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Ramsar COP13 Doc.18.26

## Draft resolution on the enhanced [protection and management] [conservation] of sea turtle breeding, feeding and nursery areas and the designation of key areas as Ramsar Sites

Submitted by France and Senegal

## Note from the Secretariat

At its 54th meeting, following discussion and suggestions for amendments, the Standing Committee in Decision SC54-25 instructed the Secretariat to edit, finalize and publish the draft resolution contained in document SC54-Com.10 for consideration at COP13, subject to inclusion in square brackets of the amendments listed by France as not having consensus support, and removal of the attribution of amendments.

## Introduction

- 1. In its Article 2 regarding the List of Ramsar Sites, the Ramsar Convention considers that the ecological functions of wetlands as habitats supporting a characteristic flora and fauna are fundamental. The choice of sites can be based on their international importance from a zoological point of view, as waterfowl habitat, but not exclusively. Sea turtles constitute a group that meets Criterion 2.
- 2. Moreover, Article 4.1 of the Convention also specifies that, for all wetlands, the Contracting Parties should promote the conservation of wetlands and waterfowl by establishing nature reserves, whether they are included in the List or not, and they should provide adequately for their wardening.
- 3. The Parties to the Convention have also already approved resolutions concerning marine turtles: Resolution VII.21 on *Enhancing the conservation and wise use of intertidal wetlands*, Resolution VIII.4 on *Wetland issues in Integrated Coastal Zone Management (ICZM)* and Resolution VIII.32 on *Conservation, integrated management, and sustainable use of mangrove ecosystems and their resources*.
- 3. The present [draft] resolution aims to urge the Parties on the one hand to reinforce conservation and management measures for wetlands presenting challenges for marine turtles and, on the other hand, to designate them as Ramsar Sites or reinforce their protection by other means.

## Draft resolution XIII.xx

# The enhanced [protection and management] [conservation] of sea turtle breeding, feeding and nursery areas and the designation of key areas as Ramsar Sites

- 1. RECALLING that the seven species of sea turtle (Dermochelyidae: *Dermochelys coriacea*; Cheloniidae: *Chelonia mydas*, *Caretta caretta*, *Eretmochelys imbricata*, *Lepidochelys olivacea*, *Lepidochelys kempii* and *Natator depressa*) have a conservation status ranging from vulnerable to critically endangered and ALSO RECALLING that in order to live and survive these species depend on the conservation of their breeding, feeding and nursery zones, which are marine and coastal areas;
- 2. CONSIDERING that, furthermore, all sites that are home to individuals belonging to the abovementioned species meet Criterion 2 of the Convention for inclusion in the List of Wetlands of International Importance (Ramsar Sites), and that consequently, the Ramsar Convention should play a role as mobilizer by encouraging the Parties to strengthen their actions in favour of the wetlands that are essential to these species;
- 3. ALSO CONSIDERING that sea turtles are included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Appendices I and II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC), the Cartagena Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region, the Berne Convention on the Conservation of European Wildlife and Natural Habitats, the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, the Convention on Biological Diversity, and regional agreements (such as the Indian Ocean – South-East Asian (IOSEA) Marine Turtle Memorandum of Understanding and the Abidjan Memorandum of Understanding (MoU) concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa), which encourage their respective Parties to provide better protection for sea turtles;
- 4. NOTING the existence of numerous tools and mechanisms with an ocean-wide scale, such as, for example covering the South Pacific and Western Pacific, the Secretariat of the Pacific Regional Environment Programme (SPREP), the Pacific Islands Regional Marine Species Conservation Action Plan, the Permanent Commission for the South Pacific (CPPS), and the Single Species Action Plan for the Loggerhead Turtle *Caretta caretta* in the South Pacific Ocean, adopted by the Conference of the Parties to CMS in Quito in November 2014 [replace with the Indian Ocean Southeast Asian Marine Turtle MOU (IOSEA)];
- 5. NOTING ALSO that some sea turtle subpopulations have increased in certain areas as a result of various conservation efforts;
- 6. CONCERNED that several regional populations of sea turtle are facing a high risk of extinction, and NOTING the degradation of their coastal habitats, the significant impact from fisheries bycatch, and also NOTING the excessively high mortality rates due to the taking of eggs, the destruction of adult females on nesting beaches by local human populations and the impact of [introduced predators] [exotic invasive species], in addition to predation and natural mortality of the eggs and hatchlings;
- 7. HIGHLIGHTING the fact that, during their life cycle, sea turtles use a wide variety of coastal habitats such as intertidal zones, estuaries, mangroves, rocks, seagrass beds and coral reefs;

- 8. CONSIDERING that marine and coastal feeding and nursery areas, in particular seagrass beds, coral reefs and mangroves, are often threatened physically and chemically by extractive, industrial and port activities and hotel infrastructure, as well as other human activities (including agriculture and the disposal of household and industrial effluents);
- [9. RECOGNIZING the role of traditional owners, indigenous peoples and local communities in turtle conservation and management;]
- 10. CONSIDERING that the protection of nesting beaches and of marine and coastal feeding and nursery areas will allow the survival rate of adult female, newly hatched and immature turtles to increase;
- 11. NOTING that Resolution 12.25 of CMS on *Promoting Conservation of Critical Intertidal and Other Coastal Habitats for Migratory Species* adopted at the twelfth session of the Conference of the Parties to CMS (Manila, October 2017) urges the Parties to that Convention to conserve intertidal and coastal habitats for migratory species;
- 12. NOTING that 114 Ramsar Sites and 53 Contracting Parties already provide habitat for at least one species of sea turtle [(see the annexed table)];
- 13. RECOGNIZING that the Abidjan MoU adopted resolutions the application of which can help improve the conservation of sea turtles; and
- 14. RECALLING that an MoU has been signed between IAC and the Secretariat of the Ramsar Convention, with the goal of combining the efforts made under each of the Conventions, in order to build the capacities of the Parties to both Conventions to identify and strengthen the conservation and rational use of Ramsar Sites;

## THE CONFERENCE OF THE CONTRACTING PARTIES

- 15. [URGES] [ENCOURAGES] the Contracting Parties whose coastlines contain sea turtle breeding areas, [important] nesting beaches, coastal and marine feeding and nursery areas, to identify index nesting and foraging sites and ensure the populations are monitored as precisely as possible, in order to improve knowledge of the distribution, numbers and state of health of each of the species involved;
- 16. [URGES] [ENCOURAGES] the Contracting Parties to strengthen the conservation and management of those identified index nesting and foraging sites, and notably if possible to designate them as Ramsar Sites, based on Criterion 2, and to strengthen this designation through the promulgation of the appropriate protective measures in accordance with their legislation, in particular through the creation of marine protected areas, as appropriate;
- 17. ENCOURAGES the Contracting Parties to develop and implement management plans for these sites, by integrating specific means for the protection or restoration of breeding, nesting, feeding and nursery habitats for the different species;
- 18. ENCOURAGES the Contracting Parties to consult each other, and work through existing regional agreements such as the Indian Ocean South-East Asian (IOSEA) Marine Turtle Memorandum of Understanding under the Convention on Migratory Species (CMS), the Abidjan Memorandum of Understanding concerning Conservation Measures for Marine Turtles of the

Atlantic Coast of Africa, the Pacific Regional Environment Programme, the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC), and the Single Species Action Plan for the Loggerhead Turtle *Caretta caretta* in the South Pacific Ocean, within the framework of the CMS and of the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, to protect habitats in networks allowing for greater safety for sea turtles during their life cycle and in their movements;

- 19. STRESSES the urgent need to take, whenever possible, the measures required to reduce the lighting and the erosion of the beaches used for breeding and to fight against the impact of [predators introduced to] [exotic invasive species on] these sites, and to develop good practices to raise the awareness of the inhabitants of coastal zones;
- [20. RECOMMENDS that the Contracting Parties, research institutes and organizations devoted to the protection of coastal and marine biodiversity set up integrated conservation programmes, which can call on responsible and regulated ecotourism, and include support for the training of guides and the launching of village community aid programmes, in order to increase respect for immature and adult turtles, their nests and their habitats, which can generate greater and more sustainable financial resources than poaching and the exploitation of dead turtle by-products (such as meat, fat and shells);]
- [21. CALLS ON international organizations to establish regional cooperation, collaborating with all stakeholders, notably in the context of Ramsar Regional Initiatives, to create an effective programme in key habitats for the sea turtle's terrestrial and coastal cycles to monitor the conservation of sea turtle habitats at all stages of the animals' life cycle: eggs, hatchlings, juveniles and adults of both sexes;]
- 22. ENCOURAGES Contracting Parties to review their Ramsar Site management plans to seek to ensure that they include sea turtle conservation actions, as appropriate; and
- 23. REQUESTS the Secretariat to work with the Secretariats of the IAC and the IOSEA MoU to further sea turtle conservation in Ramsar Sites and ALSO REQUESTS that, where possible, and subject to the availability of resources, these Secretariats work with Contracting Parties to include sea turtle conservation actions in their Ramsar Site management plans.

## [Annex 1

## Existing Ramsar Sites with coastal and marine sea turtle habitats]

Jacques Fretey and Patrick Triplet, February 2018, updated after the 54th Meeting of the Standing Committee, April 2018.

Species involved (nesting beaches, nursery areas, feeding areas)\*: Lepidochelys olivacea = Lo (IUCN Red List status: Vulnerable) Lepidochelys kempii = Lk (IUCN Red List status: Critically Endangered) Chelonia mydas = Cm (IUCN Red List status: Endangered) Chelonia agassizii or C. mydas agassizii = Ca (IUCN Red List status: Endangered) Caretta caretta = Cc (IUCN Red List status: Endangered) Eretmochelys imbricata = Ei (IUCN Red List status: Critically Endangered) Dermochelys coriacea = Dc (IUCN Red List status: Vulnerable) Natator depressus = Nd (IUCN Red List status: Data deficient)

## In red: Site considered to be a hotspot of regional or international interest for the species

\*Note: Depending on the description of the Site; there may be errors in the identification of species or lack of knowledge about existing habitats

	North America – Central America Region				
N°	Site	Country	Name of Site	Species present	
	number				
01	590	USA	Pelican Island National Wildlife Refuge	Lk, Cm, Cc, Ei	
02	1595	Mexico	Corredor Costoro La Asamblea - San	Ca, Cc, Ei, Dc, Lo	
			Francisquito		
03	1778	Mexico	Parque Nacional Cabo Pulmo	Ca, Cc, Ei, Dc, Lo	
04	1349	Mexico	Playa Tortuguera El Verde Camacho	Ca, Ei, Dc, Lo	
05	1824	Mexico	Sistema Lagunar Ceuta	Lo, Dc	
06	1350	Mexico	Playón Mexiquillo	Lo, Cm, Dc	
07	1327	Mexico	Playa Tortuguera Tierra Colorada	Dc, Lo	
08	1821	Mexico	Playa Barra de la Cruz	Dc, Cm, Ei, Lo	
09	1326	Mexico	Playa Tortuguero Rancho Nuevo	Lk, Ei, Cc, Cm	
10	1348	Mexico	Playa Tortuguera Chenkán	Cm, Ei	
11	1764	Mexico	Santuario Playa Boca de Apiza – El	Lo	
			Chupadero – El Tecuanillo		
12	1818	Mexico	Laguna Chalacatepec	Lo	
13	1795	Mexico	Playa de Maruata	Lo, Dc, Ca	
14	1823	Mexico	Sistema Estuarino Puerto Arista	Ei, Ca, Lo, Dc	
15	1448	Mexico	Laguna Costera El Caimán	Cm/Ca ?	
16	1345	Mexico	Islas Marietas	Lo	
17	1792	Mexico	Estero Majahuas	Lo	
18	1334	Mexico	Reserva de la Biosfera Chamela - Cuixmala	Dc, Lo	
19	1328	Mexico	Reserva Estatal El Palmar	Ei	
20	1360	Mexico	Area de Protección de Flora y Fauna Yum	Ei ?	
			Balam		
21	1449	Mexico	Parque Nacional Arrecifes de Cozumel	Cc, Ei, Cm	

- [Exhaustive list to be established by the secretariat]

22	1323	Mexico	Parque Nacional Isla Contoy	Ca, Cc, Ei, Dc
23	1777	Mexico	Manglares de Nichutpté	Cm
24	1921	Mexico	Manglares y Humedales del Norte de Isla	Cc, Cm, Ei
			Cozumel	
25	1329	Mexico	Sian Ka'an	Cm, Cc, Ei, Dc
26	2134	Honduras	Sistema de Humedales de la Isla de Utila	Cm, Cc, Ei
27	2189	Honduras	Sistema de Humelades Laguna de	Dc, Ei
			Zambucco	
28	1135	Nicaragua	Cayos Miskitos y Franja Costera Immediata	Cm, Ei
29	1586	El Salvador	Complejo Bahía de Jiquilisco	Ca, Dc, Ei, Lo
30	2207	El Salvador	Complejo Barra de Santiago	Ca, Dc, Ei, Lo
31	1907	Panama	Humedal de Importancia Internacional	Cc, Cm
			Damani-Guariviara	
32	1319	Panama	Bahía de Panamá	Сс
33	783	Costa Rica	Gandoca-Manzanillo	Cm, Dc, Ei

	Insular Caribbean Region					
	Site	Country	Name of Site	Species present		
N°	number					
34	642	France	Grand-Cul-de-Sac-Marin de la Guadeloupe	Ei		
35	2029	France	Zones humides et marines de Saint-Martin	Ei, Cm, Dc		
36	1830	France	Etang des Salines en Martinique	Ei		
37	493	United Kingdom	North, Middle and East Caicos Islands	Ei		
38	2119	Netherlands	Northwest Curaçao	Ei, Cc, Cm		
39	2120	Netherlands	Rif-Sint Marie	Dc, Ei		
40	2270	Netherlands	Mullet Pond, St Maarten	Dc, Cm, Ei		
41	1496	Trinidad and	Buccoo Reef – Bon Accord Lagoon Complex	Ei		
42	1234	Tobago Cuba	Ciénaga de Lanier y Sur de la Isla de la Juventud	Cm, Cc		
43	1135	Nicaragua	Cayos Miskitos y Franja Costera Immediata	Cm, Ei		
44	1820	Mexico	Parque Nacional Arrecife Alacranes	Ei ?		
45	1768	Mexico	Laguna Xola-ParamáDc	Dc, Lo, Ca		
46	856	Venezuela	Parce Nacional Archipiélago Los Roques	Ei Cm ?		
47	2210	Dominican Republic	Humedales de Jaragua	Ei, Cc, Cm, Dc		
48	1454	Jamaica	Palasadoes – Port Royal	Cm, Ei		
49	1488	Antigua and Barbuda	Codrington Lagoon	Dc, Ei		
50	2034	Grenada	Levera Wetland	Dc, Ei		

	Latin American Region				
51	Site	Country	Name of Site	Species present	
	Number				
52	643	France	Basse-Mana (réserve de l'Amana)*	Dc, Cm, Lo	
53	1202	Ecuador	Humedales del Sur de Isabela	Ca	
54	2259	Brazil	Atol das Rocas Biological Reserve	Cm, Cc, Ei	

55	1902	Brazil	Abrolhos Marine National Park	Cc, Dc, Ei
56	2305	Brazil	Guaraqueçaba Ecological Station	Cm
57	414	Venezuela	Refugio de Fauna Silvestre de Cuare	Cm, Ei, Dc
58	290	Uruguay	Bañados del Este y Franja Costera	Lo, Cm, Cc, Dc
59	885	Argentina	Bahía de Samborombón	Cm, Cc, Dc

\*First site to be designated as a Ramsar Site due to the importance of the terrestrial habitat for sea turtles \*\*\*

Africa Region				
	Site	Country	Name of Site	Species present
N°	number			
60	250	Mauritania	Parc national du Banc d'Arguin	<b>Cm</b> **, Cc
61	1044	Mauritania	Chat Tboul	Cm, Cc
62	666	Mauritania	Parc national du Diawling	Cm, Cc
63	288	Senegal	Parc national du Delta du Saloum	Cm
64	1575	Cabo Verde	Curral Velho	Сс
65	2198	Guinea-Bissau	Archipel Bolama-Bijagós	Cm, Dc, Lo
66	572	Guinea	Iles Tristao	Cm, Lo, Ei
67	618	Guinea	lle Blanche	Ei
68	1581	Côte d'Ivoire	Complexe Sassandra-Dagbego	Dc, Lo
69	1310	Equatorial	Río Ntem o Campo	Cm, Lo
		Guinea		
70	1311	Equatorial	Reserva Natural del Estuario del Muni	Cm, Lo
		Guinea		
71	1656	Gabon	Parc national de Pongara	Dc, Lo, Ei, Cm
72	352	Gabon	Petit Loango	Dc, Cm, Ei
73	353	Gabon	Setté Cama	Dc
74	1741	Congo	Conkouati-Douli	Dc
75	788	DRC	Parc marin des Mangroves	Lo

\*\*Feeding area of international importance

	Indian Ocean – Red Sea Region				
	Site	Country	Name of Site	Species present	
N°	number				
76	1887	Seychelles	Aldabra Atoll	Ei, Cm	
77	2073	France	lle Europa	Cm, Ei	
78	2002	France	Vasière des Badamiers - Mayotte	Ei, Cm	
79	1077	United	Diego Garcia	Ei, Cm	
		Kingdom			
80	1015	Islamic	Sheedvar Island	Ei, Cm	
		Republic of			
		Iran			
81	920	Bahrain	Hawar Islands	Cc, Cm, Ei, Dc	
82	2293	United Arab	Bul Syayeef	Ei, Cm ?	
		Emirates			
83	2125	United Arab	Aire protégée de mangroves et d'Alhafeya	Ei, Cm ?	
		Emirates	dans le Khor Kalba		
84	2191	United Arab	Sir Bu Nair Island Protected Area	Ei	
		Emirates			

85	1079	Lebanon	Palm Islands Nature Reserve	Cc, Cm
86	1239	Djibouti	Haramous-Loyada	Cc, Cm
87	1860	Sudan	Suakin-Gulf of Agig	Ei, Cm
88	2082	Kenya	Tana River Delta	Ei, Cm, Lo
89	1443	United	Rufiji-Mafia-Kilwa Marine Ramsar Site	Ei, Cm
		Republic of		
		Tanzania		
90	344	South Africa	Turtle Beaches – Coral Reefs of Tongaland	Cc, Dc
91	2303	Madagascar	lles Barren	Dc, Cc, Ei, Cm, Lo
92	2302	Madagascar	Mangroves de Tsiribihina	Ei, Cm

South Pacific – Oceania Region				
	Site	Country	Name of Site	Species present
N°	number			
93	1	Australia	Cobourg Peninsula	Cm, Nd, Lo, Dc,
				Ei, Cc
94	632	Australia	Bowling Green Bay	Cm, Nd
95	797	Australia	Pulu Keeling National Park	Cm
96	1220	Australia	Ashmore Reef Commonwealth Marine	Cm, Ei
			Reserve	
97	480	Australia	Eighty-mile Beach	Nd
98	479	Australia	Roebuck Bay	Nd
99	204	Australia	Kakadu National Park	Cm, Nd
100	1222	Australia	Coral Sea Reserves	Cm, Ei
101	792	Australia	Shoalwater and Corio Bays	Cm, Nd
102	992	Australia	Great Sandy Strait	Сс
103	631	Australia	Moreton Bay	Cc, Cm
104	1971	USA	Palmyra Atoll National Wildlife Refuge	Ei, Cm
105	2143	Kiribati	Nooto-North Tarawa	Cm
106	2072	Marshall	Namdrik Atoll	Cm
		Islands		
107	1834	France	Lagon de Moorea – Polynésie française	Ei, Cm

	Asia Region				
	Site	Country	Name of Site	Species present	
N°	number				
	1205	India	Bhitarkanika Mangroves	Lo	
108	2203	Vietnam	Con Dao National Park	Dc, Ei	
109	2152	Thailand	Ko Kra Archipelago	Ei, Cm	
110	1931	Sri Lanka	Kumana Wetland Cluster	Cm, Lo, Cc	
111	1910	Sri Lanka	Vankalai Sanctuary	Cm, Lo, Cc	
112	2280	Myanmar	Meinmalha Kyun Wildlife Santuary	Ei	
113	2062	Japan	Yonahawan	Ei	
114	1546	Japan	Keramashoto Coral Reef	Ei, Cm, Cc	
115	1559	Japan	Yakushima Nagata-hama	Сс	
116	2249	China	Guangdong Nanpeng Archipelago Wetlands	Cc, Cm	

117	1150	China	Huidong Harbor Sea Turtle National Nature	Cm
			Reserve	
118	2271	Philippines	Negros Occidental Coastal Wetlands	Ei, Cm, Lo
			Conservation Area	

	Mediterranean Region				
N°	Site	Country	Name of Site	Species present	
	number				
119	2135	Montenegro	Tivat Saline (Tivatska solila)	Сс	
120	1961	Algeria	lle de Rachgoun (Wilaya de Aïn	Cc (Dc)	
			Temouchent)		
121	980	Lebanon	Tyre Coast Nature Reserve	Cc, Cm	
122	1290	Albania	Butrint	Cc, Dc	
123	1473	Morocco	Cap des Trois Fourches	Сс	
124	2012	Tunisia	lles Kerkennah	Cc, Cm, Dc	
125	1704	Tunisia	Iles Kneiss avec leurs zones intertidales	Сс	
126	62	Greece	Messolongi Lagoons	Cc, Cm	

#### Annexe 2

Technical cover note on the draft resolution

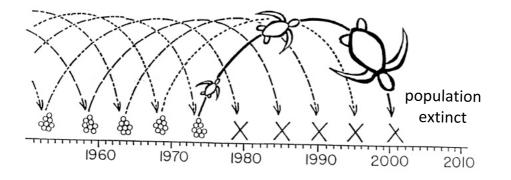


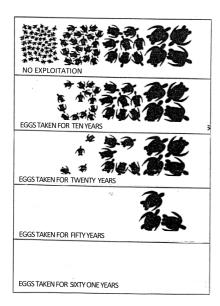
## TECHNICAL NOTE FOR THE PRESENTATION OF THE DRAFT RESOLUTION

# On the enhanced protection and management of sea turtle breeding, feeding and nursery areas and the designation of key areas as Ramsar Sites

According to the specialised systematists, a total of 7 or 8 species of sea turtle are recognised as belonging to the families Cheloniidae and Dermochelyidae. All of them (except *Natator depressus* whose populations are insufficiently known) have conservation statuses in the IUCN Red List ranging from "Vulnerable" to "Critically Endangered".

When Professor Archie Carr from the University of Florida issued a warning to the United States and the scientific community in the mid 1950s, announcing a decline in the world sea turtle populations, the anthropogenic reasons for this situation appeared to be simple to overcome. The slaughter of female turtles on nesting beaches and the poaching of eggs from their nests appeared to be the human activities that were almost entirely responsible for the decline. Mortimer's (1995) diagrams then explained very thoroughly how this decline occurred, as a result of delayed sexual maturity.





Scientific studies revealed clearly that under natural conditions, sea turtles, despite significant natural predation in the first years of their life, have a very long life span and great capacity for breeding. In the 1970s, on a large number of nesting beaches projects were launched that associated research, the identification of female turtles, the monitoring of nests and the raising of villagers' awareness. It takes a long time to obtain the results of conservation campaigns because, for a species like *Chelonia mydas*, we have to wait around fifty years for the turtles from protected nests to breed.

There continue to be several black spots where turtles are killed and poached, especially in West Africa.

The overexploitation of adults for their meat, fat and shells that has been carried out for centuries, and the total destruction of all their nests on many beaches, have led to a considerable decline in sea turtle populations since the 20th century. Gradually, new anthropogenic threats have appeared, such as the degradation and development of nesting beaches and the removal of sand, the physical and chemical pollution of coastal waters, by-catches in fishing gear, the entanglement of turtles in ghost nets, the predation of eggs and baby turtles by introduced or invasive animals (rats, mongooses, ants, beetles, etc.), pigs or stray dogs, the disturbance of females on nesting beaches by lights or uncontrolled tourism, coastline artificialisation, etc.

In the past, when a villager killed a turtle to feed their family, it was no more serious for the turtle population concerned than the natural predation of a turtle from the same population by a killer whale, for example. With the opening up of villages that had formerly existed as self-sufficient units, the desire to buy manufactured products meant the inhabitants needed money and thus had to obtain it somehow. Trade, and indeed the cross-border trafficking of products derived from sea turtles was a rapid way of making money. However, it led to an increase in the harvesting of these animals' natural populations. The few attempts that have been carried out at turtle ranching and farming have only increased the harvesting and commercial demand, and thus poaching.

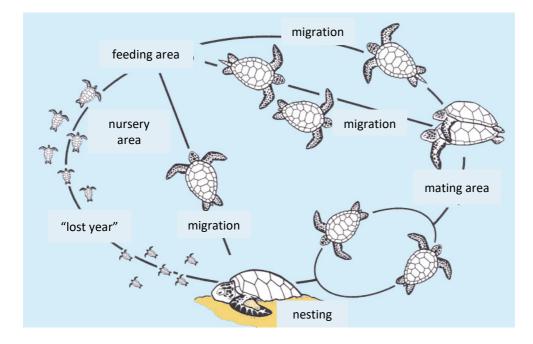
Coastal erosion affects many nesting beaches. Natural erosion, in tropical environments, is sometimes greatly worsened by anthropogenic developments such as groynes, riprap and other infrastructures, which lead to changes in coastal currents, and even the creation of ports for industrial minerals. Additional threats will include heavy shipping traffic.

In the future, global warming will constitute a new threat, and we can already imagine what repercussions this will have on the reproduction of sea turtles. Sea level rise will destroy nesting beaches, especially in island environments. Due to temperature-dependent sex determination during embryonic development, the rise in the temperature of the substrate will lead to the feminisation of turtle populations.

Irrespective of the species, the life cycle always requires mating areas, either very near the coast or offshore, and the beaches where the females go to dig a nest and lay their eggs will be abandoned without the eggs being incubated.

A period known as the sea turtles' "lost years" is also required, when newly hatched turtles swim away from the coast and then return to a coastal nursery area.

Depending on the species and the regional population, the adults either stay in one place or else carry out long migrations between feeding and nesting sites. The better the female's health and the richer her diet, the more frequently she will lay eggs and the more eggs she will lay. Directly related to their food and age, sea turtles are to a greater or lesser extent dependent on rocky coastal areas, coral reefs, seagrass meadows, estuaries and mangroves, etc.



The Convention on the Conservation of Migratory Species of Wild Animals (also referred to using the abbreviation CMS or the Bonn Convention) aims to conserve terrestrial, marine and avian migratory species throughout their range. The CMS has a unique role to play in drawing attention to the 76 endangered species currently listed in Appendix I. All species of sea turtle, except *Natator depressus*, are included in Appendix I of CMS. Appendix II contains migratory species, including sea turtles, which require or would benefit from international cooperation agreements concluded by CMS for their conservation and management. These agreements may range from legally binding treaties to less formal instruments such as memoranda of understanding. The Bonn Convention, with multispecies regional instruments such as the Memorandum of Understanding concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa (Abidjan Memorandum of Understanding) and the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats in the Indian Ocean and South-East Asia (IOSEA) has became the reference convention for these species.

Over one hundred Ramsar sites are already directly affected by sea turtle habitats.

The shores of the Basse-Mana wetland in French Guiana were the first to be classified as a Ramsar site (number 643) due to being of international importance for the nesting of one sea turtle species (*D. coriacea*), as well as being of importance for waterfowl. This Ramsar classification helped speed up the procedures for creating a national nature reserve, and thus improve the conservation of these exceptional habitats and stop the killing of the turtles and the poaching of their eggs.

The draft resolution aims to urge the Parties concerned to develop protective measures as well as management plans for the breeding, feeding and nursery habitats, and to designate as Ramsar sites the habitats presenting the greatest challenges for these species.

Jacques Fretey Senior Advisor IUCN/SSC Marine Turtle Specialist Group Scientific coordinator of the Abidjan Memorandum UNEP/CMS President of Chélonée