2004).

**PERU:**
*Status:* Catalogued as Vulnerable in the Peruvian Red Data Book (Pulido

Capurro, 1991).

*CMS actions:* None reported.

*Other actions:* WWF has worked in Peru with local partners on various initiatives, including a turtle conservation project south of Lima, law enforcement on land and at sea, initiatives against by-catch and illegal consumption, and environmental education and awareness campaigns with local fishermen, villagers and public authorities. One of the outstanding achievements of this work was the recent reduction (by two thirds) of the number of commercial establishments selling turtle meat in the Pisco Paracas area. This was a direct result of numerous control operatives set-up to prevent both the capture and sale of marine turtles (McLellan *et al.*, 2004).

**PHILIPPINES:**

*Status:* Catalogued as Endangered in the Philippine Red Data Book (Wildlife Conservation Society of the Philippines, 1997).

*CMS actions:* None reported.

*Other actions:* In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary protected areas was recommended. Areas proposed included the Phillippine-Sabah Turtle Islands, Sipadan Islands, and the Berau Island (Kemf, *et al.*, 2000).

The Turtle Islands are major rookeries for hawksbill turtles in Southeast Asia. They comprise three Sabah, Malaysia islands, and six Philippines islands. Tagging activities, egg production monitoring and genetic studies have been conducted. As a result, it was agreed that this island group needed to be treated as one management unit, despite both sets of islands being protected independently under their individual country's legislation. In 1996 of a bilateral agreement was agreed on, establishing the Turtle Islands Heritage Protected Area (TIHPA), the world's first transboundary protected area for marine turtles (McLellan *et al.*, 2004).

The islands continue to be managed by their respective country's management authorities, but under a uniform set of guidelines developed by the Joint Management Committee - comprised of representatives from each of the two countries (McLellan *et al.*, 2004).

**PORTUGAL (?):**

*Status:* The hawksbill is a rare visitor to the Madeira and the Azores EEZs. The nearest population is located in the Caribbean. Most individuals observed at Madeira and the Azores are juveniles (Portugal National Report, 2002).

*CMS actions:* Monitoring activities for *Caretta caretta* will detect *Eretmochelys imbricata* and protection activities for *Caretta caretta* will benefit this species indirectly (Portugal National Report, 2002).

*Other actions:*

**Qatar:**

*Status:* Hawksbill turtles nest on the coast of Ras Laffan (Tayab & Quiton, 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:* Ras Laffan Industrial City has initiated a programme to protect marine

turtles including identification of nesting sites on beaches and monitoring trends in nesting activity, ensuring long-term protection of nesting beaches, and increasing environmental awareness. In 1999/2000, based on the recommendation of this programme, the City erected a 6 km long sand/dirt barrier parallel to the northern beach to stop vehicular movement on the beach. It also cleaned the beaches of debris (timber, plastic, nylon ropes, glass and metal scraps), and set up continuous surveillance of the area to deter any egg poaching (Tayab & Quiton, 2003).

**Saint Kitts and Nevis:**

*Status:* Not a Party to CMS.

*CMS actions:*

*Other actions:*

**Saint Lucia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Vincent and the Grenadines:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Samoa:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* The Samoan Government declared its political commitment to establishing its 120,000km$^2$ Economic Exclusive Zone as a Whale, Shark and Turtle Sanctuary in 2002 (McLellan *et al.*, 2004).

**SAO TOME AND PRINCIPE:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**SAUDI ARABIA:**

*Status:* Hawksbills are found in both the Red Sea and the Arabian Gulf, but are only known to nest in significant aggregations on four of the Gulf's small islands. The turtle populations nesting on the islands in the Arabian Gulf have been the victims of increased man-induced pressures since the discovery of petroleum reserves in strata beneath the Gulf waters early in the 20$^{th}$ century; several turtle feeding and foraging habitats are now being polluted and landfilled along the Saudi Gulf coastline (Pilcher, 1999).

*CMS actions:* None reported.

*Other actions:*

**SENEGAL:**

*Status:* *Eretmochelys imbricata* has been seen in the coasts of the country and it has been spotted in the north in the Park of the Barbary Coast, but there has been no precise information about the size of the population (Senegal National Report, 2002). Turtles are under many threats, including local consumption of both turtle meat and eggs. Artisanal fishermen sometimes purposefully capture adult turtles in known foraging grounds on days when their fishing captures are low (McLellan *et al.*, 2004).

*CMS actions:* There are plans for a national strategy for the conservation of turtles (Senegal National Report, 2002).

*Other actions:* WWF has worked with partners "le village des tortues" on raising awareness of the need for marine turtle conservation in Senegal. As a result, the consumption of turtles has stopped in some villages where turtles were traditionally eaten (McLellan *et al.*, 2004).

The Government of Senegal recently announced the establishment of a network of four marine protected areas in Senegal's coastal zone, which will protect regionally important feeding and nesting grounds for five species of marine turtles (McLellan *et al.*, 2004).

**Seychelles:**

*Status:* Seychelles hosts one of the five most important regional populations of hawksbill turtle in the world today (although much reduced in number form historic levels) with more than 1,000 females nesting annually. A unique feature of the Seychelles population is that more than 85% of nesting occurs in broad daylight (Mortimer, 1999). Catalogued as Critically Endangered in the Seychelles Red Data Book (Gerlach, 1997).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Seychelles Government has repeatedly demonstrated its commitment to conserve this species: in 1993-94, through an artisan compensation and re-training programme that eliminated domestic trade in hawksbill shell; in 1994, by providing total legal protection for all sea turtles; and in 1998 by publicly burning its stockpile of raw hawksbill shell during the 1998 Miss World Pageant (Mortimer, 1999).

**Sierra Leone:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Singapore:**

*Status:* In Singapore, sightings have been made in and around the waters of the southern islands. Main threats for the species are pollution of seas, reclamation of favoured nesting beaches, and over-collection for its caparison scutes, as well as its meat and eggs. Catalogued as Endangered in the Singapore Red Data Book (Ng and Wee, 1994).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Solomon Islands:**

*Status:* By the 1970s, Arnavon Island still had the greatest aggregations of hawksbill turtles in the South Pacific, but they were under threat because of increased accessibility offered by outboard motors. Harvest of hawksbill turtle shell for domestic trade continues to occur within the country (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has undertaken various hawksbill conservation efforts in Arnavon since 1979, including surveys and training wardens (Kemf, *et al.*, 2000).

In 1991, at the invitation of three villages on Choiseul and Santa Isabel and in partnership with the Solomon Islands Government, the Nature Conservancy began work to establish the Arnavon Islands Marine Conservation Area (Nature Conservancy, 2005).

**SOMALIA**
**(?):**
*Status:* None reported.
*CMS actions:*
*Other actions:*

**SOUTH AFRICA:**

*Status:* Widespread throughout all island waters both mainland and coastal. Catalogued as Vulnerable in the South African Red Data Book (Branch, 1988).

*CMS actions:* None reported.

*Other actions:* WWF is starting a project to assess and reduce the by-catch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**SPAIN:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**SRI LANKA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Sudan:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Suriname:**

*Status:* A low level of nesting (perhaps 30 nests per year) takes place in Suriname approximately between April and August (Reichart & Fretey, 1993). Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action has recently been finalised and submitted for official endorsement nationally and regionally. It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

Most marine turtle conservation initiatives those are coordinated under the Foundation for Nature Conservation (Stinasu) – a semi-government organisation. Local Amerindian organisations are becoming increasing involved in managing, and benefiting from, marine turtle conservation initiatives and they have been involved in building field stations on remote beaches, training rangers, supporting sustainable tourism initiatives, and promoting fishing closures in front of a nesting beach reserve. WWF has

supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**U.R. TANZANIA:**

*Status:* It was estimated that 50 females nested annually in 1982. The population trend is not known but there is much evidence that a number of former turtle nesting areas have been vacated and that suitable nesting sites are in decline. Hawksbill was recorded in Mafia Island, Mtwara and Zanzibar. Of 24 nests on Shungi-mbili Island (adjacent to Mafia Island) six were Hawksbill. During Jan.-Jun. 2002, three nests were recorded in Mafia (U.R Tanzania. National Report, 2002).

*CMS actions:* There is a Mafia Island Turtle and Dugong Conservation Programme. Seventeen active nesting beaches on Mafia Island are monitored regularly. A proposal has been developed by the Mafia Island District with assistance from the Mafia Island Turtle and Dugong Conservation Programme to close Nyoro, Shung-mbili and Mbarakuni Islands adjacent to Mafia, for temporary settlements during part or all of the year for turtle nesting to recover. A technical committee that will coordinate all turtle conservation programmes in Tanzania has been formed (U.R Tanzania. National Report, 2002).

*Other actions:* WWF is working with local communities on marine turtle conservation on Mafia Island. The Wildlife Conservation Society (WCS) and the Born Free Foundation, amongst others, provide additional support for the turtle conservation programme. Part of WWF's work in this area has also been to support the new zoning measures in Mafia Island Marine Park, which are anticipated to reduce bycatch levels of marine turtles in no-fishing zones (McLellan *et al.*, 2004).

**Thailand:**

*Status:* By the 1970s, all turtle species in Thailand were subject to commercial egg collection and the harvest was in decline. Drift nets in coastal waters were, and remain, a major threat causing accidental drownings (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1980 there have been various WWF sponsored conservation activities to protect Thailand's turtles, including surveys, anti-poaching patrols, and village-based projects (Kemf, *et al.*, 2000).

**TOGO (?):**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Tonga:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Trinidad and Tobago:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Tuvalu (?):**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*
**United Arab Emirates (?):**
*Status:* Not a Party to CMS.
*CMS actions:*
*Other actions:*
**United Kingdom (Anguilla):**
*Status:* Breeding reported (Richardson and Gumbs, 1984). Numbers of hawksbill turtle are starting to recover in Anguilla since a five-year moratorium on harvesting of the species was imposed in 1995 (Kemf, *et al.*, 2000).

*CMS actions:* Not a party to CMS.
*Other actions:*
**UNITED KINGDOM:**
*Status:* Breeding reported in Saint Helena (UNEP-WCMC, 2004).

***Cayman Islands***
Occurrence reported. Populations in this in this nesting area have been subjected to a huge perturbation (massive exploitation) (Aiken *et al*., 2001). Trends unknown (Meylan, 1999).

*CMS actions:* None reported
*Other actions:*
**United States:**
*Status:* Within the United States, hawksbills are most common in Puerto Rico and its associated islands, and in the U.S. Virgin Islands. In the Continental U.S., the species is recorded from all the gulf states and from along the eastern seaboard as far north as Massachusetts, with the exception of Connecticut, but sightings north of Florida are rare. Hawksbills are observed in Florida with some regularity on the reefs off Palm Beach County, where the warm Gulf Stream current passes close to shore, and in the Florida Keys. Texas is the only other state where hawksbills are sighted with any regularity. Most sightings involve post hatchlings and juveniles (NOAA, 2005).
In the U.S. Pacific Ocean, there have been no hawksbill sightings off the west coast. Hawksbills have been observed in the Gulf of California as far as 29°N, throughout the northwestern states of Mexico, and south along the Central and South American coasts to Columbia and Ecuador. In the Hawaiian Islands, nesting occurs in the main islands, primarily on several small sand beaches on the Islands of Hawaii and Molokai. Two of these sites are at a remote location in the Hawaii Volcanos National Park (NOAA, 2005).
Meylan (1999) estimated 650 nests per year in Puerto Rico. The nesting population in Mona island is increasing.
The greatest threat on nesting beaches is poaching. Poaching of hawksbill eggs is a serious problem in Puerto Rico, and also occurs in St. Thomas and St. Croix. Adult females are still butchered for their tortoise shell, but the practice is decreasing with better enforcement. The extent to which hawksbills are killed or debilitated after becoming entangled in marine debris are unknown, but it is believed to be a serious and growing problem (NOAA,

2005).

*CMS actions:* Not a Party to CMS.
*Other actions:*

**URUGUAY:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Vanuatu:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* WWF supported (together with the South Pacific Regional Environmental Programme) a local theatre group to give performances to raise awareness of marine turtle conservation, and invite local communities to participate in marine turtle monitoring. The marine turtle conservation theatre programme involves the collection of information and stories upon which the theatrical group base their performances, and the recruitment of "turtle monitors" to provide a network of people concerned about turtle conservation. By 2003, as many as 150 turtle monitors in approximately 80 Vanuatu coastal villagers and the "Turtle Monitors Network" were participating in the programme. As a result of the post-theatre discussions, some villages imposed 10 year bans on turtle killing (McLellan *et al.*, 2004).

**Venezuela:**
*Status:* Nesting occurs widely on offshore islands and is reported for three states on the mainland. Between 50-500 females per year are estimated, and the population trend is unknown (Meylan, 1999). The most important nesting sites are Los Roques Archipelago and La Blanquilla Island. Catalogued as Endangered in the Venezuelan Red Data Book (Rodriguez and Suarez-Rojas, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* Fundación Científica Los Roques, FUDENA and Fundaciencia have tested breeding captive individuals in Los Roques Archipelago and Mochima (Rodriguez and Suarez-Rojas, 1999).

**Viet Nam (?):**
*Status:* Populations of hawksbill turtles are in serious decline (Kemf, *et al.*, 2000), and in danger of becoming locally extinct (McLellan *et al.*, 2004). In Viet Nam, the trade in turtle products continues openly. The size of it, with almost 30,000 items found on offer during TRAFFIC surveys carried out for the Government of Viet Nam in mid 2002, demonstrates that despite new legislation prohibiting exploitation and trade of marine turtles and their products, traders are ignoring the law. The challenge now will be to implement the recommendations of Viet Nam's National Action Plan for Marine Turtles, which was launched in July 2004 (Traffic, 2004). Catalogued as Endangered in the Viet Nam Red Data Book (Viet Nam, Ministy of Science, Technology and Environment, 1992).

*CMS actions:* Not a Party to CMS.

*Other actions:* There are proposals for a network of protected areas (Kemf, *et al.*, 2000).

**Western Sahara (br?)*:** Occurrence reported (UNEP-WCMC, 2004).
*Status:*

Not a Party to CMS.
*CMS actions:*

*Other actions:*
**Yemen:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

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* Range State not yet included in the CMS range list for this species.

***Lepidochelys kempii* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| Algeria | | ? | | |
| Canada | | ? | | |
| Colombia | | ? | | ✓ |
| Cuba | | ? | | ✓ |
| FRANCE | | ? | × | |
| IRELAND | | ? | × | |
| ITALY | | ? | × | |
| MALTA | | ? | × | |
| MAURITANIA | | ? | | |
| Mexico | | ↑ | | ✓ |
| MOROCCO | | ? | × | |
| NETHERLANDS | | ? | × | |
| PORTUGAL | | ↑ | ✓ | |
| SENEGAL | | ? | ✓ | ✓ |
| SPAIN | | ? | × | |
| United Kingdom (Anguilla) | | ? | | |
| UNITED KINGDOM | | ? | × | |
| United States | | ↑ | | ✓ |

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: CHELONIIDAE

SPECIES: *Lepidochelys kempii* (Garman, 1880)

SYNONYMS: -

COMMON NAME: Atlantic Ridley; Gulf Ridley; Kemp's Ridley; Mexican Ridley (English); Lépidochelyde de Kemp; Ridley de Kemp; Tortue de Kemp (French); Cotorra; Tortuga iora; Tortuga marina bastarda (Spanish)

RANGE STATES: Algeria; Canada; Cuba; FRANCE; ITALY; Mexico; MOROCCO; PORTUGAL; SPAIN; United Kingdom (Anguilla); UNITED KINGDOM (including Bermuda, British Virgin Islands, Cayman Islands, Montserrat, Turks and Caicos Islands); United States; international waters (Gulf of Mexico, Atlantic Ocean)

RED LIST RATING: CR A1ab (Marine Turtle Specialist Group, 1996)

CONSERVATION STATUS AND ACTIONS:

The geographic range of the Kemp's ridley is small compared to most other sea turtles. Adults are largely confined to the Gulf of Mexico. Juveniles feed each summer in the estuaries of eastern North America from Cape Cod southward to Cape Hatteras (many juveniles travel up the warm current of the Gulf Stream to Long Island's waters each summer), and along the coast of Europe and Northern Africa. It is unclear whether these juveniles are waifs or whether some individuals regularly ride the North Atlantic Gyre (Zug *et al.*, 1997). Presence in the Mediterranean basin is extremely rare and appears to be accidental (Groombridge, 1990).

Kemp's Ridleys are the rarest and most endangered sea turtle of the world (Portugal National Report, 2002), and nearly went extinct (Kemf, *et al.*, 2000). Although world wide population numbers for sea turtle species do not exist, there are an estimated 1,000 nesting females of this species based on nesting beach monitoring reports and publications from the early to mid 1990s (Caribbean Conservation Corporation and Sea Turtle Survival League, 2004). Kemp's Ridley turtles were recognized as endangered throughout their range in 1970 as a result of a dramatic decline in the nesting population at Rancho Nuevo, Tamaulipas, Mexico. Rigorous conservation efforts by Mexican and U.S. agencies have reversed this trend, and in recent years there has been a 11,3% annual increase in Kemp's ridley nests (Lewison et al., 2003). The increase can be attributed to two primary factors: full protection of nesting females and their nests in Mexico, and the requirement to use turtle excluder devices (TEDs) in shrimp trawls both in the United States and Mexico (NOAA, 2005).

The nesting population crashed from more than 40,000 turtles coming ashore in a single day in the late 1940s to a few hundred females nesting in an entire season in the late 1980s (McLellan *et al.*, 2004). As a result of an enormous conservation effort the species is undergoing a remarkable recovery, although nesting numbers are still low (McLellan *et al.*, 2004). The decline of this species was primarily due to human activities including collection of eggs, fishing for juveniles and adults, killing adults for meat and other products, and direct take for indigenous use. In addition to these sources of mortality, Kemp's ridleys have been subject to high levels of incidental take by shrimp trawlers (NOAA, 2005).

**Algeria:**
*Status:*

*CMS actions:* Not a Party to CMS.
*Other actions:*

**Canada:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Colombia*:**
*Status:* Occurrence reported (UNEP-WCMC, 2004), but the species is not reported in the Colombian Red Data Book (Castaño-Mora, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has been involved with training for marine turtle conservation and management in the Colombian Pacific. Additionally, WWF's ecoregional programme for the Colombian and Ecuadorian Pacific includes planning that takes into account important turtle nesting sites (McLellan *et al.*, 2004).

**Cuba:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has supported habitat protection in a key marine protected area, Jardines de la Reina, and supported enforcement action to aid in the decommissioning of turtle nets within the park. Turtle nesting monitoring has also been carried out in conjunction with Centre for Molecular Immunology at Guanahacabibes (McLellan *et al.*, 2004).

**FRANCE:**
*Status:* Reported as vagrant (UNEP-WCMC, 2004).

*CMS actions:* None reported.
*Other actions:*

**IRELAND:**
*Status:* Reported as vagrant (UNEP-WCMC, 2004).

*CMS actions:* None reported.
*Other actions:*

**ITALY:**
*Status:*
*CMS actions:* None reported.

*Other actions:* WWF is conducting a campaign in Italy to decrease mortality of marine turtles due to by-catch. WWF has supported the presence of independent observers on Italian longline fishing fleets to monitor fish catches and document the extent of marine turtle and shark by-catch and mortality. This type of monitoring programme is limited by the high costs involved, and the alternative is to involve the fishing industry in collecting the data. These data will provide valuable information about the rate and nature of fishing interactions, in order to guide future mitigation measures. WWF is also creating a management plan for their five Italian Rescue Centres, the goal of which is the veterinary treatment, rehabilitation and release at sea of marine turtles (McLellan *et al.*, 2004).

**MALTA*:**
Status: The single documented record of Kemp's ridley in the Mediterranean concerns a turtle, now in the Natural History Museum at Mdina in Malta, that was originally caught about one mile from the mouth of the Grand Harbour at Valetta in October 1929 (Groombridge, 1990).

CMS actions: None reported.
Other actions:

**MAURITANIA*:**

Status: Reported as vagrant (UNEP-WCMC, 2004).

CMS actions: None reported.
Other actions:

**Mexico:**

*Status:* As recently as 1947, an estimated 40,000 females nested on the beach at Rancho Nuevo in Tamaulipas. There are no other major nesting aggregations for the Kemps ridley, although a few individuals nest occasionally on other beaches of the Mexican gulf coast. Since the late 1970s, the Rancho Nuevo nesting population has numbered no more than 1,000 females, and it has received enhanced protection since 1978 (Zug *et al*., 1997). Nest surveys in Mexico suggest a growing number of nesting females since the early 1990s (Lewison *et al*., 2003).

Threats to the beach in Mexico are presently few, but potentially serious. Human population growth and increasing developmental pressure will result in increased threats to the nesting beach. A primary concern is human encroachment and access along the entire nesting area. Occasionally plans for massive expansion of La Pesca (just to the north of the nesting area) as a fishing centre or dredging of the Gulf Intercoastal Waterway from Brownsville, Texas, to Barra del Tordo (in the south part of the nesting beach) are reported. These plans are alarming because of the assuredly detrimental and possibly disastrous effects that they could have on the nesting population if they were to be completed. A threat resulting from management practices at Rancho Nuevo is relocating all of the nests in one corral to prevent poaching and predation. This concentration makes the eggs more susceptible to reduced viability from the manipulation, disease vectors and inundation (NOAA, 2005).

The Gulf of Mexico is an area of high-density offshore oil extraction with chronic low-level spills and occasional massive spills. The two primary feeding grounds for adult Kemp's ridleys turtles in the northern and southern gulf of Mexico are both near major areas of near shore and offshore oil exploration and production. The nesting beach at Rancho Nuevo is also vulnerable and has been affected by oil spills. The vast amount of plastic debris in the Gulf of Mexico constitutes an increasingly serious threat t Kemp's ridley turtles of all ages (NOAA, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF started a campaign to protect all of Mexico's turtles in the 1980s and 1990s. Public awareness, research, the setting up of protected areas, etc were all facets of the conservation project (Kemf, *et al.*, 2000). Surveys into Kemp's ridley turtle have been conducted. The species is undergoing a recovery in response to conservation efforts at Nuevo Rancho. All nests are protected and fishermen are required to use turtle excluder devices to reduce capture of the turtle in their nets (Kemf, *et al.*, 2000).

**MOROCCO:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**NETHERLANDS (v)*:**

*Status:* Occurrence reported (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**PORTUGAL:**

*Status:* The population is still extremely low, but growing slightly. Most individuals observed at Madeira and the Azores are juveniles and it may well be that this species uses Macaronesian waters regularly as a developmental habitat. However, the low population numbers drastically reduce the chances of sighting this species (Portugal National Report, 2002).

*CMS actions:* Monitoring activities for *Caretta caretta* will detect this species. No future activities planned to specifically target this species, but activities for *Caretta caretta* will benefit it indirectly (Portugal National Report, 2002).

*Other actions:*

**SENEGAL*:**

*Status:* Lack of precise detail on the presence of the species although it has been spotted in the centre of the country (Senegal National Report, 2002).

*CMS actions:* Note that CMS does not currently consider Senegal to be a range state. However, according to the Senegal National Report (2002), a national strategy will be put in place for the conservation of turtles.

*Other actions:* WWF has funded a number of protected areas for turtles in Senegal (Kemf, *et al.*, 2000).

**SPAIN:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**United Kingdom (Anguilla):**

*Status:*

*CMS actions:* Anguilla is not a Party to CMS.

*Other actions:*

**UNITED KINGDOM:**

*Status:* The species is not reported to occur in any of the U.K. overseas territories (U.K. National Report, 2002).

*CMS actions:* None reported.

*Other actions:*

**United States:**

*Status:* The species prefers shallow sandy and muddy habitats, such as the coastal lagoons of Louisiana, Texas and Alabama (Kemf, *et al.*, 2000). In the Atlantic, juvenile Kemp's ridley turtles are most commonly found in: Cape Cod Bay, Massachusetts; Long Island Sound, New York; Chesapeake Bay, Virginia; Pamlico-Albemarle Sounds in North Carolina; the South Carolina coast; the Georgia coast; Cape Canaveral and Florida Bay in Florida (Ross et al., 1989). Nest surveys in Padre Island National Seashore (Texas) suggest a growing number of nesting females since the early 1990s. Although the Padre Island closure prohibits shrimping in the nearshore area where nesting Kemp's ridleys are thought to aggregate, it is possible that adults leaving the nesting beach would move offshore and thus still be vulnerable (Lewison *et al*., 2003).

*CMS actions:* Not a Party to CMS.

*Other actions:* From 1978-1988, an international project began with the intent to increase the

number of Kemp's ridley nesting on Padre Island National Seashore. This ambitious program had one grand goal - the conservation and recovery of this ancient sea species. Eggs were airlifted from Rancho Nuevo, Mexico to south Texas, hatched in controlled conditions, and released along the south Texas shore of the Gulf of Mexico. Scientists hoped that turtles would eventually return to nest and establish a colony at Padre Island National Seashore where protection and care are available. Now, 10 to 15 year old mature Kemp's ridley females are returning to the south Texas coast to nest (National park Service, 2005). The United States and Mexican Governments have spent millions of dollars to establish a nesting colony of kemp's ridley sea turtles at Padre Island. Populations are showing signs of recovery, but it will be many decades before this species is considered fully recovered, if ever, and it will take additional protection measures including marine reserves to achieve it (Sea Turtle Restoration Project, 2004). The Sea Turtle Stranding and Salvage Network, established by the National Marine Fisheries Service (NMFS) in 1980, has been monitoring turtle strandings along the gulf of Mexico for more than 20 years (Lewison *et al*., 2003).

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* Range State not yet included in the CMS range list for this species.

***Lepidochelys olivacea* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| Angola | | ? | | ✓ |
| Antigua and Barbuda | | ? | | |
| AUSTRALIA | | ? | ✓ | ✓ |
| Bahrain | | ? | | |
| Bangladesh | | ? | | ✓ |
| Barbados | | ? | | |
| BENIN | | ? | ✓ | |
| Brazil | | ? | | ✓ |
| Brunei Darussalam | | ? | | |
| Cambodia | | ? | | |
| CAMEROON | | ? | × | |
| Canada | | ? | | |
| Cape Verde | | ? | | |
| CHILE | | ? | ✓ | |
| China | ● | ? | | |
| Colombia | ● | ? | | ✓ |
| Comoros | | ? | | |
| CONGO | | ? | ✓ | |
| D.R. CONGO | | ? | ✓ | |
| Costa Rica | | ? | | |
| COTE D'IVOIRE | | ? | × | |
| Cuba | | ? | | ✓ |
| DJIBOUTI | | ? | × | |
| Dominica | | ? | | |
| Dominican Republic | | ? | | |
| ECUADOR | | ? | × | ✓ |
| EGYPT | | ? | × | |
| El Salvador | | ? | | ✓ |
| Equatorial Guinea | | ? | | |
| Eritrea | | ? | | |
| FRANCE | | ? | × | ✓ |
| Gabon | | ? | | ✓ |
| GAMBIA | | ? | | |
| GHANA | | ? | | |
| Grenada | | ? | | |
| Guatemala | | ? | | |
| GUINEA | | ? | ✓ | |
| GUINEA-BISSAU | | ? | × | |
| Guyana | | ? | | ✓ |
| Haiti | | ? | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| Honduras | | ? | | |
| INDIA | ● | ↓ | × | ✓ |
| Indonesia | | ? | | ✓ |
| Iran | | ? | | |
| Iraq | | ? | | |
| ISRAEL | | ? | × | |
| ITALY | | ? | × | ✓ |
| Jamaica | | ? | | |
| Japan | | ? | | |
| KENYA | | ? | ✓ | ✓ |
| D.P.R. korea | | ? | | |
| Republic of Korea | | ? | | |
| Kuwait | | ? | | |
| LIBERIA | | ? | × | |
| Madagascar | | ? | | ✓ |
| Malaysia | | ↓ | | ✓ |
| Maldives | | ? | | |
| MAURITANIA | | ? | × | |
| Mexico | | ↑ | | ✓ |
| Mozambique | | ? | | ✓ |
| Myanmar | | ? | | |
| NEW ZEALAND | | ? | × | |
| Nicaragua | | ? | | ✓ |
| NIGERIA | | ? | × | |
| Oman | | ? | | |
| PAKISTAN | | ↑? | × | |
| PANAMA | | ? | × | |
| Papua New Guinea | | ? | | ✓ |
| PERU | ● | ? | × | ✓ |
| PHILIPPINES | ● | ↓ | ✓ | ✓ |
| PORTUGAL | | ? | × | |
| Qatar | | ? | | |
| Saint Kitts and Nevis | | ? | | |
| Saint Lucia | | ? | | |
| Saint Vincent and the Grenadines | | ? | | |
| Samoa | | ? | | ✓ |
| SAO TOME AND PRINCIPE | | ? | × | |
| SAUDI ARABIA | | ? | × | |
| SENEGAL | | ? | ✓ | ✓ |
| Seychelles | | ? | | |

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| Sierra Leone | | ? | | |
| Singapore | | ? | | |
| Solomon Islands | | ? | | |
| SOMALIA | | ? | × | |
| SOUTH AFRICA | ● | ? | × | ✓ |
| SRI LANKA | | ? | ✓ | ✓ |
| Sudan | | ? | | |
| Suriname | | ? | | × |
| U.R. TANZANIA | | ? | ✓ | |
| Thailand | | ↓ | | ✓ |
| TOGO | | ? | × | |
| Trinidad and Tobago | | ? | | |
| United Arab Emirates | | ? | | |
| United States | | ? | | |
| URUGUAY | | ? | ✓ | |
| Venezuela | ● | ? | | |
| Viet Nam | | ? | | |
| Yemen | | ? | | |

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: CHELONIIDAE

SPECIES: *Lepidochelys olivacea* (Eschscholtz, 1829)

SYNONYMS: -

COMMON NAME: Olive Ridley; Pacific Ridley (English); Ridley du Pacifique; Tortue bâtarde; Tortue olivâtre (French); Tortuga golfina; Tortuga olivacea (Spanish)

RANGE STATES: Angola; Antigua and Barbuda; AUSTRALIA; Bahrain; Bangladesh; Barbados; BENIN; Brazil; Brunei Darussalam; Cambodia; CAMEROON; Canada; Cape Verde; CHILE; China; Colombia; Comores; CONGO; CONGO, DEMOCRATIC REPUBLIC OF THE; Costa Rica; COTE D'IVOIRE; Cuba; DJIBOUTI; Dominica; Dominican Republic; Ecuador; EGYPT; El Salvador; Equatorial Guinea; Eritrea; FRANCE (including French Guiana, New Caledonia); Gabon; GAMBIA; GHANA; Grenada; Guatemala; GUINEA; GUINEA-BISSAU; Guyana; Haiti; Honduras; INDIA (including Andaman Islands, Laccadive Islands, Nicobar Islands); Indonesia; Iran (Islamic Republic of); Iraq; ISRAEL; Jamaica; Japan; KENYA; Korea, Democratic People`s Republic of; Korea, Republic of; Kuwait; LIBERIA; Madagascar; Malaysia; Maldives; MAURITANIA; Mexico; Mozambique; Myanmar; NEW ZEALAND; Nicaragua; NIGERIA; Oman; PAKISTAN; PANAMA; Papua New Guinea; PERU; PHILIPPINES; Qatar; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; SAO TOME AND PRINCIPE; SAUDI ARABIA; SENEGAL; Seychelles; Sierra Leone; Singapore; Solomon Islands; SOMALIA; SOUTH AFRICA; SRI LANKA; Sudan; Suriname; TANZANIA, UNITED REPUBLIC OF; Thailand; TOGO; Trinidad and Tobago; United Arab Emirates; United States (Hawaiian Islands, Puerto Rico, United States Virgin Islands); Venezuela; Viet Nam; Yemen; international waters (Atlantic Ocean, Indian Ocean, Pacific Ocean)

RED LIST RATING: EN A1bd (Red List Standards and Petitions Subcommittee, 1996)

CONSERVATION STATUS AND ACTIONS:

The range of the Olive ridley turtle is essentially tropical. In the eastern Pacific nesting takes place from southern Sonora, Mexico, to the south at least to Colombia. Non- nesting individuals occasionally are found in waters of the southwestern United States. They occur abundantly in Pacific Colombia and Ecuador, but only in small numbers in Peru and Chile. It has been recorded occasionally from Galapagos waters, but it is essentially very rare throughout the islands of the Pacific, and indeed even in the western Pacific it is scarce everywhere, although widespread low-density nesting occurs. In the Indian Ocean it only achieves abundance in eastern India and Sri Lanka, although minor nesting occurs alongside the green turtles at Hawke's Bay, Pakistan, and some nesting also occurs in New Britain, Mozambique, Madagascar, Peninsular Malaysia, and various other localities (NOAA, 2005).

In the Atlantic Ocean, the olive ridley occurs widely, but probably not in great abundance, in waters of West Africa, from about Mauritania southward at least to the Congo. In the Western Atlantic, nesting formerly occurred abundantly in eastern Suriname, as well as in western French Guiana and northwestern Guyana. Non-nesting individuals occur regularly as far west as Isla Margarita and Trinidad, but they rarely penetrate any further into the Caribbean than this. The species occurs in Brazil, and nests in the states of Bahia and Sergipe, but it seems to be rare (NOAA, 2005).

The most dramatic aspect of the life history of the olive ridley is the habit of forming great nesting aggregations, generally known as 'arribadas'. Although not very adult olive ridley participates in these 'arribadas', the vast majority of them do (NOAA, 2005).

Because of the continued existence of large arribadas, it is probable that the olive ridley is, in terms of absolute numbers of adult individuals in existence, the most abundant sea turtle species in the world. Nevertheless, there is evidence of downward trends at several arribada beaches (NOAA, 2005). Although global population numbers for Olive Ridley do not exist, there are an estimated 800,000 nesting females of this species based on nesting beach monitoring reports and publications from the early to mid 1990s (Caribbean Conservation Corporation and Sea Turtle Survival League, 2004). There is evidence for a significant decline and crude calculations based on the data provided by the Marine Turtles Specialist Group indicate that the reduction since the late 1960s has been close to 50% (Kemf, *et al.*, 2000; Red List Standards and Petitions Subcommittee, 1996).

Olive Ridley populations are in sharp decline due to poaching of eggs, beach development, fishing and pollution. The belief that turtle eggs have aphrodisiac properties is a major threat to Olive Ridley populations in Central and South America. Populations of Olive Ridley are sometimes threatened with disease, particularly tumours, which may be caused by pollution (Kemf, *et al.*, 2000). The Olive Ridley will always be vulnerable because such a large proportion of its reproductive effort is concentrated in only a few locations. Human caused or natural disturbances to nesting beaches and internesting areas can have huge repercussions on the whole population (McLellan *et al.*, 2004).
Direct harvest of adults and eggs, incidental captures in commercial fisheries and loss of nesting habitat are main concerns regarding the recovery of this species (NOAA, 2005).

**Angola:**

*Status:* The olive ridley has been reported in Ambrize and in Luanda (Carr & Carr, 1991).

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF is starting a project to assess and reduce the by-catch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**Antigua and Barbuda:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**AUSTRALIA:**

*Status:* The Australian population of the Olive Ridley turtle is poorly documented. They migrate from feeding ground in Queensland, the Northern Territory and

Western Australia to reach breeding and nesting sites in the Gulf of Carpentaria (Queensland) and the Arafura Sea (Northern Territory). They have not been recorded nesting in Western Australia. The females nest all year round (Australia National Report, 2002).

*CMS actions:* Numerous research papers on subjects including monitoring nesting sites, GIS-based models for indigenous management, effects of commercial fishing activities, ecotourism (Australia National Report, 2002).

*Other actions:* The GBR Marine Park, until recently, had not been well protected with respect to marine turtle habitats. However, the GBR Marine Park Authority is in the process of establishing a network of no-take zones throughout all 70 bioregions of the GBR, which will benefit marine turtle conservation enormously (McLellan *et al.*, 2004).

The movements of Olive Ridley turtles which nest on the Tiwi Islands north of Darwin, are largely unknown. The Australian Government Department of the Environment and Heritage and WWF, are currently launching a tracking study of these turtles which will reveal migration patterns between nesting and foraging grounds, and details about currently unknown foraging areas and foraging behaviour (McLellan *et al.*, 2004). Another project (with the same partners involved) aims to reduce the numbers of feral dogs on the northern beaches of Melville island (Tiwi islands) to increase nesting success of olive ridley turtles. Indigenous sea rangers are involved in the project and are being trained in the bating process (IOSEA Marine Turtle MoU, 2004).

**Bahrain:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Bangladesh:**

*Status:* The species is reported to occur in the territorial waters of Bangladesh, with most individuals nesting at St. Martin's Island. From October 1996 to April 2001, 477 olive ridley turtles nested successfully. Threats due to fishing nets and fishing vessels are severe. Islanders normally use drift nets, rocket nets, seine nets, etc., all of which can result in accidental capture and either drowning or intentionally killing of sea turtles. Threats to sea turtles in Bangladesh also include manmade physical alterations such as barriers around the beach (Islam, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1996, success has been gained through several awareness programs, which has helped some of the traditional fisherman view turtles as friendly animals instead of being harmful to their fishing activity (Islam, 2002).

**Barbados:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**BENIN:**

*Status:* This species is seen with increasing frequency according to people inhabiting the coast (Benin National Report, 2002).

*CMS actions:* Various actions including publicity, education, raising awareness and safeguarding of supposed egg-laying sites are being carried out (Benin National Report, 2002).

*Other actions:*

**Brazil:**

*Status:* The species occurs in Brazil, and nests in the states of Bahia and Sergipe, but it seems to be rare (NOAA, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* Until the end of the 1970s, there were no marine conservation programmes in Brazil. Marine turtles were in grave danger of local extinction through capture in fishing nets, adult females killed for meat and nests being destroyed. In 1980, the Brazilian Institute of Forestry created the TAMAR Programme, to save and protect marine turtles through research, conservation actions and community involvement. The work was soon extended nationwide from the original project sites, and focused on the identification of species, the main nesting sites, the nesting seasons, and the socio-economic reasons for the overexploitation of marine turtles by coastal communities. Accompanying this has been a large education and awareness-raising campaign (McLellan *et al.*, 2004).

**Brunei Darussalam:**

*Status:* The olive ridleys are the most common species to land and nest in the northwest part of Brunei Darussalam (Seafdec, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Government has set up the National Marine Turtle Conservation and Management Committee. All efforts are currently towards the first step of instilling awareness among the public, especially school children and those involved in the collection and selling of turtle eggs (Seafdec, 2005).

**Cambodia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CAMEROON:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Canada:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Cape Verde:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CHILE:**

*Status:* It has been reported in Region V (Valparaíso) and Region VIII, in Lirquén and Arauco (Chile National Report, 2002).

*CMS actions:* The SERNAPESCA and CPPS 2001 Workshop was held in Valparaíso to define priority action guidelines of a programme for the conservation of marine turtles. There is a lack of adequate funding for research and logistic support to cover the Chilean littoral and oceanic islands. (Chile National Report, 2002).

*Other actions:*

**China:**

*Status:* Olive ridleys have been recorded from coastal waters of Jiangsu, Shanghai, Zhejiang, Fujian, Taiwan, Hainan, Hong Kong and Guangxi. It is rare in Chinese coastal waters (Wang & Zhao, 1998). The incidental capture of sea turtles by various types of fishing gear is considered a major threat to the survival of their populations (Cheng & Chen, 1997). The species is included as Endangered in the China Red Data Book (Wang & Zhao, 1998).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Colombia:**

*Status:* It is a rare species in the Caribbean coast but it is the most abundant marine turtle in the Pacific coast, where it nests in Playón del Valle, Sanquianga Natural Park and Gorgona island. It is catalogued as Endangered in the Colombian Red Data Book. Main threats for the species in this country were overexploitation and egg harvesting, as well as entanglement in fishing nets (Castaño-Mora, 2002).

*CMS actions:* Not a Party to CMS.

*Other actions:* From 1990, Fundacion Natura has established investigation and protection camps for the species in the Playon del Valle, Chocó Department. In Sanquianga National Park, there are important awareness campaigns for the protection of its nesting colony

**Comoros:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**CONGO:**

*Status:* Very few egg-laying sites are known. Ridley Turtles have been observed near the beaches of Pointe-Noire (to the north) and are present in the Conkouati National Park. Fishermen have accidentally captured them at sea. (Congo National Report, 2002).

*CMS actions:* None reported.

*Other actions:*

**D.R. CONGO:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Costa Rica:**

*Status:* Nancite is one of the world's main Olive Ridley nesting beaches (Kemf, *et al.*, 2000), and declines have been reported there. However, other populations nesting along the Pacific coast of Costa Rica appear stable or increasing (NOAA, 2005). The nesting population, where solitary nesting is concerned, has been estimated at 4,500 to 5,000 individuals. The most important nesting beach is at Ostional, situated in the Ostional National Wildlife Refuge. It is principally threatened by incidental capture in shrimp nets and the illegal poaching of the eggs (Chaves-Quiros & du Toit, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* The turtles are protected whilst nesting at Nancite (Kemf, *et al.*, 2000).

**COTE D'IVOIRE:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Cuba:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF has supported habitat protection in a key marine protected area, Jardines de la Reina, and supported enforcement action to aid in the decommissioning of turtle nets within the park. Turtle nesting monitoring has also been carried out in conjunction with Centre for Molecular Immunology at Guanahacabibes (McLellan *et al.*, 2004).

**DJIBOUTI:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Dominica:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Dominican Republic:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**ECUADOR:**

*Status:* Reported in the Galapagos Islands (UNEP-WCMC, 2004). They occur abundantly in this country (NOAA, 2005). Since the 1960s, Olive Ridleys have been killed for their leather. An estimated 450,000 turtles, mainly Olive Ridleys were slaughtered during the 1970s in Ecuadorian waters to for the international trade (Kemf, *et al.*, 2000).

*CMS actions:* None reported.

*Other actions:* Working closely with the IATTC and NOAA, WWF is undertaking a pioneering effort in the Eastern Pacific to test such gear fixes for their efficiency and conservation impact. This work is designed to facilitate the shift of the Ecuadorian artisanal fisheries fleet from traditional j-hooks to circular hooks and provide them with dehooking equipment and training (McLellan *et al.*, 2004).

**EGYPT:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**El Salvador:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**Equatorial Guinea:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Eritrea:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**FRANCE:**

*Status:* ***French Guiana***
Olive Ridley turtles nest on French Guiana's beaches. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* None reported.

*Other actions:* ***French Guiana***
Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan has recently been technically finalised and been submitted for official endorsement nationally and regionally. It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

**Gabon:**

*Status:* All species of turtle on the Gabon coast are threatened by direct harvesting and as a by-catch of multinational fishing fleets. There are no laws to protect sea turtles (other than leatherbacks) (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* The Gamba Complex of Protected Areas in Gabon is an ideal place for long-term monitoring of marine turtle nesting sites. In the 2002-2003 turtle nesting season, which goes from October to March, a pilot study within the Gamba Complex was carried out by WWF, Ibonga (A local environmental education NGO active in the Gamba Complex) and EU funded Central African marine turtle protection programme PROTOMAC. In 2003-2004, monitoring continued with the technical assistance of a Dutch environmental NGO called Biotopic that focuses on marine turtle research in Suriname and Gabon (Wilson & Humphrey, 2004).
The partners of the Gamba Marine Turtle Programme continue their research and monitoring to improve understanding and knowledge of the status, life histories and threats to marine turtles in the area, in order to ensure a regionally coherent approach to conservation management (Wilson & Humphrey, 2004).

**GAMBIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**GHANA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Grenada:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Guatemala:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**GUINEA:**

*Status:*

*CMS actions:* Future actions will include in-depth research, protection and restoration of the habitat, and public communication and information campaigns (Guinea National Report, 2002).

*Other actions:*

**GUINEA-BISSAU:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Guyana:**

*Status:* Olive Ridley turtles nest on this country's beaches, including Shell Beach. Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000, WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action has recently been technically finalised and been submitted for official endorsement nationally and regionally. It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

Shell Beach hosts Olive Ridley nests. WWF and UNDP are providing the technical and financial support to the extensive consultation that is needed to formally declare and manage this beach as a reserve. Under the coordination of the Guyana Marine Turtle Conservation Society, WWF has, over the years, supported most marine conservation initiatives including monitoring, beach protection, and enforcement of fishing bans during the nesting season. In the last few nesting seasons, WWF has supported educational camps for local communities and supported the Almond Bay women's coconut project - an alternative livelihood option to the poaching of turtle eggs. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**Haiti:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Honduras:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**INDIA:**

*Status:* In India, a few thousands olive ridleys nest in northern Tamil Nadu, Andhra Pradesh, and the Andaman and Nicobar islands. However, the single most important breeding area for olive ridleys in the Indian Ocean is Orissa, which has three known arribada beaches at Gahirmatha, Devi River mouth and Rushikulya. This population has been simultaneously labelled as the 'world's largest' and as 'highly endangered' (Shanker *et al*., 2003). Gahirmatha, located in the Bhitarkanika Wildlife Sanctuary, supports perhaps the largest nesting

population with an average of 398,000 females nesting in a given year, and this population continues to be threatened by near shore trawl fisheries (NOAA, 2005).

The Orissa mangroves are threatened by the massive local prawn aquaculture industry that has removed more than 30km$^2$ out of the total 115.5km$^2$ of mangrove habitat (Kemf, *et al.*, 2000).

The main cause of mortality is illegal gill net and trawl fishing in the offshore waters where the turtles die as incidental catch. Despite bans on mechanised fishing in near-shore waters (5 km off the Orissa coast, 20 km in Gahirmatha), trawlers continue to operate and mortality has risen alarmingly over the past 10 years (Shanker *et al*., 2003).

The mass-nesting phenomenon used to be concentrated northwards at the Gahirimatha and Devi river mouths, but coastal erosion and development have pushed the nesting turtles further south to the Rushikulya river mouth. Beach development, erosion and predation are all serious threats to the mass nesting (McLellan *et al.*, 2004).

The species is included as Endangered in the Indian Red Data Book (Ghosh, 1994).

*CMS actions:*

None reported.

*Other actions:*

In 1975 the government declared the Bhitarkanika Wildlife Sanctuary, but the prawn aquaculture industry seriously threaned the nesting habitat of Olive Ridleys. In 1997 the Orissa Government passed a law preventing further development in the B.W. Sanctuary (Kemf, *et al.*, 2000). WWF is engaged in dialogue with the fishing community and the government in order to regulate the fishing operations and develop turtle-friendly fishing practices (McLellan *et al.*, 2004).

Beach protection work in 2003 included creating awareness in the surrounding villages of the endangered status of Olive Ridley turtles, protecting the nests from predators, and subsequently collecting and releasing the hatchlings into the sea. WWF India is also starting to address marine turtle conservation awareness in the south-east state of Tamil Nadu through traditional folk theatre, and through beach cleaning and stakeholder meetings in the central western state of Goa (McLellan *et al.*, 2004).

There is an urgent need to train management personnel in population estimates techniques and collection of scientific data in order to evaluate status, threats and trends to manage and conserve olive ridley turtles in Orissa effectively (Shanker *et al.*, 2003).

**Indonesia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* ***Berau***

In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary-protected areas was recommended. Areas proposed included Berau Island (Kemf, *et al.*, 2000).

**I.R. Iran:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Iraq:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**ISRAEL:**

*Status:* Reported to be a range state in the Israel National Report to CMS (2002), but no specific information about the species is available in it.

*CMS actions:* None reported.

*Other actions:*

**ITALY:**

*Status:*

*CMS actions:* None reported.

*Other actions:* WWF is conducting a campaign in Italy to decrease mortality of marine turtles due to by-catch. WWF has supported the presence of independent observers on Italian longline fishing fleets to monitor fish catches and document the extent of marine turtle and shark by-catch and mortality. This type of monitoring programme is limited by the high costs involved, and the alternative is to involve the fishing industry in collecting the data. These data will provide valuable information about the rate and nature of fishing interactions, in order to guide future mitigation measures. WWF is also creating a management plan for their five Italian Rescue Centres, the goal of which is the veterinary treatment, rehabilitation and release at sea of marine turtles (McLellan *et al.*, 2004).

**Jamaica:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Japan:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**KENYA:**

*Status:* Along most areas of the Kenyan coast, with higher concentrations in the northern parts and there is strong seasonal variations in distribution (Kenya National Report, 2002).

*CMS actions:* Olive Ridley turtles are monitored within the framework of coastal zone and biodiversity monitoring (Kenya National Report, 2002).

*Other actions:* In 1996, WWF joined forces with the Kenya Wildlife Service, the Fisheries and Forest Departments and local communities to develop a long-term management strategy integrating conservation and development priorities of the Kiunga Marine National Reserve. The project has focused on developing sustainable and equitable methods of using the reserve's resources. Community participation in protecting nesting marine turtles is fostered through an incentive scheme for nests discovered and protected throughout the season. The community has also actively participated in ongoing monitoring of marine turtles and their habitats (McLellan *et al.*, 2004).

WWF has recently hosted a marine turtle training course for KESCOM (Kenya Sea Turtle Committee) (McLellan *et al.*, 2004). WWF is working with national committees for marine turtle to ensure that marine resources are used sustainably by local communities and that critical habitats for marine turtles, as well as coral fish and dugongs, are protected (McLellan *et al.*, 2004).

**D.R. Korea:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Republic of Korea:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Kuwait:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**LIBERIA:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Madagascar:**

*Status:* Olive ridleys are known to nest in Madagascar beaches. A major challenge to marine turtle conservation in Madagascar is the high level of subsistence use of natural resources, including marine turtles, which lack obvious alternatives. (IOSEA Marine Turtle MoU, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000, tagging activities have been initiated in Iranja Islands in collaboration with private hotel owner. These tagging activities are the only monitoring programmes implemented in Madagascar (IOSEA Marine Turtle MoU, 2004).

**Malaysia:**

*Status:* ***Peninsular Malaysia***

The Olive Ridleys have suffered serious declines in the past ten years in Terengganu (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* ***Peninsular Malaysia***

WWF conducts the Community Education and Awareness Programme on Turtle Conservation in partnership with the Department of Fisheries at the recently established Ma' Daerah Turtle Sanctuary Centre, a hatchery and interpretation centre, in the Terengganu state on the east coast of peninsular Malaysia. This Sanctuary is a nesting site primarily of green turtles, although some Olive Ridley and leatherback also nest here. The programme aims to establish local community interest and action groups for the conservation of turtles in Ma'Daerah, to build the capacity of local communities on turtle conservation, and to lobby for the gazettal of Ma'Daerah as a turtle sanctuary (McLellan et al., 2004).

***Sabah***

In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary protected areas was recommended. Areas proposed included the Phillippine-Sabah Turtle Islands and Sipadan Island (Kemf, *et al.*, 2000).

**Maldives:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**MAURITANIA:**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**Mexico:**

*Status:* Some of the main nesting beaches of Olive Ridley are found here. On one beach in the 1960s, an estimated 30,000 Olive Ridleys nested here in a single *arribada.* Illegal harvesting has been carried out since the 1960s and continued despite a sharp decline in numbers. All species of Mexican sea turtles are under threat. Today populations of the species are starting to recover in this area, although 500,000 eggs were removed from Oaxaca beach in 1996 (Kemf, *et al.*, 2000).

*CMS actions:* Not a Party to CMS.

*Other actions:* The main strategies for sea turtle conservation in Mexico include a complete ban on exploitation of sea turtles and their eggs, and the protection of nesting beaches. Management has mainly focused on nest protection in centralized beach hatcheries. Recurrent problems related to lack of funds include insufficient beach protection and inadequate management of nest removal to hatcheries have resulted in poor overall success of the conservation programs. A successful sea turtle conservation strategy in the Pacific coast of Mexico must combine mechanisms to reduce human-induced and natural factors causing nests and hatchling losses (Garcia *et al*., 2003).

**Mozambique:**

*Status:* Turtles are found in the waters of Mozambique and also come ashore to nest (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Work has been conducted by WWF in 2001 on turtle by-catch in shrimp fisheries and on the use of turtle excluder devices (TEDs) (McLellan *et al.*, 2004). A WWF online public advocacy campaign urging Mozambique's Ministers to take action to prevent further losses of turtles was launched in February 2003. As a result of this, and WWF's work with the relevant Ministers, a new Regulation for Marine Fisheries was approved by the Council of Ministers in October 2003, which made TEDs compulsory in trawl nets in Mozambique (McLellan *et al.*, 2004).

In an effort to reduce long-line turtle by-catch by illegal and unlicensed longline fishing vessels in Mozambique waters, the Government has begun to intercept these vessels, through a military team based at Bazaruto Archipelago National Park (McLellan *et al.*, 2004). Marine turtles are among the species benefiting from a number of marine protected areas set up on the coast (Kemf, *et al.*, 2000).

The creation in 2001 and 2002 of two new marine protected areas (Bazaruto Archipielago National Park and Quirimbas National Park) is a critical milestone in global marine conservation (Wilson & Humphrey, 2004).

**Myanmar:**

*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**NEW ZEALAND**
**(Tokelau):**

*Status:*
*CMS actions:* None reported.
*Other actions:*

**Nicaragua:**
*Status:*
*CMS actions:* Not a Party to CMS.

*Other actions:* WWF started a campaign to protect Pacific Olive Ridley turtles in 1987. Since 1995, WWF has focused its Central American marine turtle conservation activities on the Nicaraguan, Honduran, Costa Rican and El Salvador coasts (Kemf, *et al.*, 2000).

**NIGERIA (?):**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Oman:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**PAKISTAN:**
*Status:* Sandspit and Hawkes bay (near Karachi) are the major olive ridley turtles nesting areas. They nest from July to September with a peak during August. In Pakistan, sea turtles are not part of the local diet due to religious customs, and as a result, except for occasional poachers and curious tourists, the main cause of destruction is feral dogs that dig up the nests for food. Other factors that threaten sea turtles are the destruction of nesting habitat due to construction of houses/beach huts all along the beaches, pollution, and disturbance on the beach by tourists, all of which interfere with the nesting cycle of the turtles (Firdous, 1999)

*CMS actions:* None reported.
*Other actions:*

**PANAMA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**Papua New Guinea:**
*Status:* Few quantitative data are available about important marine turtle habitats in Papua New Guinea, but nesting is reported in this country

*CMS actions:* Not a Party to CMS.

*Other actions:* WWF and other partner organisations are currently investigating the potential of establishing a marine turtle monitoring programme that will provide valuable data as well as involve local communities. It is anticipated that the data generated from these surveys will become the baseline upon which national policies for the conservation and protection of marine turtles will be formulated (McLellan *et al.*, 2004).

**PERU:**
*Status:* Catalogued as Vulnerable in the Peruvian Red Data Book (Pulido Capurro, 1991).

*CMS actions:* None reported.

*Other actions:* WWF has worked in Peru with local partners on various initiatives, including a turtle conservation project south of Lima, law enforcement on land and at sea, initiatives against by-catch and illegal consumption, and environmental education and awareness campaigns with local fishermen, villagers and public

authorities. One of the outstanding achievements of this work was the recent reduction (by two thirds) of the number of commercial establishments selling turtle meat in the Pisco Paracas area. This was a direct result of numerous control operatives set-up to prevent both the capture and sale of marine turtles (McLellan *et al.*, 2004).

**PHILIPPINES:**

*Status:* Hatchlings to nesting adults are rarely sighted in the Philippines. Isolated cases of nesting have been recorded in El Nido, Palawan and Subic Bay, Zambales. In the Bicol region, it was found that the olive ridley and hawksbill carapaces were used as wall decors and these species were collected in adjacent waters. Olive ridleys may be distributed throughout the Philippines but its population has been greatly reduced (Wildlife Conservation Society of the Philippines, 1997).

*CMS actions:* Research, monitoring and habitat protection activities have been carried out. The development of a community-based sea turtle conservation program in other sites to duplicate the one established in Morong, Bataan, is being planned (Philippines National Report, 2002).

*Other actions:* In 1993 an ASEAN Regional Symposium on Marine Turtle Conservation was held, which brought together experts from throughout the Asia Pacific region. The establishment of transboundary protected areas was recommended. Areas proposed included the Phillippine-Sabah Turtle Islands, Sipadan Islands, and the Berau Island (Kemf, *et al.*, 2000).

**PORTUGAL (v)*:**

*Status:* Occurrence reported in Madeira (UNEP-WCMC, 2004).

*CMS actions:* None reported.

*Other actions:*

**Qatar:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Kitts and Nevis:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Lucia:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Saint Vincent and the Grenadines:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Samoa:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* The Samoan Government has declared its political commitment to establishing its 120,000km$^2$ Economic Exclusive Zone as a Whale, Shark and Turtle Sanctuary in 2002 (McLellan *et al.*, 2004).

**SAO TOME AND PRINCIPE:**

*Status:*

*CMS actions:* None reported.
*Other actions:*

**SAUDI ARABIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**SENEGAL:**
*Status:* Olive Ridleys have been spotted in the centre of the country and in the north in the National Park of the Barbary Coast. There is no precise information on the size of the population (Senegal National Report, 2002).

*CMS actions:* A national strategy for the conservation of turtles will be put in place (Senegal National Report, 2002).

*Other actions:* WWF has funded a number of protected areas for turtles in Senegal (Kemf, *et al.*, 2000). WWF has worked with partners "le village des tortues" on raising awareness of the need for marine turtle conservation in Senegal. As a result, the consumption of turtles has stopped in some villages where turtles were traditionally eaten (McLellan *et al.*, 2004).

The Government of Senegal recently announced the establishment of a network of four marine protected areas in Senegal's coastal zone, which will protect regionally important feeding and nesting grounds for five species of marine turtles (McLellan *et al.*, 2004).

**Seychelles:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Sierra Leone:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Singapore:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**Solomon Islands:**
*Status:*
*CMS actions:* Not a Party to CMS.
*Other actions:*

**SOMALIA:**
*Status:*
*CMS actions:* None reported.
*Other actions:*

**SOUTH AFRICA:**
*Status:* It is a frequent visitor to South African waters, but only a sporadic breeder in South Africa. Catalogued as Vulnerable in the South African Red Data Book (Branch, 1988)

*CMS actions:* None reported.

*Other actions:* WWF is starting a project to assess and reduce the by-catch of threatened seabirds, sharks and turtles on longline fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project will mainly concentrate on increasing the understanding of the nature and scale of impacts, raising awareness of the conservation issues, training and capacity building of the

fishing industry and government, demonstration trials of known mitigation measures, and encouraging the active participation of the fishing industry in dealing with this issue (McLellan *et al.*, 2004).

**SRI LANKA:**

*Status:* The most important turtle nesting grounds in Sri Lanka are located in the Galle and the Hambantota districts (Amarasooriya, 1999)

*CMS actions:* CMS has funded a project in Sri Lanka to assess by-catch and fisheries interactions involving olive ridley turtles, to sensitive local fishermen to marine turtle conservation issues, as well as to carry out a tagging programme designed to give more information about turtle conservation issues, as well as to carry out a tagging programme designed to give more information about turtle movements in that part of the northern Indian ocean (Hykle, 1999).

*Other actions:* The Turtle Conservation Project (TCP) in Sri Lanka was established in 1993 to address the issue of marine turtle conservation. The TCP aims to devise and facilitate the implementation of sustainable marine turtle conservation strategies through education, research and community participation (Kapurusinghe, 1999).

**Sudan:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Suriname:**

*Status:* Some of the main nesting beaches of Olive Ridley are found here (Kemf, *et al.*, 2000). Suriname and adjacent areas nesting populations have declined more than 80 percent since 1967 (NOAA, 2005). Egg poaching and incidental capture by fisheries off the coast are both seriously threatening marine turtles in this region (McLellan *et al.*, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 2000,WWF has played a key role in establishing a functioning network for marine turtle conservation across French Guiana, Suriname and Guyana. A Regional Sea Turtle Conservation Programme and Action Plan has recently been technically finalised and been submitted for official endorsement nationally and regionally. It provides a framework for integrated scientific initiatives (including research and monitoring), conservation and public awareness campaigns, and collaboration among local, national and regional entities involved in marine turtle conservation in the Guianas (McLellan *et al.*, 2004).

WWF is currently supporting most marine turtle conservation initiatives that are coordinated under the Foundation for Nature Conservation (Stinasu) – a semi-government organisation. Local Amerindian organisations, such as the community-based Stidunal, are becoming increasing involved in managing, and benefiting from, marine turtle conservation initiatives. WWF has been involved in building field stations on remote beaches, training rangers, supporting sustainable tourism initiatives, and promoting fishing closures in front of a nesting beach reserve. WWF has supported marine turtle conservation in this country for more than 20 years through marine turtle research, supporting enforcement of conservation regulations, developing ecotourism, encouraging selective fishing gear use, and reducing turtle meat and egg take. Increasingly, local organisations and communities are playing an integral role in the conservation of marine turtles in the Guianas (McLellan *et al.*, 2004).

**U.R. TANZANIA:**

*Status:* Population size and trends are not known. There is no nesting record of Olive Ridley Turtle in Tanzania. Formerly nested in Maziwi Island (Tanga Region) which became inundated in the 1980s and which may have been the only (known?) nesting sites in Tanzania. There have been no mortality records in Mafia since January 2001 but fishermen say they do occur from time to time (Tanzania, U.R. National Report, 2002).

*CMS actions:* There is monitoring of mortalities in Mafia Islands. A technical committee will be formed to coordinate all turtle conservation programmes in Tanzania (U.R. Tanzania National Report, 2002).

*Other actions:*

**Thailand:**

*Status:* Olive ridleys nest along the Andaman coast (Wangkulangkul *et al*., 1999). By the 1970s, all turtle species in Thailand were subject to commercial egg collection and the harvest was in decline. Drift nets in coastal waters were, and remain, a major threat causing accidental drowning (Kemf, *et al.*, 2000). Due to over-harvesting of eggs and other forms of exploitation along the Andaman coast of southern Thailand, decreased numbers of sea turtle nesting have been reported (Wangkulangkul *et al*., 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:* Since 1980 there have been various conservation activities to protect Thailand's turtles, including surveys, anti-poaching patrols, and village-based projects (Kemf, *et al.*, 2000).
Various efforts have been underway to increase sea turtle population through a breeding conservation project at the Phuket Marine Biological Center. Eggs have been collected from various nesting sites along the west coast of Thailand and transferred for incubation at the center. Biological and behavioural data have been collected from a captive population for use as a basis for maintenance and breeding programs (Wangkulangkul *et al*., 1999).

**TOGO:**

*Status:*

*CMS actions:* None reported.

*Other actions:*

**Trinidad and Tobago:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**United Arab Emirates:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

**United States:**

*Status:* Non-nesting individuals are occasionally found in waters of the southwestern United States (NOAA, 2005).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**URUGUAY*:**

*Status:* There are only three records of Olive Ridleys in Uruguay. Therefore the species is not researched (Uruguay National Report, 2002).

*CMS actions:* Four future research lines have been established: genetic, impacts from

fisheries, environmental education, and feeding areas (Uruguay National Report, 2002).

*Other actions:*

**Venezuela:**

*Status:* The species is regularly observed offshore the northeast coast of this country, but nesting has not been probed in Venezuela. It is catalogued as Endangered in the Venezuela Red Data Book (Rodriguez and Rojas-Suarez, 1999).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Viet Nam (?):**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:* There are proposals for a network of protected areas (Kemf, *et al.*, 2000).

**Yemen:**

*Status:*

*CMS actions:* Not a Party to CMS.

*Other actions:*

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* Range State not yet included in the CMS range list for this species.

***Natator depressus* - synopsis**

| Country | Reported as nationally threatened | Apparent trend | CMS actions reported (in 2002 National Reports) | Other recent actions reported in the literature |
|---|---|---|---|---|
| AUSTRALIA | ● | ? | × | ✓ |
| Indonesia | | ? | | |
| Papua New Guinea | | ? | | ✓ |

**REVIEW OF CONCERTED ACTION SPECIES**

REPTILIA: CHELONIIDAE

SPECIES: *Natator depressus* (Garman, 1880)

SYNONYMS: *Chelonia depressa*

COMMON NAME: Flatback (English); Cayunne; Chelonée à dos plat; Coffre; Tortue à bahut; Tortue marine à dos plat (French); Tortuga franca oriental (Spanish)

RANGE STATES: AUSTRALIA; Indonesia (?); Papua New Guinea

RED LIST RATING: DD (Red List Standards and Petitions Subcommittee, 1996)

CONSERVATION STATUS AND ACTIONS:

Flatback turtles inhabit subtidal soft-bottomed habitats of the continental shelf (Great Barrier Reef Marine Park Authority, 2004). They have the most limited range of any marine turtle species, being found only around the northern half of Australia, and in the seas between northern Australia and southern parts of Indonesia and Papua New Guinea. Flatbacks only very rarely leave the shallow waters of the continental shelf, and nest only in northern Australia, where beaches on small offshore islands are the most important sites (McLellan *et al.*, 2004).

Although global population numbers for sea turtle species do not exist, there are an estimated 7,500 nesting females of this species based on nesting beach monitoring reports and publications from the early to mid 1990s (Caribbean Conservation Corporation and Sea Turtle Survival League, 2004). Kemf, *et al.* (2000) reported the nesting population at 10,000 females, but point out that populations have never been monitored. The flatback is probably the least threatened marine turtle species (Kemf, *et al.*, 2000) but there are reasons why some declines may be expected in the future (Red List Standards and Petitions Subcommittee, 1996).

The restricted range means that the flatback is extremely vulnerable to habitat loss, especially of breeding sites, but the major threat appears to be incidental catch by the numerous fishing vessels operating in waters favoured by these turtles (McLellan *et al.*, 2004). Since the species is not highly valued by indigenous peoples, it is rarely subject to direct hunting. Populations of flatbacks are sometimes threatened with disease, particularly tumours, which may be caused by pollution (Kemf, *et al.*, 2000).

**AUSTRALIA:**

*Status:* All known breeding sites of the flatback turtle are in Australia. Breeding is centred in the southern Great Barrier Reef around Peak, Wild Duck, Curtis and Facing islands. However, low density nesting by flatbacks occurs on many mainland beaches and offshore islands north of Gladstone. The largest amount of nesting occurs on Crab Island in western Torres Strait This species is considered vulnerable in Australia (Great Barrier Reef Marine Park Authority, 2004).

*CMS actions:* None reported.

*Other actions:* Wild Duck Island National Park (Queensland) was set up in 1982 specifically for flatbacks (Euro Turtles, 2001). WWF's involvement with marine turtle conservation at Ningaloo Reef began with its participation in a campaign to halt a proposed beachside marina and hotel. WWF has supported a monitoring community project involving the local community, local government, and state government conservation agencies since 2002. WWF staff is also working with all other stakeholders in the region, in order to develop a coordinated and collaborative Conservation Strategy for marine turtles on the Ningaloo Reef and adjacent beaches. WWF is also extending its community turtle conservation work to other sites along the northwest coast of Western Australia, including into the Kimberley region, where the focus will be on community participation and sustainable catch by indigenous Aboriginal people (McLellan *et al.*, 2004).

**Indonesia (?):**

*Status:* The flatback turtle has been reported in this country, in the seas of East Nusa Tenggara and central and south Maluku (Great Barrier Reef Marine Park Authority, 2004; Anon, 2001). It is protected (Anon., 2001).

*CMS actions:* Not a Party to CMS.

*Other actions:*

**Papua New Guinea:**

*Status:* The flatback turtle has been reported in this country (Great Barrier Reef Marine Park Authority, 2004).

*CMS actions:* Not a Party to CMS.

*Other actions:* Few quantitative data are available about important marine turtle habitats in Papua New Guinea. As a result, WWF and other partner organisations are currently investigating the potential of establishing a marine turtle monitoring programme that will provide valuable data as well as involve local communities. It is anticipated that the data generated from these surveys will become the baseline upon which national policies for the conservation and protection of marine turtles will be formulated (McLellan *et al.*, 2004).

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* Range State not yet included in the CMS range list for this species.