



CMS

IOSEA Marine Turtles Memorandum of Understanding - National Report 2024

INSTRUCTIONS FOR COMPLETING THE NATIONAL REPORTING QUESTIONNAIRE:

The main purpose of completing the National Reporting Questionnaire (NRQ) is to provide information on your country's implementation of the IOSEA Marine Turtle MOU, including its Conservation and Management Plan (CMP) and the IOSEA Work Programme adopted by the 8th Meeting of Signatory States. Please include activities undertaken by the government, non-governmental organizations, private sector and other relevant stakeholders.

The IOSEA Secretariat will analyze national reports and use the provided information to facilitate marine turtle conservation work using the resources at its disposal, as well as in fundraising efforts. The information will also be used to raise any issues, as mandated by IOSEA Signatories, at relevant political fora, such as CMS, CITES, or Regional Fisheries Management Organizations.

Most importantly, collecting information of relevance to marine turtle conservation in the NRQ can help national decision makers to plan marine turtle conservation activities within countries and sub-regions, and guide national and international project planners and donors.

The NRQ is structured to reflect progress in implementation of the six objectives of the CMP: There are two modalities of the NRQ: it can be accessed via the online reporting system (ORS) or filled out using an MS Word file. However, the Word version should be used only if using the online questionnaire is not possible for technical reasons (e.g. the internet connection is too unreliable).

Please answer all questions as fully and as accurately as possible. Wherever possible, please indicate the source of information used to answer the question, particularly if a published reference or report is available. Comprehensive responses to the questions posed in Section 1.4 should also satisfy many of the reporting requirements of the 2009 FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations, thereby avoiding duplication of effort.

When working on the online version of the NRQ, 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. If additional information is available (e.g. published reports, maps) please attach it to this questionnaire. If working on an offline MS Word file, please submit the completed NRQ by email to the IOSEA Secretariat (iosea@un.org); with a copy to the Coordinator (heidrun.frisch-nwakanma@un.org), as a Word attachment.

GENERAL INFORMATION

Signatory State:

>>> France

List any other agencies, institutions, or NGOs that have provided input:

>>> Ministère de la transition écologique et de la cohésion des territoires (MTECT)

Conseil Départemental (CD) Mayotte,

Parc Naturel Marin de Mayotte (PNMM), REMMAT,

Université de Mayotte

Terres australes et antarctiques françaises (TAAF)

Ifremer

La Réunion

Kelonia

CEDTM

Mayotte :

Les Naturalistes de Mayotte (NdM),

Oulanga Na Nyamba (ONN),

TAAF :

Memorandum in effect in Signatory State since (dd/mm/yyyy):

>>> 11/09/2014

This report was last modified: (dd/mm/yyyy):

>>> 2024

Designated Focal Point (and full contact details):

>>> Florian Expert

chargé de mission espèces marines menacées

MARINE TURTLE SPECIES AND HABITATS

Provide sources of information supporting the responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources, and attach digital files if necessary.

0.1 Overview of marine turtles and their habitats in the IOSEA MOU Signatory States within the IOSEA region.

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

a) Please list marine turtle species and genetic stocks in your country, give a general population estimate and trend for your country and indicate where they occur.

	Population trend (increase, decrease, stable, unknown)	Number of egg clutches per year	Species, genetic stock	Type of habitat (nesting, feeding developmental)?	Geographic area
	increasing		Tortue verte (Chelonia mydas).	nesting, feeding, developmental ; important reproductive site	French indian ocean territories
	stable		Tortue imbriquée (Eretmochelys imbricata).	nesting, feeding, developmental ; reproductive site	French indian ocean territories
	increasing		Tortue caouanne (Caretta caretta).	feeding, developmental	French indian ocean territories
	decreasing		Tortue olivâtre (Lepidochelys olivacea).	feeding, developmental	French indian ocean territories
	stable		Tortue luth (Dermochelys coriacea).	feeding, developmental	French indian ocean territories

b) Do government agencies and/or scientific institutions submit data on the occurrence and population numbers of marine turtles to an international database?

YES

Name of database:

>>> SWOT
TORSOOI

c) Does your country have index nesting beaches in the IOSEA region?

YES

d) Does your country have an IOSEA Network site?

YES

0.2 Site-specific information

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

Please fill out the following section for index beaches and/or IOSEA Site Network Sites in your country. If there are no such beaches or sites in your country, please leave this section blank. **An index beach is defined as a marine turtle nesting beach, which has been monitored for at least five years using a standardized set of methods and which will continue to be monitored in the long term.** An index beach may be located in a remote area or close to human settlements with influence of

anthropogenic activities.
Please complete a separate section for each site.

Sites
Site 1

a) Provide the name, location and length of the site

Name of the site:

>>> La Réunion : Plage de Cap Champagne / Plage nord Saint Leu (Résidence Gabrielle + Spot tortue + Pointe Châteaux)

State/province:

>>> La Réunion, France

Latitude and longitude (middle of the beach or two from either end of the beach):

>>> Plage de Cap Champagne Latitude : -21.024223 | Longitude : 55.229049 / Plage nord Saint Leu (Résidence Gabrielle + Spot tortue + Pointe Châteaux) : Latitude : -21.152919 | Longitude : 55.280112

Length:

>>> Plage de Cap Champagne : 783 m / Plage nord Saint Leu : 336 m

b) Is this an index beach (An index beach is defined as a marine turtle nesting beach, which has been monitored for at least five years using a standardized set of methods and which will continue to be monitored in the long term)?

YES

c) Is this an IOSEA Network Site?

NO

d) Does this site have any other international or national status (e.g. protected area, Ramsar, UNESCO)?

YES

Details:

>>> Natural marine reserve of La Réunion

e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?

>>> Plage nord Saint Leu (Résidence Gabrielle + Spot tortue + Pointe Châteaux)

Plage de Cap Champagne

Monitoring start : 2004

Frequency: yearly

f) Indicate the species present at this site, estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ' a ' through ' h ', 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. If trend information is available, add "increasing", "decreasing" or "stable". If information on population and trend is not available, simply indicate which species are present at each location by inserting "yes" or "no" in the appropriate boxes.

	How often is this species monitored?	Monitored since (year)	Trend (decreasing, increasing, stable)	Number of clutches per year	Species present at this location?
Flatback (Natator depressus)					
Olive ridley (Lepidochelys olivacea)					

Hawksbill (<i>Eretmochelys imbricata</i>)					
Leatherback (<i>Dermochelys coriacea</i>)					
Green (<i>Chelonia mydas</i>)	Each year	2004	Stable	a (2)	YES
Loggerhead (<i>Caretta caretta</i>)					

g) Please estimate the approximate area of adjacent in-water habitat for this site.

2-5 km²

Please describe the approximate area of the in-water habitat near the site and provide any references and links:

>>> Plage nord Saint Leu (Résidence Gabrielle + Spot tortue + Pointe Châteaux)
 Plage de Cap Champagne
 In front of the beaches (coral reefs <50m depth)

h) Please fill out the following table for the in-water habitat of the site. Please include information on population number and trend, if available.

	How often is this species monitored?	Monitored since (year)	Trend (decreasing, increasing, stable)	Population number	Are marine turtles monitored in water?	Species present at this location
Flatback (<i>Natator depressus</i>)						
Olive ridley (<i>Lepidochelys olivacea</i>)	Each year	2006	Unknown	Unknown		x
Hawksbill (<i>Eretmochelys imbricata</i>)	Each year	2007	Unknown	Unknown		x
Leatherback (<i>Dermochelys coriacea</i>)			Unknown	Unknown		x
Green (<i>Chelonia mydas</i>)	Each year	1998	Stable	Unknown		x
Loggerhead (<i>Caretta caretta</i>)	Each year	2006	Unknown	Unknown		x

Please provide any references and links:

>>> Kelonia annual reports
 TORSOOI data base
 Bilan forum réserve marine 2022 C. Jean

i) Please describe the main threats to marine turtles at this site (both at the nesting beach and in the water).

	High (common occurrence)	Medium	Low (rare event)	None	Unknown
Other (type in)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Predation by domestic / feral animals (cats, dogs)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natural threats, disease, predation of nests/nesting females or natural predation at sea	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sand mining / removal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Artificial lighting (on land or near shore)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inshore oil pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial effluent	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marine debris (e.g. plastics at sea, flotsam)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boat strikes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incidental capture in coastal fisheries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Egg collection (i.e. direct harvest by humans)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Direct harvest of animals in coastal waters at or near the site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exploitation of nesting females (i.e. direct harvest on land)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

j) What assistance for conservation and management at this site would be useful, including through the IOSEA Capacity-building programme? Please choose from the list below:

- Training/ capacity building for authorities and/or managers
- Training/ capacity building for people from coastal communities

Please provide details:

>>> Training/ capacity building for authorities and/or managers: to raise awareness ; education programs
 Training/ capacity building for people from coastal communities: tourism operators to prevent strikes

Sites

Site 2

a) Provide the name, location and length of the site

Name of the site:

>>> Mayotte : 5 sites : Moya 1 + Gouela/Charifou + Saziley + Papani + Titi Moya

State/province:

>>> Mayotte, France

Latitude and longitude (middle of the beach or two from either end of the beach):

>>> N/A

Length:

>>> N/A

b) Is this an index beach (An index beach is defined as a marine turtle nesting beach, which has been monitored for at least five years using a standardized set of methods and which will continue to be monitored in the long term)?

- YES

c) Is this an IOSEA Network Site?

NO

d) Does this site have any other international or national status (e.g. protected area, Ramsar, UNESCO)?

YES

Details:

>>> Prefectoral Decree for the protection of Biotope

e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?

>>> Moya 1 - 2001 - daily

Gouela/Charifou - 2001 - twice a month

Saziley - 2019 - 3 nights/week

Papani - 2019 - twice a month

Titi Moya - 2019 - twice a month

f) Indicate the species present at this site, estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ' a ' through ' h ', 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. If trend information is available, add "increasing", "decreasing" or "stable". If information on population and trend is not available, simply indicate which species are present at each location by inserting "yes" or "no" in the appropriate boxes.

	How often is this species monitored?	Monitored since (year)	Trend (decreasing, increasing, stable)	Number of clutches per year	Species present at this location?
Flatback (<i>Natator depressus</i>)					
Olive ridley (<i>Lepidochelys olivacea</i>)					
Hawksbill (<i>Eretmochelys imbricata</i>)		1990's	Unknown	e	YES
Leatherback (<i>Dermochelys coriacea</i>)					
Green (<i>Chelonia mydas</i>)		1990's	Stable	e	YES
Loggerhead (<i>Caretta caretta</i>)					

g) Please estimate the approximate area of adjacent in-water habitat for this site.

15-100 km²

h) Please fill out the following table for the in-water habitat of the site. Please include information on population number and trend, if available.

	How often is this species monitored?	Monitored since (year)	Trend (decreasing, increasing, stable)	Population number	Are marine turtles monitored in water?	Species present at this location
Flatback (<i>Natator depressus</i>)						
Olive ridley (<i>Lepidochelys olivacea</i>)	N/A	N/A	Unknown	Unknown	NO	YES
Hawksbill (<i>Eretmochelys imbricata</i>)	N/A	N/A	Unknown	Unknown	YES	YES
Leatherback (<i>Dermochelys coriacea</i>)	N/A	N/A	Unknown	Unknown	NO	YES

Green (Chelonia mydas)	N/A	N/A	Unknown	Unknown	YES	YES
Loggerhead (Caretta caretta)	N/A	N/A	Unknown	Unknown	NO	YES

i) Please describe the main threats to marine turtles at this site (both at the nesting beach and in the water).

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

j) What assistance for conservation and management at this site would be useful, including through the IOSEA Capacity-building programme? Please choose from the list below:

- Training/ capacity building for authorities and/or managers
- Training/ capacity building for people from coastal communities
- Training/capacity building for onboard observer programmes
- Training/capacity building for project development, fundraising, execution, evaluation

l) Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources, and attach digital

files if necessary.

>>> Further data on direct harvest (braconnage) ?

Sites

Site 3

a) Provide the name, location and length of the site

Name of the site:

>>> TAAF : Europa Island

State/province:

>>> TAAF, France

Latitude and longitude (middle of the beach or two from either end of the beach):

>>> 22°20'22''S / 40°21'37''E

Length:

>>> 3.7 km of beach

b) Is this an index beach (An index beach is defined as a marine turtle nesting beach, which has been monitored for at least five years using a standardized set of methods and which will continue to be monitored in the long term)?

YES

c) Is this an IOSEA Network Site?

YES

d) Does this site have any other international or national status (e.g. protected area, Ramsar, UNESCO)?

YES

Details:

>>> Europa has been classified as a nature reserve at the prefectural level since 1975 and as a Ramsar site since 2011.

e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?

>>> Monitoring of sea turtles began in 1984 in Europa. Since then, the frequency of monitoring has been daily.

f) Indicate the species present at this site, estimated number of nests per year for each species by inserting, in the appropriate boxes, one of the letters ' a ' through ' h ', 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. If trend information is available, add "increasing", "decreasing" or "stable". If information on population and trend is not available, simply indicate which species are present at each location by inserting "yes" or "no" in the appropriate boxes.

	How often is this species monitored?	Monitored since (year)	Trend (decreasing, increasing, stable)	Number of clutches per year	Species present at this location?
Flatback (Natator depressus)					
Olive ridley (Lepidochelys olivacea)					
Hawksbill (Eretmochelys imbricata)					
Leatherback (Dermochelys coriacea)					

Green (<i>Chelonia mydas</i>)	Daily	1984	Stable	f (6300)	YES
Loggerhead (<i>Caretta caretta</i>)					

g) Please estimate the approximate area of adjacent in-water habitat for this site.

more than 100 km²

Please describe the approximate area of the in-water habitat near the site and provide any references and links:

>>> The waters under French jurisdiction adjoining Europa Island and therefore the green turtle nesting site are 121 304 km².

h) Please fill out the following table for the in-water habitat of the site. Please include information on population number and trend, if available.

	How often is this species monitored?	Monitored since (year)	Trend (decreasing, increasing, stable)	Population number	Are marine turtles monitored in water?	Species present at this location
Flatback (<i>Natator depressus</i>)						NO
Olive ridley (<i>Lepidochelys olivacea</i>)						NO
Hawksbill (<i>Eretmochelys imbricata</i>)	Punctually	N/A	Unknown	Unknown	Somes studies	YES
Leatherback (<i>Dermochelys coriacea</i>)	Punctually	N/A	Unknown	Unknown	Somes studies	YES
Green (<i>Chelonia mydas</i>)	Punctually	N/A	Unknown	Unknown	Somes studies	YES
Loggerhead (<i>Caretta caretta</i>)	Punctually	N/A	Unknown	Unknown	Somes studies	YES

Please provide any references and links:

>>> Dalleau, M. (2013). Ecologie spatiale des tortues marines dans le Sud-ouest de l'océan Indien. Apport de la géomatique et de la modélisation pour la conservation. Thèse de doctorat. Sainte-Clotilde, Réunion : Université De La Réunion.

Dalleau, M., Kramer-Schadt, S., Gangat, Y., Bourjea, J., Lajoie, G. & Grimm, V. (2019). Modeling the emergence of migratory corridors and foraging hot spots of the green sea turtle. *Ecol Evol*, 9: 10317-10342.

Jensen, M. P., Dalleau, M., Gaspar, P., Lalire, M., Jean, C., Ciccione, S., Mortimer, J. A., Quillard, M., Taquet, C., Wamukota, A., Leroux, G. & Bourjea, J. (2020). Seascape Genetics and the Spatial Ecology of Juvenile Green Turtles. *Genes*, 11, 278.

Mortimer, J. A. (2000). Conservation of hawksbill turtles (*Eretmochelys imbricata*) in the Republic of Seychelles. In: *Sea Turtles of the Indo-Pacific: Research, Management and Conservation*. (eds. Pilcher NJ & Ismail G). ASEAN Academic Press Ltd London, pp. 176-185.

Monsinjon, J. R., Laforge, A., Gaspar, P., Barat, A., Bousquet, O., Ciccione, S., Jean, C., Ballorain, K., Dalleau, M., Coelho, R., Bonhommeau, S. & Bourjea, J. (2023). Loggerhead turtle oceanic-neritic habitat shift reveals key foraging areas in the Western Indian Ocean. *Front. Mar. Sci.* 10:1204664.

Stelfox, M., Burian, A., Shanker, K., Rees, A., Jean, C., Willson, M., Manik, N. & Sweet, M. (2020). Tracing the origin of olive ridley turtles entangled in ghost nets in the Maldives: A phylogeographic assessment of populations at risk. *Biological Conservation*, 245(May 2020), 108499.

Robinson, N., Morreale, S., Nel, R. & Paladino, F. V. (2016). Coastal leatherback turtles reveal conservation hotspot. *Sci Rep*, 6, 37851.

Chambault, P., Dalleau, M., Nicet, J. B., Mouquet, P., Ballorain, K., Jean, C., Ciccione, S. & Bourjea, J. (2020). Contrasted habitats and individual plasticity drive the fine scale movements of juvenile green turtles in coastal ecosystems. *Movement Ecology*, 8:1.

i) Please describe the main threats to marine turtles at this site (both at the nesting beach and in the water).

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

j) What assistance for conservation and management at this site would be useful, including through the IOSEA Capacity-building programme? Please choose from the list below:

- Training/ capacity building for researchers and field workers
- Training/ capacity building for authorities and/or managers
- Training/capacity building for onboard observer programmes
- Training/capacity building for project development, fundraising, execution, evaluation

l) Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources, and attach digital files if necessary.

>>> Bourjea, J., Ciccione, S., Lauret-Stepler, M., Marmoex, C. & Jean, C. (2011). Les îles Éparses : vingt-cinq ans de recherche sur les tortues marines. Bull. Soc. Herp. Fr., 139-140 : 95-111.
 Bourjea, J. & Dalleau, M. (2023). Chelonia mydas (Southwest Indian Ocean subpopulation). The IUCN Red List of Threatened Species 2023: e.T220970396A220970430.

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

1.1 BEST PRACTICE APPROACHES TO MINIMIZING THREATS

Provide sources of information supporting the above responses, include reports (governmental, departamental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

1.1.1. Are there any best practice protocols relating to the protection of marine turtles and their habitats used in your country that you would like to share with other IOSEA Signatories? Please name the protocols and describe briefly, providing references or links to more detailed reports or online texts.

If more rows are required, please contact the secretariat at iosea@un.org

	References and links	Has the effectiveness of this approach been evaluated? What was the result?	What does this approach/ protocol help to achieve	Title of best practice protocol or approach
	https://cedtm-asso.org/vegetation/les-plages/ https://cedtm-asso.org/vegetation/ressources/se-former/guide-damenagement/	50% of the nestings take place on restored sites		Restoring the nesting beaches by replanting indigenous coastal vegetation with the public participation
				Create partnerships with volunteer fishermen to reduce the impact of accidental captures : training and providing of special equipment to remove fishing hooks, transportation of the injured sea turtles by the rescue center after declaration, adoption of the turtles by students during the releases events.
	https://museesreunion.fr/kelonia/			Raising public awareness about the protection of the sea turtles and their habitats : organisation of the Sea Turtles Days for 20 years (4000 participants in 2 days) and opening of Kelonia to the public (210 000 visitors / year, including 17 000 students)
	Bilan pacte braconnage - MISEN Mayotte	Decrease of the poaching activities on monitored sites	Monitoring of the sea turtles nesting beaches	Agreement to fight poaching
	Bilan PNA janvier 2023	increase the capacities of monitoring and protection of sea turtles	Launching specific actions for the marine territories	PNA sea turtles SOOI 2015-2020

1.2 REDUCTION OF INCIDENTAL CAPTURE AND MORTALITY

Provide sources of information supporting the above responses, include reports (governmental, departamental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

1.2.1 Indicate, and describe in more detail, the main fisheries occurring in the waters of your country (including territorial waters and the EEZ), as well as any high seas fisheries in which flag vessels of your country participate and interact with marine turtles within the IOSEA region.

For each of the different fisheries listed below, please indicate whether the fishery is present and use the text box below to provide more detailed information. Please include information on what marine turtle species are affected and number of reported interactions, if known.

1) Bottoms trawls (including shrimp trawls)

a) Fishing effort:

NONE

2) Pelagic trawling

a) Fishing effort:

NONE

3) Set nets

a) Fishing effort:

PRESENT

Please provide the information below:

Geographic distribution:

>>> only Mayotte territory

b) Methods used by your country to minimise bycatch of marine turtles in this fishery

- Safe handling (as per existing protocols e.g., FAO guidelines) of incidentally caught turtles (e.g. resuscitation or release by fishers using equipment such as de-hooking, line cutting tools and scoop nets)
- Devices that allow marine turtles to avoid the nets (e.g. stick lights)
- Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)
- Effort management control

Details:

>>> Only for TAAF
Mayotte : effort of management control only

4) Driftnet

a) Fishing effort

NONE

5) Purse seine (with or without FADs)

a) Fishing effort

PRESENT

Please provide the information below:

Number of vessels:

>>> TAAF - Between 20 and 45 for all Eparses Islands

Geographic distribution:

>>> TAAF - Eparses islands

Number of bycaught turtles per year:

>>> TAAF - <1

b) Methods used by your country to minimise bycatch of marine turtles in this fishery

- Safe handling (as per existing protocols e.g., FAO guidelines) of incidentally caught turtles (e.g. resuscitation or release by fishers using equipment such as de-hooking, line cutting tools and scoop nets)
- Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)

Details:

>>> Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities) - Applies only for TAAF

6) longline

a) Fishing effort

PRESENT

Please provide the information below:

Number of vessels:

>>> La Réunion - 25 ; TAAF - 1 to 2 for all Eparses Islands

Geographic distribution:

>>> TAAF - Eparses Islands

If known, turtle species affected:

>>> La Réunion - Loggerhead, Hawksbill, Green, Olive ridley, Leatherback turtles

Number of bycaught turtles per year:

>>> La Réunion - 40 ; TAAF - <1

b) Methods used by your country to minimise bycatch of marine turtles in this fishery

- Safe handling (as per existing protocols e.g., FAO guidelines) of incidentally caught turtles (e.g. resuscitation or release by fishers using equipment such as de-hooking, line cutting tools and scoop nets)
- Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)

Details:

>>> Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities) -applies only for the TAAF

7) Artisanal fishing gear

a) Fishing effort

PRESENT

Please provide any available information below:

Main gear used (beach seine, traps, nets, handline, other?):

>>> Only La Réunion- Handline

Geographic distribution:

>>> La Réunion - Rocky coasts + harbour sites

If known, turtle species affected:

>>> La Réunion - Green, Hawksbill turtles

Number of bycaught turtles per year:

>>> La Réunion - 5-10

b) Methods used by your country to minimise bycatch of marine turtles in this fishery

Safe handling (as per existing protocols e.g., FAO guidelines) of incidentally caught turtles (e.g. resuscitation or release by fishers using equipment such as de-hooking, line cutting tools and scoop nets)

c) Programmes to promote implementation of measures to minimise bycatch of turtles. Please tick the boxes that apply in your country and provide details in the text boxes below.

Training programmes / workshops to train fishers on the use of bycatch reduction methods

Informative videos, brochures, printed guidelines etc

Other (list and explain)

Training programmes / workshops to train fishers on the use of bycatch reduction methods

Details/future plans:

>>> La Réunion - 2 trainings in 2023 (Handling onboard and release)

Informative videos, brochures, printed guidelines etc.

Details/future plans:

>>> La Réunion - Stickers, hook cutting pliers (montseigneur clamp),keyrings, guidelines

Other (list and explain)

Details/future plans:

>>> La Réunion - Participation to IOTC workshop + Meeting sessions on the quays of the port

8) Other types of fisheries

a) Fishing effort

UNKNOWN

1.2.2 Provide sources of information supporting the responses in 1.2.1, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources, and/or attach digital files to this report.

References and links:

>>> La Réunion - Kelonia annual reports

PNA + PNA annual reports

Debord M 2022 - Training report

1.2.3 Are the bycatch mitigation measures described above (in 1.2.1) periodically reviewed and evaluated for their efficacy?

UNSURE

1.2.4 Has your country provided technical assistance (formally or informally) to other Signatory States of the IOSEA MOU to promote the activities to mitigate incidental catch of marine turtles in fisheries?

YES

If yes, please give details of the information exchanges and/or technical assistance.

>>> Mayotte, Mauritius, Maldives

1.2.5 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?

Details:

>>> Not national, but IOTC resolution 12/04 on marine turtle conservation

<https://www.fao.org/3/bl868f/bl868f.pdf>

1.2.6 Describe illegal unreported and unregulated (IUU) fishing that is known to occur in the territorial waters of the exclusive economic zone of your country that may impact marine turtles. Does IUU fishing occur in your country?

YES

c) Is there enforcement in place to deter these practices? Please indicate area covered and challenges.

Details:

>>> Details for Mayotte and la Réunion

1.3 ADDRESSING HARVEST OF, AND TRADE IN, MARINE TURTLES

Provide sources of information supporting the above responses, include reports (governmental, departamental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

1.3.1 Are marine turtles and/or their eggs harvest in your country? Please indicate which species are harvested.

YES

Details:

>>> Mayotte : Ei

La Réunion : Very rare poaching events. Prohibited since 1983 for wild product, and 1997 for all products (wild and farmed)

1.3.2 Which types of consumptive use of turtles are practiced in your country?

Use the text boxes below each rating to explain or clarify your responses.

a) Meat consumption

YES

Details (e.g. species, estimated number taken per year, location, if known):

>>> La Réunion - Very low

Mayotte ~

124 cases in 2021

200 cases in 2023 (79% Cm; 6% Ei; 15% undetermined)

b) Egg consumption

YES

Details (e.g. species, estimated number taken per year, location, if known):

>>> Yes - only for Mayotte

c) Fat and oil consumption

NO

d) Traditional medicine

NO

e) Shell

YES

Details (e.g. species, estimated number taken per year, location, if known):

>>> Only in La Réunion : production from old stocks of a turtles breeding farm (1977-1997)

f) Making of tortoise shell products (bekko)

YES

Details (e.g. species, estimated number taken per year, location, if known):

>>> Only in La Réunion : LOW. Only concerns an old stock of products from turtles found in the wile before 1984.

h) Which type(s) of consumptive use of marine turtles are the most common in your country?

Please list the most common types of consumption:

>>> Mayotte - Meat consumption

1.3.3 Does your country have active legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products?

YES

If yes, please provide details (title/date) of the relevant legislation, as well as any exemptions (e.g. for traditional use) under that legislation and comment on effectiveness of the legislation in terms of enforcement.

If more rows are required, please contact the secretariat at iosea@un.org

	What are the challenges?	Is the legislation enforced?	Is traditional use allowed under this legislation?	Legislation date	Legislation title
		YES	NO	November 10th, 2022	Ministerial decree for the protection of sea turtles - establishing the list of marine turtles protected on the national territory and the terms of their protection
			NO	June, 28th, 2018	portant réglementation de l'exercice de la pêche maritime dans les eaux du département de Mayotte

1.3.6 Please describe the ILLEGAL harvest of marine turtles and eggs in your country by answering the questions below.

a) Does illegal harvest of marine turtles occur in your country?

YES

Details:

>>> La Réunion - Very rare poaching events. Prohibited since 1983 for wild product, and 1997 for all products (wild and farmed)

References and links:

>>> Mayotte - Catherine Sabinot and Antoine Wickel - Sociological and anthropological study on sea turtles' meat consumption in Mayotte.

b) Please list the specific locations where illegal harvest is known to occur, if possible.

Details (examples of areas where illegal harvest is known to occur):

>>> La Réunion - Rocky coasts, causing minor impact

TAAF - : Some poaching actions on the island of Lys (Glorieuses archipelago) and Juan de Nova are observed occasionally. None on Europa.

Mayotte : see map attached

You have attached the following documents to this answer.

[Braconnage_Mayotte.png](#) - Cartographie des plages où des actes de braconnages ont été identifiés en 2023

References and links:

>>> Mayotte - Map provided with REMMAT 2023 (data hasn't been checked by steering Committee)

c) What is the impact of this illegal harvest on the populations of marine turtles? In case of illegal egg collection, what is the impact on marine turtle recruitment?

Details:

>>> Mayotte : Unknown. Une études du recrutement des tortues marines sur Mayotte serait nécessaire.
TAAF - If we relate the rare incidents of poaching to the population of females laying eggs on the Scattered Islands, we see that the threat weighing on these turtles remains very low.

1.3.7 Which of the following adverse economic incentives are encouraging illegal take of marine turtles in your country?

- Relatively high prices, relatively high revenues earned from selling turtle parts and products (any of the following: meat, eggs, crafts)
- Lack of culturally acceptable alternatives to turtle parts and products
- Ease of access to the turtle resource (e.g. proximity to nesting beaches, or ease of land/water access)
- Lack of patrolling and enforcement at nesting beaches and nearshore areas
- Low cost of land near nesting beaches
- Low penalties against illegal take
- Other (please describe)

Other - Description:

>>> In addition to the above ticked items :
La Réunion - Limited enforcement forces (human and funds) dedicated
Mayotte - Difficulty to sentence the consumers
TAAF - not applicable

1.3.8 Has your country taken any measures to try to correct these adverse incentives?

YES

If yes, please describe these measures in detail.

Details:

>>> Mayotte : plan d'action de lutte contre le braconnage (adopted 2020, another to come early 2024)

1.3.9 Are there touristic activities linked in marine turtles in your country?

YES

If yes, please indicate which type:

	N o	Ye s
Other (please describe)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Swimming/ snorkeling activities	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Hatching releases	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Nesting turtle observation	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Details:

>>> La Réunion - Kelonia awareness and education center + boat-based turtle watching
Mayotte - Swimming/snorkeling activities + nesting turtle observation
TAAF - none

References and links:

>>> La Réunion - Kelonia annual reports
Rapports de stage dans le lagon
Rapports Quiétude

1.3.10 Are there any standard and government-certified protocols to ensure that touristic activities do not harm turtles and/or hatchlings?

YES

Please briefly describe the type of protocols used, references or links, if available.

Details:

>>> La Réunion : Charter on whales, dolphins, and sea turtles watching (2017)

Mayotte : Formation REMMAT / livret d'approche des tortues marines rappelant la réglementation en vigueur il existe un groupe approche TM qui est en place à Mayotte et qui rédige un livret de formation sur l'approche des TM dans le cadre de l'écotourisme

1.3.11 Does your country have mechanisms in place to identify domestic and international illegal trade routes (for illegally traded marine turtles, eggs and derivatives)?

Please provide references to any published reports (e.g. already prepared for CITES purposes) that give a more ample explanation.

NOT APPLICABLE

Details:

>>> Mayotte : Problématique du commerce illégal, rendant complexe l'identification des consommateurs. Au vu des multiples problématiques du territoires de Mayotte les atteintes à l'environnement passent facilement au 2eme plan

1.3.12 Please describe any activities/projects that aim(ed) to reduce illegal take of and/or trade in marine turtles in your country.

If more rows are required, please contact the secretariat at iosea@un.org

	Project website or other links with project description	Lessons learned	How does the project involve local communities?	End year (if completed)	Start year	Implemented by	Title of the project/activity
		Repetition Takes time over several generations	Public visitors	Ongoing	1997	Kelonia	Kelonia awareness and education center
		Decrease of poaching activities on monitored beaches	Means grant for the monitoring of the most important nesting beaches	Ongoing	2020	Préfecture	Agreement
				2020	2015	DEAL Reunion, DEALM Mayotte, TAFF	PNA
			Knowledge on species	Ongoing	1990's	CD, ONN, LdM	Nesting beaches monitoring
			Knowledge on species	Ongoing	2011	Remmat	REMMAT actions

1.3.13 Has your country submitted the annual illegal trade report to CITES, including information relevant for marine turtles?

Please provide a copy of this report or a link to the published report online, if possible.

NO

1.3.14 Are there any compliance and/or trade issues (either domestic or international) that your country would like to raise at the upcoming IOSEA MOS or otherwise through the IOSEA Secretariat?

YES

If yes, please provide details:

>>> Yes - only for Mayotte

1.4. MINIMIZING MORTALITY THROUGH NESTING BEACH PROGRAMMES

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

1.4.1 Tick the boxes that apply to indicate whether your country has any of the following measures in place to minimise the mortality of eggs, hatchlings and/or nesting females.

Please indicate if these measures are being implemented at the IOSEA Network sites and index beaches that you described in question 0.2.

Measures

a) Nesting beach monitoring (eggs and nesting females)

YES

Details:

>>> La Réunion - Nesting beaches, nesting females and nests monitoring
Mayotte : record number of nesting tracks in majority on the nesting beaches of Petite-Terre et Saziley

b) Nesting beach protection (patrolling)

YES

Details:

>>> La Réunion - Irregular volunteer patrols
Mayotte - APPB et reserve
TAAF - no patrols

Implemented at the sites described in question 0.2 (name the sites, where this applies):

>>> Mayotte - Beaches of Saziley and Papani/Moya/ Ngouja and Passe en S

c) Predator control

YES

Details:

>>> Mayotte : yes
La Réunion - Very few nesting event -> predation level very low
TAAF : yes

d) Nest screening (placing wire screens over the buried nests)

NO

e) Vehicle access restrictions

YES

Details:

>>> La Réunion - Traffic is prohibited in all natural sites, including beaches (public maritime territory)
Mayotte - APPB Nesting beaches
TAAF - It is prohibited on all the Scattered Islands except for resupplying the islands which is done every 3 months by sea. The tractor must then go to the landing beach to load and unload the cargo.

f) Regular removal of debris / clean-up programmes

YES

List recent clean-up programmes/references and links:

>>> La Réunion - Programs of rehabilitation of nesting beaches from CEDTM, including clean-up activities
Opportunistic clean-up events by various local actors (actions citoyennes)

g) Has re-vegetation of dunes at nesting beaches been carried out, using native vegetation?

YES

Details:

>>> only for La Réunion

h) Building location design regulations (coastal protection)

YES

Details:

>>> only in la Réunion

i) Light pollution reduction (direct lights visible from the beach)

YES

Details:

>>> national : Arrêté du 10 novembre 2022 fixant la liste des tortues marines protégées sur le territoire national et les modalités de leur protection (article 2)

<https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000046683396>

La Réunion - Work on light pollution, contribution to the LightFree Nights and Night days since their first edition.

Charter Nature et Nuit 2022

Adaptation of the EDF program to the charter (grants for the renovation of the existin public and private light stocks du programme EDF à la charte.

Mayotte : Prise en compte dans certains projet d'aménagement

TAAF - For example, between 2021 and 2023, several measures to reduce the impact of light pollution at the Tromelin camp have been taken, namely the installation of blackout devices on the doors and windows of the buildings as well as the modification of all lighting.

References and links:

>>> La Réunion - Patry M Rapport stage 2021

Bouchereau C Rapport stage 2024 (in progress)

k) Are these measures in place in protected areas only, or also outside of established protected areas?

In protected areas only (list the measures above e.g. a, b, c, etc.):

>>> TAAF - The whole of the Eparses Islands is protected.

Mayotte : outside of protected areas : a,b,f

Outside of protected areas (list the measures above e.g. a, b, c etc.):

>>> La Réunion - a, b, f, g, i measures specific above items

1.4.2 To what extent is egg relocation practiced in your country (including relocation to hatcheries)?

Egg relocation is practiced on 5-49% of nesting beaches

Please provide the reasons:

>>> only in La Réunion due to flooding

1.4.3 Has your country undertaken an evaluation of the effectiveness of its nesting beach management programmes in terms of maximizing the recruitment of marine turtle hatchlings?

NO

OBJECTIVE II: PROTECT, CONSERVE AND RESTORE MARINE TURTLE HABITATS

2.1 MEASURES TO PROTECT AND CONSERVE MARINE TURTLE HABITATS

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

2.1.1 Please list Protected Areas (PAs), sanctuaries or temporary exclusion zones that were created to protect marine turtle habitat. Please provide the official name and date of establishment.

Details:

>>> La Réunion - Reunion natural marine reserve - created in 2007

Mayotte - APPB et reserves - plages de Saziley et Papani/Moya/ Ngouja et passe en S

TAAF -

- Order No. 13/DG/IOI of November 18, 1975 classifying Europa, Bassas da India, Glorieuses and Tromelin as a "nature reserve" (status equivalent to a biotope protection order), which prohibits in particular "any depredation of nature (fauna and flora) terrestrial and marine";

- Order No. 257 of February 15, 1994 prohibiting fishing in the territorial waters of the Europa, Bassas da India, Juan de Nova, Glorieuses and Tromelin islands;

- On October 27, 2011, Europa Island became the 42nd wetland of international importance in France under the Ramsar Convention. The classification applies to all terrestrial ecosystems on the island as well as marine ecosystems up to the limit of 12 MN;

-Decree No. 2021-734 of June 8, 2021 creating the national nature reserve of the Glorieuses archipelago;

-Project to create the Scattered Islands national nature reserve, encompassing all the islands, land and maritime spaces, launched in 2022.

2.1.2 Has your country developed any incentives to encourage protection of marine turtle habitat outside of protected areas?

Details:

>>> for all territories :

Fight against INN fisheries and bycatch in all protected areas (Rural code)

Marine turtle national regulation signed november 10th 2022

for each territory :

La Réunion - Raising awareness program to reduce speed (and collision risk) in and beyond the reserve

Mayotte - raising awareness

TAAF - 70% of Eparses Islands are protected

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

YES

Details:

>>> La Réunion - in the context of DCSMM

Mayotte - monitoring of water quality PNMM

TAAF - Monitoring of marine macrowaste washed up on the beaches of the Scattered Islands has been carried out since 2019.

2.1.4 Are measures in place to prohibit the use of poisonous chemicals and explosives in the marine environment?

YES

Use the text box to elaborate on your response.

Details:

>>> Yes only for Mayotte : Arrêté n° 2018/DMSOI/601 du 28 juin 2018 portant réglementation de l'exercice de la pêche maritime dans les eaux du département de Mayotte

2.2 RESTORATION OF DEGRADED MARINE TURTLE HABITATS

Provide sources of information supporting the above responses, include reports (governmental,

departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

2.2.1 What efforts are being made to recover degraded coral reef habitat? Give details (location, how long efforts have been carried out, effectiveness, lessons learned, future plans, etc).

YES see below

Details/future plans:

>>> effort for protection of coral reef to foster resilience (mainly through MPAs)
Réunion : 80% of coral reefs protected)
Mayotte : 100% coral reefs protected with PNM Mayotte + future maore reef
TAAF : 70% of coral reefs protected

2.2.2 Are efforts being made to recover degraded mangrove habitats that are important for turtles?

YES see below

If yes, give details (location, duration, effectiveness, lessons learned, future plans etc.)

Details/future plans:

>>> only Mayotte

2.2.3 What efforts are being made to recover degraded seagrass habitats? Give details (location, duration, effectiveness, lessons learned, future plans etc.).

NO efforts to recover degraded seagrass habitats

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

provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

3.1.1 Please list monitoring programmes that are currently in place or are being planned in your country.

Please enter details in the following table. If more rows are required, please contact the secretariat at iosea@un.org

	Is this a protected area?	Population trend	Nature of monitoring	Duration of the monitoring programme	Start year	Species genetic stock	Site geographical name (refer to questions 0.1 and 0.2)
	Partially	Stable	Air monitoring of the coastal habitats since 1996, photo identification since 2004, reproduction monitoring since 2004	Ongoing	1998	Cm- Indopacific Ei - Unknown	Réunion
	Partially	Unknown	Photo-identification program	Ongoing	2007	Cm- Indopacific Ei - Unknown	Réunion
	Partially	Unknown	Satellite individual trackings	Ongoing	2010	Cm- Indopacific Ei - Unknown Cc - Oman	Réunion
	Partially	Unknown	Foraging ecology monitoring	Ongoing	2014	Cm- Indopacific Ei - Unknown	Réunion
	YES	Stable	Trace tracking (47% of favorable beaches)	Permanent	1984	Green turtle, Atlantic genetic stock in the south of the Mozambique Channel	Europa
	YES	Increasing	Trace tracking (47% of favorable beaches) Trace tracking (100% of favorable beaches)	Permanent	1986	Green turtle, Atlantic genetic stock in the south of the Mozambique Channel	Juan de Nova
	YES	Increasing	Trace tracking (47% of favorable beaches) Trace tracking (100% of favorable beaches)	Permanent	1987	Green turtle, Indian Ocean stock in the northern Mozambique Channel	Grande Glorieuse
	YES	Increasing	Trace tracking (47% of favorable beaches) Trace tracking (100% of favorable beaches)	Permanent	1983	Green turtle, Indian Ocean stock in the northern Mozambique Channel	Tromelin
	N/A	N/A	Suivi ponte ULM	N/A	N/A	Green Turtle, Hawksbill Turtle	Mayotte (toutes les plages)

3.1.2 Has your country undertaken an evaluation of its marine turtle monitoring programmes?

YES

Please indicate when the evaluation took place and describe lessons learned.

Details:

>>> TAAF and Mayotte only

Mayotte : Evaluation du PNA TM SOOI - février 2023

3.1.3 Which of the following methods have been or are being used to identify migration routes of turtles?

Use the text boxes to provide details

a) Tagging (flipper)

YES

Details (e.g., list species, duration of programme, start and end year):

>>> TAAF only

Mayotte used to tag flippers but this action was abandoned a few years ago.

b) Satellite tracking

Yes

Details (e.g. species, genetic stock):

>>> La Réunion - >200 deployed on Cm, Ei, Cc, Lo

Mayotte : yes

TAAF - 77 female green turtles monitored by satellite in the SOOI during and outside the nesting peak between 1998 and 2012

References and links:

>>> La Réunion - Chambault et al. 2020a et b

Dalleau et al. 2014

Dalleau 2013

Bourjea 2015

Niviere et al. 2023

TAAF - Dalleau, M. (2013). Ecologie spatiale des tortues marines dans le Sud-ouest de l'océan Indien. Apport de la géomatique et de la modélisation pour la conservation. Thèse de doctorat. Sainte-Clotilde, Réunion : Université De La Réunion.

Monsinjon et al. 2023

Laforge et al. 2024

c) Genetic studies

YES

Details (e.g. species, genetic stock):

>>> La Réunion - on Cm, Ei, Cc, Lo

TAAF - A genetic study carried out across the southwest Indian Ocean has shown that nesting green turtles in the region are structured into three subpopulations: one very close to the Atlantic genetic stock in the south of the Canal du Mozambique (Europa and Juan de Nova), one associated with the large Indian Ocean stock in the north of the Mozambique Channel (Tromelin and Glorieuses) and one centered in the Seychelles also belonging to the Indian Ocean stock.

Mayotte : a DNA study project is being discussed

References and links:

>>> La Réunion - EGETOMER reports

COCA LOCA reports

Jensen et al. 2020

Stelfox et al. 2020

Rapports TIMOI et ACT

TAAF - Bourjea, J., Lapègue, S., Gagnevin, L., Broderick, D., Mortimer, J. A., Ciccione, S., Roos, D., Taquet, C., & Grizel, H. (2007). Phylogeography of the green turtle, *Chelonia mydas*, in the Southwest Indian Ocean.

Molecular Ecology, 16(1), 175-186.

d) Other (list and provide details)

Details (e.g. species, genetic stock):

>>> Mayotte : individual's identification according to the position of their face scales

3.1.4 Have the studies mentioned in 3.1.3 helped to identify foraging and migration areas of marine turtles in your country?

YES

Details, examples:

>>> TAAF - There are four main feeding zones or "hotspots" which are found in coastal areas: on the border between Mozambique and Tanzania, in the south-east of Mozambique and in the north-west and south-west of Madagascar. The northwest zone of Madagascar is one of the most important feeding regions.

References and links:

>>> La Réunion -

COCA LOCA

STORM

DYMITILE

TIMOI

TAAF - Dalleau, M., Kramer-Schadt, S., Gangat, Y., Bourjea, J., Lajoie, G. & Grimm, V. (2019). Modeling the emergence of migratory corridors and foraging hot spots of the green sea turtle. *Ecol Evol*, 9: 10317-10342.

3.1.5 Is the use of traditional ecological knowledge in research being promoted?

YES

Explanation/examples:

>>> TAAF only

Mayotte is unsure

3.1.6 Give a list of relevant literature that includes information from studies carried out in your country on marine turtle populations and their habitats, sorting them by topic.

a) Bycatch mitigation measures

Details (e.g. numbers and species of released turtles, type of fishery and gear used, method for monitoring survival, result):

>>> Mayotte : monitoring by PNMM agents embarked on fishing vessels

b) Effect of bycatch mitigation measures on non-target species

Details (e.g. type of fishery and gear used, mitigation method assessed, result):

>>> Mayotte : monitoring by PNMM agents embarked on fishing vessels

References and links:

>>> TAAF - Bourjea, J., Lapègue, S., Gagnevin, L., Broderick, D., Mortimer, J. A., Ciccione, S., Roos, D., Taquet, C., & Grizel, H. (2007). Phylogeography of the green turtle, *Chelonia mydas*, in the Southwest Indian Ocean. *Molecular Ecology*, 16(1), 175-186.

Jensen, M. P., Dalleau, M., Gaspar, P., Lalire, M., Jean, C., Ciccione, S., Mortimer, J. A., Quillard, M., Taquet, C., Wamukota, A., Leroux, G. & Bourjea, J. (2020). Seascape Genetics and the Spatial Ecology of Juvenile Green Turtles. *Genes*, 11, 278.

Taquet, C. (2007). Diversité et différenciation génétiques des populations de tortues vertes (*Chelonia mydas*) dans les sites de ponte et d'alimentation du sud-ouest de l'océan Indien : Application aux stratégies de conservation de l'espèce. Thèse de Doctorat de l'Université de la Réunion, Biologie Marine, 226 p.

e) Socio-economic studies within communities that interact with marine turtles and their habitats

Details (aim of study, methods, results):

>>> Mayotte - Catherine Sabinot et Antoine Wickel - Sociological and anthropological study on sea turtles consumption in Mayotte

3.2 COLLABORATIVE RESEARCH AND MONITORING

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

3.2.1 Does your country participate in any regional or sub-regional action plans that identify regional priorities in terms of research and monitoring needs?

YES

Please specify:

If more rows are required, please contact the secretariat at iosea@un.org

	Links	Identified research and monitoring needs	Regional or sub-regional action plan
	https://www.reunion.developpement-durable.gouv.fr/le-pna-tortues-marines-a984.html	Reduce the sea turtles mortality related to human activities - Protect and restore the sea turtles priority habitats - Increase the knowledge about the causes of sea turtles death - Increase the understanding of : - sea turtles food ecology - sea turtles population reproduction ecology - sea turtles populations dynamics	National Action Plan in favor of the sea turtles in the south-west french territories of the Indian Ocean (2015-2020)
	https://www.reunion.developpement-durable.gouv.fr/le-pna-tortues-marines-a984.html	Threats related o fishing activities - Abundance and structure of the populations - Spatial dynamics and behaviours of the species	PNA SOOI volet régional
	PHILIPPE JS., BOURJEA J., CICCIONE S., BALLORAIN K., MARINESQUE S., GLENARD Z. 2014. Plan national d'actions en faveur des tortues marines des territoires français de l'océan Indien : La Réunion, Mayotte et Îles Éparses (2015-2020). Ministère de l'Écologie, du Développement durable et de l'Énergie, Direction de l'Environnement, de l'Aménagement et du Logement de La Réunion. BIOTOPE, KÉLONIA, IFREMER, PARC NATUREL MARIN DE MAYOTTE, TAAF, PHAETON TRADUCTION. 4 volumes, 312 p.	-Sustainability of egg-laying monitoring programs and database feeding - Identifying regional connectivity of green turtles breeding in the Eparses Islands - Reassessment of turtle reproduction parameters green eggs laying eggs in the Eparses Islands - Determination of origin and spatiotemporal dynamics immature green and hawksbill turtles present in the Eparses Islands - Determination of origin and spatiotemporal dynamics hawksbill turtles laying eggs in Juan de Nova	National action plan in favor of sea turtles in the southwestern French territories of the Indian Ocean 2015-2020
		Etude du recrutement des juvenils Estimation de la population	PNA TM SOOI

3.2.2 On which of the following themes have regional 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.

a) Reproductive biology (including any of the following: nesting data, hatchling survival, nest protection, recruitment, etc.)

YES

Details (year when collaboration took place, project name, future plans):

- >>> Only for:
- Mayotte
- La Réunion - Madagascar, Nosy Iranja - 2001 + Moheli, Comores - 1998

References and links:

- >>> Bourjea et al. 2006: Bourjea J, Ciccione S, Rantsimbazafy R (2006) Marine turtle survey in Nosy Iranja Kely, North-Western Madagascar. West Indian Ocean J Mar Sci 5:209-212

Bourjea et al. 2015 : Bourjea Jerome, Dalleau Mayeul, Derville S., Beudard F., Marmoex C., M'Soili A., Roos David, Ciccione S., Frazier J. (2015). Seasonality, abundance, and fifteen-year trend in green turtle nesting activity at Itsamia, Moheli, Comoros. *Endangered Species Research*, 27(3), 265-276. Publisher's official version : <https://doi.org/10.3354/esr00672> , Open Access version : <https://archimer.ifremer.fr/doc/00266/37733/>

b) Genetic characterization

YES

Details (year when collaboration took place, project name, future plans):

>>> La Réunion : Genetics program on Greens, Loggerheads and Hawksbills
TAAF : Genetic study carried out across the southwest Indian Ocean concerning the Green Turtle.
Mayotte : DNA study project in discussion

References and links:

>>> La Réunion - Bourjea et al. 2007

Bourjea et al. 2015

Jensen et al. 2020

TAAF : Bourjea, J., Lapègue, S., Gagnevin, L., Broderick, D., Mortimer, J. A., Ciccione, S., Roos, D., Taquet, C., & Grizel, H. (2007). Phylogeography of the green turtle, *Chelonia mydas*, in the Southwest Indian Ocean. *Molecular Ecology*, 16(1), 175-186.

Jensen, M. P., Dalleau, M., Gaspar, P., Lalire, M., Jean, C., Ciccione, S., Mortimer, J. A., Quillard, M., Taquet, C., Wamukota, A., Leroux, G. & Bourjea, J. (2020). Seascape Genetics and the Spatial Ecology of Juvenile Green Turtles. *Genes*, 11, 278.

Taquet, C. (2007). Diversité et différenciation génétiques des populations de tortues vertes (*Chelonia mydas*) dans les sites de ponte et d'alimentation du sud-ouest de l'océan Indien : Application aux stratégies de conservation de l'espèce. Thèse de Doctorat de l'Université de la Réunion, Biologie Marine, 226 p.

c) Migratory and dispersal routes

YES

Details (year when collaboration took place, project name, future plans):

>>> La Réunion - Over 200 markers installed since 1990

TAAF : 77 female green turtles monitored by satellite in the SOOI during and outside the nesting peak between 1998 and 2012

67 loggerhead turtles (66 subadults and 1 adult) equipped with satellite tags between 2008 and 2021 from Reunion Island and from fishing vessels tracked from iSimangaliso Wetland Park, South Africa using tethered satellite

transmitters between 2011 and 2013

Mayotte : Profile pictures of sea turtles for their identification - TORSOOI

Hiring project for the next national action plan

References and links:

>>> La Réunion -

Dalleau 2013

Bourjea 2015

Rapport DYMITLE

Dalleau et al. 2014

Monsinjon et al. 2023

Laforge et al. 2024

Niviere et al. 2023

TAAF : Dalleau, M. (2013). Ecologie spatiale des tortues marines dans le Sud-ouest de l'océan Indien. Apport de la géomatique et de la modélisation pour la conservation. Thèse de doctorat. Sainte-Clotilde, Réunion : Université De La Réunion.

Dalleau, M., Kramer-Schadt, S., Gangat, Y., Bourjea, J., Lajoie, G. & Grimm, V. (2019). Modeling the emergence of migratory corridors and foraging hot spots of the green sea turtle. *Ecol Evol*, 9: 10317-10342.

Jensen, M. P., Dalleau, M., Gaspar, P., Lalire, M., Jean, C., Ciccione, S., Mortimer, J. A., Quillard, M., Taquet, C., Wamukota, A., Leroux, G. & Bourjea, J. (2020). Seascape Genetics and the Spatial Ecology of Juvenile Green Turtles. *Genes*, 11, 278.

Monsinjon, J. R., Laforge, A., Gaspar, P., Barat, A., Bousquet, O., Ciccione, S., Jean, C., Ballorain, K., Dalleau, M., Coelho, R., Bonhommeau, S. & Bourjea, J. (2023). Loggerhead turtle oceanic-neritic habitat shift reveals key foraging areas in the Western Indian Ocean. *Front. Mar. Sci.* 10:1204664.
Robinson, N., Morreale, S., Nel, R. & Paladino, F. V. (2016). Coastal leatherback turtles reveal conservation hotspot. *Sci Rep*, 6, 37851.

d) Other biological and ecological aspects

YES

Details (year when collaboration took place, project name, future plans):

>>> No details for La Réunion
TAAF : Study of food and seagrass meadows

References and links:

>>> La Réunion -
Chambault et al. 2020a
Chambault et al 2020b
TAAF : Bourjea, J., Ciccione, S., Lauret-Stepler, M., Marmoex, C. & Jean, C. (2011). Les îles Éparses : vingt-cinq ans de recherche sur les tortues marines. *Bull. Soc. Herp. Fr.*, 139-140 : 95-111.
Chambault, P., Dalleau, M., Nicet, J. B., Mouquet, P., Ballorain, K., Jean, C., Ciccione, S. & Bourjea, J. (2020). Contrasted habitats and individual plasticity drive the fine scale movements of juvenile green turtles in coastal ecosystems. *Movement Ecology*, 8:1.
Bourjea, J., Ciccione, S. & Dalleau, M. (2013). DYMITILE - DYNAMIQUE MIGRATOIRE DES TORTUES MARINES NIDIFIANT DANS LES ILES FRANÇAISES DE L'OCEAN INDIEN. Rapport final Phase I et II. Rapport de Mission IFREMER, Le Port, La Réunion. 60 p.

3.3 DATA ANALYSIS AND APPLIED RESEARCH

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

3.3.1 Describe how research results are being applied to improve management practices and mitigation of threats.

Details:

>>> La Réunion - The results of the research helped determine the initial state during the elaboration of the National Action Plan 2015.
Mayotte : national action plan, APPB, pact on the protection of sea turtles

3.3.2 Is traditional knowledge on marine turtles and their habitats being used for conservation and management?

YES

Details, future plans:

>>> TAAF
Mayotte : national action plan, APPB, pact on the protection of sea turtles

3.4 INFORMATION EXCHANGE

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

3.4.1 Has your country undertaken any initiatives (nationally or through collaboration with other IOSEA Signatory States) to standardise methods of data collection?

YES

If yes, please give details of the agreed protocol(s).

Details:

>>> La Réunion - Yes through the TORSOOI database and to ensure the national and international databases interoperability.
TAAF - TORSOOI is a PHP MySQL database accessible for data entry / consultation / extraction via its website

(www.torsooi.com), developed with a view to standardizing field protocols and data formats (according to the recommendations of IUCN Marine Turtle Specialist Group) for the study and conservation of marine turtles.
Mayotte : monitoring of the nesting attempts and emergences

3.4.2 Has your country taken part in producing IUCN regional status reports for red list assessments?

YES

Details (year when more recent collaboration took place, project name, links):

>>> La Réunion - Bourjea, J. & Dalleau, M. 2023. Chelonia mydas (Southwest Indian Ocean subpopulation). The IUCN Red List of Threatened Species 2023: e.T220970396A220970430
TAAF - Bourjea, J. & Dalleau, M. (2023). Chelonia mydas (Southwest Indian Ocean subpopulation). The IUCN Red List of Threatened Species 2023: e.T220970396A220970430.
Mayotte : on going collaboration for the protection of the island's fauna

3.4.3 How often does your country share information on marine turtle populations of regional interest with other IOSEA Signatories?

every 3 years

Details:

>>> La Réunion - once in more than 5 years
TAAF - Every 3 years

3.4.4 Since 2019, has your country taken part in any workshops or other events with participation of other countries, scientific institutions, non-governmental or international organisations in order to develop and implement best practice approaches for marine turtle conservation?

YES

Details (name of the event, year, main objective of the event):

>>> La Réunion - Annual International Sea Turtles Symposiums (thematic workshops and regional meetings)
WIOMSA congress (thematic workshops and regional meetings) - every 2 years
Mayotte : GTMF

References and links:

>>> La Réunion - Symposiums and congress reports

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

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

4.1.1 Are education/awareness programmes in place at/near nesting beaches?

YES

Please indicate at which sites, described in question 0.2 these programmes are being implemented.

Details:

>>> La Réunion - Plage de Cap Champagne

Plage nord Saint Leu (Résidence Gabrielle + Spot tortue + Pointe Châteaux)

TAAF - Users of the Eparses Islands (mainly military personnel) are regularly made aware on site thanks to the presence of TAAF environmental officers.

Mayotte : Action Petit Fondi du Lagon + nesting tour + REMMAT training

4.1.2 Describe the educational materials, including mass media information programmes that your country has collected, developed and/or disseminated.

Details/future plans:

>>> La Réunion - Ateliers pédagogiques participatifs (plantations, lutte contre les espèces exotiques, ramassage de déchets...)

Conférences

Réunions d'acteurs

Editions de supports pédagogiques (guides de bonnes pratiques, posters, ...)

Film en réalité virtuelle

Films de sensibilisation

References and links:

>>> La Réunion - <https://cedtm-asso.org/vegetation>

Réseaux sociaux (facebook : Kelonia, CEDTM)

<https://museesreunion.fr/kelonia/ressources-pedagogiques-kelonia/>

<https://www.youtube.com/@CEDTMKELONIA/videos>

4.1.3 Which of the following groups have been the targets of focused education or awareness programmes?

- Policy makers
- Fishing industry
- Communities that interact with marine turtles and their habitats
- Local/Fishing communities
- Indigenous groups
- Tourists
- Media
- Teachers
- Students
- Military, Navy, Police
- Scientists
- NGOs
- Enforcement personnel
- judicial personnel

Details, if necessary:

>>> TAAF - fishing industry / Communities that interact with marine turtles and their habitats / tourists / teachers / students / Military / scientists / enforcement personnel / judicial personnel

Mayotte : everything but enforcement personnel + judicial personnel

4.14 Have any community learning centres or information centres been established in your country?

YES

Details/future plans:

>>> La Réunion and Mayotte only

La Réunion - Kelonia the observatory of marine turtles

Centre permanent de sensibilisation à la préservation du patrimoine naturel et culturel associé aux tortues marines. Il accueille 210 000 visiteurs par an dont 17 000 scolaires

Développement des jeux éducatifs pour Pc, tablette et smartphone (français/anglais)

Films documentaires, vidéo immersives (certains français /anglais)>

Mayotte : creation of a rehabilitation center with a small museum

4.2 STAKEHOLDER PARTICIPATION

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

4.2.1 Are there public participation programmes in place at nesting beaches to involve local stakeholders in activities to conserve marine turtles?

YES

If yes, which stakeholders are being involved?

Communities that interact with marine turtles and their habitats

Indigenous groups

Tourists

Media

Teachers

Students

Military, Navy, Police

Scientists

NGOs

Please indicate at which sites, described in question 0.2 these programmes are being implemented.

Details/future plans:

>>> Yes for all

La Réunion - Restauration des plages de ponte par la replantation de la végétation littorale indigène, Suivi individuel des tortues par photo-identification>

Mayotte : Saziley/Charifou et Papani/Moya, Ngouja, mais des actions de sensibilisation sont menées sur toutes les plage de Mayotte

4.2.2. The role of local communities. Please answer the questions below, giving examples of activities that took place since 2019.

a) Is traditional knowledge used in the development of education and awareness programmes in your country?

N/A

Details, examples:

>>> TAAF : No education program in place since the local populations are either TAAF agents, scientific partners or military personnel. However, all users are made aware of the preservation of sea turtles through training prior to missions and on-site thanks to permanent TAAF environmental rangers.

b) Do local communities participate in the development and implementation of conservation measures?

Details, examples:

>>> La Réunion - Concertations avec les gens de la mer pour la mise en place et les évolutions de la charte d'approche et d'observation des baleines, dauphins et tortues marines (2017)

TAAF : The soldiers and gendarmes deployed on the Scattered Islands contribute to improving knowledge of sea turtles since they carry out daily track counts on favorable beaches. In addition, these people are made aware by the TAAF environmental officers present on site and thus they contribute, through their surveillance patrol, to the regular rescue of adult female turtles in stressful or blocked situations.

Mayotte : inhabitant's consulting

4.2.3 Describe initiatives undertaken or planned since 2019 to involve and encourage the cooperation of Government institutions, NGOs and the private sector in marine turtle conservation programmes.

Details/future plans:

>>> La Réunion - Charte Nature et Nuit pour réduire la pollution lumineuse

Mise en place du PNA tortues marines

Concertations avec la DMSOI et la DEAL > transmission d'une note sur la réduction de la vitesse côtière pour limiter le risque de collisions avec les tortues marines auprès des usagers de la mer

Mayotte : PNA TM SOOI, Pacte sauvegarde, rehabilitation center

References and links:

>>> La Réunion - <https://www.natureetnuit.re>

<https://www.reunion.developpement-durable.gouv.fr/le-pna-tortues-marines-a984.html>

<https://www.dm.sud-ocean-indien.developpement-durable.gouv.fr/protection-des-tortues-marines-et-prevention-des-a1049.html>

OBJECTIVE V: ENHANCE NATIONAL, REGIONAL, AND INTERNATIONAL COOPERATION

5.1 COOPERATION NEEDS

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

5.1.1 Please indicate, the extent to which the following local management issues require regional and/or international cooperation in order to achieve progress.

In other words, how important is **regional/international** cooperation for addressing the issues listed below?

a) Illegal fishing in territorial waters

ESSENTIAL

b) Incidental capture by foreign fleets in territorial waters

ESSENTIAL

c) Enforcement/patrolling of territorial waters

ESSENTIAL

d) Illegal fishing in EEZ

ESSENTIAL

e) Incidental capture by foreign fleets in EEZ

ESSENTIAL

f) Enforcement/patrolling of EEZ

ESSENTIAL

g) Harvest exploitation of turtles and eggs

IMPORTANT

h) Illegal trade in turtle parts and products

ESSENTIAL

i) Development of gear technology to reduce bycatch of marine turtles

ESSENTIAL

j) Marine pollution, including oil spills and marine debris

ESSENTIAL

k) Training / capacity-building

ESSENTIAL

l) Alternative livelihood development

ESSENTIAL

m) Characterisation of turtle populations/genetic stocks

ESSENTIAL

n) Identification of migration routes

ESSENTIAL

o) Tagging / satellite tracking

ESSENTIAL

p) Habitat studies

ESSENTIAL

q) Genetic studies

ESSENTIAL

5.2 COOPERATION AND INFORMATION EXCHANGE

5.2.1 Regional cooperation to enhance marine turtle conservation and management

a) Which regional/bilateral agreements for marine turtle conservation and management does your country participate in?

Details:

>>> La Réunion -

Indian Ocean Commission. Funded multiples workshops and actions fostering exchanges between teams of the affected countries, that lead to launching monitoring and cooperation programs (some of them still ongoing : Mohéli/Réunion, Iranja-Madagascar/Réunion)

WIOMSA - occasional reunions enabled the "turtle" actors to meet up and exchange views.

MTTF-WIO/IOSEA - enabled identify key issues in each country, and facilitated the exchanges in favor of definition elaboration or common programs implementation.

SWOT helps gathering data for the definition of the 'Unités de Gestion Régionales'

IUCN-MTSG

TAAF -

- Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Intergovernmental Agreement for the Conservation of Marine Turtles and Their Habitats (IOSEA)

- Convention on International Trade in Species of Wild Fauna and Flora (CITES)

- Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean Region

- Indian Ocean Tuna Commission (IOTC)

Mayotte : PNA TM SOOI

b) Please list the organizations that your country cooperates with to enhance regional collaboration on marine turtle conservation in your subregion.

Details:

>>> La Réunion -

IOSEA

WIOMSA

IUCN

COI

Région Réunion

Mission diplomatique de la Préfecture de La Réunion

French Embassy (Mozambique)

TAAF -

- Kelonia, the sea turtle observatory

- Center for the Study and Discovery of Marine Turtles (CEDTM)

- French Research Institute for the Exploitation of the Sea (Ifremer)

c) Do these agreements and organizations have an associated action plan for the conservation of marine turtles and their habitats? Please list the respective actions plans.

If more rows are required, please contact the secretariat at iosea@un.org

	Threats addressed by the plan	Objectives	Geographic coverage	Species covered	Name of the regional/sub-regional action plan (include web links to plan if available)

	Incidental mortality in fishing operations Harvest (unsustainable exploitation for consumption, and trade of meat and eggs, as well as of shell for ornamental purposes) Destruction of nesting beaches and feeding habitats such as mangroves, seagrass beds and coral reefs Less visible threats: climate change, artificial light pollution associated with coastal development, marine pollution (especially plastic), abandoned fishing nets ("ghost nets"), inappropriate beach management strategies, and natural predation by feral animals	Main: to maintain and recover marine turtle populations by promoting cooperation among Governments and other organizations that share this common objective.	Indian Ocean and South East Asia	6 species of the region: Green Leatherback Hawksbill Loggerhead Flatback	IOSEA regional strategy conservation https://www.cms.int/en/legalinstrument/iosea-marine-turtles
	All known threats	Bringing together stakeholders to improve the conservation of marine turtles in the region	South-West Indian Ocean	All species of sea turtles in the area	National action plan in favor of sea turtles in the southwestern French territories of the Indian Ocean 2015-2020

5.2.2 Has your country encouraged Regional Fishery Management Organizations (RFMOs) in the Indian Ocean to adopt marine turtle conservation measures within Exclusive Economic Zones (EEZs) and on the high seas? Please describe the interventions made by your country in this regard in the last 5 years, referring to specific RFMOs.

Details/future plans:

>>> TAAF : has not encouraged Indian Ocean RFMOs to adopt conservation measures for marine turtles in EEZs for the past 5 years. However, the TAAF did so between 2015 and 2018

References and links:

>>> TAAF : Order No. 2020-25 of March 5, 2020 governing fishing for tuna and other pelagic fish in the EEZ of the Eparses Islands. These technical prescription orders have been renewed annually since 2008, they take into account in particular the recommendations and resolutions of the IOTC

5.2.3 Please describe any additional efforts of your country to enhance sub-regional turtle conservation.

Details/future plans:

>>> La Réunion -
 Presentations during regional and international conferences and symposiums.
 Cooperation missions
 Implementing collaboration conventions
 Setting up research programs (including capacity building actions)

5.3 CAPACITY-BUILDING

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

5.3.1 Describe your country's needs in terms of human resources, knowledge and facilities, in order to build capacity to strengthen marine turtle conservation measures in the IOSEA region.

Details:

>>> La Réunion - Regional cooperation funding projects in favor of sea turtles conservation studies, including capacity building actions.

5.3.2 Describe any training your country provided in marine turtle conservation and

management in the last 5 years (e.g., workshops held, training manuals produced etc.), and indicate your plans for the coming year.

Details/future plans:

>>> La Réunion -

Genetic samples and tagging (TImOI and STORM projects)

Training for using the TORSOOI database (Maurice, Comores, Mayotte)

International exchanges on good practices for nesting beaches rehabilitation (especially Antilles, Hawaii, Polynésie Française)

References and links:

>>> La Réunion -

Projet ADAPTOM - OFB

5.3.3 Specifically in relation to capacity-building for the conservation of marine turtles and their habitats, describe any partnerships with universities, research institutions, training bodies and other relevant organisations, national, regional, and/or international.

Details/future plans:

>>> La Réunion - ongoing programs and others

TAAF -

- Kelonia, the sea turtle observatory

- Center for the Study and Discovery of Marine Turtles (CEDTM)

- French Research Institute for the Exploitation of the Sea (Ifremer)

- LACy (Atmosphere and Cyclone Laboratory)

5.4 STRATEGY AND LEGISLATION

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

5.4.1 Development of a national action plan

a) Is there a national action plan for the conservation of marine turtles and their habitats in your country?

YES

Details:

title of the document, year, link:

>>> La Réunion - Plan National d'Action en faveur tortues marines du Sud Ouest de l'Océan Indien (2015-2020)

<https://www.reunion.developpement-durable.gouv.fr/le-pna-tortues-marines-a984.html>

TAAF -

PHILIPPE JS., BOURJEA J., CICCIONE S., BALLORAIN K., MARINESQUE S., GLENARD Z. 2014. Plan national d'actions en faveur des tortues marines des territoires français de l'océan Indien : La Réunion, Mayotte et Îles Éparses (2015-2020). Ministère de l'Écologie, du Développement durable et de l'Énergie, Direction de l'Environnement, de l'Aménagement et du Logement de La Réunion. BIOTOPE, KÉLONIA, IFREMER, PARC NATUREL MARIN DE MAYOTTE, TAAF, PHAETON TRADUCTION. 4 volumes, 312 p.

Mayotte : Plan national d'actions tortues marines du sud ouest de l'océan indien

b) If there is no action plan yet, has a set of key management measures been identified that could eventually serve as a basis for a more specific action plan at a national or local level?

YES

Details:

Title of the documents, year, link:

>>> TAAF - Eparses Islands Biodiversity Action Plan 2020-2025

Mayotte : National Action Plan being revised

5.4.2 Which are the main threats to marine turtles in your country per species and the most urgent management activities to address them?

Please list up to 5 corresponding activities from the IOSEA Conservation and Management Plan (**CMP**).

>>> La Réunion -

Bycatch - Loggerhead and green

Boat strikes - Green and Hawksbill

Nesting habitats destruction or degradation - Green

Foraging habitats destruction or degradation - Green and Hawksbill

TAAF -

The main threats to the marine turtles of the Scattered Islands are found at sea or in feeding and migration areas outside French maritime areas.

Mayotte : poaching, human activities, stray dogs, fishing

5.4.3 Has your country conducted a review of policies and laws to address any inconsistencies in relation to the conservation of marine turtles and their habitats?

YES

Details, future plans:

>>> TAAF - An evaluation of the national action plan was carried out in 2022 by the Planète Publique design office.

Next PNA tortue marines du sud -ouest de l'océan indien to come soon

Mayotte : will of modifying the 2022 order on sea turtles to integrate the consumption to it

5.4.5 Does your country have legislation that explicitly requires marine and coastal development projects and natural resource extraction projects to be accompanied by an Environmental Impact Assessment (EIA) in relation to marine turtles and their habitats?

YES

a) If yes, please provide references to legal texts, date of adoption and briefly describe such legislation.

Details:

>>> TAAF - The terrestrial and maritime areas of the islands are currently protected and the protection of these areas will be strengthened thanks to the project to create the national nature reserve.

Mayotte : Code de l'environnement

b) Which measures are in place to ensure compliance with this regulation?

References and links:

>>> Mayotte : control actions

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

6.1 IOSEA MARINE TURTLE MOU MEMBERSHIP AND ACTIVITIES

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

6.1.2 Is your country currently favourable, in principle, to amending the MOU to make it a legally binding instrument?

NO VIEW

6.2 RESOURCES TO SUPPORT IMPLEMENTATION OF THE MOU

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

6.2.1 What programmes has your country funded for domestic implementation of marine turtle conservation activities related to the IOSEA Marine Turtle MOU?

Please refer to the IOSEA CMP and IOSEA Work Programme.

Name of the funded programme, corresponding CMP activity or IOSEA Work Programme measure:

>>> Plan national d'action tortues marines Sud-ouest océan indien

6.2.2 In the last 5 years, what funding sources have been available for your country to support marine turtle conservation?

YES

Details: (national, other governments, international organisations, donor organisations, industry, private sector, foundations)

>>> TAAF + la Réunion + Mayotte - National action plan

in favor of sea turtles

in the southwestern French territories

of the Indian Ocean 2015-2020

Mayotte : national donors, organizations, industry, private sector, foundations

6.2.3 In accordance with CITES decisions on marine turtles, has your country attempted to raise funds for the activities listed below through CITES?

NO

6.3 COORDINATION AMONG GOVERNMENT AGENCIES

Provide sources of information supporting the above responses, include reports (governmental, departmental, university, NGO, etc.) as well as published articles (scientific or online articles); also include appropriate links to these information sources and/or attach documents to this report.

6.3.1 List government agencies that play a role in the conservation and management of marine turtles and their habitats in your country. Please indicate their responsibilities in relation to protecting marine turtles and their habitats.

If more rows are required, please contact the secretariat at iosea@un.org

	Role in the conservation of marine turtles and their habitats	Name of the agency
		French biodiversity agency

