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MEMORANDUM OF UNDERSTANDING ON THE CONSERVATION AND MANAGEMENT OF MARINE TURTLES AND THEIR HABITATS OF THE INDIAN OCEAN AND SOUTH-EAST ASIA

CMS/IOSEA/MOS8/Inf.7.1.m

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Agenda Item 9.1

SEYCHELLES – NATIONAL REPORT 2019

(Prepared by Seychelles)

IOSEA MARINE TURTLES MEMORANDUM OF UNDERSTANDING - NATIONAL REPORTING 2019

IOSEA Marine Turtles MoU - National Reports

The purpose of completing the national report is to provide information on your country's implementation of the IOSEA Marine Turtle MoU including, as far as possible, contributions of cooperating non-governmental partners. Implementation will be assessed in terms of the six objectives of the Conservation and Management Plan (CMP). The online questionnaire is divided into these six main objectives, and asks specific questions in relation to the activities that need to be carried out to fulfil those objectives.

Please answer all questions as fully and as accurately as possible. It may seem time-consuming, but once you have completed the first report, the next time will be much easier because you can simply revise your existing report online. Comprehensive responses to the questions posed in Section 1.4 should satisfy many of the reporting requirements of the 2004 FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations, thereby avoiding duplication of effort.

Description text is provided below some of the questions to explain what information needs to be provided. Text boxes can be expanded to accommodate longer answers or to explain and provide additional information, beyond what is requested. Details of future plans are especially encouraged. Wherever possible, please try to indicate the source of information used to answer a particular question, if a published reference is available. Remember that you are sharing information with other countries about your progress, so that it may be of benefit to them. At the same time, you may find it useful to look at other countries' reports to get ideas for marine turtle conservation that might be adapted to your context.

When working on the online questionnaire, save your information by clicking on the "Save all" button inside each section. An auto-save feature also saves any changed responses every 30 seconds, and whenever you move between sections. Feel free to attach additional material (published reports, maps etc) to this questionnaire.

Throughout the questionnaire, alongside each question you will find one or more 3-letter abbreviations within square brackets. These are used to indicate the purpose for which the information provided will be used in the subsequent analysis of all of the national reports, as shown in the following table.

To some extent, the order in which these different types of information are listed below is a reflection of their importance – ranging from critical indicators of performance to factual details that are merely informative.

Abbreviation	**Type**	**Treatment / Purpose**
IND	Indicator	The information provided serves, in and of itself, as a key indicator of successful implementation or of pre-requisites for same (eg. of core actions undertaken, resource availability, capacity etc.)
PRI	Priorities	The collective data will be synthesized to give an indication of what has been done already (helping to avoid duplication of effort); what is generally not being done (gaps that need to be addressed); and what interventions or specific assistance may be required.
TSH	Trouble-shooting	

Particular implementation problems and issues (possibly of special interest to a small group of countries) are identified/highlighted with a view to stimulating remedial action in the short-term.

BPR

Best practice

Well-documented examples of best practices / success stories will be compiled and presented as approaches that other Signatory States might consider pursuing (ie adopting or adapting to suit their own circumstances).

SAP

Self-Appraisal

Self-assessment of effectiveness and completeness of actions undertaken – intended to stimulate reflection within a given Signatory State on what more could or should be done in relation to a particular activity.

INF

Information

The information will be collected and compiled, with little or no modification, mainly for purpose of sharing of information that could be of interest or value to other readers and/or other analyses.

GENERAL INFORMATION

Signatory State:
Which agency or institution has been primarily responsible for the preparation of this report?
› Biodiversity Conservation Section
Biodiversity Conservation and Management Division
Department of Environment
Ministry of Environment, Energy and Climate Change

List any other agencies, institutions, or NGOs that have provided input:
› Seychelles National Parks Authority (SNPA)
Marine Conservation Society Seychelles (MCSS)
North Island Seychelles
Green Islands Foundation
Global Vision International (GVI)
Seychelles Islands Foundation (SIF)
Turtle Action Group Seychelles (Dr Jeanne Mortimer)

Memorandum in effect in Signatory State since (dd/mm/yyyy):
› 22 January 2003

This report was last modified (dd/mm/yyyy):
› 29th June 2019

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OBJECTIVE I: REDUCE DIRECT AND INDIRECT CAUSES OF MARINE TURTLE MORTALITY

1.1 Introduction to marine turtle populations and habitats, challenges and conservation efforts

Please introduce and summarise, in an abstract of less than a page, the marine turtle populations and their habitats in your country. Comment on their status and highlight the main conservation challenges and achievements to date. It is not necessary to list here by name the individual nesting beaches, feeding areas and developmental habitats that are important for marine turtles in your country, as this information can be generated from the 'Site-Threat' data sheets to be completed in Annex 1. **[INF]**

› Two turtle species nest in Seychelles, Green Turtle (En) and Hawksbill Turtle (CR). The presence of other sea turtle species such as Loggerhead and Olive Ridley have also been reported, although only rare sightings and occurrences throughout Seychelles waters.

Despite increased monitoring and awareness campaigns, illegal harvesting of sea turtles still exists, although on a smaller scale as of 2019.

Other threats that continue to persist include, habitat loss due to coastal erosion, mortalities caused by road transport, increased predators such as dogs and cats on the beach. Another critical challenge is enforcement of areas, especially outside marine protected areas.

Despite many challenges, well-protected populations occur with well established and effectively managed protected areas such as St Anne Marine Parks, Curieuse, Aldabra and Cousin.

One strong element in turtle conservation and monitoring in Seychelles is engagement from members of the public. Through its greenline, the Ministry of Environment continuously receives assistance from members of the public, including occasional reports from a very small number of fishermen who seem very concerned about species protection.

Populations

Sea turtles occur throughout Seychelles waters, around both inner and outer islands, with hawksbill being more common within inner islands and green outer islands.

Since 1996, over 900 green and 392 hawksbill individuals have been caught and tagged in the lagoon. (Seychelles Islands Foundation). North Island has the highest density of nesting Green Turtle of the inner island of the Seychelles, 614 emergences recorded in 2018.

MCSS recorded Hawksbill turtle Hawksbill turtle nests: 147, Green turtle nests: 8, GIF recorded 544 green turtle tracks and 48 hawksbill tracks.

Eight poaching cases were reported on the main island of Mahe during 2018-2019.

1.2 Best practice approaches to minimizing threats

Describe any protocol or approaches practiced in your country, which you consider exemplary, for minimising threats to marine turtle populations and their habitats, which may be suitable for adaptation and adoption elsewhere. **[BRP]**

› 1. The Ministry of Environment Energy and Climate Change (MEECC) became an institutional member of the nationally registered association, Turtle Action Group of Seychelles (TAGS)

2. SeyCCAT -- an independent trust fund -- is mandated to provide a sustainable flow of funds to support marine-related projects and other activities that contribute substantially to the conservation, protection and maintenance of biodiversity and the adaptation to climate change.

3. Seychelles has committed up to 30% of the Exclusive Economic Zone including 15% in 'no-take' areas, through its Marine Spatial Planning. In 2012 only 0.04% of Seychelles water was protected, now 26% is protected, ongoing discussions for the remaining 4%.

4. The president of Seychelles has made a plea for stronger protection of the "beating blue heart of our planet", in his speech delivered from deep below the ocean's surface during Seychelles- Nekton Deep Sea Expedition.

5. Seychelles is leading the Commonwealth Blue Charter action group on marine protected areas.

6. Annual Turtle Monitoring Programme conducted by the Ministry of Environment, Energy and Climate Change as well as a number of NGOs such as MCSS, SIF, ICS, Nature Seychelles, GIF, GVI, SNPA, etc.

7. Seychelles will review its Wild Animals and Birds Protection Act 2001 (Turtle Regulations) later during the year.

8. The Ministry of Environment, Energy and Climate Change is working on its CITES legislation (At the Attorney General's Office at the moment). Other legislation to be developed include a coral reef conservation policy and strategic action plan

9. Education and Awareness campaigns are conducted throughout the year, i.e School presentations, Exhibitions especially on theme days such as Biodiversity Day, Ocean Day, Environment Day, etc.

10. Under the Environment Protection regulation 2017, there is a restriction on manufacturing, importation, and distribution of plastic bags

Additionally, Seychelles has banned straws used in cocktails and other drinks but will exempt plastic straws attached to juice packets

11. Various projects are being implemented to target and address issues of marine debris, for example, Aldabra Clean up project collected 25.75 tonnes of marine debris on the UNESCO World Heritage Site Aldabra Atoll. Most of the debris is from other regions of the world. In addition, Island Development Company (IDC) who manages some of Seychelles Outer Islands supported a major beach clean-up operation on eight of

Seychelles outer islands involving 40 volunteers.
12. The Ministry of Environment has a greenline whereby any issues pertaining to poaching, pollution or any other crimes or issues can be reported and addressed by relevant sections within the Ministry. Furthermore, an ECO-Alert website (will be used for reporting of environmental issues)was officially launched on Environment Day 2019.
13. The country recently developed its Coastal Management Plan which will aim to reduce pressures on coasts and mitigate future impacts of climate change.

1.3 Programmes to correct adverse economic incentives

1.3.1 Describe any socio-economic studies or activities that have been conducted among communities that interact with marine turtles and their habitats. **[BPR, INF]**

Elaborate on the nature of the socio-economic study/ activity undertaken, the results obtained (successful or otherwise) and the desirability/ suitability for replication.
Include references to published reports, where available.
› Survey of 4,000 Primary and Secondary school children conducted by the “Sea Turtle Friends of Seychelles” group in 2018 to assess attitudes of children to eating turtle meat, turtles, and legislation protecting turtles.

1.3.2 Which of these adverse economic incentives are underlying threats to marine turtles in your country? **[TSH]**
☑ Ease of access to the turtle ressource (e.g. by virtue of proximity or ease of land/water access)
☑ Low penalties against illegal harvesting
☑ Others (Please describe)

› Black market demand for turtle meat still very high

1.3.3 Has your country taken any measures to try to correct these adverse economic incentives? **[BPR]**
☑ Yes (If yes, please describe these measures in detail)

› Ministry increased penalties for Turtle infractions in 2000, but prosecution of cases needs to be taken more seriously by law enforcement.
Increased awareness of the endangered status of the turtles and need to conserve them
Increased monitoring of key nesting beaches. The Ministry will look into the possibility of installing wildlife cameras on key beaches to deter poachers.

1.4 Reduction of incidental capture and mortality

1.4.1 Indicate, and describe in more detail, the main fisheries occuring in the waters of your country, as well as any high seas fisheries in which flag vessels of your country participate and interact with marine turtles.

Tick ‘YES’ to indicate that a fishery is present and interacting marine turtles or ‘NO’ to indicate that a fishery is not present or is not interacting with marine turtles. **[INF]**
If a fishery is present, use the text box to indicate, for example, the approximate geographic distribution of the fishery, how long it has been operating, how many vessels are involved, etc.

a) Shrimp trawls:
☑ No (Please provide details)

› Trawling not practiced in Seychelles

b) Set gill nets:
☑ Yes (Please provide details)

› Fishing for sharks with nets (ie drift nets) is banned (Fisheries Act).
However, there needs to be more effective enforcement by the Seychelles Fisheries Authority

c) Anchored Fish Aggregating Devices (FADs):
☑ Yes (Please provide details)

› . Anchored Fish Aggregating Devices have been the subject of two MSc studies in recent years.

d) Purse seine (with or without FADs):
☑ Yes (Please provide details)

› The Island Conservation Society, the Island Development Company and Spanish tuna boat owners associations of tuna freezer vessels (OPAGAC) signed a memorandum of understanding for a FAD watch program. This agreement is being expanded to involve other nationalities during 2019.
To date, FAD remains a controversial fishing activity in Seychelles.

e) Longline (shallow or deepset):
☑ Yes (Please provide details)

› Large scale and semi-industrial longliners operate in Seychelles' EEZ and on the high seas.

f) Driftnet:
☑ No (Please provide details)

› The use of drift nets (shark nets) is banned in Seychelles waters (Mortimer 1998)

1.4.2 Please indicate the relative level of fishing effort and perceived impact of each of the above fisheries on marine turtles (e.g. in terms of by-catch) [TSH]. Select from one of the following descriptions: RELATIVELY HIGH, MODERATE, RELATIVELY LOW, NONE (i.e. not present), UNKNOWN (i.e. unable to answer for whatever reason).

a) Shrimp trawls
Please select only one per line

	UNKNOWN	NONE	RELATIVELY LOW	MODERATE	RELATIVELY HIGH
Fishing efforts:	☐	☑	☐	☐	☐
Perceived impact:	☐	☑	☐	☐	☐

b) Set gill nets
Please select only one per line

	UNKNOWN	NONE	RELATIVELY LOW	MODERATE	RELATIVELY HIGH
Fishing effort:	☐	☐	☐	☑	☐
Perceived impact:	☐	☐	☑	☐	☐

- Source of information / clarification
› Seychelles Fisheries Authority

c) Anchored Fish Aggregating Devices (FADs)
Please select only one per line

	UNKNOWN	NONE	RELATIVELY LOW	MODERATE	RELATIVELY HIGH
Fishing effort:	☐	☐	☐	☑	☐
Perceived impact:	☐	☐	☐	☑	☐

- Source of information / clarification
› Seychelles Fisheries Authority

d) Purse seine (with or without FADs)
Please select only one per line

	UNKNOWN	NONE	RELATIVELY LOW	MODERATE	RELATIVELY HIGH
Fishing efforts:	☐	☐	☐	☐	☑
Perceived impact:	☐	☐	☑	☐	☐

- Source of information / clarification
› Seychelles Fishing Authority (SFA)

e) Longline (shallow or deepset)
Please select only one per line

	UNKNOWN	NONE	RELATIVELY LOW	MODERATE	RELATIVELY HIGH
Fishing effort:	☐	☐	☐	☐	☑
Perceived impact:	☐	☐	☑	☐	☐

- Source of information / clarification
› Seychelles Fishing Authority (SFA)

f) Driftnet
Please select only one per line

	UNKNOWN	NONE	RELATIVELY LOW	MODERATE	RELATIVELY HIGH
Fishing effort:	☐	☑	☐	☐	☐
Perceived impact:	☑	☐	☐	☐	☐

- Source of information / clarification
› Banned in Seychelles, but better enforcement is necessary (Mortimer et al. 2003).

1.4.3 Describe any **illegal fishing** that is known to occur in or around the waters of your country that may impact marine turtles. Describe the measures being taken to deal with this problem and any difficulties encountered in this regard. **[TSH]**
› Most poaching incidents take place on nesting beaches. A few offenders
have been arrested and prosecuted; there is however, an institutional gap to fully address those poaching incidents.
There have been several incidents of Sri Lankan-flagged vessels fishing in the Seychelles' waters
Eight Malagasy nationals arrested on Sunday on suspicion of illegal fishing in the Seychelles' waters
Three citizens of Comoros were arrested on March 26 after their vessel was intercepted in the vicinity of Assumption on suspicion of illegal fishing
Measures
Seychelles Air Force pilots have received initial training to operate drones that will be used to monitor illegal fishing activities in the waters of the island nation (FishGuard)
Seychelles Fisheries Authority (SFA) has a Monitoring Control and surveillance (MCS) Section, one of its main objective is to ensure compliance to the fisheries Act and regulations, Fisheries agreement and protocols
The Ministry of Environment will this year review and amend its sea turtles regulations under the Wild Animals and Birds Protection Act.
Seychelles Government commitment to protect 30% of its waters through its Marine Spatial Planning.

1.4.4 Which of the following methods are used by your country to minimise incidental capture/mortality of marine turtles in fishing activities? [IND]

a) **Appropriate handling** of incidentally caught turtles (e.g. resuscitation or release by fishersusing equipment such as de-hooking, line cutting tools and scoop nets)
☑ NO (Details/future plans)

b) **Devices that allow the escape of marine turtles** (e.g. turtle excluder devices (TEDs) or other measures that are comparable in effectiveness)
☑ UNDER INVESTIGATION or NOT APPLICABLE (Details/future plans)

c) **Measures to avoid encirclement** of marine turtles in purse seine
☑ YES (Details/future plans)

d) **Appropriate combinations** of hook design, type of bait, depth, gear specifications and fishing practices
☑ YES (Details/future plans)

› Many local longliners are now using circular hooks instead of J-hooks, citing better CPUEs as the reason for the change.

e) **Monitoring and recovery of fish aggregating devices** (FADs)
☑ YES (Details/future plans)

› Seychelles FAD Watch Program

f) **Net retention and recycling schemes**
☑ NO (Details/future plans)

g) **Spatial and temporal control of fishing** (e.g. seasonal closures of fishing activities)
☑ YES (Details/future plans)

h) **Effort management control**
☑ YES (Details/future plans)

1.4.5 Which of the following programmes has your country developed – in consultation with the fishing industry and fisheries management organisations – to promote implementation of measures to minimise incidental capture and mortality of turtles in national waters and in the high seas? [IND]

Please use the corresponding text boxes to explain/clarify each of your responses, including 'NOT APPLICABLE' responses, and indicate future plans in this regard. [IND]
Please describe the collaboration, when/where the programmes were introduced, any difficulties encountered, and general results obtained (i.e. successful and unsuccessful). Provide references to publications, where available.

a) **Onboard observer programmes**

X
☑ YES (Details/future plans)

› An observer programme for the Seychelles-flagged purse seiners was established in 2008

b) **Vessel monitoring systems**
☑ YES (Details/future plans)

› All Seychelles flagged vessels require authorization to fish outside the Seychelles EEZ and are required to report through VMS.
semi industrial longline fishery is monitored through a logbook system The positions declared on the logbooks are also validated by the SFA Vessel Monitoring System (VMS) data.

c) **Inspections** (i.e. at sea, in port, at landing sites)
☑ YES (Details/future plans)

› Land Patrols Inspections of boats upon licence application
The Enforcement Unit (SFA) carries out all inspectorate duties with regards to port state inspection, land inspection, sea and air surveillance duties pertaining to national and regional requirements.
SFA inspectors have had training in the field of inspection at sea
Inspections carried out by SFA and Ministry of Environment Staff on vessels suspected of poaching activities.

d) **Training programmes / workshops** to educate fishers
☑ YES (Details/future plans)

› Ministry of Environment plans to hold future workshops on sea turtle conservation to fishermen and other stakeholders in the near future.
Existing training pragrammes mostly target habitats used by turtles i.e MPAS, coral reefs etc

e) **Informative videos, brochures, printed guidelines** etc.
☑ YES (Details/future plans)

› The Ministry of Environment as well as most E-NGOs have produced and disseminated educational materials on turtle conservation and existing threats in Seychelles.
Nesting turtle guidelines were distributed to hotel establishments

1.4.6 Are the mitigation measures described in 1.4.4 and 1.4.5 periodically reviewed and evaluated for their efficiency? **[SAP]**
☑ YES (Please give details)

1.4.7 In your country, what types of data collection, research and development have been undertaken to support the reduction of marine turtle incidental catch (while taking into consideration the impact of various mitigation measures on other species)? **[SAP]**
› None in the last year

1.4.8 Has your country exchanged information and provided technical assistance (formally or informally) to

other Signatory States to promote the activities described in 1.4.4, 1.4.5 and 1.4.7 above? **[SAP]**
☑ NO

1.4.9 What legislative and practical measures has your country taken in support of UN General Assembly Resolution 46/215 concerning the moratorium on the use of large-scale driftnets? **[SAP]**
› Large-scale drift nets are prohibited in
Seychelles waters (by the Fisheries Act).

1.5 Addressing harvest of, and trade in, marine turtles; and protecting of habitat

1.5.1 Does your country have legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products; and to protect important turtle habitats? **[IND]**

Please provide details (title/date) of the relevant legislation, as well as any exemptions (e.g. for traditional harvest) under that legislation.
☑ YES

› Wild Animals and Birds Protection Act 2012 (Turtle Regulations) completely banned all disturbances, harvest, sale, possession of turtles, turtle products or eggs.
Seychelles party to CITES and MEECC has a draft CITES legislation at Attorney General's Office

1.5.2 Which, among the following list, are economic uses and cultural values of marine turtles in your country? [INF]

Please rate the relative prevalence / importance of each consumptive or non-consumptive use.
Use the text boxes below each rating to explain or clarify your responses.

a1) Meat consumption
☑ YES

› Some Seychellois still consume turtle meat

a2) Meat consumption: relative prevalence/importance
☑ MODERATE

› Meat consumption (now illegal, but some poaching occurs)

b1) Egg consumption
☑ YES

› Still exists, but by a minority of the population

b2) Egg consumption: relative prevalence/importance
☑ LOW

c1) Shell products
☑ NO

› All trade has ceased. Illegal to possess any turtle products.
No import of products allowed.

c2) Shell products: relative prevalence/importance
☑ LOW

d1) Fat consumption
☑ NO

› Historically, fat was burned into oil and drank as medicine.

d2) Fat consumption: relative prevalence/importance
☑ LOW

e1) Traditional medicine
☑ NO

› According to tradition people diagnosed with tuberculosis were sent to outer islands where they drank turtles blood for
cure.

e2) Traditional medicine: relative prevalence/importance
☑ LOW

f1) Eco-tourism programmes
☑ YES

› sea turtles are amongst the
tourist attractions
turtles are considered to be among the natural assets that Seychelles has to offer tourists who visit the country
Ministry of Environment amending turtle encounter guidelines for tourists

f2) Eco-tourism programmes: relative prevalence/importance
☑ HIGH

g1) Cultural / traditional significance
☑ YES

› Turtles are featured as a symbol of the Central Bank of Seychelles, on bank notes, coins, on postage stamps, etc.) and also feature on many advertising campaigns for hotels, dive centres, and even the National Beer "Seybrew".

g2) Cultural/traditional significance: relative prevalence/importance
☑ HIGH

1.5.3 Please indicate the relative level and impact of traditional harvest on marine turtles and their eggs. **[IND, TSH]**

	RELATIVELY HIGH	UNKNOWN	NONE	RELATIVELY LOW	MODERATE
Level of harvest:	☐	☐	☐	☐	☑
Impact of harvest:	☐	☐	☐	☐	☑

Source of information / explanation:
› Ministry of Environment, Energy and Climate Change

1.5.4 Have any domestic management programmes been established to limit the levels of intentional harvest? **[SAP]**

Use the text box to give details.
☑ YES

› The most effective programmes have been the establishment of protected areas
Increased penalties - 2 years imprisonment and 500,000 scr for turtle poaching
Increased monitoring during nesting seasons

1.5.5 Describe any management agreements negotiating between your country and other States in relation to sustainable levels of traditional harvest, to ensure that such harvest does not undermine conservation efforts. **[BPR]**
› CONSERVATION AND MANAGEMENT PLAN: WESTERN INDIAN OCEAN

1.6 Minimizing mortality through nesting beach programmes

1.6.1 Measures and effectiveness

First, tick one of the YES/NO-boxes to indicate whether or not your country has any of the following measures in place to minimise the mortality of eggs, hatchlings and nesting females. If yes, then **estimate the relative effectiveness** of these measures. **[IND, SAP]**

Use the text boxes below each rating to elaborate on your responses, including any lessons learned that might be of value to other Signatory States, and indicate your plans for the coming year. Please explain any "Not Applicable (N/A)" responses.

a1) Monitoring/protection programmes
☑ YES

› Annual monitoring programme implemented by Ministry of Environment and all other E-NGOs such as Seychelles Islands Foundation (SIF), Island Conservation Society (ICS), Marine Conservation Society of Seychelles (MCSS), Seychelles National Parks Authority (SNPA), Green Island Foundation (GIF), Nature Seychelles etc. Some private islands also conduct monitoring such Bird Island, Fregate island, Denis Island,

North Island, Cousine Island, etc.
Environment Impact Assessment (EIA) conducted for all project that may have an impact on sea turtle nesting habitats.
Control of dogs on beaches

a2) Monitoring/protection programmes: relative effectiveness
☑ EXCELLENT

› Beach turtle monitoring programmes have proven to be our most effective conservation tool at the national level. Where monitoring programmes are in place poaching declines exponentially. Currently we have more than 20 long term monitoring programmes that operate in both the inner islands and in the outer islands. Monitoring programmes have been underway at Strict Nature Reserves (Aride, Aldabra and Cousin) for more than 4 decades and have been very successful at protecting turtles from poaching. Many private islands have long-term turtle monitoring programmes in place: Bird, Denis, Fregate, Cousine etc. in the Inner Islands. In the outer islands, D'Arros/St. Joseph has been monitoring turtles and protecting the beaches since 2004. At Government owned outer islands managed by the parastatal Islands Development Company (IDC), the eNGO Island Conservation Society (ICS) currently manages long-term turtle monitoring programmes at Alphonse/St Francois, Desroches, Silhouette, and Farquhar atoll. During the coming year, new monitoring programmes will be implemented by ICS at Cosmoledo, Astove, Marie-Louise, and Platte islands. Private hotels on Mahé (Banyan Tree, Anse Forbans, etc.) and Praslin (Lemuria Resort).

b1) Education/awareness programmes
☑ YES

› Awareness campaign during and outside breeding/nesting season.
Educational materials produced and disseminated
Sea Turtle Friends of Seychelles (STFS) NGO has been running a Sea Turtle Festival each year aimed primarily at school children and the general public.

b2) Education/awareness programmes: Relative effectiveness
☑ EXCELLENT

› Reporting on national TV, radio, and newspapers about poaching incidents
Education about turtle conservation in Seychelles
Production of educational materials
A number of turtle march has been conducted by Sea Turtle Friends of Seychelles

c1) Egg relocation/hatcheries
☑ YES

› Egg clutches are relocated where beaches are eroded by tidal waves .

c2) Egg relocation/hatcheries: Relative effectiveness
☑ GOOD

d1) Predator control
☑ YES

› Feral dog eradication campaigns are ongoing

d2) Predator control: Relative effectiveness
☑ GOOD

e1) Vehicle / access restrictions
☑ YES

› At several locations protective barriers have been installed so as to prevent vehicles from going on the beaches.

e2) Vehicle/access restriction: relative effectiveness
☑ GOOD

f1) **Removal of debris / clean-up**
☑ YES

› Extensive beach clean ups conducted by many NGOs. For many year Island Conservation Society (ICS) has been running beach cleanups on a regular basis at all of the islands where it works. More recently, Ocean Project, SIF (Aldabra Clean up project), more recently PARLEY and also by a number of other organizations and institutions such as school clubs and action groups, E-NGOs,CBOs as well as private sectors.
Seychelles is putting a lot of effort to combat marine debris which is mainly plastics.

f2) Removal of debris /clean-up: relative effectiveness
☑ GOOD

› › Effective on a short-term basis. Unfortunately, the problem is that most of these debris originate from other countries… especially in South East Asia. So, we are not actually solving the problem.

g1) Re-vegetation of frontal dunes
☑ YES

› planting coastal indigenous trees conducted on various islands

g2) Re-vegetation of frontal dunes: relative effectiveness
☑ GOOD

h1) Building location/design regulations
☑ YES

› Environment Impact Assessment (EIA) Regulations are applied to any development near nesting beaches.

h2) Buidling location/design regulations: relative efectiveness
☑ GOOD

› Sometimes projects are allowed to proceed despite problems identified.

i1) Light pollution reduction
☑ YES

› Advice given during the planning stage of development projects. New developments on the coast are increasingly taking
the issue into account.
The Ministry of Environment (Biodiversity Conservation Section) are actively engaged in EIA process, especially for development near key turtle nesting beaches. Turtle friendly lighting is strictly advised/recommended.

i2) Light pollution reduction: Relative effectiveness
☑ GOOD

1.6.2 Has your country undertaken any evaluation of its nest and beach management programmes? **[SAP]**

Use the text box to elaborate on your response, if necessary.
☑ YES

› Selected references for publications and reports on this topic:
Mortimer, J.A. 1998. Turtle and Tortoise Conservation. Project J1: Environmental Management Plan of the Seychelles. Final
report to the Ministry of Environment Republic of Seychelles and the Global Environment Facility (GEF). January 1998.
Volume 1 (82 pages) and Volume 2 (Appendices 1-50).
Mortimer, J.A. 2000. Sea turtle conservation programmes: factors determining success or failure. Pp. 327-333 in Salm,
R.V., Clark, J.R., and Siirila, E. Marine and Coastal Protected Areas: A guide for planners and managers. IUCN, Washington
D.C. xxi+371 pp.
Mortimer, J.A., T. Jupiter, J. Collie, R. Chapman, A. Liljevik, B. Betsy, J. Stevenson, V. Laboudallon, M. Assary, D. Augeri, &
S. Pierce. in press. Pp. 00-00. Trends in the Green Turtle (Chelonia mydas) Nesting Population at Aldabra Atoll, Seychelles
(WIO) and their Implications for the Region. Proceedings of the 23rd Annual Symposium on Sea Turtle Biology and
Conservation, held 17-21 March 2003, Kuala Lumpur, Malaysia.
Mortimer, J.A. 2004. Seychelles Marine Ecosystem Management Project (SEYMEMP) - Turtle component. Dec 2000 to March
2004: Final report.
The National Beach Monitoring programme involves taking beach profile measurements at regular intervals which are
compiled in a national database. The programme aims to provide information on the seasonal trends of erosion and
accretion of all the beaches in Seychelles to give an overview of the state of the beaches. This is relevant to the turtle
nesting activities since many of the beaches in Seychelles provide nesting habitat for turtles. Project executed

by Policy
Planning and Services (PPS) of MENR.

OBJECTIVE II: PROTECT, CONSERVE AND REHABILITATE MARINE TURTLE HABITATS

2.1 Measures to protect and conserve marine turtle habitats

2.1.1 What is being done to protect critical habitats outside of established protected areas? (NB: It is assumed that legislation relating to established protected areas will have been described in Section 1.5.1) **[BPR, SAP]**

› Ministry of Environment greenline and Eco Alert Website for reporting of environmental issues.- Members of the public are awarded with small tokens for information provided i.e pertaining to turtle nesting, poaching, etc.
Inspections and monitoring conducted for all development projects. Key recommendations provided on setbacks, coastal rehabilitation etc
Patrolling conducted by Marine Police

2.1.2 Are assessments routinely made of the environmental impact of marine and coastal development on marine turtles and their habitats? **[IND, SAP]**

Use the text box to elaborate on your response.
☑ YES

› Assessments are made at many beaches, which include but are not specific to, turtles. These record and report any
threats to turtles, including habitat destruction, poaching, etc.

2.1.3 Is marine water quality (including marine debris) monitoring near turtle habitats? If yes, describe the nature of this monitoring and any remedial measures that may have been taken. **[SAP]**
☑ YES

2.1.4 Are measures in place to prohibit the use of poisonous chemicals and explosives? **[SAP]**

Use the text box to elaborate on your response.
☑ YES

› The Fisheries Act prohibits the use of explosives or poisons in Seychelles waters.
The Pesticide Board approves the use of poisonous substances in Seychelles. MEECC is represented on the board.

2.2 Rehabilitation of degraded marine turtle habitats

2.2.1 Are efforts being made to recover degraded coral reefs? If yes, give details (location, duration, effectveness, lessons learned, future plans etc.). **[IND, SAP]**

Provide sufficient details of the measures taken, especially those measures shown to have been effective in recovering degraded coral reefs. Please indicate future plans in this regard.
☑ YES (Details/future plans)

› In response to the severe mass coral-bleaching event in 1998 and again in 2016, a number of coral reef restoration projects have been or are still being implemented.
Reef Rescuers project raised over 40,000 corals fragments in underwater nurseries and transplanted over 24,000 onto 5,225m2 of degraded reef - the size of a football pitch - at Cousin Island Special Reserve.
Furthermore Nature Seychelles was key in developing a coral reef restoration toolkit for the country
First ever Coral Reef Restoration Training program in Seychelles launched by Nature Seychelles
Coral reef policy and strategic Action Plan will be developed as part of SWIOFISH3 World Bank Project

You have attached the following documents to this answer.

2018-Coral-Reef-Restoration-Toolkit-Seychelles.pdf

2.2.2 Are efforts being made to recover degraded mangrove habitats that are important for turtles? If yes, give details (location, duration, effectiveness, lessons learned future plans etc.). **[IND, SAP]**
☑ NOT APPLICABLE (no mangrove habitats important for turtles)

2.2.3 Are efforts being made to recover degraded sea grass habitats? If yes, give details (location, duration, effectiveness, lessons learned future plans etc.). **[IND, SAP]**
☑ NO (Details/future plans)

› Not yet. But, national studies are now underway to assess the status of seagrass habitats in Seychelles.

OBJECTIVE III: IMPROVE UNDERSTANDING OF MARINE TURTLE ECOLOGY AND POPULATIONS THROUGH RESEARCH, MONITORING AND INFORMATION EXCHANGE

3.1 Studies on marine turtles and their habitats

3.1.1 Give a list of available literature that includes baseline information from studies carried out in your country on marine turtle populations and their habitats. **[INF]**

› Bourjea, J., Lapegue, S., Gagnevin, L., Broderick, D., Mortimer, J.A., Ciccioine, S., Roos, D., Taquet, C., Griezel, H. 2007.
Phylogeography of the green turtle, Chelonia mydas, in the Southwest Indian Ocean. Molecular Ecology 16: 175 - 186.
Broderick, D., Johanson, H., Lavery, S., Mortimer, J.A., Miller, J., Moritz, C. 1998. Genetic assessment of Western and
Central Indian Ocean marine turtle stocks. Final report to the Department of Environment, Republic of Seychelles
Government produced under the GEF EMPS J1 Turtle and Tortoise Conservation Project. 1-23 p.
Brooke, M.d.L., Garnett, M.C. 1983. Survival and reproductive performance of hawksbill turtles Eretmochelys imbricata L.
on Cousin Island, Seychelles. Biological Conservation 25: 161-170.
Diamond, A. W 1976. Breeding biology and conservation of hawksbill turtles, Eretmochelys imbricata L. on Cousine Island,
Seychelles. Biological Conservation 9: 199-215.
Domingue, G., Mortimer, J.A. 2001. The impact of commercial fisheries on turtles in Seychelles. 81 pp. In: Ciccione, S.,
Roos, D., Le Gall, J.-Y. (Eds.), Advance in Knowledge and Conservation of Sea Turtles in South-West Indian Ocean. 81
pp.81 pp.
Feare, C. 1979. Ecology of Bird Island, Seychelles.
Frazier, J.G. 1970. Report on sea turtles in the Seychelles Region. Mimeographed. 1-96 p.
Frazier, J.G. 1971. Observations on sea turtles at Aldabra Atoll. Philosophical Transactions of the Royal Society of London,
Series B 260: 373-410.
Frazier, J.G. 1974. Sea turtles in Seychelles. Biological Conservation 6: 71-73.
Frazier, J.G. 1976. Report on sea turtles in the Seychelles Area. Journal of the Marine Biological Association of India 18:
179-214.
Frazier, J.G. 1979. Marine turtle management in Seychelles: A case-study. Environmental Conservation 6: 225-230.
Frazier, J.G. 1982. Status of marine turtles in the Central Western Indian Ocean. 385-389 p. In: Bjorndal, K. (Ed.), Biology
and Conservation of Sea Turtles. 385-389 p. Smithsonian Institution Press, Washington D.C. 385-389 p.
OBJECTIVE III. IMPROVE UNDERSTANDING OF MARINE TURTLE ECOLOGY AND
POPULATIONS THROUGH RESEARCH, MONITORING AND INFORMATION EXCHANGE
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Frazier, J.G. 1984. Marine turtles in the Seychelles and adjacent territories. 417-468 p. In: Stoddart, D.R. (Ed.), Biogeography and Ecology of the Seychelles Islands. 417-468 p. Junk, The Hague. 417-468 p.
Frith, C.B. 1975. Predation upon hatchlings and eggs of the Green turtle, Chelonia mydas, on Aldabra Atoll, Indian Ocean.
Atoll Research Bulletin 185: 11-12.
Garnett, M., Frazier, J.G. 1979. Eretmochelys breeding biology in the Seychelles. pp. 954.
Gibson, T.S.H. 1979. Green turtle (Chelonia mydas (L.)) nesting activity at Aldabra Atoll. Philosophical Transactions of the
Royal Society of London, Series B 286: 255-263.
Groombridge, B., Luxmoore, R. 1987. The green turtle and hawksbill (Reptilia: Cheloniidae) world status, exploitation and
trade.
Hirth, H. F. 1969. Marine turtles in the Seychelles and Aldabra (British Indian Ocean Territory). Proceedings of the Working
Meeting of Marine Turtle Specialists. 54-55 p.
Hirth, H.F., Carr, A. 1970. The Green turtle in the Gulf of Aden and the Seychelles Islands. 1-44 p. North-Holland Publishing
Company, Amsterdam.
Hitchins, P.M., Bourquin, O., Hitchins, S. 2003. Inter-island nesting by Hawksbill turtles (Eretmochelys imbricata) in

Seychelles. Phelsuma 11: 70-71.
Hitchins, P.M., Bourquin, O., Hitchins, S. 2003. Factors influencing emergences and nesting sites of Hawksbill turtles
(Eretmochelys imbricata) on Cousine Island, Seychelles, 1995 - 1999. Phelsuma 11: 59-69.
Hitchins, P.M., Bourquin, O., Hitchins, S., Piper, S.E. 2004. Biometric data on hawksbill turtles (Eretmochelys imbricata)
nesting at Cousine Island, Seychelles. Journal of Zoology 264: 371-381.
Hitchins, P.M., Bourquin, O., Hitchins, S. 2004. Nesting success of Hawksbill turtles (Eretmochelys imbricata) on Cousine
Island, Seychelles. Journal of Zoology 264: 381-389.
Honegger, R.E. 1967. The green turtle (Chelonia mydas japonica) Thunberg in the Seychelles Islands. British Journal of
Herpetology 4: 8-11.
Hornell, J. 1927. The turtle fisheries of the Seychelles Islands. 1-55 p.
Houghton, J.D.R., Callow, M.J., Hays, G.C. 2003. Habitat utilization by juvenile hawksbill turtles (Eretmochelys imbricata,
Linnaeus, 1766) around a shallow water coral reef. Journal of Natural History 37: 1269-1280.
Houghton, J.D.R., Cedras, A., Myers, A.E., Liebsch, N., Metcalf, J.D., Mortimer, J.A., Hays, G.C. 2008. Measuring the state
of consciousness in a free-living diving sea turtle. Journal of Experimental Marine Biology and Ecology 356: 115-120.
Hughes, G. R. 1971. Sea turtle research and conservation in South East Africa. Proceedings of the 2nd working meeting of
marine turtle specialists. 57-67 p.
Ministry of Foreign Affairs, P.a.E. 1994. Seychelles moves to stop turtle-shell trade. Oryx 28: 229. Mortimer, J.A. 1984.
Marine turtles in the Republic of the Seychelles: status and management. 1-80 p.
Mortimer, J.A. 1985. Recovery of green turtles on Aldabra. Oryx 19: 146-150.
Mortimer, J.A. 1986. Turtles, tortoises and terrapins of the Seychelles. 1-32 p. World Wildlife Fund/International, 1-32 p.
Mortimer, J.A. 1988. Green turtle nesting at Aldabra Atoll - population estimates and trends. Biological Society of
Washington 8: 116-128.
Mortimer, J. A. and Bresson, R. 1994. The Hawksbill nesting population at Cousin Island, Republic of Seychelles: 1971 - 72
to 1991 - 92. 13th Annual Symposium on Sea Turtle Biology and Conservation. Proceedings of the Thirteenth Annual
Symposium on Sea Turtle Biology and Conservation. 115-117 p.

Mortimer, J. A. and Bresson, R. 1994. Individual and age-dependent variations in clutch frequency among Hawksbill turtles
at Cousin Island, Seychelles: 1973 - 1992. 14th Annual Symposium on Sea Turtle Biology and Conservation. Proceedings of
the Fourteenth Annual Symposium on Sea Turtle Biology and Conservation. 94-96 p.
Mortimer, J.A., Collie, J., Mbindo, C. 1996. The status of sea turtle conservation in the Republic of Seychelles. 103-115 p.
In: Humphrey, S.L., Salm, R.V. (Eds.), Status of sea turtle conservation in the Western Indian Ocean. 103-115 p. IUCN /
UNEP, 103-115 p.
Mortimer, J.A. 1997. Turtle monitoring at Aldabra. 1-47 p.
Mortimer, J. A. and Collie, J. 1998. Status and conservation of sea turtles in the Republic of Seychelles. 17th Annual Sea
Turtle Symposium. Proceedings of the Seventeenth Annual Symposium on Sea Turtle Biology and Conservation. 74-76 p.
Mortimer, J.A. 1998a. Turtle and tortoise conservation: Project J1 Environmental Management Plan of the Seychelles
Volumes 1 of 2 (Final Version). 1-82 p.
Mortimer, J.A. 1998b. Turtle and tortoise conservation: Project J1 Environmental Management Plan of the Seychelles
Volumes 2 of 2 (Appendices). 1-128 p.
Mortimer, J.A., Bresson,R. 1999. Temporal distribution and periodicity in hawksbill turtles (Eretmochelys imbricata) nesting
at Cousin Island, Republic of Seychelles. Chelonian Conservation 3: 318-325.
Mortimer, J.A. 1999. World's first turtle shell stockpile to go up in flames as Miss World 1998 contestants look on. Chelonian
Conservation and Biology 3: 376-377.

Mortimer, J.A. 1999. Turtle shell stockpile burnt. Oryx 33: 98-107.
Mortimer, J.A., Broderick,D. 1999. Population genetic structure and developmental migrations of sea turtles in the Chagos
Archipelago and adjacent regions inferred from mtDNA sequence variation. 185-194 p. In: Sheppard,C.R.C., Seaward,M.R.D. (Eds.), Ecology of the Chagos Archipelago. 185-194 p. Linnean Society Occasional Publications 2, 185-194
p.
Mortimer, J.A. 2000a. Conservation of Hawksbill turtles (Eretmochelys imbricata) in the Republic of the Seychelles. 176-185
p. In: Pilcher, N.J., Ismail, G. (Eds.), Sea turtles of the Indo-Pacific: research, management and conservation. 176-185 p.
ASEAN Academic Press Ltd., London. 176-185 p.
Mortimer, J. A. 2000b. Sea turtles in the Republic of Seychelles: An emerging conservation success story. 18th International
Sea Turtle Symposium. Proceedings of the Eighteenth International Sea Turtle Symposium. 24-27 p.
Mortimer, J.A. 2000. Sea turtle conservation programmes: Factors determining success or failure. 1-371 p. In: Salm, R.V.,
Clark, J.R., Siirila, E. (Eds.), Marine and Coastal Protected Areas: A guide for planners and managers. 1-371 p. IUCN,
Washington D.C. 1-371 p.
Mortimer, J.A. 2000. More effective turtle monitoring at Aldabra. pp. 1-2.
Mortimer, J. A. and Balazs, G. H. 2000. Post-nesting migrations of Hawksbill turtles in the granitic Seychelles and
implications for conservation. 19th Annual Sea Turtle Symposium. Proceedings of the nineteenth annual symposium on sea
turtle conservation and biology. 22-26 p.
Mortimer, J.A. 2001. International migrations of sea turtles tagged at Aldabra. Seychelles Islands Foundation Newsletter
7:3.
Mortimer, J. A., Collie, J, Jupiter, T, Chapman, R, Liljevik, A, and Betsy, B 2003. Growth rates of immature hawksbills
(Erytmochelys imbricata) at Aldabra Atoll, Seychelles (Western Indian Ocean). 22nd Annual Symposium on Sea Turtle
Biology and Conservation. 22nd Annual Symposium on Sea Turtle Biology and Conservation . 247-248 p.
Mortimer, J.A. 2004. Seychelles Marine Ecosystem Management Project (SEYMEMP) - Turtle component: Final report -
Appendices 1 to 11. 1-159 p.
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Mortimer, J.A. 2004. Turtle Talk: Aldabra's mysterious sea turtles - well-travelled but "home-loving" navigators. Seychelles
Island Foundation Newsletter 7: 5-6.
Mortimer, J.A. 2005a. Hawksbills in the Indian Ocean: Brief summary of status, trends, threats and available data. Western
Pacific Sea Turtle Workshop - Hawksbill Turtles. Proceedings of the Western Pacific Sea Turtle. 97-100 p.
Mortimer, J.A. 2005b. Sea turtles of D'Arros Island and St. Joseph Atoll: Status and recommendations. Proceedings of a
Scientific Symposium held at the D'Arros Research Centre 15 - 17 April 2005: D'Arros Research Centre Technical Report
No.1. 54-72 p.
Mortimer, J.A., Jupiter, T., Collie, J., Chapman, R., Liljevik, A., Betsy, B., Stevenson, J., Laboudallon, V., Assary, M., Augeri,
D., and Pierce, S. 2006. Trends in the Green turtle (Chelonia mydas) nesting population at Aldabra Atoll, Seychelles (WIO)
and their implications for the region. 23rd Annual Symposium on Sea Turtle Biology and Conservation. Proceedings of the
Twenty-Third Annual Symposium on Sea Turtle Biology and Conservation. 75-77 p.
Okayama, T., Diaz-Fernandez, R., Baba, Y., Halim, M., Abe, O., Azeno, N., Koike, H. 1999. Genetic diversity of the
Hawksbill turtel in the Indo-Pacific and Caribbean regions. Chelonian Conservation and Biology 3: 362-367.
Remie, S., Mortimer, J.A. 2007. First records of Olive ridley turtles (Lepidochelys olivacea) in Seychelles. Marine Turtle
Newsletter 117: 9-10.
Salm, R.V. 1976. Marine turtle management in Seychelles and Pakistan. Environmental Conservation 3: 267-268.
Seabrook, W. 1987. Examination of the impact of the feral cat (Felis catus L.) on the fauna of Aldabra Atoll, Seychelles,

with recommendations on management. World Wildlife Fund (Project Report 1784).
Seabrook, W. 1989. The seasonal pattern and distribution of Green turtle (Chelonia mydas) nesting activity on Aldabra
Atoll, Indian Ocean. Journal of Zoology 219: 71-81.
Wood, V.E. 1986. Breeding success of hawksbill turtles Eretmochelys imbricata at Cousin Island, Seychelles and the
implications for their conservation. Biological Conservation 37: 321-332.

3.1.2 Have **long-term** monitoring programmes (i.e. of at least 10 years duration) been initiated or planned for priority marine turtle populations frequenting the territory of your country? **[IND, BPR]**

Please give details of the nature, duration and continuity of these programmes.
☑ YES

› Aldabra atoll - since 1968 (Mortimer et al. 2006); ongoing monitoring by SIF
Aride island - since 1981 (Mortimer and Balazs 2000); ongoing monitoring by ICS
Bird island - since 1995 (Mortimer and Balazs 2000); ongoing
Curieuse Marine Park - since 1980 (Mortimer and Balazs 2000); ongoing monitoring by SNPA
Cousin island - since 1973 (Mortimer and Bresson 1999); ongoing monitoring by Nature Seychelles
Cousine island - since 1994 (Mortimer and Balazs 2000); ongoing by Nature Seychelles
Grand Seour - since 1999 (Mortimer et al. 2003)
La Digue - since 1995 (Mortimer et al. 2003)
Mahe (southern beaches) - since 1995 (Mortimer et al. 2003)ongoing monitoring by MEECC and MCSS
Praslin - 1995 (Mortimer et al. 2003)ongoing monitoring by MEECC
Ste. Anne Marine Park - since 1981 (Mortimer and Balazs 2000); ongoing monitoring by SNPA
North Island since 1998
Silhouette Island since 2000
Fregate Island since 1998
Desroches Island since 2009
Alphonse Island/St. Francois atoll since 2006
Farquhar atoll since 2014
D'Arros Island/ St. Joseph atoll since 2004

3.1.3 Has the genetic identity of marine turtle populations in your country been characterised? **[INF, PRI]**

Please give details (e.g. which species, which populations?).
☑ YES

› During 1995-1997, as a component of the GEF Turtle and Tortoise Conservation Project (EMPS- J1), a total of 160 genetic
samples were collected from nesting green turtles and nesting hawksbills throughout Seychelles, and 370 genetic samples
were collected from foraging green turtles and foraging hawksbills throughout Seychelles. (Mortimer 1998aa.)
The results of the genetic analyses are presented in the following:
Broderick, D., Johanson, H., Lavery, S., Miller, J. and Moritz, C. 1998. Genetic Assessment of Western and Central Indian
Ocean Marine Turtle Stocks. Final Report to the Department of Environment, Republic of Seychelles Government. 15 January
1998. 23 pp.
Mortimer, J.A., Broderick, D. 1999. Population genetic structure and developmental migrations of sea turtles in the Chagos
Archipelago and adjacent regions inferred from mtDNA sequence variation. 185-194 p. In: Sheppard, C.R.C., Seaward, M.R.D.
(Eds.), Ecology of the Chagos Archipelago. 185-194 p. Linnean Society Occasional Publications 2, 185-194 p.
Bourjea J, La Pègue S, Gagnevin L, Broderick D, Mortimer JA, Ciccione S, Roos D, Taquet C, Grizel H. 2007. Phylogeography of the green turtle, Chelonia mydas, in the Southwest Indian Ocean. Molecular Ecology 2007(16):175-186.
Bourjea, J., Mortimer, J.A., Garnier, J., Okemwa, G., Godley, B.J., Hughes, G. et al. (2015) Population structure enhances perspectives on regional management of the western Indian Ocean green turtle. Conservation Genetics, 16, 1069-1083. (and supplementary data).
Vargas, S.M., Jensen, M.P., Ho, S.Y.W., Mobaraki, A., Broderick, D., Mortimer, J.A. et al. (2016) Phylogeography, genetic diversity, and management units of hawksbill turtles in the Indo-Pacific. Journal of Heredity, 107, 199-213.
Phillips KP, Mortimer JA, Jolliffe KG, Jolliffe S-M, Hodgkiss RD, McClelland JHR, Liljevik A. 2017. Season-long sperm storage and no multiple paternity in green turtles (Chelonia mydas) nesting on Cousine Island, Seychelles. Marine Turtle Newsletter 154:6-11.

Phillips KP, Mortimer JA, Joliffe KG, Jorgensen TH, Richardson DS. 2014. Molecular techniques reveal cryptic life history and demographic processes of a critically endangered marine turtle. Journal of Experimental Marine Biology & Ecology 455:29-37.

3.1.4 Which of the following methods have been or are being used to try to identify migration routes of turtles? Use the text boxes to provide additional details [INF, PRI]

a) Tagging

☑ YES (Details/future plans)

› Major programmes to tag nesting females throughout the country (Mortimer and Bresson 1999; Mortimer and Balazs 2000;
Mortimer et al. 2003; Mortimer et al. 2006). Nesting hawksbills have been tagged at Cousin Island since 1973, and
elsewhere since 1981 (see section 3.1.2.). Nesting green turtles have been tagged intensively at Aldabra since 1981, and on
a smaller scale elsewhere in the country. Tagging of juvenile green turtles and hawksbills has been taking place at Aldabra
since 1986, and at other sites since 1995.

b) Satellite tracking

☑ YES (Details/future plans)

› Hawksbills (post-nesting) tracked from Inner Islands and from Amirantes Group.
Mortimer JA, Balazs GH. 2000. Post-nesting migrations of hawksbill turtles in the granitic Seychelles and implications for conservation. In: Kalb H. (compilers). Proceedings of the 19th Annual Sea Turtle Symposium. South Padre Island, Texas.
Green turtles (post-nesting) tracked from Aldabra.
Green turtles (post-nesting) tracked from Alphonse Island.
Green turtles tracked from Chagos Island to Seychelles.
Hays GC, Mortimer JA, Ierodiaconou D, Esteban N. 2014. The World's largest marine protected area, conservation planning and long distance migration of endangered species. Conservation Biology 28(6):1636-1644.
Hawksbills (post-nesting) tracked from Inner Islands and from Amirantes Group.
Mortimer JA, Balazs GH. 2000. Post-nesting migrations of hawksbill turtles in the granitic Seychelles and implications for conservation. In: Kalb H. (compilers). Proceedings of the 19th Annual Sea Turtle Symposium. South Padre Island, Texas.
Green turtles (post-nesting) tracked from Aldabra.
Green turtles (post-nesting) tracked from Alphonse Island.
Green turtles tracked from Chagos Island to Seychelles.
Hays GC, Mortimer JA, Ierodiaconou D, Esteban N. 2014. The World's largest marine protected area, conservation planning and long distance migration of endangered species. Conservation Biology 28(6):1636-1644.

3.1.5 Have studies been carried out on marine turtle population dynamics and survival rates (e.g. including studies into the survival rates of incidentally caught and released turtles)? **[INF, PRI]**

☑ YES

3.1.6 Has research been conducted on the frequency and pathology of diseases in marine turtles? **[INF, PRI]**

☑ YES

› Where nesting and foraging turtles are studied, injury and disease are routinely noted

3.1.7 Is the use of traditional ecological knowledge in research studies being promoted? **[BPR, PRI]**

☑ YES

› Fisherman and turtle hunters are consulted regarding their knowledge of turtle ecology and behaviour, and sometimes
participate in field work.

3.2 Collaborative research and monitoring

- 3.2.1 List any **regional** or **sub-regional action plans** in which your country is already participating, which may serve the purpose of identifying priority research and monitoring needs. **[INF]**

Use the text box to elaborate on your response.
› Seychelles Marine Spatial Plan.
IOSEA MoU

3.2.2 On which of the following themes have collaborative studies and monitoring been conducted? Use the text boxes to describe the nature of this international collaboration or to clarify your response. Answer 'NO' if the studies/monitoring undertaken do not involve international collaboration. [INF, PRI]

a) Genetic identity
☑ YES (Details/future plans)

› Genetic characteristics compared between Seychelles turtles and those of: the Arabian Gulf, Australia, Europa, Tromelin
and Chagos (BIOT):
Broderick, D., Johanson, H., Lavery, S., Miller, J. and Moritz, C. 1998. Genetic Assessment of Western and Central Indian
Ocean Marine Turtle Stocks. Final Report to the Department of Environment, Republic of Seychelles Government. 15
January 1998. 23 pp.
Mortimer, J.A. & Broderick, D. 1999. Population genetic structure and developmental migrations of sea turtles in the
Chagos Archipelago and adjacent regions inferred from mtDNA sequence variation. Pp. 185-194, in Sheppard, CRC and
Seaward, MRD (eds). Ecology of the Chagos Archipelago. Linnean Society Occasional Publications 2.
Bourjea, J., Lapegue, S., Gagnevin, L., Broderick, D., Mortimer, J.A., Ciccioine, S., Roos, D., Taquet, C., Griezel,H. 2007.
Phylogeography of the green turtle, Chelonia mydas, in the Southwest Indian Ocean. Molecular Ecology 16: 175 -186.
Ongoing Project funded by Bertarelli Foundation to study turtles in Chagos which shows international migration patterns.

b) Conservation status
☑ YES (Details/future plans)

c) Migrations
☑ YES (Details/future plans)

› Mortimer, J. A. and Balazs, G. H. 1999. Post-nesting migrations of hawksbill turtles in the granitic Seychelles and
implications for conservation. Proceedings of the nineteenth annual symposium on sea turtle conservation and biology.
Mortimer, J.A., Broderick, D. 1999. Population genetic structure and developmental migrations of sea turtles in the Chagos
Archipelago and adjacent regions inferred from mtDNA sequence variation. 185-194 p. In: Sheppard, C.R.C., Seaward,
M.R.D. (Eds.), Ecology of the Chagos Archipelago. 185-194 p. Linnean Society Occasional Publications 2, 185-194 p.
Mortimer, J. A. and Balazs, G. H. 2000. Post-nesting migrations of Hawksbill turtles in the granitic Seychelles and
implications for conservation. 19th Annual Sea Turtle Symposium. Proceedings of the nineteenth annual symposium on sea
turtle conservation and biology. 22-26 p.
Mortimer, J.A. 2001. International migrations of sea turtles tagged at Aldabra. Seychelles Islands Foundation Newsletter
7:3.
Hays GC, Mortimer JA, Ierodiaconou D, Esteban N. 2014. The World's largest marine protected area, conservation planning and long distance migration of endangered species. Conservation Biology 28(6):1636-1644.

d) Other biological and ecological aspects
☑ YES (Details/future plans)

3.3 Data analysis and applied research

3.3.1 List, in order of priority, the marine turtle populations in your country in need of conservation actions, and indicate their population trends. **[PRI]**
› Most nesting populations of both Green Turtles and Hawksbills where protection and beach monitoring occur are increasing throughout the country.
Population declines are apparent at the three main islands where most people reside: Mahé, Praslin, La Digue
Some significant populations of nesting hawksbills are potentially threatened by major hotel development: eg.

Silhouette Island, Ste. Anne Island, Platte Island, etc..

3.3.2 Are research and monitoring activities, such as those described above in Section 3.1, periodically reviewed and evaluated for their efficacy? **[SAP]**
☑ YES

› standardized techniques used for monitoring

3.3.3 Describe how research results are being applied to improve management practices and mitigation of threats (in relation to the priority populations identified in 3.3.1, among others). **[SAP]**
› working collaboratively at the national, regional and international levels to improve/increase capacities to manage shared sea turtle populations.
Address and develop guidelines for improved coastal development
Develop and amend existing legislation to effectively minimize threats to sea turtles and their habitats
Engaging with fishermen to educate them about benefits of turtle conservation etc

3.4 Information exchange

3.4.1 Has your country undertaken any initiatives (nationally or through collaboration with other Range States) to standardise methods and levels of data collection? **[BPR, INF]**
☑ YES [If yes, please give details of the agreed protocol(s)]

› Annual reports submitted to MEECC by E NGOs
All research applications receives final approval from MEECC

3.4.2 To what extent does your country exchange scientific and technical information and expertise with other Range States? **[SAP, IND]**
☑ OCCASIONALLY

3.4.3 If your country shares scientific and technical information and expertise with other Range States, what mechanisms have commonly been used for this purpose? Comment on any positive benefits/outcomes achieved through these interactions. **[INF]**
› Reports and publications, personal communications, presentations at international meetings/workshops.

3.4.4 Does your country compile and make available to other countries data on marine turtle populations of a regional interest?

Please give details **[INF]**
☑ YES

OBJECTIVE IV: INCREASE PUBLIC AWARENESS OF THE THREATS TO MARINE TURTLES AND THEIR HABITATS, AND ENHANCE PUBLIC PARTICIPATION IN CONSERVATION ACTIVITIES

4.1 Public education and information programmes

4.1.1 Describe the educational materials, including mass media information programmes that your country has collected, developed and/or disseminated. **[INF, PRI]**

Details/future plans:
› Educational booklets for school children:
- Mortimer, J.A. 1986. "Turtles, Tortoises and Terrapins of the Seychelles." A conservation education booklet for children
produced for the Ministry of Education, Seychelles. Typeset publication 32 pp., 29 illustrations. Funded by WWF-International.
- Mortimer, J.A. 1986. Teacher's Manual to Accompany "Turtles, Tortoises and Terrapins of the Seychelles." 26 pp.,
unpublished. Funded by WWF-International.
- Mortimer, J.A. 1995. Teaching Critical Concepts for the Conservation of Sea Turtles. Marine Turtle Newsletter. 71:1-4.
Educational booklets for school children:
- Mortimer, J.A. 1986. "Turtles, Tortoises and Terrapins of the Seychelles." A conservation education booklet for children
produced for the Ministry of Education, Seychelles. Typeset publication 32 pp., 29 illustrations. Funded by WWF-International.
- Mortimer, J.A. 1986. Teacher's Manual to Accompany "Turtles, Tortoises and Terrapins of the Seychelles." 26 pp.,
unpublished. Funded by WWF-International.
- Mortimer, J.A. 1995. Teaching Critical Concepts for the Conservation of Sea Turtles. Marine Turtle Newsletter. 71:1-4.
Sea turtle monitoring Guidebook for students and teachers (currently being developed by MEECC)
Sea turtle value, conservation and threats in Seychelles (MEECC)
Sea turtle T shirts- Sensitization against poaching (MEECC)
Annual Sea Turtle Festival implemented by Sea Turtle Friends of Seychelles (STFS)

4.1.2 Which of the following groups have been the targets of these focused education and awareness programmes described in above in Section 4.1.1? **[PRI, INF]**
☑ Policy makers
☑ Fishing industry
☑ Local/Fishing communities
☑ Tourists
☑ Media
☑ Teachers
☑ Students
☑ Military, Navy, Police

4.2 Alternative livelihoods opportunitiesDescribe initiatives already undertaken or planned to identify and facilitate alternative livelihoods (including income-generating activities) for local communities. **[IND, BPR]**
› Artisan Re-training and Compensation Programme conducted in the early 1990s ended domestic trade in hawksbill shell.

OBJECTIVE V: ENHANCE NATIONAL, REGIONAL AND INTERNATIONAL COOPERATION

5.1 Collaboration with, and assistance to, signatory and non-signatory States

5.1.1 Has your country undertaken a national review of its compliance with Convention on International Trade in Endangered Species (CITES) obligations in relation to marine turtles? **[SAP]**
☑ YES (If yes, please elaborate briefly)

› No trade in turtle meat,shell or products allowed
Seychelles has a draft CITES legislation (currently at the Attorney General's Office.
Seychelles will review its Wild Animals and Birds Protection Act this year.

5.1.2 Does your country have, or participate/cooperate in, CITES training programmes for relevant authorities? **[SAP]**
☑ YES (If yes, please provide details of these training programmes)

› Seychelles actively involved in training/workshops organised by CITES especially marine species related trainings

5.1.3 Does your country have in place mechanisms to identify **international** illegal trade routes (for marine turtle products etc.)? Please use the text box to elaborate on how your country is cooperating with other States to prevent/deter/eliminate illegal trade. **[SAP]**

Please give details of particularly successful interventions and prosecutions; and/or mention any difficulties experienced that impede progress in this area. Please provide references to any published reports (e.g. already prepared for CITES purposes) that give a more ample explanation.
☑ YES

› The Authorities in Seychelles are in direct contact with Interpol and CITES Management Authorities. Random search is sometimes conducted by Custom Officers.
A CITES training workshop was organized with different stakeholders from enforcement, customs, law etc.
Further training is planned

5.1.5 Describe measures in place to prevent, deter and eliminate domestic illegal trade in marine turtle products, particularly with a view to enforcing the legislation identified in Section 1.5.1**. [INF]**
› The "Wild Animals and Birds Protection Act" imposes complete ban on domestic trade in turtles or their parts. (However, because of our huge exclusive economic zone (1.33 million km2), enforcement and surveillance is very difficult and costly.)
A Green line enables members of the public to report any illegal activities, even anonymously.
Coast Guard assist in surveillance and at all times.They are actively involved in operations to arrest poachers and to confiscate illegal products.
Environment education and awareness programmes remain a key element in turtle conservation.

5.2 Prioritisation, development and implementation of national action plans

5.2.1 Has your country already developed a national **action plan** or a set of **key management measures** that could eventually serve as a basis for a more specific action plan at a national level? **[IND]**

Please explain.
☑ YES

› National Biodiversity Strategy And Action Plan
Seychelles Coastal Management Plan

5.2.2 From your country’s perspective, which **conservation and management activities**, and/or which particular **sites or locations**, ought to be among the highest priorities for action?
(List up to 10 activities from the IOSEA Conservation and Management Plan). **[PRI]**
› 1. Identify routes of illegal trade through monitoring, and seek cooperation to take action to prevent, deter and where possible, eliminate illegal trade.
2. Identify needs for capacity building in terms of human resources, knowledge and facilities.
3. Develop partnerships with universities, research institutions, training bodies and other relevant organisations.
4. Implement, where appropriate, incentive schemes to encourage public participation (e.g.T-shirts for tag returns, public acknowledgement, certificates).
5. Promote exchange of scientific and technical information and expertise among nations, scientific institutions, non-governmental and international organisations, in order to develop and implement best

practice approaches to conservation of marine turtles and their habitats.
6. Explore international funding support and other incentives for signatory states that effectively manage marine turtle populations, which might include the complete prohibition of direct harvest (capture or killing)
7. Liaise and co-ordinate with fisheries industries and fisheries management organisations to develop and implement incidental capture mitigation mechanisms in national water and on the high seas.
8. Identify and strengthen existing mechanisms for co-operation at the sub-regional level.
9. Develop and implement media outreach programs
10. Re-vegetate, where appropriate, frontal dunes at nesting beaches, with indigenous flora as far as possible, in order to provide visual barriers to coastal development; and to restore appropriate beach temperature regimes.

5.2.3 Please indicate, from your country's standpoint, the extent to which the following **local** management issues require **international** cooperation in order to achieve progress. **[PRI]**
In other words, how important is **international** cooperation for addressing these issues?
Please select only one per line

	NOT AT ALL	LIMITED	IMPORTANT	ESSENTIAL
Illegal fishing in territorial waters	☐	☐	☐	☑
Incidental capture by foreign fleets	☐	☐	☐	☑
Enforcement/patrolling of territorial waters	☐	☐	☐	☑
Hunting/harvest by neighboring countries	☐	☐	☐	☑
Poaching, illegal trade in turtle products	☐	☐	☐	☑
Development of gear technology	☐	☐	☐	☑
Oil spills, pollution, marine debris	☐	☐	☐	☑
Training / capacity-building	☐	☐	☐	☑
Alternative livelihood development	☐	☐	☑	☐
Identification of turtle populations	☐	☐	☑	☐
Identification of migration routes	☐	☐	☐	☑
Tagging / satellite tracking	☐	☐	☐	☑
Habitat studies	☐	☐	☐	☑
Genetics studies	☐	☐	☐	☑

5.3 Cooperation and Information exchange

5.3.2 Has your country developed, or is it participating in, any networks for cooperative management of shared turtle populations? **[BPR, INF]**
☑ YES (if yes, give details)

5.3.3 What steps has your country taken to encourage Regional Fishery Bodies (RFBs) to adopt marine turtle conservation measures within Exclusive Economic Zones (EEZs) and on the high seas? Please describe the interventions made in this regard, referring to specific RFBs. **[SAP]**
› N/A

5.4 Capacity-building

5.4.1 Describe your country’s needs, in terms of human resources, knowledge and facilities, in order to build capacity to strengthen marine turtle conservation measures. **[PRI]**
› Surveillance and Patrol equipment:
- Patrol boats and accessory equipment; and
- Remote surveillance equipment; etc.
Training needs relative to reptile veterinary medicine for:
- Treatment of injured or sick turtles; and
- Post-mortems, etc
- Identification of cooked turtle meat

5.4.2 Describe any training provided in marine turtle conservation and management techniques (e.g. workshops held, training manuals produced etc.), and indicate your plans for the coming year. **[PRI, INF]**
› turtle tagging training for all MEECC staff.
further training on turtle biology

5.4.3 Specifically in relation to **capacity-building**, describe any partnerships developed or planned with universities, research institutions, training bodies and other relevant organisations. **[BPR]**
› MEECC to develop further collaborations with the University of Seychelles i.e encourage more students to conduct their final research on sea turtles and their habitats, existing and potential threats etc.
MEECC to build capacity of its biodiversity conservation staff through training sessions provided by NGOS such as MCCS,ICS, SIF etc

5.5 Enforcement of conservation legislation

5.5.1 National policies and laws concerning the conservation of marine turtles and their habitats will have been described in Section 1.5.1. Please indicate their effectiveness, in terms of their practical application and enforcement. **[SAP, TSH]**
› A lot of existing laws are outdated.
There is often lack of enforcement due to lack of human resource and equipment for effective monitoring .
The Turtle regulations under the Wild Animals and Birds Protection Act will be reviewed 2019 i.e will include increased fines/penalties etc.

5.5.2 Has your country conducted a review of policies and laws to address any gaps, inconsistencies or impediments in relation to marine turtle conservation? If not, indicate any obstacles encountered in this regard and when this review is expected to be done. **[SAP]**

Please give details.
☑ YES

5.5.3 From the standpoint of law enforcement, has your country experienced any difficulties achieving cooperation to ensure compatible application of laws across and between jurisdictions? **[TSH]**

Please give details.
☑ NO

OBJECTIVE VI: PROMOTE IMPLEMENTATION OF THE MOU, INCLUDING THE CMP

6.1 IOSEA Marine Turtle MoU membership and activities

6.1.2 Is your country **currently** favourable, in principle, to amending the MoU to make it a legally binding instrument? **[INF]**
☑ NO

6.1.3 Would your country be favourable, over a **longer time horizon**, to amending the MoU to make it a legally-binding instrument? **[INF]**
☑ NO (Use the text box to elaborate on your response, if necessary)

6.2 Secretariat and Advisory Committee

What efforts has your country made, or can it make, to secure funding to support the core operations of the IOSEA MoU (Secretariat and Advisory Committee, and related activities)? **[IND]**
› N/A

6.3 Resources to support implementation of the MoU

6.3.1 What funding has your country mobilised for **domestic** implementation of marine turtle conservation activities related to the IOSEA Marine Turtle MoU? Where possible, indicate the specific monetary values attached to these activities/programmes, as well as future plans. **[IND]**
› Seychelles Islands Foundation (SIF) is a parastatal body responsible for the management of two World Heritage sites in Seychelles (including Aldabra and Vallee de Mai). Fees paid to visit these sites are used to fund conservation projects on
Aldabra.
Environment Trust Fund (MEECC)
SEYCAAT

6.3.2 Has your country tried to solicit funds from, or seek partnerships with, other Governments, major donor organizations, industry, private sector, foundations or NGOs for marine turtle conservation activities? **[IND]**
☑ YES (If yes, give details of the approaches made (both successful and unsuccessful))

6.4 Coordination among government agencies

6.4.1 Has your country designated a lead agency responsible for coordinating national marine turtle conservation and management policy? If not, when is this information expected to be communicated to the IOSEA MoU Secretariat? **[IND]**

Please elaborate, as necessary.
☑ YES

› Ministry of Environment, Energy and Climate Change

6.4.2 Are the roles and responsibilities of all government agencies related to the conservation and management of marine turtles and their habitats clearly defined? **[IND]**

Use the text box to elaborate.
☑ YES

› The Biodiversity Conservation Section within MEECC is key in overseeing turtle conservation and management of sea turtles

6.4.3 Has your country ever conducted a review of agency roles and responsibilities? If so, when, and what was the general outcome? If not, is such a review planned and when? **[SAP]**

This question seeks to ascertain whether Signatories have made a serious examination of which agencies have a role to play in marine turtle conservation, either directly or indirectly, and which therefore should be apprised of the IOSEA MoU and its provisions.
If no internal review of interagency roles and responsibilities has been or will be undertaken, please elaborate if only to indicate that the necessary arrangements are already clear and not in need of further review.
☑ NO (Use the text box to elaborate)

ANNEX 1: SPECIES, HABITAT AND THREAT DATA [PRI, INF]
PLEASE COMPLETE A SEPARATE SECTION FOR EACH SITE/AREA

Site 1

Name of site/area:
› Aldabra

Geographic coordinates (North/South)
☑ South

› 9.4237◦ S, 46.3433◦ E

On-site research activities:
☑ Tagging
☑ Satellite tracking
☑ Foraging surveys

Province / State:
› Seychelles

Name of person / agency wwho has provided the information:
› Seychelles Islands Foundtion (SIF)

Information was last updated: (dd/mm/yyyy)
› June 2018

Short description of the site (optional):
› The property is legally protected under national legislation and is managed by a public trust, the Seychelles Islands Foundation
Aldabra Atoll is an outstanding example of a raised coral atoll. Due to its remoteness and inaccessibility, the atoll has remained largely untouched by humans for the majority of its existence. Aldabra is one of the largest atolls in the world
The atoll constitutes a refuge for over 400 endemic species and subspecies (including vertebrates, invertebrates and plants). These include a population of over 100,000 Aldabra Giant Tortoise.
Tourism is limited and carefully controlled. Whilst the property displays an almost intact ecosystem, protection and management need to address the constant threats posed by invasive alien species, climate change and oil spills, particularly in the event that oil exploration increases in the wider region.

Indicate the species occurence / use and relative importance of the site:

Abbreviations: Loggerhead Caretta caretta (CC); Olive Ridley Lepidochelys olivacea (LO); Green Chelonia mydas CM); Hawksbill Eretmochelys imbricata (EI); Leatherback Dermochelys coriacea (DC); Flatback Natator depressus (ND)
Use one of the following symbols or letters to indicate the presence or absence of a species at this site in the table above, including details (if known) about the relative importance of the site for nesting, feeding or development.

Insufficient information is available on the presence or absence of the species (leave box empty)

The species is **not present** or does not use this particular habitat type at this site.
?
It is speculated (only) that the species is present at this site and may be using one or more particular habitat types. In the absence of definitive information, place a **?** in the appropriate box(es).
✓
The species is definitely **known to be present** at this site; however no information is available on the relative importance of the site for nesting, feeding or development.
✓
H
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **high importance** for this species, relative to other sites in the country.
✓
A
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **average importance** for this species, relative to other sites in the country.
✓
L
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **lower importance** for this species, relative to other sites in the country.

a - h
Additional information on nesting habitat (where available):

Indicate the estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ' **a** ' through ' **f** ', corresponding to the following scale: **a**: 1 - 10 nests ; **b**: 11 - 100 nests ; **c**: 101 - 500 nests ; **d**: 501 - 1,000 nests ; **e**: 1,001 - 5,000 nests ; **f**: 5,001 - 10,000 nests ; **g**: 10,001 - 100,000 nests; **h**: more than 100,000 nests

	ND Flatback	DC Leatherback	EI Hawksbill	CM Green	LO Olive Ridley	CC Loggerhead
Nesting			✓ H	✓ H		
Feeding			✓ H	✓ H		
Developmental			✓ H	✓ H		

Describe the nature of and intensity of threats to marine turtles at this site:

	High (common occurence)	Medium	Low (rare event)	None	Unknown
Exploitation of nesting females (i.e. direct harvest on land)				✓	
Direct harvest of animals in coastal waters at or near the site				✓	
Egg collection (i.e. direct harvest by humans)				✓	
Incidental capture in coastal fisheries				✓	
Boat strikes				✓	
Marine debris (e.g. plastics at sea, flotsam)	✓				
Industrial effluent				✓	
Inshore oil pollution				✓	
Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities)				✓	
Artificial lighting (on land or near shore)				✓	
Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.)		✓			
Vehicles				✓	
Sand mining / removal				✓	
Natural threats, disease, predation of nests/nesting females (e.g. by domestic / feral animals), or natural predation at sea			✓		
Other (type in):					

What measures have been introduced to remove threats to marine turtles at this site?
☑ Vehicle / access restrictions

Site 2

Name of site/area:
› North Island Seychelles

Geographic coordinates (North/South)
☑ South

› 4.3950◦S, 55.2453◦ E

On-site research activities:
☑ Tagging
☑ Satellite tracking
☑ Foraging surveys

Province / State:
› Seychelles

Name of person / agency wwho has provided the information:
› Tarryn Retief Conservation Manager

Information was last updated: (dd/mm/yyyy)
› 2018

Indicate the species occurence / use and relative importance of the site:

Abbreviations: Loggerhead Caretta caretta (CC); Olive Ridley Lepidochelys olivacea (LO); Green Chelonia mydas CM); Hawksbill Eretmochelys imbricata (EI); Leatherback Dermochelys coriacea (DC); Flatback Natator depressus (ND)
Use one of the following symbols or letters to indicate the presence or absence of a species at this site in the table above, including details (if known) about the relative importance of the site for nesting, feeding or development.

Insufficient information is available on the presence or absence of the species (leave box empty)

The species is **not present** or does not use this particular habitat type at this site.
?
It is speculated (only) that the species is present at this site and may be using one or more particular habitat types. In the absence of definitive information, place a **?** in the appropriate box(es).
✓
The species is definitely **known to be present** at this site; however no information is available on the relative importance of the site for nesting, feeding or development.
✓
H
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **high importance** for this species, relative to other sites in the country.
✓
A
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **average importance** for this species, relative to other sites in the country.
✓
L
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **lower importance** for this species, relative to other sites in the country.
a - h
Additional information on nesting habitat (where available):

Indicate the estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ‘ **a** ’ through ‘ **f** ’, corresponding to the following scale: **a**: 1 - 10 nests ; **b**: 11 - 100 nests ; **c**: 101 - 500 nests ; **d**: 501 - 1,000 nests ; **e**: 1,001 - 5,000 nests ; **f**: 5,001 - 10,000 nests ; **g**: 10,001 - 100,000 nests; **h**: more than 100,000 nests

	ND Flatback	DC Leatherback	EI Hawksbill	CM Green	LO Olive Ridley	CC Loggerhead
Nesting			✓ H	✓ H		
Feeding			✓ H	✓ H		

Developmental			✓ H	✓ H		

Describe the nature of and intensity of threats to marine turtles at this site:

	High (common occurence)	Medium	Low (rare event)	None	Unknown
Exploitation of nesting females (i.e. direct harvest on land)				✓	
Direct harvest of animals in coastal waters at or near the site			✓		
Egg collection (i.e. direct harvest by humans)				✓	
Incidental capture in coastal fisheries				✓	
Boat strikes				✓	
Marine debris (e.g. plastics at sea, flotsam)		✓			
Industrial effluent				✓	
Inshore oil pollution				✓	
Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities)			✓		
Artificial lighting (on land or near shore)			✓		
Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.)					
Vehicles				✓	
Sand mining / removal					
Natural threats, disease, predation of nests/nesting females (e.g. by domestic / feral animals), or natural predation at sea			✓		
Other (type in):					

What measures have been introduced to remove threats to marine turtles at this site?
☑ Other (Please specify)

Please give further details or clarification about any of the information provided, as appropriate / necessary.
› Hawksbill turtle number of confirmed nests 98 and 19 turtles were tagged
Green turtle number of confirmed nests 310 and 41 turtles were tagged

Site 3

Name of site/area:
› Curieuse Island

Geographic coordinates (North/South)
☑ South

› 4.2816° S, 55.7217° E

On-site research activities:
☑ Tagging
☑ Foraging surveys

Province / State:
› Seychelles

Name of person / agency wwho has provided the information:
› Seychelles National Parks Authority

Information was last updated: (dd/mm/yyyy)
› 2018

Short description of the site (optional):
› Curieuse Marine national Park was designated 11th June 1979.The island is currently managed by the Seychelles National Parks Authority.

Indicate the species occurence / use and relative importance of the site:

Abbreviations: Loggerhead Caretta caretta (CC); Olive Ridley Lepidochelys olivacea (LO); Green Chelonia mydas CM); Hawksbill Eretmochelys imbricata (EI); Leatherback Dermochelys coriacea (DC); Flatback Natator depressus (ND)
Use one of the following symbols or letters to indicate the presence or absence of a species at this site in the table above, including details (if known) about the relative importance of the site for nesting, feeding or development.

Insufficient information is available on the presence or absence of the species (leave box empty)

The species is **not present** or does not use this particular habitat type at this site.
?
It is speculated (only) that the species is present at this site and may be using one or more particular habitat types. In the absence of definitive information, place a **?** in the appropriate box(es).
✓
The species is definitely **known to be present** at this site; however no information is available on the relative importance of the site for nesting, feeding or development.
✓
H
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **high importance** for this species, relative to other sites in the country.
✓
A
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **average importance** for this species, relative to other sites in the country.
✓
L
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **lower importance** for this species, relative to other sites in the country.
a - h
Additional information on nesting habitat (where available):

Indicate the estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ' **a** ' through ' **f** ', corresponding to the following scale: **a**: 1 - 10 nests ; **b**: 11 - 100 nests ; **c**: 101 - 500 nests ; **d**: 501 - 1,000 nests ; **e**: 1,001 - 5,000 nests ; **f**: 5,001 - 10,000 nests ; **g**: 10,001 - 100,000 nests; **h**: more than 100,000 nests

	ND Flatback	DC Leatherback	EI Hawksbill	CM Green	LO Olive Ridley	CC Loggerhead
Nesting			✓ H	✓ L		
Feeding			✓ H	✓ L		
Developmental			✓ H	✓ L		

Describe the nature of and intensity of threats to marine turtles at this site:

	High (common occurence)	Medium	Low (rare event)	None	Unknown
Exploitation of nesting females (i.e. direct harvest on land)			✓		
Direct harvest of animals in coastal waters at or near the site			✓		
Egg collection (i.e. direct harvest by humans)			✓		
Incidental capture in coastal fisheries			✓		
Boat strikes					✓
Marine debris (e.g. plastics at sea, flotsam)		✓			
Industrial effluent				✓	
Inshore oil pollution				✓	
Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities)			✓		
Artificial lighting (on land or near shore)		✓			
Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.)		✓			
Vehicles				✓	
Sand mining / removal				✓	
Natural threats, disease, predation of nests/nesting females (e.g. by domestic / feral animals), or natural predation at sea			✓		
Other (type in):					

Please give further details or clarification about any of the information provided, as appropriate / necessary.
› Hawksbill nests 148
Green turtle nests 21

Site 4

Name of site/area:
› Denis Island

Geographic coordinates (North/South)
☑ South

› 3.8053° S, 55.6676° E

On-site research activities:
☑ Tagging
☑ Satellite tracking
☑ Foraging surveys

Province / State:
› Seychelles

Name of person / agency wwho has provided the information:
› Green Islands Foundation (Denis Island)

Information was last updated: (dd/mm/yyyy)
› 2018

Indicate the species occurence / use and relative importance of the site:

Abbreviations: Loggerhead Caretta caretta (CC); Olive Ridley Lepidochelys olivacea (LO); Green Chelonia mydas CM); Hawksbill Eretmochelys imbricata (EI); Leatherback Dermochelys coriacea (DC); Flatback Natator depressus (ND)
Use one of the following symbols or letters to indicate the presence or absence of a species at this site in the table above, including details (if known) about the relative importance of the site for nesting, feeding or development.

Insufficient information is available on the presence or absence of the species (leave box empty)

The species is **not present** or does not use this particular habitat type at this site.
?
It is speculated (only) that the species is present at this site and may be using one or more particular habitat types. In the absence of definitive information, place a **?** in the appropriate box(es).
✓
The species is definitely **known to be present** at this site; however no information is available on the relative importance of the site for nesting, feeding or development.
✓
H
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **high importance** for this species, relative to other sites in the country.
✓
A
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **average importance** for this species, relative to other sites in the country.
✓
L
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **lower importance** for this species, relative to other sites in the country.
a - h
Additional information on nesting habitat (where available):

Indicate the estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ' **a** ' through ' **f** ', corresponding to the following scale: **a**: 1 - 10 nests ; **b**: 11 - 100 nests ; **c**: 101 - 500 nests ; **d**: 501 - 1,000 nests ; **e**: 1,001 - 5,000 nests ; **f**: 5,001 - 10,000 nests ; **g**: 10,001 - 100,000 nests; **h**: more than 100,000 nests

	ND Flatback	DC Leatherback	EI Hawksbill	CM Green	LO Olive Ridley	CC Loggerhead
Nesting			✓ A	✓ H		
Feeding			✓ A	✓ H		
Developmental			✓ A	✓ H		

Describe the nature of and intensity of threats to marine turtles at this site:

	High (common occurence)	Mediu m	Low (rare event)	Non e	Unknow n
Exploitation of nesting females (i.e. direct harvest on land)			✓		
Direct harvest of animals in coastal waters at or near the site			✓		
Egg collection (i.e. direct harvest by humans)				✓	

Incidental capture in coastal fisheries			✓		
Boat strikes					✓
Marine debris (e.g. plastics at sea, flotsam)		✓			
Industrial effluent				✓	
Inshore oil pollution				✓	
Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities)			✓		
Artificial lighting (on land or near shore)		✓			
Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.)		✓			
Vehicles				✓	
Sand mining / removal				✓	
Natural threats, disease, predation of nests/nesting females (e.g. by domestic / feral animals), or natural predation at sea		✓			
Other (type in):					

Please give further details or clarification about any of the information provided, as appropriate / necessary.
› Hawksbill tracks recorded 48
Green tracks recorded 544

Site 5

Name of site/area:
› Mahe, South Beaches Anse Grand Police
Anse Petite Police
Anse Bazarca
Anse Corail
Anse Cachee
Anse Intendance
Anse Parnel
Anse Forbans (NM)
Anse Forbans (ALA)
Anse Marie-Louise
Anse Takamaka
Anse Government
Anse Louis
Anse Madame Troian

Geographic coordinates (North/South)
☑ South

› 4.6827° S, 55.4804° E

On-site research activities:
☑ Tagging
☑ Genetic Sampling
☑ Satellite tracking
☑ Foraging surveys

Province / State:
› Seychelles

Name of person / agency wwho has provided the information:
› Marine Conservation Society Seychelles (MCSS)

Information was last updated: (dd/mm/yyyy)
› jun 2019

Short description of the site (optional):
› MCSS monitors 14 beaches all year round. As usual we conducted beach patrols on South Mahé beaches once a week during the off-peak season, increasing to twice a week nearing the peak season and minimum three times a week during the peak nesting period. On some occasions the main beaches were monitored more than once a day and even more than three times a week, depending on sightings of turtle activities observed by the general public at any particular time, where the monitoring team would be required to visit the particular beach to either attend to the nesting turtle or record any new turtle nesting activities. The other beaches in the South East and South West Mahe were monitored normally once a week throughout the season or as necessary. After the peak of the season the frequency of patrols normally decreases, with more effort set towards nest monitoring and gathering of egg clutch survival data.

Indicate the species occurence / use and relative importance of the site:

Abbreviations: Loggerhead Caretta caretta (CC); Olive Ridley Lepidochelys olivacea (LO); Green Chelonia mydas CM); Hawksbill Eretmochelys imbricata (EI); Leatherback Dermochelys coriacea (DC); Flatback Natator depressus (ND)
Use one of the following symbols or letters to indicate the presence or absence of a species at this site in the table above, including details (if known) about the relative importance of the site for nesting, feeding or development.

Insufficient information is available on the presence or absence of the species (leave box empty)

The species is **not present** or does not use this particular habitat type at this site.
?
It is speculated (only) that the species is present at this site and may be using one or more particular habitat types. In the absence of definitive information, place a **?** in the appropriate box(es).
✓
The species is definitely **known to be present** at this site; however no information is available on the relative importance of the site for nesting, feeding or development.
✓
H
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **high importance** for this species, relative to other sites in the country.
✓
A
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **average importance** for this species, relative to other sites in the country.
✓
L
The species is known to be present at this site and definitely uses this particular habitat. The site is considered to be of **lower importance** for this species, relative to other sites in the country.
a - h
Additional information on nesting habitat (where available):

Indicate the estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ‘ **a** ’ through ‘ **f** ’, corresponding to the following scale: **a**: 1 - 10 nests ; **b**: 11 - 100 nests ; **c**: 101 - 500 nests ; **d**: 501 - 1,000 nests ; **e**: 1,001 - 5,000 nests ; **f**: 5,001 - 10,000 nests ; **g**: 10,001 - 100,000 nests; **h**: more than 100,000 nests

	ND Flatback	DC Leatherback	EI Hawksbill	CM Green	LO Olive Ridley	CC Loggerhead
Nesting			✓ A	✓ A		
Feeding			✓ A	✓ A		
Developmental			✓ A	✓ A		

Describe the nature of and intensity of threats to marine turtles at this site:

	High (common occurence)	Medium	Low (rare event)	None	Unknown
Exploitation of nesting females (i.e. direct harvest on land)	✓				
Direct harvest of animals in coastal waters at or near the site	✓				
Egg collection (i.e. direct harvest by humans)			✓		
Incidental capture in coastal fisheries			✓		
Boat strikes			✓		
Marine debris (e.g. plastics at sea, flotsam)	✓			✓	
Industrial effluent			✓		
Inshore oil pollution				✓	
Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities)		✓			
Artificial lighting (on land or near shore)		✓			
Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.)	✓				
Vehicles	✓				
Sand mining / removal		✓			
Natural threats, disease, predation of nests/nesting females (e.g. by domestic / feral animals), or natural predation at sea		✓			
Other (type in):					

Please give further details or clarification about any of the information provided, as appropriate / necessary.

› Beach Name Estimated No. of Nest
Anse Grand Police 6
Anse Petite Police 0
Anse Bazarca 10
Anse Corail 8
Anse Cachee 22
Anse Intendance 23
Anse Parnel 2
Anse Forbans (NM) 0
Anse Forbans (ALA) 0
Anse Marie-Louise 1
Anse Takamaka 0
Anse Government 1
Anse Louis 0
Anse Madame Troian 0
TOTAL 73