## CMS

# IOSEA Marine Turtles Memorandum of Understanding - National Report 2024

**INSTRUCTIONS FOR COMPLETING THE NATIONAL REPORTING QUETIONNAIRE:**

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:

››› Australia

List any other agencies, institutions, or NGOs that have provided input:
››› • Western Australia Government Department of Biodiversity, Conservation and Attractions
• Queensland Government Department of Environment and Science
• Australian Government Great Barrier Reef Marine Park Authority
• Australian Government DCCEEW Parks Australia
• Australian Government Australian Fisheries Management Authority

Memorandum in effect in Signatory State since (dd/mm/yyyy):
››› 1/09/2001

This report was last modified: (dd/mm/yyyy):
››› 11/03/2024

Designated Focal Point (and full contact details):
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# MARINE TURTLE SPECIES AND HABITATS

Provide sources of information supporting the 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 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, 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.

### 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.

| | Geographic area | Type of habitat (nesting, feeding developmental)? | Species, genetic stock | Number of egg clutches per year | Population trend (increase, decrease, stable, unknown) |
|---|---|---|---|---|---|
| | Increase | 5.06 clutches/female/season | Green turtle – Southern Great Barrier Reef (GBR) | Nesting | Islands of the Capricornia- Bunker Group, Bushy Islet, Wreck Rock to Burnett Head |
| | Increase | N/A | Green turtle – Southern Great Barrier Reef (GBR) | Foraging | Coastal waters from Darwin to southern New South Wales to SW Pacific |
| | Unknown | N/A | Green turtle – Southern Great Barrier Reef (GBR) | Developmental | Waters off south Queensland- New South Wales; extending into Tasman Sea, Coral Sea to as far east as Fiji |
| | Unknown | Unknown | Green turtle – Coral Sea | Nesting | Sand cays and islets of the Coral Sea Marine Park |
| | Unknown | N/A | Green turtle – Coral Sea | Foraging | Coastal waters off Queensland |
| | Decrease | 6.2 clutches/female/season | Green turtle – northern GBR | Nesting | Raine Island, Moulter Cay, Bramble Cay, Murray Island, Dauar Island, Sandbanks no. 7 and no. 8, etc |

You have attached the following documents to this answer.

CMS_IOSEA_NRQ_2024_Australia_final.docx - Please see pp 3-10 for the complete list of marine turtle species and genetic stocks occurring in Australia

### 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:

››› Species occurrence data can be submitted to the Turtle Nesting Distribution Abundance and Migration (TurtleNet) database, which is managed by Queensland Government Department of Environment and Science.
https://apps.information.qld.gov.au/TurtleDistribution/
Another suitable database for the Pacific island countries and territories is the Turtle Research and Monitoring Database System (SPREP).
https://www.sprep.org/thetreds
The SWOT Global Sea Turtle Database also collects global data on nesting occurrence and telemetry tracks.
https://www.seaturtlestatus.org/online-map-data
It is up to each stakeholder to decide whether to upload their data to these databases to make it available to the public. Result dissemination of monitoring surveys might also be mandated by funding bodies.

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

☑ YES

You have attached the following documents to this answer.

CMS_IOSEA_NRQ_2024_Australia_final.docx - Sites not described in this National Report due to lack of drop-down menus can be found on pp 111-174

**d) Does your country have an IOSEA Network site?**

☑ NO

## 0.2 Site-specific information

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.
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 seperate section for each site.

## Sites
## Site 1

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

Name of the site:
››› Heron Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 23.433°S, 151.917°E

Length:

››› 0.8 km

**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:

››› National Park (Capricornia Cays National Park / Capricorn and Bunker Group) within Great Barrier Reef World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1964. Monitoring is carried out each nesting season (nightly tagging census) by Queensland Parks and Wildlife Service Threatened Species Operations.
The genetic stocks nesting at this site are: Green turtle – Southern Great Barrier Reef stock; and Loggerhead turtle – South-west Pacific stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 1964 | Increasing (around 700 nesting females per year) | e | YES |
| Loggerhead (Caretta caretta) | Each nesting season | 1964 | Decreasing (few 10s females nesting /season) | b | YES (nesting in the islands group) |

**g) Please estimate the approximate area of adjacent in-water habitat for this site.**
☑ 10-15 km2

Please describe the approximate area of the in-water habitat near the site and provide any references and links:
››› Heron Island is located within Capricornia Cays National Park, which comprises 241 ha of coral cays.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | Annual tagging-recapture studies were conducted during 19875-1999 | | Unknown | Unknown | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | Annual tagging-recapture studies were conducted during 1975-1999 & 2022 | | Increasing | Unknown | NO | YES |
| Loggerhead (Caretta caretta) | Annual tagging-recapture studies were conducted during 19875-1999 & 2022 | | Decreasing | Unknown | NO | YES |

Please provide any references and links:

››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation’s Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf

Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane. https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf

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

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

Other threat:

››› Climate change - medium
Vessel disturbance - low

**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 people from coastal communities

Please provide details:

››› Expand existing Citizen Science training program to encompass broader community engagement.

**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.**

››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 2

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

Name of the site:
››› Wreck Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 23.20°S, 151.57°E

Length:

››› 0.98 km

**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:

››› National Park (Capricornia Cays National Park / Capricorn Bunker Group); within Great Barrier Reef World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1977. Loggerhead tagging census & green turtle track count census for each nesting season
Genetic stocks nesting at this site: Green turtle – Southern Great Barrier Reef stock; Loggerhead turtle – south-west Pacific stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 1977 | Increasing | f | YES |
| Loggerhead (Caretta caretta) | Each nesting season | 1977 | Decreasing | b | YES (nesting in the region) |

**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:
››› Wreck Island Reef is approximately 3.5 x 1.5 km in size. The reef is located within Capricornia Cays National Park, which comprises 241 ha of coral cays.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | Unknown | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | | Increasing | NO | YES |
| Loggerhead (Caretta caretta) | | | | Decreasing | NO | YES |

Please provide any references and links:

››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation’s Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

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

Other threat:

››› Climate change - medium
Vessel strike - low

**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 people from coastal communities

**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.**
››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research

and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 3

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

Name of the site:
››› North West Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 23.300°S, 151.700°E

Length:

››› 1.8 km

**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:

››› National Park (Capricornia Cays National Park); within Great Barrier Reef World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› Intermittent since 1977. Track count census for each nesting season.
Genetic stocks nesting at this site: Green turtle – Southern Great Barrier Reef stock; Loggerhead turtle – South-west Pacific stock.

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 1977 | Increasing | f | YES |
| Loggerhead (Caretta caretta) | Each nesting season | 1977 | Decreasing | a | YES |

**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:
››› North West island is located within Capricornia Cays National Park, which comprises 241 ha of coral cays.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | Unknown | | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | Increasing | | NO | YES |
| Loggerhead (Caretta caretta) | | | Decreasing | | NO | YES |

Please provide any references and links:

››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

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

Other threat:

››› Climate change - medium
Vessel disturbance - low

**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 people from coastal communities

**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.**
››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf

Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane. https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 4

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

Name of the site:
››› Lady Musgrave Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 23.900°S, 152.383°E

Length:

››› 0.77 km

**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:

››› National Park (Capricornia Cays National Park); within Great Barrier Reef World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1972. Loggerhead turtle: tagging census; green turtles: track count census for each nesting season.
Genetic stocks nesting on this site: Green turtle – Southern Great Barrier Reef stock; Loggerhead turtle – South-West Pacific stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |

| | | | | | |
|---|---|---|---|---|---|
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 1977 | Increasing | e | YES |
| Loggerhead (Caretta caretta) | Each nesting season | 1977 | Decreasing | b | YES |

**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:
››› Lady Musgrave is located within Capricornia Cays National Park, which comprises 241 ha of coral cays.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | Unknown | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | | Increasing | NO | YES |
| Loggerhead (Caretta caretta) | | | | Decreasing | NO | YES |

Please provide any references and links:

››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

| | Unknown | None | Low (rare event) | Medium | High (common occurrence) |
|---|---|---|---|---|---|
| Other (type in) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Predation by domestic / feral animals (cats, dogs) | ☐ | ☐ | ☐ | ☑ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| Natural threats, disease, predation of nests/nesting females or natural predation at sea | ☐ | ☐ | ☑ | ☐ | ☐ |
| Sand mining / removal | ☐ | ☐ | ☐ | ☑ | ☐ |
| Vehicles | ☐ | ☐ | ☐ | ☑ | ☐ |
| Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Artificial lighting (on land or near shore) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Inshore oil pollution | ☐ | ☐ | ☐ | ☑ | ☐ |
| Industrial effluent | ☐ | ☐ | ☐ | ☑ | ☐ |
| Marine debris (e.g. plastics at sea, flotsam) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Boat strikes | ☐ | ☐ | ☐ | ☑ | ☐ |
| Incidental capture in coastal fisheries | ☐ | ☐ | ☐ | ☑ | ☐ |
| Egg collection (i.e. direct harvest by humans) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Direct harvest of animals in coastal waters at or near the site | ☐ | ☐ | ☐ | ☑ | ☐ |
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Climate change - medium
Vessel strikes - low

Please provide details:

››› NA. Nil input received.

**I) 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.**

››› Limpus CJ, Parmenter CJ and Chaloupka M (2013) Monitoring of Coastal Sea Turtles: Gap Analysis 2. Green turtles, Chelonia mydas, in the Port Curtis and Port Alma Region. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-995512-v3-ENV_Report_Port_Curtis_and_Port_Alma_ERMP_Tier_1_project_CA120021_Monitoring_of_Coastal_Sea_Turtles__Gap_Analysis_2__Green_turtles__Chelonia_myda.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites

## Site 5

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

Name of the site:
››› Raine Island National Park (Raine Island and Moulter Cay)

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› Raine Island 11.59°S, 144.04°E; Moulter Cay 11.41°S, 144.02°E

Length:

››› Raine Island 0.8 km; Moulter Cay 0.5 km

**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:

››› National Park (Scientific); within Great Barrier Reef World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› Raine Island 1974, Moulter Cay 2006. Track count monitoring is carried out during and out of nesting season.
Genetic stocks nesting at this site: Green turtle – Northern Great Barrier Reef stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | During and out of nesting season | 1974 (Raine Island) and 2006 (Moulter Cay) | Decreasing | | YES |

| | | | | | |
|---|---|---|---|---|---|
| Loggerhead (Caretta caretta) | | | | | NO |

**g) Please estimate the approximate area of adjacent in-water habitat for this site.**
☑ 15-100 km2

Please describe the approximate area of the in-water habitat near the site and provide any references and links:
››› Raine Island and Moulter Cay are located within the Raine Island National Park (Scientific), which comprises 36 ha.

**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.**

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

Please provide any references and links:

››› Limpus, C.J., Miller, J.D., Parmenter, C.J. and Limpus, D.J., 2003. The green turtle, Chelonia mydas, population of Raine Island and the Northern Great Barrier Reef: 1843-2001. Memoirs-Queensland Museum, 49(1), pp.349-440.
https://www.museum.qld.gov.au/collections-and-research/memoirs/nature-49/mqm-n49-1-20-limpus-et-al
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

| | Unknown | None | Low (rare event) | Medium | High (common occurrence) |
|---|---|---|---|---|---|
| Other (type in) | ☑ | ☐ | ☐ | ☐ | ☐ |
| Predation by domestic / feral animals (cats, dogs) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Natural threats, disease, predation of nests/nesting females or natural predation at sea | ☐ | ☐ | ☑ | ☐ | ☐ |
| Sand mining / removal | ☐ | ☐ | ☐ | ☑ | ☐ |
| Vehicles | ☐ | ☐ | ☐ | ☑ | ☐ |

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

Other threat:

››› Climate change - high

**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:**
☑ Technical expertise to enhance conservation or management at the site

**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.**
››› Limpus, C.J., Miller, J.D., Parmenter, C.J. and Limpus, D.J., 2003. The green turtle, Chelonia mydas, population of Raine Island and the Northern Great Barrier Reef: 1843-2001. Memoirs-Queensland Museum, 49(1), pp.349-440.
https://www.museum.qld.gov.au/collections-and-research/memoirs/nature-49/mqm-n49-1-20-limpus-et-al
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 6

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

Name of the site:
››› Dowar Islet (also known as Dauar Island)

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 9.943°S, 144.026°E

Length:

››› 1.42 km

**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)?**
☑ NO

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 2006. Yearly nesting and hatchling surveys.

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 2006 | Decreasing | | YES |
| Loggerhead (Caretta caretta) | | | | | NO |

**g) Please estimate the approximate area of adjacent in-water habitat for this site.**
☑ 1-2 km2

Please describe the approximate area of the in-water habitat near the site and provide any references and links:
››› Less than 2 km2 approximately. Size of surrounding reef determined as measured on Google Maps.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO | NO |
| Green (Chelonia mydas) | | | Decreasing | Unknown | NO | YES |
| Loggerhead (Caretta caretta) | | | | | NO | NO |

Please provide any references and links:


››› Australian Government and TSRA (2015). Torres Strait Dugong and Turtle Management Project. Marine Turtle Monitoring Project Report 2014-15. May 2015. https://www.tsra.gov.au/__data/assets/pdf_file/0008/13976/TSRA-2015-Marine-Turtle-Monitoring-Project-Report-2014-2015.pdf
Torres Strait Regional Authority (2017) Torres Strait Dugong and Turtle Management Project: Marine Turtle Monitoring Project Report 2015-16. Published by the Torres Strait Regional Authority Land and Sea Management Unit, Thursday Island, Queensland. (61pp.).
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane. https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf


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

| | Unknown | None | Low (rare event) | Medium | High (common occurrence) |
|---|---|---|---|---|---|
| Other (type in) | ☑ | ☐ | ☐ | ☐ | ☐ |
| Predation by domestic / feral animals (cats, dogs) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Natural threats, disease, predation of nests/nesting females or natural predation at sea | ☐ | ☐ | ☐ | ☑ | ☐ |
| Sand mining / removal | ☐ | ☐ | ☐ | ☑ | ☐ |
| Vehicles | ☐ | ☐ | ☐ | ☑ | ☐ |
| Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.) | ☑ | ☐ | ☐ | ☐ | ☐ |
| Artificial lighting (on land or near shore) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Inshore oil pollution | ☐ | ☐ | ☐ | ☑ | ☐ |
| Industrial effluent | ☐ | ☐ | ☑ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| Marine debris (e.g. plastics at sea, flotsam) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Boat strikes | ☐ | ☐ | ☑ | ☐ | ☐ |
| Incidental capture in coastal fisheries | ☐ | ☐ | ☐ | ☑ | ☐ |
| Egg collection (i.e. direct harvest by humans) | ☐ | ☐ | ☑ | ☐ | ☐ |
| Direct harvest of animals in coastal waters at or near the site | ☐ | ☐ | ☑ | ☐ | ☐ |
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☑ | ☐ | ☐ |

Other threat:

››› Climate change - high
Vessel disturbance - low

Please provide details:

››› NA. Nil input received

**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.**
››› Australian Government and TSRA (2015). Torres Strait Dugong and Turtle Management Project. Marine Turtle Monitoring Project Report 2014-15. May 2015. https://www.tsra.gov.au/__data/assets/pdf_file/0008/13976/TSRA-2015-Marine-Turtle-Monitoring-Project-Report-2014-2015.pdf
TSRA Annual Report 2016-2017
https://www.tsra.gov.au/__data/assets/pdf_file/0003/17823/Annual-Report-2016-2017.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 7

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

Name of the site:
››› Ningaloo Coast

State/province:

››› Western Australia

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 22.39°S, 113.29°E

Length:

››› 260 km

**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:

››› Marine Park and World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 2000s. All-year monitoring of nesting and foraging grounds.
Genetic stocks nesting at this site: Green turtle – North West Shelf stock; Hawksbill turtle – Western Australia stock; Loggerhead turtle – Western Australia stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | All-year round | 2000s | Stable | c | YES |
| Leatherback (Dermochelys coriacea) | All-year round | 2000s | Stable | e | NO |
| Green (Chelonia mydas) | | | | | YES |
| Loggerhead (Caretta caretta) | All-year round | 2000s | Stable | d | YES |

**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 Ningaloo Marine Park covers a total area of 5070 km2
https://parksaustralia.gov.au/marine/parks/north-west/ningaloo/#:~:text=Ningaloo%20Marine%20Park%20(Commonwealth%20waters)%20covers%202%2C%20435%20square,gardens%20and%20rich%20fish%20communities.
https://ningaloo-atlas.org.au/node/215

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | Seasonal morning track counts | | Unknown | | NO | YES |

| | | | | | | |
|---|---|---|---|---|---|---|
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | Seasonal morning track counts | | Uknown | | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | Seasonal morning track counts | | Stable | | NO | YES |
| Loggerhead (Caretta caretta) | Seasonal morning track counts | | Unknown | | NO | YES |

Please provide any references and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Ningaloo Turtle Program
https://ningalooturtles.org.au/
http://ningalooturtles.org.au/wp-content/uploads/2023/08/NTP-Annual-Report-2022_23-FINAL.pdf

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

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

| | | | | | |
|---|---|---|---|---|---|
| Direct harvest of animals in coastal waters at or near the site | ☐ | ☐ | ☑ | ☐ | ☐ |
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Climate change - medium
Noise pollution - medium

**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 community-based activities
☑ Training/capacity building for project development, fundraising, execution, evaluation
☑ Scientific equipment and/or technical support
☑ Technical expertise to enhance conservation or management at the site

Please provide details:

››› Extreme ghost crab predation, also gulls

**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.**
››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Ningaloo Turtle Program
https://ningalooturtles.org.au/
Avenant C, Fossette S, Whiting S, Hopkins AJM, Hyndes GA. Sea turtle eggs and hatchlings are a seasonally important food source for the generalist feeding golden ghost crab (Ocypode convexa). Estuaries and Coasts 2023:1-18. https://doi.org/10.1007/s12237-023-01309-4
Avenant C, Whiting S, Fossette S, Barnes P, Hyndes GA. Extreme predation of eggs and hatchlings for loggerhead turtles in eastern Indian Ocean. Biodiversity and Conservation (2023). https://doi.org/10.1007/s10531-023-02739-z.

## Sites
## Site 8

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

Name of the site:
››› Barrow Island

State/province:

››› Western Australia

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 20.48°S, 115.22°E

Length:

››› 23.4 km

**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:

››› Class A Nature Reserve

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 2005. Monitoring is carried out every nesting season, however sightings are recorded all-year round.
Industry funded program, so annual numbers are estimated.
Genetic stocks nesting at this site: Flatback turtle – Pilbara stock; Green turtle – North West Shelf stock; Hawksbill turtle – Western Australia

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Every nesting season | 2005 | Stable | f | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | Monitoring has ceased | 2005 | Unknown | c | YES |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Monitoring has ceased | 2005 | Unknown | f | YES |
| Loggerhead (Caretta caretta) | | | | | NO |

**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:
››› Barrow Island Marine Park encompasses 4,100 ha of surrounding waters.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | Unknown | NO | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |

| | | | | | | |
|---|---|---|---|---|---|---|
| Hawksbill (Eretmochelys imbricata) | | | | Unknown | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | | Unknown | NO | YES |
| Loggerhead (Caretta caretta) | | | | Unknown | NO | YES |

Please provide any references and links:

››› Limpus CJ 2009. A Biological Review of Australian Marine Turtles. Brisbane, Queensland. Queensland Government Environmental Protection Agency. pp 324. https://qldgov.softlinkhosting.com.au/liberty/opac/search.do?mode=ADVANCED&=AUTHOR&=KEYWORD&queryTerm=a%20biological%20review%20of%20australian%20marine%20turtles&operator=AND&timeScale=ANY_TIME&searchTarget=THIS_LIBRARY&activeMenuItem=false
Chevron Australia Pty Ltd 2018. Gorgon Gas Development and Jansz Feed Gas Pipeline. Long-term Marine Turtle Management Plan. https://australia.chevron.com/-/media/australia/our-businesses/documents/gorgon-emp-long-term-marine-turtle-management-plan.PDF
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

| | Unknown | None | Low (rare event) | Medium | High (common occurrence) |
|---|---|---|---|---|---|
| Other (type in) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Predation by domestic / feral animals (cats, dogs) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Natural threats, disease, predation of nests/nesting females or natural predation at sea | ☑ | ☐ | ☐ | ☐ | ☐ |
| Sand mining / removal | ☐ | ☐ | ☑ | ☐ | ☐ |
| Vehicles | ☐ | ☐ | ☑ | ☐ | ☐ |
| Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.) | ☑ | ☐ | ☐ | ☐ | ☐ |
| Artificial lighting (on land or near shore) | ☑ | ☐ | ☐ | ☐ | ☐ |
| Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Inshore oil pollution | ☐ | ☐ | ☐ | ☑ | ☐ |
| Industrial effluent | ☐ | ☐ | ☑ | ☐ | ☐ |
| Marine debris (e.g. plastics at sea, flotsam) | ☐ | ☐ | ☑ | ☐ | ☐ |
| Boat strikes | ☐ | ☐ | ☑ | ☐ | ☐ |
| Incidental capture in coastal fisheries | ☐ | ☐ | ☑ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| Egg collection (i.e. direct harvest by humans) | ☐ | ☐ | ☑ | ☐ | ☐ |
| Direct harvest of animals in coastal waters at or near the site | ☐ | ☐ | ☐ | ☑ | ☐ |
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Climate change - medium
Noise pollution - medium

Please provide details:

››› None; monitored by industry

**k) If necessary, use the text box to give further details or clarification about any of the information provided.**
››› • High level of turtle nesting habitat degradation due to erosion from coastal development on east coast flatback turtle beaches.
• Disturbance from artificial lights on west coast green turtle beaches.

**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.**
››› Limpus CJ 2009. A Biological Review of Australian Marine Turtles. Brisbane, Queensland. Queensland Government Environmental Protection Agency. pp 324. https://qldgov.softlinkhosting.com.au/liberty/opac/search.do?mode=ADVANCED&=AUTHOR&=KEYWORD&queryTerm=a%20biological%20review%20of%20australian%20marine%20turtles&operator=AND&timeScale=ANY_TIME&searchTarget=THIS_LIBRARY&activeMenuItem=false
Chevron Australia Pty Ltd 2018. Gorgon Gas Development and Jansz Feed Gas Pipeline. Long-term Marine Turtle Management Plan. https://australia.chevron.com/-/media/australia/our-businesses/documents/gorgon-emp-long-term-marine-turtle-management-plan.PDF
Commonwealth of Australia 2017. Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 9

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

Name of the site:
››› Muiron Islands

State/province:

››› Western Australia

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 21.66°S, 114.35°E

Length:

››› 13.5 km (28 km of coastline in total)

**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:

››› Marine management area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 2013; track count census carried out most nesting seasons (irregular aerial survey monitoring).
Genetic stocks nesting at this site: Green turtle – North West Shelf stock; Loggerhead turtle – Western Australia; Flatback turtle – Pilbara stock; Hawksbill – Western Australia

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Irregular – aerial survey | 2013 | Stable | d | YES (occasional) |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | Irregular – aerial survey | 2013 | Stable | e | YES (occasional) |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Irregular – aerial survey | 2013 | Unknown | b | YES |
| Loggerhead (Caretta caretta) | Irregular – aerial survey | 2013 | Unknown | a | YES |

**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 marine management area covers 28,600 ha.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | Unknown | | NO | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | Unknown | | NO | YES |

| | | | | | | |
|---|---|---|---|---|---|---|
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | Unknown | | NO | YES |
| Loggerhead (Caretta caretta) | | | Unknown | | NO | YES |

Please provide any references and links:

››› Rob D, Barnes P, Whiting S, Fossette S, Tucker T and Mongan T (2019) Turtle activity and nesting on the Muiron Islands and Ningaloo Coast: Final Report 2018, Ningaloo Turtle Program. Report prepared for Woodside Energy Limited. Department of Biodiversity, Conservation and Attractions, Exmouth, pp.51. https://library.dbca.wa.gov.au/static/FullTextFiles/072472.pdf
Tucker et al (2020). Inter-nestinf and migrations by marine turtles of the Muiron Islands and Ningaloo Coast Final Report.
http://ningalooturtles.org.au/wp-content/uploads/2022/12/DBCA-Muiron-Report-FINAL-13.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

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

| | | | | | |
|---|---|---|---|---|---|
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Climate change - none
Direct harvest of animals in coastal waters or near the site - low (indigenous take)
Direct harvest of animals in coastal waters or near the site - medium (international take)

**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:**
☑ Scientific equipment and/or technical support

Please provide details:

››› Ghost crab and seagull predation on hatchlings

**k) If necessary, use the text box to give further details or clarification about any of the information provided.**
››› Major loggerhead rookery but sparse satellite information, needs investment in GPS tags

**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.**
››› Rob D, Barnes P, Whiting S, Fossette S, Tucker T and Mongan T (2019) Turtle activity and nesting on the Muiron Islands and Ningaloo Coast: Final Report 2018, Ningaloo Turtle Program. Report prepared for Woodside Energy Limited. Department of Biodiversity, Conservation and Attractions, Exmouth, pp.51. https://library.dbca.wa.gov.au/static/FullTextFiles/072472.pdf
Tucker et al (2020). Inter-nestinf and migrations by marine turtles of the Muiron Islands and Ningaloo Coast Final Report. http://ningalooturtles.org.au/wp-content/uploads/2022/12/DBCA-Muiron-Report-FINAL-13.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Avenant C, Fossette S, Whiting S, Hopkins AJM, Hyndes GA. Sea turtle eggs and hatchlings are a seasonally important food source for the generalist feeding golden ghost crab (Ocypode convexa). Estuaries and Coasts 2023:1-18. https://doi.org/10.1007/s12237-023-01309-4
Avenant C, Whiting S, Fossette S, Barnes P, Hyndes GA. Extreme predation of eggs and hatchlings for loggerhead turtles in eastern Indian Ocean. Biodiversity and Conservation (2023). https://doi.org/10.1007/s10531-023-02739-z

## Sites
## Site 10

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

Name of the site:
››› Woongarra Coast (includes Mon Repos)

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 24.796°S, 152.441°E

Length:

››› 1.5 km

**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:

››› Conservation Park for one beach (Mon Repos)

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1968, monitoring carried out each nesting season (tagging, clutch counts and track counts).
Genetic stocks nesting at this site: Loggerhead turtle – South-West Pacific stock; Flatback turtle – Eastern Queensland stock; Green turtle – Southern Great Barrier Reef stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Each nesting season | 1968 | Increasing | b | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 1968 | Increasing | b | YES |
| Loggerhead (Caretta caretta) | Each nesting season | 1968 | Decreasing | e | YES |

**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:
››› This site is not linked to a reef, telemetry suggests more than 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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | | NO |

| | | | | | | |
|---|---|---|---|---|---|---|
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | | | NO | YES |
| Loggerhead (Caretta caretta) | | | | | NO | YES |

Please provide any references and links:

››› Limpus CJ 2009. A Biological Review of Australian Marine Turtles. Brisbane, Queensland. Queensland Government Environmental Protection Agency. pp 324.
https://qldgov.softlinkhosting.com.au/liberty/opac/search.do?mode=ADVANCED&=AUTHOR&=KEYWORD&queryTerm=a%20biological%20review%20of%20australian%20marine%20turtles&operator=AND&timeScale=ANY_TIME&searchTarget=THIS_LIBRARY&activeMenuItem=false
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Mon Repos Conservation Park – Queensland Government website
https://parks.des.qld.gov.au/parks/mon-repos/attractions/mon-repos-turtle-centre

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

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

| | | | | | |
|---|---|---|---|---|---|
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Climate change - medium
Noise pollution - low

Please provide details:

››› NA. Nil input received.

**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.**
››› Limpus CJ 2009. A Biological Review of Australian Marine Turtles. Brisbane, Queensland. Queensland Government Environmental Protection Agency. pp 324.
https://qldgov.softlinkhosting.com.au/liberty/opac/search.do?mode=ADVANCED&=AUTHOR&=KEYWORD&queryTerm=a%20biological%20review%20of%20australian%20marine%20turtles&operator=AND&timeScale=ANY_TIME&searchTarget=THIS_LIBRARY&activeMenuItem=false
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Mon Repos Conservation Park – Queensland Government website
https://parks.des.qld.gov.au/parks/mon-repos/attractions/mon-repos-turtle-centre

## Sites
## Site 11

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

Name of the site:
››› Wreck Rock

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 24.314°S, 151.963°E

Length:

››› 22 km

**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:

››› National Park for most of the beach

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

››› 1978, monitoring carried out each nesting season (tagging and track counts).
Genetic stocks nesting at this site: Loggerhead turtle – South-West Pacific stock; Flatback turtle – Eastern Queensland stock; Green turtle – Southern Great Barrier Reef stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Each nesting season | 1978 | Unknown | b | YES |
| Olive ridley (Lepidochelys olivacea) | | | | Nil since 1996 | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Each nesting season | 1978 | Increasing | b | YES |
| Loggerhead (Caretta caretta) | Each nesting season | 1978 | Decreasing | c | YES |

Please describe the approximate area of the in-water habitat near the site and provide any references and links:
››› This site is not linked to a reef, hence we were not sure about how to measure the in-water habitat.

**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.**

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

Please provide any references and links:

››› Limpus CJ 2009. A Biological Review of Australian Marine Turtles. Brisbane, Queensland. Queensland Government Environmental Protection Agency. pp 324.
https://qldgov.softlinkhosting.com.au/liberty/opac/search.do?mode=ADVANCED&=AUTHOR&=KEYWORD&queryTerm=a%20biological%20review%20of%20australian%20marine%20turtles&operator=AND&timeScale=ANY_TIME&searchTarget=THIS_LIBRARY&activeMenuItem=false
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

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

Other threat:

››› Climate change - medium
Noise pollution - none

Please provide details:

››› NA. Nil input received

**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.**
››› Limpus CJ 2009. A Biological Review of Australian Marine Turtles. Brisbane, Queensland. Queensland Government Environmental Protection Agency. pp 324.
https://qldgov.softlinkhosting.com.au/liberty/opac/search.do?mode=ADVANCED&=AUTHOR&=KEYWORD&queryTerm=a%20biological%20review%20of%20australian%20marine%20turtles&operator=AND&timeScale=ANY_TIME&searchTarget=THIS_LIBRARY&activeMenuItem=false
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Wreck Rock Turtle Care – Seeturtle.org
http://www.seaturtle.org/tracking/index.shtml?project_id=1381

## Sites
## Site 12

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

Name of the site:
››› Dirk Hartog Island

State/province:

››› Western Australia

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 25.79°S, 113.04°E

Length:

››› 78 km

**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:

››› Shark Bay World Heritage Area

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1994. Monitoring is carried out each nesting season (tagging and track counts).
Genetic stocks nesting at this site: Loggerhead – Western Australian stock; Green turtle – North West Shelf stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO |
| Olive ridley (Lepidochelys olivacea) | | | | | |
| Hawksbill (Eretmochelys imbricata) | | | | | |
| Leatherback (Dermochelys coriacea) | | | | | |
| Green (Chelonia mydas) | | | Unknown | | YES (in other sites within Shark Bay) |
| Loggerhead (Caretta caretta) | Every nesting season | 1994 | Stable | f | YES |

**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:
››› Shark Bay World Heritage Area encompasses 23,000 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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | | NO | |
| Olive ridley (Lepidochelys olivacea) | | | | | NO | |
| Hawksbill (Eretmochelys imbricata) | | | | | NO | |
| Leatherback (Dermochelys coriacea) | | | | | NO | |
| Green (Chelonia mydas) | | | Unknown | | NO | YES |
| Loggerhead (Caretta caretta) | | | Unknown | SE Indian Ocean Management Unit | NO | YES |

Please provide any references and links:

››› Sharkbay.org
https://www.sharkbay.org/place/shark-bay-marine-reserve/turtle-monitoring/
CMS article:
https://www.cms.int/iosea-turtles/fr/node/14681
Dirk Hartog Island Rewilding Program
https://www.sharkbay.org/restoration/dirk-hartog-island-return-1616/
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

| | Unknown | None | Low (rare event) | Medium | High (common occurrence) |
|---|---|---|---|---|---|
| Other (type in) | ☐ | ☑ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| Predation by domestic / feral animals (cats, dogs) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Natural threats, disease, predation of nests/nesting females or natural predation at sea | ☑ | ☐ | ☐ | ☐ | ☐ |
| Sand mining / removal | ☐ | ☐ | ☐ | ☑ | ☐ |
| Vehicles | ☐ | ☐ | ☐ | ☑ | ☐ |
| Habitat degradation (e.g. coastal erosion, debris that obstructs nesting etc.) | ☐ | ☐ | ☑ | ☐ | ☐ |
| Artificial lighting (on land or near shore) | ☐ | ☐ | ☑ | ☐ | ☐ |
| Agricultural/urban/tourism development (e.g. construction that disrupts nesting activities) | ☐ | ☐ | ☐ | ☑ | ☐ |
| Inshore oil pollution | ☐ | ☐ | ☐ | ☑ | ☐ |
| Industrial effluent | ☐ | ☑ | ☐ | ☐ | ☐ |
| Marine debris (e.g. plastics at sea, flotsam) | ☐ | ☑ | ☐ | ☐ | ☐ |
| Boat strikes | ☐ | ☐ | ☑ | ☐ | ☐ |
| Incidental capture in coastal fisheries | ☐ | ☑ | ☐ | ☐ | ☐ |
| Egg collection (i.e. direct harvest by humans) | ☐ | ☐ | ☑ | ☐ | ☐ |
| Direct harvest of animals in coastal waters at or near the site | ☐ | ☐ | ☑ | ☐ | ☐ |
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Ghost crabs and silver gull predation on eggs and hatchlings - high
Climate change - medium
Noise pollution - medium (at the stock level)

**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 people from coastal communities
☑ Scientific equipment and/or technical support
☑ Technical expertise to enhance conservation or management at the site

**k) If necessary, use the text box to give further details or clarification about any of the information provided.**
››› • Major loggerhead rookery but sparse satellite information, recommend investment in GPS tags
• More studies into egg and hatchling predation and potential mitigation actions

**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.**
››› Sharkbay.org

https://www.sharkbay.org/place/shark-bay-marine-reserve/turtle-monitoring/
CMS article:
https://www.cms.int/iosea-turtles/fr/node/14681
Careforhedland.org
https://careforhedland.org.au/turtle-monitoring/
Dirk Hartog Island Rewilding Program
https://www.sharkbay.org/restoration/dirk-hartog-island-return-1616/
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

## Sites
## Site 13

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

Name of the site:
››› Peak Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 22.66°S, 150.96°E

Length:

››› 0.6 km

**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:

››› Keppel Bay Islands National Park (Scientific)

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1980. Mid season tagging census. Monitoring is carried out every nesting season.
Genetic stocks nesting at this site: Flatback turtle – Eastern Queensland stock.

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Usually every nesting season | 1980 | Depleted - increasing | c | YES |

| | | | | | |
|---|---|---|---|---|---|
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | | | | | NO |
| Loggerhead (Caretta caretta) | | | | | NO |

**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:
››› Keppel Islands National Park has a total area of 703 ha; without including the surrounding waters.
https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/national-park-keppel-bay-islands/

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | | Stable | NO | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | | Increasing | NO | YES |
| Loggerhead (Caretta caretta) | | | | Decreasing | NO | YES |

Please provide any references and links:

››› Limpus, C. J., Chaloupka, M., Ferguson, J., FitzSimmons, N. N. and Parmenter, C. J. (2020). Flatback Turtle, Natator depressus, 2019-2020 Breeding Season, at Curtis, Peak and Avoid Islands. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 58 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1793425-v1-Env_ERMPCA12000291_Flatback_Turtle_Population_Size_Trends_-Final_Report.pdf
Colin J. Limpus, Nancy N. FitzSimmons, Ian Anderson, Wayne Bennet, Leisa Baldwin, Leisa Fien, Fiona Hoffmann, Erwin Hoffmann, Duncan J. Limpus, and Trevor Turner (2021). Monitoring of eastern Australian Flatback turtle, Natator depressus, breeding populations in the Gladstone region: 2020-2021 breeding season. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 64 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1807789-v1-ENV_ERMP_CA120000291-_Flatback_Turtle_Natator_depressus_202002021_Breeding_Populations_in_the_Gladstone_Region_2020-2021.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Queensland Government website:

https://parks.des.qld.gov.au/parks/keppel-bay-islands/about

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

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

Other threat:

››› Climate change - high
Diseases and pathogens - medium
Noise pollution - none

Please provide details:

››› NA. Nil input received

**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.**
››› Limpus, C. J., Chaloupka, M., Ferguson, J., FitzSimmons, N. N. and Parmenter, C. J. (2020). Flatback Turtle, Natator depressus, 2019-2020 Breeding Season, at Curtis, Peak and Avoid Islands. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 58 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1793425-v1-Env_ERMPCA12000291_Flatback_Turtle_Population_Size_Trends_-Final_Report.pdf
Colin J. Limpus, Nancy N. FitzSimmons, Ian Anderson, Wayne Bennet, Leisa Baldwin, Leisa Fien, Fiona Hoffmann, Erwin Hoffmann, Duncan J. Limpus, and Trevor Turner (2021). Monitoring of eastern Australian Flatback turtle, Natator depressus, breeding populations in the Gladstone region: 2020-2021 breeding season. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 64 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1807789-v1-ENV_ERMP_CA120000291-_Flatback_Turtle_Natator_depressus_202002021_Breeding_Populations_in_the_Gladstone_Region_2020-2021.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Queensland Government website:
https://parks.des.qld.gov.au/parks/keppel-bay-islands/about

## Sites
## Site 14

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

Name of the site:
››› Wild Duck Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 22.66°S, 150.96°E

Length:

››› 3.8 km

**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:

››› Within Broad Sound Islands National Park

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1981.
Genetic stocks nesting at this location: Flatback turtle – Eastern Queensland stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Every nesting season | 1981-2006; recommenced 2019 | Increasing | d | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | | | | | NO |
| Loggerhead (Caretta caretta) | | | | | NO |

**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:
››› Broad Sound Islands National Park encompasses a total area of 118 ha.

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | Increasing | | NO | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | Decreasing | | NO | YES |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | Increasing | | NO | YES |
| Loggerhead (Caretta caretta) | | | Decreasing | | NO | YES |

Please provide any references and links:

››› Colin J. Limpus, Nancy N. FitzSimmons, Ian Anderson, Wayne Bennet, Leisa Baldwin, Leisa Fien, Fiona Hoffmann, Erwin Hoffmann, Duncan J. Limpus, and Trevor Turner (2021). Monitoring of eastern Australian Flatback turtle, Natator depressus, breeding populations in the Gladstone region: 2020-2021 breeding season. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation’s Ecosystem Research and Monitoring Program. 64 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1807789-v1-ENV_ERMP_CA120000291-_Flatback_Turtle_Natator_depressus_202002021_Breeding_Populations_in_the_Gladstone_Region_2020-

2021.pdf
Queensland government website:
https://parks.des.qld.gov.au/parks/broad-sound-islands/things-to-do
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Queensland Government 2013. Broad Sound Islands National Park and adjoining State Waters Management Statement 2013
https://parks.des.qld.gov.au/__data/assets/pdf_file/0024/167712/broad-sound-islands.pdf

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

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

Other threat:

››› Climate change - medium

Noise pollution - none

Please provide details:

››› NA. Nil input received

**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.**
››› Colin J. Limpus, Nancy N. FitzSimmons, Ian Anderson, Wayne Bennet, Leisa Baldwin, Leisa Fien, Fiona Hoffmann, Erwin Hoffmann, Duncan J. Limpus, and Trevor Turner (2021). Monitoring of eastern Australian Flatback turtle, Natator depressus, breeding populations in the Gladstone region: 2020-2021 breeding season. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 64 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1807789-v1-ENV_ERMP_CA120000291-_Flatback_Turtle_Natator_depressus_202002021_Breeding_Populations_in_the_Gladstone_Region_2020-2021.pdf
Queensland government website:
https://parks.des.qld.gov.au/parks/broad-sound-islands/things-to-do
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Queensland Government 2013. Broad Sound Islands National Park and adjoining State Waters Management Statement 2013
https://parks.des.qld.gov.au/__data/assets/pdf_file/0024/167712/broad-sound-islands.pdf

## Sites
## Site 15

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

Name of the site:
››› Curtis Island

State/province:

››› Queensland

Latitude and longitude (middle of the beach or two from either end of the beach):
››› 23.61°S, 151.15°E

Length:

››› 42 km

**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:

››› Curtis Island Conservation Park and Conservation Zone, and National Park and Marine National Park

**e) When did marine turtle monitoring start at this location (year) and how often is monitoring carried out?**
››› 1980. Monitoring is carried out every nesting season.
Genetic stocks nesting at this site: Flatback turtle – Eastern Queensland stock

**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.**

| | Species present at this location? | Number of clutches per year | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|
| Flatback (Natator depressus) | Annual monitoring | 1980 | Increasing | | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | NO |
| Green (Chelonia mydas) | Annual monitoring | 1993 | Increasing | a | YES |
| Loggerhead (Caretta caretta) | Annual monitoring | 1993 | Decreasing | a | YES |

**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:
››› Curtis Island Conservation Zone and Marine National Park cover an area of around 280 km2
https://parks.des.qld.gov.au/__data/assets/pdf_file/0024/157605/curtis-map.pdf

**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.**

| | Species present at this location | Are marine turtles monitored in water? | Population number | Trend (decreasing, increasing, stable) | Monitored since (year) | How often is this species monitored? |
|---|---|---|---|---|---|---|
| Flatback (Natator depressus) | | | Increasing | | NO | YES |
| Olive ridley (Lepidochelys olivacea) | | | | | | NO |
| Hawksbill (Eretmochelys imbricata) | | | | | | NO |
| Leatherback (Dermochelys coriacea) | | | | | | NO |
| Green (Chelonia mydas) | | | Increasing | | NO | YES |
| Loggerhead (Caretta caretta) | | | Decreasing | | NO | YES |

Please provide any references and links:

››› Limpus, C. J., Chaloupka, M., Ferguson, J., FitzSimmons, N. N. and Parmenter, C. J. (2020). Flatback Turtle, Natator depressus, 2019-2020 Breeding Season, at Curtis, Peak and Avoid Islands. Brisbane: Department of

Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 58 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1793425-v1-Env_ERMPCA12000291_Flatback_Turtle_Population_Size_Trends_-Final_Report.pdf
Colin J. Limpus, Nancy N. FitzSimmons, Ian Anderson, Wayne Bennet, Leisa Baldwin, Leisa Fien, Fiona Hoffmann, Erwin Hoffmann, Duncan J. Limpus, and Trevor Turner (2021). Monitoring of eastern Australian Flatback turtle, Natator depressus, breeding populations in the Gladstone region: 2020-2021 breeding season. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 64 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1807789-v1-ENV_ERMP_CA120000291-_Flatback_Turtle_Natator_depressus_202002021_Breeding_Populations_in_the_Gladstone_Region_2020-2021.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

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

| | | | | | |
|---|---|---|---|---|---|
| Direct harvest of animals in coastal waters at or near the site | ☐ | ☐ | ☐ | ☑ | ☐ |
| Exploitation of nesting females (i.e. direct harvest on land) | ☐ | ☐ | ☐ | ☑ | ☐ |

Other threat:

››› Climate change - medium
Diseases and pathogens - low
Noise pollution - none

Please provide details:

››› NA. Nil input received

**I) 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.**

››› Colin J. Limpus, Nancy N. FitzSimmons, Ian Anderson, Wayne Bennet, Leisa Baldwin, Leisa Fien, Fiona Hoffmann, Erwin Hoffmann, Duncan J. Limpus, and Trevor Turner (2021). Monitoring of eastern Australian Flatback turtle, Natator depressus, breeding populations in the Gladstone region: 2020-2021 breeding season. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 64 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1807789-v1-ENV_ERMP_CA120000291-_Flatback_Turtle_Natator_depressus_202002021_Breeding_Populations_in_the_Gladstone_Region_2020-2021.pdf
Limpus, C. J., Chaloupka, M., Ferguson, J., FitzSimmons, N. N. and Parmenter, C. J. (2020). Flatback Turtle, Natator depressus, 2019-2020 Breeding Season, at Curtis, Peak and Avoid Islands. Brisbane: Department of Environment and Science, Queensland Government. Report produced for the Ecosystem Research and Monitoring Program Advisory Panel as part of Gladstone Ports Corporation's Ecosystem Research and Monitoring Program. 58 pp.
https://www.gpcl.com.au/wp-content/uploads/2022/08/DOCSCQPA-1793425-v1-Env_ERMPCA12000291_Flatback_Turtle_Population_Size_Trends_-Final_Report.pdf
Department of Environment and Science (2021) Queensland Marine Turtle Conservation Strategy (2021–2031). Queensland Government, Brisbane.
https://www.qld.gov.au/__data/assets/pdf_file/0021/314184/marine-turtle-conservation-strategy.pdf
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

## 1.1 BEST PRACTICE APPROACHES TO MINMIZING 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 secretarat at iosea@un.org

| | Title of best practice protocol or approach | What does this approach/ protocol help to achieve | Has the effectiveness of this approach been evaluated? What was the result? | References and links |
|---|---|---|---|---|
| | Recovery Plan for Marine Turtles in Australia 2017-2027 (2017) | The Recovery Plan is reviewed on a five-year basis, with the last review occurring in 2022. The implementation of the proposed actions has effectively allowed for management of anthropogenic threats at the stock level and at specific foraging and nesting sites. However, the main objective of the plan - to reduce threats to a level that marine turtle species can be removed from the EPBC Act threatened species list - has not been met. The conservation status of the six marine turtle species has not improved to the extent which would warrant removal from the EPBC Act threatened species list. | The objective of the Recovery Plan is to minimise anthropogenic threats to a level that enables removing marine turtle species from the EPBC Act threatened species list. The Recovery Plan promotes a coordinated approach to management and is used to inform decision-making (e.g., environmental assessments); develop work plans (e.g., proponent management plans); and prioritise funding at the national, state and local levels. The plan also helps guide state and territory and regional areas to develop marine turtle conservation plans and initiatives that are nested within the National framework (e.g., the Queensland Marine Turtle Conservation Strategy). The plan continues to provide a framework that enables the Commonwealth to meet its obligations within Australia under international agreements for regional marine turtle conservation (CMS, IOSEA MoU, SSAPs). In this manner, the plan successfully supports a strong basis for management programs, prioritised research, on-ground funding, targeted engagement and guided policy initiatives. | https://www.dcceew.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf |

| | | | | |
|---|---|---|---|---|
| | Threatened Species Action Plan 2022-2032 (superseded the Threatened Species Strategy 2021-2031) | The Action Plan is the result of a review of the Threatened Species Strategy 2021-2031 and aims to respond to some of the challenges identified in the 2021 State of the Environment report of the EPBC Act. Improvements to the Action Plan 2022-2032 included: an objective to prevent new extinctions; a focus on priority places; a commitment to protect and conserve more than 30% of Australia's land mass; increased participation of indigenous people in the management of threatened species and ecological communities; updated and fit for purpose conservation planning approaches; and other guidance for tackling the impacts of feral animals, educating and empowering the public, and improving the resilience and adaptive capacity of priority species to climate change. Furthermore, the Action Plan guides the Saving Native Species Program, which provides over 200m AUD over four years to support the recovery of plants, animals and ecological communities. | The Action Plan maps a pathway to protect, manage and restore Australia's threatened species and important natural places. The Action Plan identifies priority species (including the green turtle and olive ridley turtle), and places (including Raine Island) and proposes concrete actions and practical and measurable targets to assess progress. | https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/action-plan-2022-2032 https://www.dcceew.gov.au/environment/biodiversity/threatened/saving-native-species |
| | Threat Abatement Plans and Key Threatening Processes | Threat abatement plans are to be reviewed at intervals of no longer than five years. The review should propose revised objectives and related actions, performance indicators and milestones for the threat abatement plan appropriate to a second five-year period for the threat abatement plans, and consistent with the legislative requirements for threat abatement plans; identify any significant shortcomings or flaws in the content and coverage of the threat abatement plans, and propose in general terms how these shortcomings could be addressed; and provide sound justification for the proposed changes. | The EPBC Act provides for the identification and listing of key threatening processes and the development and implementation of threat abatement plans. Threat abatement plans provide for the research, management, and any other actions necessary to reduce the impact of a listed key threatening process on native species and ecological communities. Implementing the plan should assist the long-term survival in the wild of affected native species or ecological communities. A threatening process is defined as a key threatening process if it threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community (e.g. fisheries bycatch). Threat abatement plans relevant to marine turtles are: Threat abatement plan for predation by European red fox (2008); Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (Sus scrofa) (2017); and Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (2018). | https://www.dcceew.gov.au/environment/biodiversity/threatened/threat-abatement-plans https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/tap/predation-european-red-fox https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/tap/feral-pig-2017 https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/tap/marine-debris-2018 |

| | | | | |
|---|---|---|---|---|
| | Biologically Important Areas, Marine Bioregional Plans and the Conservation Values Atlas | BIAs are a key consideration in the assessment of significant impacts and the development of approval conditions for marine projects referred under the EPBC Act. BIAs are not directly referenced in legislation and are used in research, conservation, and regional planning. BIAs are to be regularly updated as more information on species and populations becomes available. | Marine Bioregional Plans aim to strengthen the operation of the EPBC Act in the Commonwealth marine environment in each marine region to ensure the marine environment remains healthy and resilient. The Plans identify conservation values, key ecological features, regional priorities, regional pressure analysis, and regional advice. One important element of these Plans is the identification of Biologically Important Areas (BIAs) for over 66 different marine species, including marine turtles. The National Conservation Values Atlas allows identification of areas that are important for different behaviours, such as nesting, feeding and inter-nesting activity. Guidance is provided on what actions represent greater risk of impact to marine turtles. This improved spatial information assists developers avoid and mitigate impacts to marine turtles. Furthermore, the Department of Climate Change, Energy, the Environment and Water has developed a Protocol for the Designation of Biologically Important Areas for Protected Marine Species (BIA Protocol). The BIA Protocol shall serve as an important decision support tool for conservation planning and regulatory decision-making carried out under Australian national environmental law. The Protocol provides guidance on the process for designation of BIAs under the updated legislative framework. | https://www.dcceew.gov.au/environment/marine/marine-species/bias https://www.dcceew.gov.au/environment/marine/marine-bioregional-plans/conservation-values-atlas |
| | Light Pollution Guidelines | The Australian Government's National Light Pollution Guidelines for Wildlife, including Marine Turtles, Seabirds and Migratory Shorebirds were adopted at COP13 in February 2020. The CMS International Light Pollution Guidelines for Migratory Species -which are based on the Australian national guidelines- were endorsed by COP14 (February 2024). These improved guidelines included additional technical guidance from Australia on bats, terrestrial mammals and ecological communities. Australia continues to be recognised as a world leader in raising awareness with respect to the impact of light pollution on migratory species and producing best-practice guidance. The CMS International Light Pollution Guidelines for Migratory Species will assist Parties address this issue in their own jurisdictions. | The Guidelines aim to raise awareness of the potential impacts of artificial light on wildlife and provide a framework for assessing and managing these impacts on susceptible wildlife, including migratory species. The Guidelines are built around a concept of best practice lighting design principles and a risk assessed and adaptive management approach to light management near protected wildlife. | https://www.cms.int/sites/default/files/document/cms_cop14_doc.30.4.4_annex3_cms-light-pollution-guidelines_e.pdf |

| | | | | |
|---|---|---|---|---|
| | Offset programs | This approach has been employed in Australia with current examples including the northwest Shelf Flatback Turtle Conservation Program (NWSFTCP - an additional undertaking of the Chevron Gorgon Project at Barrow Island) and the Gladstone Ports Corporation Biodiversity Offset Strategy. | Offsets compensate for residual adverse impacts of an action. Offsets are only an option after the proponent has tried to avoid or mitigate any impacts. Offsets do not make an unacceptable impact acceptable. | https://www.dcceew.gov.au/environment/epbc/approvals/offsets#offsetting-environmental-impacts-in-projects-and-developments |
| | Nature Positive Plan | The Nature Positive Plan is currently being further developed. Engagement in 2023-24 will focus on: -Developing the first National Environmental Standards: The standard for Matters of National Environmental Significance will be the first developed, building on the standard set out in the review. -Designing the independent EPA and developing of an appropriate cost recovery model. -Working with states and territories to identify initial locations for regional plans. -Improving the quality, accessibility and interoperability of environmental data to aid decision-making, measuring what matters, reporting and assisting with the establishment of the national nature repair market. -Improving the quality and effectiveness of conservation planning. These important reforms will lay the foundations for a strong, efficient and enduring regulatory system that can deliver better outcomes for Australia's unique environment and heritage. | Launched in 2022, the Nature Positive Plan is the Australian government's response to the independent review of the EPBC Act and the State of the Environment Report. The aim of the Nature Positive Plan is to deliver reforms and laws that are nature positive, by restoring and recovering habitat and species with every environmental approval decision. The Nature Positive Plan is guided by three principles: (1) the need to better protect Australia's environment and prevent further extinctions; (2) the need to enable faster decision making and promoting sustainable economic development, as well as (3) committing to restoring public accountability and trust in environmental decision making through an independent Environment Protection Agency. | https://www.dcceew.gov.au/sites/default/files/documents/nature-positive-plan.pdf |
| | Nest to Ocean Turtle Protection Program 2014-2026 | The Queensland Parks and Wildlife Service was originally delivering this program over four years, 2014-18, however, the project was extended to mid-2020 due to its success. New funding was announced late in 2023 for new projects, including turtle rookeries on the east coast of Cape York, the Torres Strait and coastal catchments of the Great Barrier Reef. | The Australian and Queensland Governments made a $7 million AUD commitment to protect marine turtle eggs and hatchlings from predation by feral pigs and other predators. Key marine turtle rookeries along the coast and on offshore islands were identified and prioritised for active nest protection and predator control efforts. Annual implementation plans and monitoring programs were developed for the priority sites. | https://parks.des.qld.gov.au/management/programs/pest-plants-animals/nest-to-ocean-program https://parks.des.qld.gov.au/__data/assets/pdf_file/0024/168324/nest-to-ocean-turtle-protection-program.pdf |

| | | | | |
|---|---|---|---|---|
| | Raine Island Recovery Project (Ocean Leadership Package) | Phase 1 of the project was highly successful and mainly consisted in reprofiling the beach and in setting up fences around elevated areas to avoid turtles to fall. Phase 2 of the Raine Island Recovery Project (RIRP). Phase 2 of the RIRP was funded under the AUD $100 million Ocean Leadership Package, $2 million was allocated to support aims to re-establish and maintain Raine Island as a viable island ecosystem that supports sustainable turtle populations of green turtles and seabirds through collaboration with Traditional Owners. Phase 2 of the project is expected to run until June 2024. | Raine Island supports the world's largest remaining green turtle population and the most important seabird rookery in the Great Barrier Reef World Heritage Area. The Raine Island Recovery Project (RIRP) is delivered by the Queensland Government in collaboration with the Great Barrier Reef Marine Park Authority (GBRMPA) and Traditional Owners (Wuthathi and Meriam Nation [Ugar, Mer, Erub]). | https://www.barrierreef.org/what-we-do/projects/raine-island-recovery-project https://parks.des.qld.gov.au/raineisland |
| | TurtleNet | The effectiveness of TurtleNet has not been evaluated yet, as it is still missing some features. | TurtleNet (Turtle Nesting Distribution Abundance and Migration) is an interactive atlas that shows nesting, courtship, feeding and migration routes of marine turtles at a global scale. TurtleNet was developed by Queensland Department of Environment and Science (DES) and CMS, and provides publicly-available data for stakeholders to use for reporting and decision-making actions. | https://apps.information.qld.gov.au/TurtleDistribution/ |

You have attached the following documents to this answer.

CMS_IOSEA_NRQ_2024_Australia_2024_03_07_clean.docx - See additional rows from page 182 - 188

## 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:

☑ PRESENT

### Please provide the information below:

Number of vessels:
››› The information below refers to bottom shrimp trawls.

If known, turtle species affected:
››› Unspecified, green turtle, flatback turtle, leatherback turtle

Number of bycaught turtles per year:
››› Number of bycaught turtles per year: 143 reported in 2023 (11 in Commonwealth fisheries, 132 in Western Australian fisheries)

**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 the escape of marine turtles (e.g. turtle excluder devices (TEDs)
☑ Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)
☑ Effort management control

If applicable, the measures are mandatory under the following regulation:
››› If applicable, the measures are mandatory under the following regulation: For Commonwealth Fisheries use of Turtle exclusion and bycatch reduction devices is compulsory and prescribed in relevant legislation/ instruments

**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.**
☑ Onboard observer programmes
☑ Vessel monitoring systems
☑ Inspections (i.e. at sea, in port, at landing sites)
☑ Training programmes / workshops to train fishers on the use of bycatch reduction methods
☑ Informative videos, brochures, printed guidelines etc.

## Onboard observer programmes

The measure is mandatory under the following regulation:
››› All Commonwealth Fisheries have coverage by on-board observers and or Electronic Monitoring systems (cameras and sensors). This supports data validation and compliance. These requirements are prescribed in Fisheries Regulations and Fishing Concession conditions.

## Vessel monitoring systems

The measure is mandatory under the following regulation:
››› All Commonwealth Fishing vessels are required to have VMS systems- this is prescribed in Fisheries Regulations and Fishing Concession conditions. A number of Commonwealth Fisheries are also required to have electronic monitoring systems (cameras and sensors) on their vessels to support data validation and compliance. This is prescribed in Fisheries Regulations and Fishing Concession conditions.

The measure is voluntary:

››› Parks Australia have implemented VMS data sharing arrangements with several jurisdictions to monitor fishing vessel activity in marine parks.

Details/future plans:

››› The Australian Government has implemented the Electronic and Vessel Monitoring Systems Assistance Program and has provided $5.5 million grant funding to support initiatives that increase the uptake of electronic and vessel monitoring systems by commercial fishers who operate in or transit in Australian Marine Parks.

## Inspections (i.e. at sea, in port, at landing sites)

The measure is mandatory under the following regulation:
››› Commonwealth fisheries have an extensive risk-based compliance program in place to identify and target key risks to fisheries sustainability. Compliance requirements are reflected in relevant legislation– see here for information Domestic Compliance | Australian Fisheries Management Authority (afma.gov.au) https://www.afma.gov.au/fisheries-management/compliance/domestic-compliance

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

Details/future plans:
››› Commonwealth fisheries regularly hold pre-season briefings with relevant fisheries to inform of changes and improvement in things such as bycatch reduction.

### Informative videos, brochures, printed guidelines etc.

Details/future plans:
››› Commonwealth fisheries have developed a range of useful tools and information to assist with bycatch reduction, see here: Reducing bycatch | Australian Fisheries Management Authority (afma.gov.au) https://www.afma.gov.au/protected-species/reducing-bycatch

## 2) Pelagic trawling

### a) Fishing effort:
☑ PRESENT

## Please provide the information below:

If known, turtle species affected:

››› Loggerhead, green, leatherback

Number of bycaught turtles per year:

››› 6 reported in 2023 (Queensland)

### 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 the escape of marine turtles (e.g. turtle excluder devices (TEDs)
☑ Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)
☑ Effort management control

Details:
››› See information provided in the above section.

### 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.
☑ Onboard observer programmes
☑ Vessel monitoring systems
☑ Inspections (i.e. at sea, in port, at landing sites)
☑ Training programmes / workshops to train fishers on the use of bycatch reduction methods
☑ Informative videos, brochures, printed guidelines etc.

## 3) Set nets

### a) Fishing effort:

☑ PRESENT

## Please provide the information below:

Number of vessels:
››› Fisheries reported in this section: Anchored gillnetting, ring netting, tunnel netting

If known, turtle species affected:
››› Green, hawksbill, olive ridley, loggerhead)

Number of bycaught turtles per year:

››› 1675 reported by Queensland in 2023. Tunnel netting encompassed the majority of bycaught animals (1587 green turtles)

### 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)
☑ Net retention and recycling schemes
☑ Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)

☑ Effort management control

Details:

››› See information provided in 1.2.1.1 c above

**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.**
☑ Onboard observer programmes
☑ Vessel monitoring systems
☑ Inspections (i.e. at sea, in port, at landing sites)
☑ Training programmes / workshops to train fishers on the use of bycatch reduction methods
☑ Informative videos, brochures, printed guidelines etc.

## 4) Driftnet

### a) Fishing effort

☑ PRESENT

## Please provide the information below:

Number of vessels:

››› Please note that our answers refer to drifting gillnetting

If known, turtle species affected:

››› Green turtle

Number of bycaught turtles per year:

››› 67 reported in 2023 (Queensland)

**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)
☑ Net retention and recycling schemes
☑ Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)
☑ Effort management control

## 5) Purse seine (with or without FADs)

### a) Fishing effort

☑ PRESENT

## Please provide the information below:

Number of vessels:

››› No purse seine interactions were reported for Australia. We used this section to report on Danish seine instead.

If known, turtle species affected:

››› Loggerhead turtle

Number of bycaught turtles per year:

››› Few or no turtle interactions have been reported to date in purse seine fisheries across Australia. 4 interactions have been reported for 2023 (Queensland) for Danish seine. Most Australian purse seining

activity occurs in fisheries in southern Australian waters where marine turtle presence is minimal.

### 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)
☑ Net retention and recycling schemes
☑ Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)
☑ Effort management control

Details:

››› Danish seine reported on above.
See section 1.2.1.1 c for details on measures.

### 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.

☑ Onboard observer programmes
☑ Vessel monitoring systems
☑ Inspection (i.e. at sea, in port, at landing sites)
☑ Training programmes / workshops to train fishers on the use of bycatch reduction methods
☑ Informative videos, brochures, printed guidelines etc.

## Vessel monitoring systems

The measure is voluntary:

››› Parks Australia have implemented VMS data sharing arrangements with several jurisdictions to monitor fishing vessel activity in marine parks.

Details/future plans:

››› The Australian Government has implemented the Electronic and Vessel Monitoring Systems Assistance Program and has provided $5.5 million grant funding to support initiatives that increase the uptake of electronic and vessel monitoring systems by commercial fishers who operate in or transit in Australian Marine Parks.

## 6) longline

### a) Fishing effort

☑ PRESENT

## Please provide the information below:

Number of vessels:

››› The information below refers to Commonwealth managed pelagic longline fisheries (Tuna and Billfish) and to demersal longline fisheries (data sourced from the Australian Fisheries Management Authority).

If known, turtle species affected:
››› Unspecified, green, leatherback, loggerhead

Number of bycaught turtles per year:
››› 50 turtles reported by the Commonwealth in 2023.

### 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)
☑ Appropriate combinations (as per existing guidelines e.g., FAO, IOTC guidelines) of hook size and design, type of bait, depth, gear specifications and fishing practices
☑ Rope retention and recycling schemes
☑ Spatial and temporal control of fishing (e.g. seasonal closures of fishing activities)
☑ Technical expertise to enhance conservation or management at the site
☑ Effort management control

Details:

››› Commonwealth fisheries have Mandatory Turtle Mitigation Measures for Longline Fishing, i.e,:
• Circle hooks. Large circle hooks must be used for shallow sets with less than eight hooks per basket.
• De-hooking device: At all times vessels must carry on board a minimum of one de-hooking device, with the following specifications: • The device must enable the hook to be secured and the barb shielded so that the barb does not re-engage with the fish while the hook is being removed • The device must be blunt with all edges rounded • Where more than one size of hook is to be carried, a de-hooking device (or devices) must be carried that can be used with all hooks on the boat, and • The shaft of the device must be a minimum of 1.5 metres in length. Line cutting device At all times you must carry on board a minimum of one line cutting device. The line cutting device must be constructed and used in accordance with the following specifications: • The device must be constructed to allow the line to be cut as close to the hook as possible • The blade of the device must be enclosed in a blunt rounded (arc-shaped) cover with the hook exposed on the inside of the arc, and • The shaft of the device must be a minimum of 1.5 metres in length.
Commonwealth fisheries have developed a range of useful tools and information to assist with bycatch reduction, see here: Reducing bycatch | Australian Fisheries Management Authority (afma.gov.au) https://www.afma.gov.au/protected-species/reducing-bycatch

**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.**
☑ Onboard observer programmes
☑ Vessel monitoring systems
☑ Inspections (i.e. at sea, in port, at landing sites)
☑ Training programmes / workshops to train fishers on the use of bycatch reduction methods
☑ Informative videos, brochures, printed guidelines etc.

## Onboard observer programmes

The measure is mandatory under the following regulation:
››› See section 1.2.1 1 c above

## Vessel monitoring systems

The measure is mandatory under the following regulation:
››› All Commonwealth Fishing vessels are required to have VMS systems- this is prescribed in Fisheries Regulations and Fishing Concession conditions. A number of Commonwealth Fisheries are also required to have electronic monitoring systems (cameras and sensors) on their vessels to support data validation and compliance. This is prescribed in Fisheries Regulations and Fishing Concession conditions.

The measure is voluntary:

››› Parks Australia have implemented VMS data sharing arrangements with several jurisdictions to monitor fishing vessel activity in marine parks.

Details/future plans:

››› The Australian Government has implemented the Electronic and Vessel Monitoring Systems Assistance Program and has provided $5.5 million grant funding to support initiatives that increase the uptake of electronic and vessel monitoring systems by commercial fishers who operate in or transit in Australian Marine Parks.

## If Inspections (i.e. at sea, in port, at landing sites)

The measure is mandatory under the following regulation:
››› Commonweath fisheries have an extensive risk-based compliance program in place to identify and target key risks to fisheries sustainability. Compliance requirements are reflected in relevant legislation– see here for information Domestic Compliance | Australian Fisheries Management Authority (afma.gov.au) https://www.afma.gov.au/fisheries-management/compliance/domestic-compliance

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

Details/future plans:
››› Commonwealth fisheries regularly hold pre-season briefings with relevant fisheries to inform of changes and improvement in things such as bycatch reduction.

**Informative videos, brochures, printed guidelines etc.**

Details/future plans:
››› Commonwealth fisheries have developed a range of useful tools and information to assist with bycatch reduction, see here: Reducing bycatch | Australian Fisheries Management Authority (afma.gov.au) https://www.afma.gov.au/protected-species/reducing-bycatch

## 7) Artisanal fishing gear

Type and description:

››› See section (8) Other types of fisheries

### a) Fishing effort
☑ NONE

## 8) Other types of fisheries

Type of description:

››› Direct take
Turtles are traditionally fished in the Torres Strait Protected Zone and within this zone, the turtle fishery is managed by the Torres Strait Protected Zone Joint Authority and commercial fishing is not permitted. The Torres Strait traditional fishing for dugong and turtle is managed through the community management plans supported by the Torres Strait Regional Authority.
Trap and pot fisheries
Trap and pot fisheries would have some (generally rare) interactions where turtles become entangled in the float line. Trap and Pot Fisheries include:
• Western Australian Western Rock Lobster Fishery
• South Australian Rock Lobster Fishery
• New South Wales Ocean Trap and Line Fishery
• Western Australian West Coast Deep Sea Crab Fishery
• Western Australian Shark Bay Experimental Blue Swimmer Crab Fishery
• Western Australian South Coast Crustacean Fishery
• Victorian Rock Lobster Fishery
• Queensland Spanner Crab Fishery
• Queensland Mud Crab Fishery
• Queensland Blue Swimmer Crab Fishery
• Tasmanian Rock Lobster Fishery

### a) Fishing effort

☑ PRESENT

### 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:
››› References and links:
• https://www.afma.gov.au/protected-species/reducing-bycatch
• https://www.fish.gov.au/Jurisdiction
• https://www.afma.gov.au/methods-and-gear
• https://www.afma.gov.au/fisheries-management

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

If yes, please give details.

››› All jurisdictions have review processes for fisheries management arrangements. The Australian Fisheries

Management Authority carries out a 6 monthly assessment of the implementation of Fisheries Bycatch Work Plans for Australian Government fisheries, with a review of each plan every 2 years. Fisheries Management Plans are reviewed as appropriate.

### 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

### 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:
››› Australia passed legislation in 1991 (Commonwealth Fisheries Management Act 1991) that gives effect to the Convention for the Prohibition of Fishing with long Drift Nets in the South Pacific.
In the Great Barrier Reef World Heritage Area, the largest commercial nets that can be used are 1.2km in length. They can only be used in accordance with the Queensland Fisheries Act (1994) and Fisheries Regulation 1995.
In the Torres Strait, commercial net fishing for finfish is banned because of concerns about the undesirable impact of net fishing, particularly in terms of bycatch such as marine turtles.
The Australian Fisheries Management Authority has introduced restrictions on net sizes for nets used in traditional fishing for finfish to reduce the risk of incidental catch of turtle.

References and links:

››› References and links1:
• https://www.legislation.gov.au/C2004A04237/2004-08-20/text
• https://www.legislation.qld.gov.au/view/html/inforce/current/act-1994-037
• https://www.legislation.qld.gov.au/view/pdf/published.ris/sl-1995-0325

### 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

a) Please indicate number of vessels per year (0, 1-10, 11-50, 51-100, 101-500, more than 500)
››› Undocumented Indonesian trespassing on distant islands in Torres Strait and Timor Sea (taking green turtles). Only a fraction of fishers might be seen by Australian Border Patrol, charter fishers, or opportunistic encounters.
This financial year as at 7 March 2024 there has been (195) Legislative Forfeitures and (11) Apprehensions. In recent months, there has been an unprecedented number of foreign fishing vessel sightings within the Kimberley Marine Park, including close to shore. This activity poses risks to our border, protected marine environments, and biosecurity.
Australia implements a multi-faceted response to illegal fishing. This includes enforcement actions at sea, targeted operations, and collaborative patrols with Indonesia, education in country, and political engagement. At sea operations seize catch, fishing equipment, and can result in the disposal of seized foreign fishing vessels (FFV). Foreign fishers may also be subject to apprehension and prosecution in Australia. Increased activity is due to a number of factors, including the depletion of fish stocks in traditional fishing grounds, favourable weather conditions, growth in market demand for sedentary fish species (trepang/sea cucumber). The economic benefits of this illegal fishing continue to outweigh the impact of the current enforcement options.
Last financial year consisted of (119) Legislative Forfeiture and (6) Apprehensions, of note these are vessels that have been located and subject to enforcement measures, the true number of vessels operating illegally in Australia's Northern Waters would far exceed this number and remain a concern and immediate priority for the Australian Fisheries Management Authority (AFMA).

b) Countries of origin of IUU fishing, if known?

Details:
››› Economic pressures in Indonesia and PNG resulting from impacts of COVID-19 and recent natural disasters (Indonesia), coupled with high market value for targeted marine species (sea cucumber) are believed to be driving factors for the countries to venture to Australian waters and partake in IUU activity.

References and links:

››› • https://www.abc.net.au/news/2023-11-19/illegal-indonesian-fishers-resurgence-northern-australia-

/103063244
• https://www.abc.net.au/news/2024-01-01/australian-border-force-30-illegal-fishers-kimberley-crackdown/103276932
• https://www.abc.net.au/news/2023-01-31/illegal-foreign-fishing-boats-increase-torres-strait-islanders/101910034
• https://www.afma.gov.au/news/regional-partners-unite-deter-illegal-foreign-fishing-torres-strait
• https://www.sciencedirect.com/science/article/pii/S0308597X17301793

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

Details:
››› Australia implements a multi-faceted response to illegal fishing, including the following initiatives:
• Conducts enforcement actions at sea (Legislative Forfeitures and Apprehensions), including collaborative patrols, to seize catch, fishing equipment and vessels and prosecute offenders in Australia for fisheries offences.
• Targets illegal foreign fishing through bilateral engagement with countries bordering Australia, including Indonesia and Papua New Guinea, and through multilateral forums including the Regional Plan of Action on IUU (RPOA-IUU).
• Delivers in-country public information campaigns at key ports and distributes educational material, including targeted social media.
• Works with international partners to strengthen regional frameworks, exchange surveillance information and enhance national capacity to deal with illegal foreign fishing.
• Supports the implementation of international fisheries instruments and improve regional management and governance arrangements.
•
Australia has a National Plan of Action to Prevent, Deter and Eliminate IUU Fishing which outlines Australia's current and future actions to address IUU fishing.
The Australian Fisheries Management Authority (AFMA) also works closely with international partners to prevent and deter IUU fishing within the Australian Fishing Zone (AFZ) and areas of the high seas where Australia has an interest. The sustained and coordinated efforts of Australian Government agencies have been very successful in reducing IUU activities within, and adjacent to, the AFZ.
As the Commonwealth's fisheries regulator, AFMA uses a multifaceted approach that recognises the dynamic and diverse nature of IUU fishing.
AFMA's approach to combating IUU fishing is outlined in its International Compliance and Engagement Program 2022-24 and includes five components:
1- Communication: Improving public understanding and awareness of AFMA's activities to combat IUU fishing, including working with Australia's neighbouring countries in sharing information and planning regional fisheries operations.
2- Enforcement operations: Leading and supporting enforcement operations to support monitoring, control and surveillance (MCS) activities in Australian waters and in areas of Australia's interest.
3- Strategic engagement: Working closely with other Australian Government departments and agencies in engaging with other countries, particularly Australia's neighbours, to develop and promote regional strategies to address IUU fishing.
4- Capability development and supplementation: Developing national and regional capacity to undertake risk-responsive MCS operations to combat IUU fishing, delivered through the provision of theoretical training, on-the-job mentoring and participation in regional fisheries surveillance operations.
5- Targeted threat program: Implementation of a risk-based compliance approach to facilitate the effective and efficient deployment of AFMA's resources to high-risk areas.
AFMA's International Compliance and Engagement Program draws on the principles of regulatory compliance and seeks to prioritise limited resources against key risk areas.

References and links:

››› https://www.afma.gov.au/fisheries-management/international-fisheries-management/iuu-fishing#:~:text=IUU%20fishing%20refers%20to%20three,correctly%20to%20the%20appropriate%20authorities.

## 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:

››› Turtles may be legally hunted by Aboriginal and Torres Strait Islander people under section 211 of the Native Title Act 1993 for personal, domestic or non-commercial communal needs. The most harvested species is the green turtle (Chelonia mydas). Many other Commonwealth and state/territory Acts also have specific clauses that identify the right and authority for native title holders to hunt as part of cultural practice; see section 1.3.4 for details.

## 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):
››› Marine turtles and eggs have economic value (by providing food that would otherwise have to be bought) and cultural value to Aboriginal and Torres Strait Islander people in Australia. The relative prevalence/importance of the consumption of meat and fat of marine turtles and eggs to coastal Aboriginal and Torres Strait Islander people varies for different communities. For this reason, a scale for the relative prevalence/importance of meat consumption, egg consumption or fat consumption has not been indicated.

### b) Egg consumption

☑ YES

Details (e.g. species, estimated number taken per year, location, if known):
››› Marine turtles and eggs have economic value (by providing food that would otherwise have to be bought) and cultural value to Aboriginal and Torres Strait Islander people in Australia. The relative prevalence/importance of the consumption of meat and fat of marine turtles and eggs to coastal Aboriginal and Torres Strait Islander people varies for different communities. For this reason, a scale for the relative prevalence/importance of meat consumption, egg consumption or fat consumption has not been indicated.

### c) Fat and oil consumption

☑ YES

Details (e.g. species, estimated number taken per year, location, if known):
››› Marine turtles and eggs have economic value (by providing food that would otherwise have to be bought) and cultural value to Aboriginal and Torres Strait Islander people in Australia. The relative prevalence/importance of the consumption of meat and fat of marine turtles and eggs to coastal Aboriginal and Torres Strait Islander people varies for different communities. For this reason, a scale for the relative prevalence/importance of meat consumption, egg consumption or fat consumption has not been indicated.

### d) Traditional medicine

☑ YES

Details (e.g. species, estimated number taken per year, location, if known):
››› Marine turtles and eggs have economic value (by providing food that would otherwise have to be bought) and cultural value to Aboriginal and Torres Strait Islander people in Australia. The relative prevalence/importance of the consumption of meat and fat of marine turtles and eggs to coastal Aboriginal and Torres Strait Islander people varies for different communities. For this reason, a scale for the relative prevalence/importance of meat consumption, egg consumption or fat consumption has not been indicated.

### e) Shell

☑ YES

Details (e.g. species, estimated number taken per year, location, if known):
››› Shells are valued by some Indigenous people and are used in traditional ornaments, like the dari in the Torres Strait. These traditional ornaments are only used for cultural practices and are not for sale.

### f) Making of tortoise shell products (bekko)

☑ NO

Details (e.g. species, estimated number taken per year, location, if known):
››› There is no evidence of commercial or saleable tortoiseshell products within Australia’s jurisdiction.

### 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:
››› Egg and 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 secretarat at iosea@un.org

| | Legislation title | Legislation date | Is traditional use allowed under this legislation? | Is the legislation enforced? | What are the challenges? |
|---|---|---|---|---|---|
| | | YES | YES | 1999 | Environment Protection and Biodiversity Conservation (EPBC) Act |
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## 1.3.4 Please describe the LEGAL traditional harvest of marine turtles, their parts and products in your country by answering the questions below.

NOTE: If there is no legal harvest of marine turtles in your country, please skip question 1.3.4 and 1.3.5.

### a) Please provide the regulation, which allows traditional harvest of marine turtles in your country.

Details:
››› All six species of marine turtle found in Australian waters are listed as threatened, migratory and marine under the Environmental Protection and Biodiversity Conservation Act 1999.
- Under Part 13 of the Environment Protection and Biodiversity Conservation (EPBC) Act it is an offence to kill, injure, take, trade, keep or move listed species in a Commonwealth area, unless the person taking the action holds a permit under the EPBC Act or the activity is carried out in accordance with a state/territory or Commonwealth fishery plan of management accredited by the Commonwealth Minister responsible for the administration of the EPBC Act.
- In addition, it is an offence under Part 3 of the EPBC Act to take an action that will have a significant impact on listed species anywhere in Australia unless approved under Part 9.
- Actions likely to have a significant impact on a marine turtle species may be assessed by the Minister and where impacts are found to be acceptable may be approved subject to a range of conditions.
Turtles may be legally hunted by Aboriginal and Torres Strait Islander people under section 211 of the Native Title Act 1993 for personal, domestic or non-commercial communal needs. The most harvested species is the green turtle (Chelonia mydas).
Many other Commonwealth and state/territory Acts also have specific clauses
that identify the right and authority for native title holders to hunt as part of
cultural practice, for example:
NT: The Northern Territory Parks and Wildlife Conservation Act 1974 recognises the rights of Aboriginal peoples who have traditionally used an area of land or water to continue to use that area for traditional hunting, food gathering (other than for sale) and for ceremonial and religious purposes.
WA: The Western Australian Wildlife Conservation Act 1950 provides an exemption otherwise applying to the taking of fauna for persons of Aboriginal descent to take fauna for food for their selves and their family, but not for sale.
QLD: Section 61 of the Queensland Aboriginal and Torres Strait Islander Communities (Justice, Land and Other Matters) Act 1984 allows a member of a community of Aboriginal and Torres Strait Islander people resident in a community government or Indigenous Regional Council Area to take marine products or fauna by traditional means for consumption by members of the community.
TS: Turtle hunting in the Torres Strait Protected Zone is managed as traditional subsistence fisheries under the

Commonwealth Torres Strait Fisheries Act 1984. The fisheries are limited to the Traditional Inhabitants of the Torres Strait, and animals may only be taken in the course of traditional fishing and used for traditional purposes.
GBR: The Great Barrier Reef Marine Park Act 1975 permits the traditional use of marine resources by Traditional Owner groups in accordance with accredited traditional use of marine resource agreements.
Please refer to section 1.3.1 for details on turtle harvest by Aboriginal and Torres Strait Islander people.

References and links:
››› • https://www.legislation.gov.au/C2004A04665/2017-06-22/text
• https://legislation.nt.gov.au/en/Legislation/TERRITORY-PARKS-AND-WILDLIFE-CONSERVATION-ACT-1976
• https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_1080_homepage.html
• https://www.legislation.qld.gov.au/view/pdf/inforce/current/act-1984-051
• https://www.legislation.gov.au/C2004A02887/latest/text
• https://www.legislation.gov.au/C2004A01395/latest/text

### b) Does this or another regulation limit the level of traditional take?
☑ NO

### c) Does your country have a harvest quote for traditional use of marine turtles?
☑ NO

Details:

››› The Australian Government supports a range of initiatives in collaboration with traditional owners and Indigenous communities to manage the levels of intentional harvest of marine turtles to be sustainable.

### e) Please list the specific locations where harvest is allowed.

Note: please provide a reference to any reports or documents, which give the bacground for the management of turtle harvest in your country.
Details:
››› Traditional harvest is allowed in all Australian waters.

### f) Where does traditional harvest occur, and which species are affected?

Details:

››› Traditional harvest occurs in the Northern Territory, Western Australia and Queensland. The species most affected by traditional harvest is the green turtle (Chelonia mydas). However, all marine turtle species occurring in Australian waters are affected to some level of degree by traditional harvest, be it for meat or eggs. This includes the loggerhead turtle (Caretta caretta), the flatback turtle (Natator depressus), the olive Ridley turtle (Lepidocheyis olivacea) and the hawksbill turtle (Eretmochelys imbricata).

### g) How is the compliance with the existing regulations on traditional harvest monitored?

Details:
››› Aboriginal and Torres Strait Islander peoples have developed resource utilisation and management regimes for marine, riparian and estuarine habitats and incorporated cultural, ritual and social rules and practices governing use and harvesting to ensure the sustainability of these resources as a major component of their traditional ecological knowledge systems.
Aboriginal and Torres Strait Islander people are currently highly engaged with the management of natural resources, including food sources, through several State and Federal strategies. An outcome of this is the growing recruitment of Aboriginal and Torres Strait Islander people as Rangers on their country. This has been especially prevalent in the Top End of Australia, where active involvement in land and sea management, including the food resources, has ensured a strong cultural connection to country is maintained, as well as providing a means for continued intergenerational transfer of knowledge.
Management of traditional harvest is also often undertaken via Traditional Use of Marine Resources Agreements (TUMRAs).
Traditional Use of Marine Resources Agreements are community-based plans for management of traditional resources which are accredited in legislation and have proved a successful mechanism for joint management of the Reef.
Traditional Use of Marine Resources Agreements describe how Great Barrier Reef Traditional Owner groups work in partnership with the Australian and Queensland governments to manage traditional use activities on their Sea Country.
Each Traditional Use of Marine Resources Agreements has a committee to manage the agreement and traditional use of marine resources in their Sea Country, including traditional take, if any of important species such as dugongs and turtles. Their management of traditional use is based on both cultural lore and contemporary science and are also used for broader Sea Country planning and management.

References and links:

››› • https://www2.gbrmpa.gov.au/learn/traditional-owners/traditional-use-marine-resources-agreements
• https://www.yawuru.org.au/wp-content/uploads/2021/12/ISWAG-Kimberley-Indigenous-Turtle-and-Dugong-Initiative_Implementation-Plan-2022-to-2032-_-complete.-pdf.pdf
• https://indigenousknowledge.unimelb.edu.au/curriculum/resources/living-off-our-waters

### 1.3.5 List any management agreements between your country and other States in the IOSEA region to ensure that legal harvest of marine turtles has no negative effects on the population size. Please provide references and links to published documents.

Details:
››› • The Department of Climate Change, Energy, the Environment and Water worked closely with the former CMS COP-appointed Councillor for Marine Turtles to develop a Single Species Action Plan for Loggerhead Turtles in the South Pacific Ocean. The Australian Government has provided a voluntary contribution to the CMS to facilitate implementation of high priority activities contained in the Plan.
• The Memorandum of Understanding (MoU) between Australia and Indonesia (1974) permits traditional Indonesian fishers to enter areas of the Australian Fishing Zone and Continental Shelf 'within the Box' for traditional fishing, but excludes the take of turtles, and other CITES listed species, in the box.
• The Torres Strait Treaty (the Treaty) between Australia and Papua New Guinea came into force on February 15 1985. The Treaty defines borders between Australia and PNG and protects the right to live a traditional way of life.
• The Department, in conjunction with other range states, contributed to the Hawksbill Single Species Action Plan through CMS. The plan is underpinned by the IOSEA papers 'Assessment of the conservation status of the Hawksbill Turtle in the Indian Ocean and South-East Asia Region' and the 'Assessment of the conservation status of the Hawksbill Turtle in the Western Pacific Ocean Region'. The plan has a focus on addressing take and trade as a key threat.
• Australia has also developed National Guidelines for the Survey of Cetaceans, Marine Turtles and the Dugong.

References and links:

››› • https://www.naa.gov.au/help-your-research/fact-sheets/torres-strait-treaty-1978#:~:text=The%20Torres%20Strait%20Treaty%20is,sea%20areas%20may%20be%20used.
• https://leap.unep.org/en/countries/id/national-legislation/memorandum-understanding-between-government-australia-and
• https://www.cms.int/en/document/single-species-action-plan-loggerhead-turtle-caretta-caretta-south-pacific-ocean
• https://www.cms.int/en/document/single-species-action-plan-hawksbill-turtle-south-east-asia-western-pacific
• https://www.dcceew.gov.au/environment/epbc/publications/national-guidelines-survey-cetaceans-marine-turtles-dugong

### 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:

››› Undocumented turtle harvesting (meat and eggs) by fishers from Indonesia and, possibly in lower numbers, Papua New Guinea

#### 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):
››› Torres Strait and Timor Sea

References and links:

››› • https://www.abc.net.au/news/2023-11-19/illegal-indonesian-fishers-resurgence-northern-australia-/103063244
• https://www.abc.net.au/news/2024-01-01/australian-border-force-30-illegal-fishers-kimberley-crackdown/103276932
• https://www.abc.net.au/news/2023-01-31/illegal-foreign-fishing-boats-increase-torres-strait-islanders/101910034

• https://www.afma.gov.au/news/regional-partners-unite-deter-illegal-foreign-fishing-torres-strait
• https://www.sciencedirect.com/science/article/pii/S0308597X17301793

### 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:

››› The impact is unknown; however it is assumed to be significant for those genetic stocks that are in decline or are composed of few individuals.

### 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)
☑ 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

### 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:
››› Australian Fisheries Management Agency (AFMA) is responsible for fisheries compliance operations, with the assistance of the Department of Foreign Affairs and Trade (DFAT).

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

☑ YES

If yes, please indicate which type:

| | No | Yes |
|---|---|---|
| a) Nesting turtle observation | ☐ | ☑ |
| b) Hatching releases | ☐ | ☑ |
| c) Swimming/ snorkeling activities | ☐ | ☑ |
| Other (please describe) | ☐ | ☐ |

Details:
››› • The Western Australian Parks and Wildlife Service conducts evening guided turtle eco-education tours from the Jurabi Turtle Centre for people wanting to view nesting turtles and hatchlings.
• The Western Australian Ningaloo Turtle Program takes out volunteers to help with track monitoring on nesting beaches.
• In Queensland, a turtle ecotourism and information centre exists at Mon Repos Conservation Park, Queensland providing comprehensive interpretative and educational information. From november to March, visitors can see nesting and hatching turtles on the beach at night; tourist resorts on Heron Island and Lady Elliott Island provide turtle ecotourism activities for guests.
• Some eco-tourism activities to watch nesting flatback turtles occur on Bare Sand Island near Darwin.

References and links:

››› • https://parks.des.qld.gov.au/parks/mon-repos/attractions/mon-repos-turtle-centre
• https://seadarwin.com/darwin-tours/turtle-tracks/
• https://ningalooturtles.org.au/
• https://www.ningaloocentre.com.au/tours/turtle-tours-exmouth-parks-and-wildlife

### 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:
››› Turtle watching code of conduct
https://flatbacks.dbca.wa.gov.au/publications/turtle-watching-code-of-conduct

### 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.
☑ YES

Details:
››› Trading of all CITES Appendix I reptiles, which includes all species of marine turtles, is prohibited by the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).
Australia is a Party to CITES, and the Australian Border Force (ABF) manages a broad range of risks at the border, including the importation and exportation of goods that Australian law prohibits, restricts or regulates. Information relating to restrictions and inputs can be found at the link below.
Further information about penalties relating to obligations associated with CITES listings in the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) can be found at the link below.
The Department of Climate Change, Energy, the Environment and Water is engaged in INTERPOL's Environment Security Sub-Directorate and regularly exchanges intelligence and coordinates international law enforcement operations with a number of countries, including those in the Asia-Pacific region.

References and links
››› • https://www.abf.gov.au/importing-exporting-and-manufacturing/prohibited-goods/list-of-items?srckeyword=woolpack
• https://www.interpol.int/en/Crimes/Environmental-crime/Our-response-to-environmental-crime
• https://www.dcceew.gov.au/environment/wildlife-trade/law

### 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 secretarat at iosea@un.org

| | Title of the project/activity | Implemented by | Start year | End year (if completed) | How does the project involve local communities? | Lessons learned | Project website or other links with project description |
|---|---|---|---|---|---|---|---|
| | Australia's Environment Protection and Biodiversity Conservation Act 1999 and various state/territory government legislation regulate domestic trade in marine turtle products. In 2016 the Australian Criminal Intelligence Commission (ACIC) reported on a two-year investigation into the practice of illegal killing, poaching and transportation of turtle and dugong meat. The report concluded (amongst other findings) that there was no substantive evidence to suggest that an organised commercial trade in turtle and dugong meat existed in Queensland. | | | | | | |
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### 1.3.13 Has you 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.
☑ YES

Details:
››› Australia has not undertaken a national CITES review specifically for marine turtles, however, the

government provides annual trade and compliance reports to the CITES Secretariat as well as biannual reports on Australia's administration and legal arrangements in relation to CITES.

### 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?

☑ NO

## 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:

››› Nesting beach monitoring (that has occurred over 5+ years) is conducted at 28 sites, to the best of the Department's knowledge.

Implemented at the sites described in question 0.2 (name the sites, where this applies):
››› Implemented at the sites described in question 0.2 (name the sites, where this applies):
Heron Island, Wreck Island, North West Island, Lady Musgrave, Raine Island National Park, Dowar Islet (Dauar Island), Ningaloo Coast, Barrow Island, Muiron Islands, Woongarra Coast (includes Mon Repos), Wreck Rock, Dirk Hartog Island, Peak Island, Wild Duck Island, Curtis Island, Crab Island, Eco Beach, Eighty Mile Beach, Mundabullangana Station and Cowrie Beach, Milman Islet, Cable Beach, Cemetery Beach, Rosemary Island, Varanus Island, Thevenard Island, Delambre Island, Gardangarl or Field Island, and Bare Sand Island.
References and links1:
Please refer to the references and links provided in section 0.2

References and links:

››› Please refer to the references and links provided in section 0.2

#### b) Nesting beach protection (patrolling)

☑ YES

Details:

››› Nesting beach patrolling (that has occurred over 5+ years) is conducted at 28 sites, to the best of the Department's knowledge.

Implemented at the sites described in question 0.2 (name the sites, where this applies):
››› Implemented at the sites described in question 0.2 (name the sites, where this applies):
Heron Island, Wreck Island, North West Island, Lady Musgrave, Raine Island National Park, Dowar Islet (Dauar Island), Ningaloo Coast, Barrow Island, Muiron Islands, Woongarra Coast (includes Mon Repos), Wreck Rock, Dirk Hartog Island, Peak Island, Wild Duck Island, Curtis Island, Crab Island, Eco Beach, Eighty Mile Beach, Mundabullangana Station and Cowrie Beach, Milman Islet, Cable Beach, Cemetery Beach, Rosemary Island, Varanus Island, Thevenard Island, Delambre Island, Gardangarl or Field Island, and Bare Sand Island.
References and links1:
Please refer to the references and links provided in section 0.2

References and links:

››› Please refer to the references and links provided in section 0.2

### c) Predator control

☑ YES

Details:

››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions. Predation has been listed as a threat, as mentioned in the Recovery Plan and management is undertaken by a range of stakeholders.
The following threat abatement plans allow for the implementation of programs that control predators: Threat abatement plan for predation by European red fox (2008), and Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (Sus scrofa) (2017)

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

››› Implemented at the sites described in question 0.2 (name the sites, where this applies):
*Non-exhaustive list: Mundabullangana and Cemetery Beach (also implemented at Bells Beach, an index beach not described in question 0.2)

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Threat abatement plan for predation by European red fox (2008)
https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/tap/predation-european-red-fox
Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (Sus scrofa) (2017)
https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/tap/feral-pig-2017

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

☑ YES

Details:

››› Nil input received

### e) Vehicle access restrictions

☑ YES

Details:

››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions. Vehicles can have an impact on nest sites, as mentioned in the Recovery Plan and some councils have closed beaches during nesting seasons.

Implemented at the sites described in question 0.2 (name the sites, where this applies):
››› Implemented at the sites described in question 0.2 (name the sites, where this applies):
*Non-exhaustive list: Cable Beach (also implemented at Pretty Pool Beach, an index beach not described in question 0.2)

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

### f) Regular removal of debris / clean-up programmes

☑ YES

List recent clean-up programmes/references and links:
››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions. Marine debris has been listed as a threat in the Recovery Plan, which helps allow management undertaken by a range of stakeholders.
The Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (2018) allows for the implementation of programs that remove marine debris.

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf
Threat abatement plan
https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/tap/marine-debris-2018

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

Details:

››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions.
Loss of vegetation has been listed as a threat for some genetic populations, as mentioned in the Recovery Plan and management is undertaken by a range of stakeholders.

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

**h) Building location design regulations (coastal protection)**

☑ YES

Details:
››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions.
Under the Environment Protection and Biodiversity Conservation ACT 1999 (EPBC Act), actions that have, or are likely to have a significant impact on a matter of national environmental significance require approval from the Australian Government Minister for the Environment. The Minister will decide whether assessment and approval is required under the EPBC Act.
There are currently eight matters of national environmental significance protected under the EPBC Act, including listed threatened species such as marine turtles.
A streamlined approach for the environmental approval of offshore petroleum and greenhouse gas activities in Commonwealth waters came into effect in 2014. The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is now the sole assessor for offshore petroleum activities in Commonwealth waters. This means that actions will not require individual referral, assessment or approval under the EPBC Act provided they are undertaken in accordance with the endorsed NOPSEMA Program.
WA Regulations for building designs fall under:
• Environmental Protection Act (Environmental Impact Assessments for Significant Developments)
• Biodiversity Conservation Act (protection of native and threatened fauna and flora)
• Planning and Development Act (requirements for local governments to manage and protect threatened species and their habitats)

Implemented at the sites described in question 0.2 (name the sites, where this applies):
››› Implemented at the sites described in question 0.2 (name the sites, where this applies):
*Non-exhaustive list: Ningaloo, Cemetery Beach, Barrow Island, Varanus Island, Dampier Archipelago (Burrup Peninsula). Also implemented at Eramurra, Mardie, Onslow, which are nesting beaches not described in question 0.2.

References and links:

››› https://www.nopsema.gov.au/

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

Details:

››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions.
The Australian and Western Australian Governments have developed National Light Pollution Guidelines for Wildlife including marine turtles, shorebirds and migratory shorebirds. These guidelines were adopted at COP13 (February 2020). COP14 (February 2024) endorsed a refined version of the Guidelines, applicable at an international level, with additional Appendices on species-specific technical guidance for migratory bats and migratory landbirds. These refined guidelines, called “CMS International Light Pollution Guidelines for Migratory Species”, aim to assist Parties with addressing light pollution in their own jurisdictions. Australia continues to be recognised as a world leader in raising awareness with respect to the impact of light pollution on migratory species and producing best-practice guidance.
WA Regulations for light pollution designs fall under:
• Environmental Protection Act (Environmental Impact Assessments for Significant Developments)
• Biodiversity Conservation Act (protection of native and threatened fauna and flora)
• Planning and Development Act (requirements for local governments to manage and protect threatened species and their habitats), including DPLH Dark Sky Position Statement
Projects to reduce light pollution that were undertaken in Bundaberg, Australia, are linked below.
In Western Australia, all new development proposals that are adjacent to marine turtle nesting habitat are required to demonstrate adherence to the National Light Pollution Guidelines for Wildlife (Commonwealth). This includes those submitted for approval under the WA Environmental Protection Act (EIA processes), and under the Biodiversity Conservation Act (authorisation to take or disturb a threatened species). Additionally, the Western Australian government works with Local Governments across the State on land use planning referrals, that includes reducing light pollution impacts to native and threatened species.

Implemented at the sites described in question 0.2 (name the sites, where this applies):
››› Implemented at the sites described in question 0.2 (name the sites, where this applies):
*Non-exhaustive list: Ningaloo, Cemetery Beach, Barrow Island, Varanus Island, Dampier Archipelago (Burrup Peninsula). Also implemented at the index beaches Eramurra, Mardie, Onslow, which were not described in question 0.2.

References and links:

››› Light Pollution Guidelines
https://www.cms.int/sites/default/files/document/cms_cop14_doc.30.4.4_annex3_cms-light-pollution-guidelines_e.pdf
Programmes to reduce light pollution:
https://www.greenfleet.com.au/blogs/forest/low-glow-project
https://www.bundaberg.qld.gov.au/environment/reducing-urban-glow

References and links:

››› • National Light Pollution Guidelines
• https://flatbacks.dbca.wa.gov.au/publications/national-light-pollution-guidelines-for-wildlife

Please provide the reasons:
››› Please note that in Australia, a range of measures are used by all jurisdictions (i.e. Australian Government, state/territory government and, local government) and may reflect differing priorities for protection and conservation. There may also be considerable variability in terms of the effectiveness of these measures across different jurisdictions. For this reason a scale for the relative prevalence/importance has not been indicated.
The Department of Climate Change, Energy, the Environment and Water considers that conservation of marine turtles in the wild should be the primary focus of conservation efforts and ex-situ efforts such as hatcheries a secondary option. Egg relocation occurs at Mon Repos Conservation Park, near Bundaberg, Queensland

### 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:
››› Please note that not all States and Territories provided information for this question. The sites below are the list of protected areas for Western Australia.
Western Australia State Conservation Estate under CALM Act that includes marine turtle conservation management:
• Barrow Group Nature Reserves Management Plan
• Cape Range National Park Management Plan
• Dampier Archipelago Nature Reserves Management Plan
• Eighty Mile Beach Marine Park Management Plan
• Guniyan Binba Conservation Park Joint Management Plan
• Jurabi and Bundegi Coastal Parks, and Muiron Islands Management Plan
• Lalang-Garram / Camden Sound Marine Park Management Plan
• Lalang-Garram / Horizontal Falls and North Lalang-Garram Marine Parks Management Plan
• Montebello/Barrow Islands Marine Conservation Reserves
• Niiwalarra Islands National Park and Lesueur Island Nature Reserve Joint Management Plan
• Ningaloo Marine Park and Muiron Islands Marine Management Area Management Plan
• North Kimberley Marine Park Joint Management Plan
• Parks and Reserves of the South-West Kimberley and North West Pilbara Joint Management Plan
• Rowley Shoals Marine Park Management Plan
• Shark Bay Marine Reserves Management Plan
• Shark Bay Terrestrial Reserves and Proposed Reserve Additions Management Plan
• Yawuru Nagulagun / Roebuck Bay Marine Park Joint Management Plan
• Yawuru Birragun Conservation Park Joint Management Plan

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

Details:
››› • The Australian Government Working on Country Programme supports Indigenous rangers in undertaking marine turtle conservation initiatives.
• The Australian Government provides funding to the Torres Strait Regional Authority to support the development and implementation of community-based dugong and turtle plans in the Torres Strait region.
• Traditional Use of Marine Resource Agreements (TUMRAs) are being developed and implemented in the Great Barrier Reef Marine Park.
• In Western Australia, the marine turtle tourism interpretative centre and the Ningaloo Community Turtle Monitoring Program have been developed to raise community awareness and involvement in marine turtle conservation activities. Industry monitoring programs occur at Barrow Island and Mundabullangana, while community groups drive programs in northern Western Australia. Furthermore, local pastoral lease holders are collaborating with the Western Australian Department of Biodiversity Conservation and Attractions in fox baiting and monitoring programs.
• AusTurtle is a non-Government Organisation that encourages public participation in turtle research at Bare Sand Island in the Northern Territory. Researchers and volunteers monitor nesting and foraging turtles.

References and links:

››› References and links1:
• https://nntc.com.au/working-on-country/
• https://www.tsra.gov.au/the-tsra/programmes/env-mgt-program/our-projects/dugong-and-turtle-management-project
• https://www2.gbrmpa.gov.au/learn/traditional-owners/traditional-use-marine-resources-agreements
• https://ningalooturtles.org.au/
• https://www.facebook.com/austurtle/

### 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:

››› Reef 2050 Water Quality Improvement Plan 2017-2022:
More than $600 million dollars is approved by both the Australian and Queensland Governments to deliver programs to improve water quality through to 2022. It has identified how to achieve long term sustainability of the water through management of agriculture, mining and city waste.
Queensland Government and Great Barrier Reef Marine Park Authority Joint Field Management Program:
The joint field team provides conservation and monitoring, incidence response, welcoming visitors and upholding compliance. The rangers can respond to a wide variety of incidences that may affect water quality including oil or pollution spills.
Saving Our Species program:
In NSW, the Saving Our Species program is training local community volunteers to monitor marine debris close to known turtle zones.

References and links:

››› • https://www.reefplan.qld.gov.au/
• https://www2.gbrmpa.gov.au/our-work/field-management/field-management-great-barrier-reef-marine-park
• https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/saving-our-species-program

### 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:
››› The Great Barrier Reef Marine Park Authority works closely with the Australian Department of Defence to minimise the potential for negative interactions with protected species when conducting live firing exercises and underwater demolitions within the Great Barrier Reef Marine Park. In all states and territories, the use of chemicals and explosives in industry is regulated and closely monitored.
In Western Australia, use of poisoness chemicals and explosives from an environmental context is managed under the following legislation:
• Environmental Protection Act (Environmental Impact Assessments for Significant Developments)
• Biodiversity Conservation Act (protection of native and threatened fauna and flora)
• Conservation and Land Management Act (creation and management of conservation estate)
• Planning and Development Act (requirements for local governments to manage and protect threatened species and their habitats)

## 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:

››› Reef 2050 Plan
The plan outlines concrete management measures for 35 years to ensure the Outstanding Universal Value of the Reef is preserved now and into the future. Through preventative measures and improving the knowledge and sustainability of businesses and communities around the reef. The other program associated with the Great Barrier Reef is the Great Barrier Reef Extreme Weather Response
Program, which was implemented by the Great Barrier Reef Marine Park Authority following the extreme weather events of the 2010-11 summer.
All other marine parks in Australia are monitored by Parks Australia. The Australian Government has

committed $15 million over 4 years for partnerships in ocean discovery and restoration. Through the Ocean Discovery and Restoration Program, Parks Australia will deliver discovery and restoration projects important to science, industry, Traditional Owners, park managers and the community, to improve understanding and sustainable management of Australian Marine Parks.

References and links:

››› • https://www.dcceew.gov.au/parks-heritage/great-barrier-reef/protecting/reef-2050-plan
• https://www.dcceew.gov.au/parks-heritage/great-barrier-reef/publications/reef-2050-plan-key-achievements-2021#infographic-text
• https://parksaustralia.gov.au/marine/management/partnerships/ocean-discovery-and-restoration/

### 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:
››› In the Great Barrier Reef Marine Park reef Water Quality Improvement Plan are in place to improve mangrove and seagrass habitat over the longer term.
In Western Australia, mangrove habitats are given special consideration when developments are proposed. The Western Australia Environmental Protection Agency has guidelines as to the amount of mangrove habitat that can be disturbed/destroyed in given areas. In addition, where industrial developments disturb/destroy mangroves they undertake rehabilitation and replanting programmes, where required.

References and links:
››› References and links1:
https://www.reefplan.qld.gov.au/

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

☑ YES, see below

Details/future plans:

››› Seagrass Restoration Network is working towards ‘enabling the sharing of knowledge and tools for seagrass conservation, recovery and restoration and foster an integrated long-term approach to developing restoration solutions.’ The network links scientists, government, and community and industry practitioners to create seagrass colonies that have a mixture of species suitable to the area.
Seagrass recovery projects (Western Australian Marine Science Institution, WAMSI)
WAMSI regularly supports seagrass restoration projects along Western Australia’s coastline.
Shark Bay seagrass restoration project
The Shark Bay seagrass restoration project is a part of Shark Bay Salt Pty Ltd, which is situated in the middle of a world heritage area. Since 2001, the seagrass restoration project is restoring 122 hectares in collaboration with the University of Western Australia, through the use of collected seeds.
TropWATER seagrass research
The Centre for Tropical Water and Aquatic Ecosystem Research (TropWATER) is Australia’s premiere tropical aquatic research group. They undertake research in fields related to water science, resource management and the ecology of water ecosystems, and have a strong emphasis on seagrass. TropWATER’s research themes include:
• Science based advice to managers and regulators
• Habitat mapping, assessment and monitoring
• Developing environmental requirements and ecologically relevant thresholds
• Resilience, recovery and restoration of coastal habits
• Modelling biophysical factors that shape coastal ecosystems
• Enhancing the resilience and recovery of key habitats

References and links:

››› References and links1:
• https://seagrassrestorationnetwork.com/
• Volunteers spring into action to help seagrass recovery in Cockburn Sound – Western Australian Marine Science Institution (wamsi.org.au)
• https://www.seagrassresearch.net/shark-bay-restoration
• https://www.tropwater.com/research/seagrass-ecology/

# 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 secretarat at iosea@un.org

| | Site geographical name (refer to questions 0.1 and 0.2) | Species genetic stock | Start year | Duration of the monitoring programme | Nature of monitoring | Population trend | Is this a protected area? |
|---|---|---|---|---|---|---|---|
| | | | | | | | Please refer to section 0.2 |
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### 3.1.2 Has you country undertaken an evaluation of its marine turtle monitoring programmes?

☑ NO

### 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):

››› Details (e.g., list species, duration of programme, start and end year):
Monitoring and tagging have occurred at sites across Australia over both long and short time frames.
Please see Recovery Plan for details, and refer to section 0.2

References and links:

››› References and links1:
Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

#### b) Satellite tracking

☑ Yes

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

››› Satellite tracking is a common tool in Australian marine turtle research. Please see below for a selection of resources and projects.

References and links:

››› References and links1:
• Sunshine Coast Council: https://www.sunshinecoast.qld.gov.au/direct/f258398f-b618-5b38-802c-171a362a76eb
• Western Australia rehabilitated turtles: http://www.seaturtle.org/tracking/?project_id=879
• Queensland government turtle tracking research program: https://www.qld.gov.au/environment/plants-animals/animals/discovering-wildlife/turtles/turtle-tracking/research-program
• Taronga Conservation Society Australia: https://taronga.org.au/conservation-and-science/current-research/satellite-tracking-of-sea-turtles
• TurtleNet: https://apps.information.qld.gov.au/TurtleDistribution/

### c) Genetic studies

☑ YES

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia. https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

### 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

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

☑ YES

Explanation/examples:

››› The Environment Protection and Biodiversity Conservation Act 1999 promotes the use of traditional ecological knowledge in cooperation with Indigenous people. The North Australian Indigenous Land and Sea Management Alliance conducted a Traditional Ecological Knowledge project as part of their Dugong and Marine Turtle Project. The Torres Strait Regional Authority is supporting the use of Traditional Ecological Knowledge system in Torres Strait to enable Rangers' cultural and natural resource management activities.

## 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):
››› Please refer to section (g) "Other"

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

Details (e.g. type of fishery and gear used, mitigation method assessed, result):
››› Please refer to section (g) "Other"

### c) Frequency and pathology of disease in marine turtles

Details (disease, incidence, species and genetic stock):
››› Please refer to section (g) "Other"

### d) Genetic studies

Details (species and genetic stock):
››› Please refer to section (g) "Other"

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

## habitats

Details (aim of study, methods, results):
››› Please refer to section (g) "Other"

## f) Evaluation of the efficacy of conservation activities for marine turtles and their habitats

Details (types of activities assessed, participation of local communities in the evaluaton, methods, results):
››› Please refer to section (g) "Other"

References and links:


››› 1 Abrantes, K., Wildermann, N., Miller, I., Hamann, M., Limpus, C. J., Hof, C. A., Bell, I., Sheaves, M., & Barnett, A. (2023). Intraspecific variability in flatback turtle habitat use - δ15N as indicator of foraging locations. Endangered Species Research, 53. https://doi.org/10.3354/esr01293
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3 Ahasan, M. S., Kinobe, R., Elliott, L., Owens, L., Scott, J., Picard, J., Huerlimann, R., & Ariel, E. (2019). Bacteriophage versus antibiotic therapy on gut bacterial communities of juvenile green turtle, Chelonia mydas. Environmental Microbiology, 21(8), 2871-2885. https://doi.org/https://doi.org/10.1111/1462-2920.14644
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## 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 secretarat at iosea@un.org

| | Regional or sub-regional action plan | Identified research and monitoring needs | Links |
|---|---|---|---|
| | https://www.sprep.org/ | Australia supports the South Pacific Regional Environment Programme and the associated action plan for marine turtles coordinated by the Secretariat | South Pacific Regional Environment Programme |
| | | Australia is supporting programs to address high priority actions, particularly around bycatch. | CMS Single Species Action Plan for Loggerhead Turtles in the South Pacific |
| | https://www.pzja.gov.au/advisory-committees/pzja-committees/torres-strait-scientific-advisory-committee-tssac | Papua New Guinea is a member on the Torres Strait Scientific Advisory Committee which provides research advice on Torres Strait fisheries (including marine turtles) to the Protected Zone Joint Authority. | Torres Strait Scientific Advisory Committee |
| | https://www.tsra.gov.au/ | In the Torres Strait region, communities, with the support of the Torres Strait Regional Authority, have developed dugong and turtle management plans, which contain community derived objectives, concerns, and research priorities from their perspective. | Torres Strait Regional Authority |
| | https://www.klc.org.au/newsroomblog/2023/11/27/saltwater-country-management-forum-2023 | Kimberley regional group | ISWAG (Indigenous Saltwater Advisory Group) |
| | | | Please refer to section 1.1.1 for further plans and strategies. |
| | | | |
| | | | |
| | | | |
| | | | |

### 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 collabroation took place, project name, future plans):

››› Please refer to section 3.1.6.

**b) Genetic characterization**

☑ YES

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

››› Please refer to section 3.1.6.

**c) Migratory and dispersal routes**
☑ YES

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

››› Please refer to section 3.1.6.

**d) Other biological and ecological aspects**
☑ YES

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

››› Please refer to section 3.1.6.

## 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:
››› Long term monitoring projects are undertaken to detect long term changes in population treads to identify priority areas for management. Tagging and genetic studies provide information on genetic diversity, migration patterns and key nesting and foraging areas to help identify critical sites for protection. Information on life history parameters is used for population modelling studies to estimate sustainable levels of harvest and to model other impacts on populations. Research on interactions between marine turtles and fisheries are used to mitigate these threats.
Individual programs include an evaluation and improvement component to ensure ongoing improvement.

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

Details, future plans:
››› The Environment Protection and Biodiversity Conservation Act 1999 promotes the use of traditional ecological knowledge in cooperation with Indigenous people. The North Australian Indigenous Land and Sea Management Alliance conducted a Traditional Ecological Knowledge project as part of their Dugong and Marine Turtle Project. The Torres Strait Regional Authority is supporting the use of Traditional Ecological Knowledge system in Torres Strait to enable Rangers' cultural and natural resource management activities. ISWAG (Indigenous Saltwater Advisory Group works across boundaries with joint management objectives.

References and links:

››› References and links1:

https://www.yawuru.org.au/wp-content/uploads/2021/12/ISWAG-Kimberley-Indigenous-Turtle-and-Dugong-Initiative_Implementation-Plan-2022-to-2032-_-complete.-pdf.pdf

## 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:
››› Most researchers work collaboratively, and many methods are standardised. This occurs either through shared knowledge (publications, conferences, workshops etc) or shared training (e.g. fieldwork).

### 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):

››› Several Australian researchers are part of the IUCN-SSC Marine Turtle Specialist Group. One of their tasks is to collaborate on regional reports for red list assessments.
https://www.iucn-mtsg.org/members/#memberlist/

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

☑ more frequently than once a year

Details:

››› • 1-2 times per year via Australian Government Marine Turtle Roundtable (online and in-person format)
• 1-2 times per year through the Australian Marine Turtle Symposium
• Annually at International Sea Turtle Symposium
• Multiple staff form IOSEA advisory panel for AUS

### 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

# 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:
››› • In Western Australia, information is shared primarily through the North West Shelf Flatback Turtle Conservation Program (NWSFTCP) and through regional DBCA offices delivering management of conservation estate and threatened species management. The NWSFTCP has an established communication strategy delivering communication and education projects to targeted partners and stakeholders across the State, including a website (that is currently under review) that contains pertinent Program information such as code of conduct, methods manuals, project information and strategic plan. Individual marine turtle monitoring programs, including government and non-government coordinated, complete their own education programs. For example, the Ningaloo Turtle Program also has developed a range of education, awareness and information resources. The Western Australian Parks and Wildlife Service also conducts evening guided turtle eco-education tours from the Jurabi Turtle Centre for people wanting to view nesting turtles and hatchlings. Education programs are undertaken in most regional towns where they are present, including Shark Bay (Denham), Coral Bay, Exmouth (Ningaloo), Onslow, Karratha, Port Hedland, Broome, and into the Kimberley. Education programs are also in place within metropolitan Perth anbd surrounds, such as AQWA and Dolphin Discovery Centre.
• In Queensland, a turtle ecotourism and information centre exists at Mon Repos Conservation Park, Queensland providing comprehensive interpretative and educational information. From november to March, visitors can see nesting and hatching turtles on the beach at night.
• Some eco-tourism activities to watch nesting flatback turtles occur on Bare Sand Island near Darwin.

References and links:

››› • https://flatbacks.dbca.wa.gov.au/
• https://ningalooturtles.org.au/
• https://www.ningaloocentre.com.au/tours/turtle-tours-exmouth-parks-and-wildlife
• https://parks.des.qld.gov.au/parks/mon-repos
• https://seadarwin.com/darwin-tours/turtle-tracks/

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

Details/future plans:
››› • In the Great Barrier Reef Marine Park, GBRMPA administers the Reef Guardian Program. The Program allows for stakeholders to undertake and expand their knowledge on how to create a healthier reef. The Program also incoorporates educational resources and training for schools.
• In the Torres Strait, the Torres Strait Regional Authority is training traditional owners, rangers and high school children in Seagrass Watch.
• ReefHQ Aquarium Turtle Hospital: The ReefHQ Aquarium Turtle Hospital in Townsville, Queensland opened in August 2009. The hospital was developed to rehabilitate sick and injured marine turtles so they can be released back into the Great Barrier Reef Marine Park, enhancing their long term survival and sustainability as a threatened species. The hospital – which is currently undergoing renovations and is temporarily closed – plays a key role in raising community awareness in relation to threatened species and encouraging behavioural change that contributes to nature conservation. The facility provides visitors with an opportunity to see and learn about the plight of marine turtles, through educational talks and guided tours of the hospital.
• Educational books on turtles and climate change have been distributed to schools in Torres Strait through ranger educational programs.
• In Western Australia, the Ningaloo Turtle Program has developed a range of education, awareness and information resources.
• Tangaroa Blue Foundation, which runs several education programs, also has a Marine Debris Education Kit aligned to the national curriculum. This kit highlights the impacts of marine debris on wildlife, including turtles.

References and links:

››› References and links1:
• https://ningalooturtles.org.au/
• https://www2.gbrmpa.gov.au/our-work/programs-and-projects/reef-guardians
• https://www.seagrasswatch.org/
• https://www.tangaroablue.org/resources/education-kit-and-fact-sheets/marine-debris-education-kit/
• https://www.greatbarrierreefaquarium.au/

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

☑ Fishing industry
☑ Communities that interact with marine turtles and their habitats
☑ Local/Fishing communities
☑ Indigenous groups
☑ Tourists
☑ Teachers
☑ Students
☑ NGOs
☑ Other (describe)

Details, if necessary:

››› Throughout Australia turtle conservation has benefited from two-way knowledge around turtle management. Ranger programs have been funded from various sources and training has been provided from a variety of sources including government, non-government and industry in the fields of turtle research, marine debris, feral animal control, data bases, GIS, and project management.

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

☑ YES

Details/future plans:

››› • The Western Australian Parks and Wildlife Service conducts evening guided turtle eco-education tours from the Jurabi Turtle Centre for people wanting to view nesting turtles and hatchlings. The Centre also provides interpretative and educational information.
• In Queensland, a turtle ecotourism and information centre exists at Mon Repos Conservation Park, Queensland providing interpretative and educational information. From november to March, visitors can see nesting and hatching turtles on the beach at night.
• ReefHQ Aquarium Turtle Hospital: The ReefHQ Aquarium Turtle Hospital in Townsville, Queensland opened in August 2009. The hospital was developed to rehabilitate sick and injured marine turtles so they can be released back into the Great Barrier Reef Marine Park, enhancing their long term survival and sustainability as a threatened species. The hospital – which is currently undergoing renovations and is temporarily closed – plays a key role in raising community awareness in relation to threatened species and encouraging behavioural change that contributes to nature conservation. The facility provides visitors with an opportunity to see and learn about the plight of marine turtles, through educational talks and guided tours of the hospital.

References and links:
››› References and links1:
• https://www.ningaloocentre.com.au/tours/turtle-tours-exmouth-parks-and-wildlife
• https://parks.des.qld.gov.au/parks/mon-repos
• https://www.greatbarrierreefaquarium.au/

## 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?

☑ Tourists
☑ Students
☑ Other (describe):

››› Volunteers (any profession)

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

Details/future plans:
››› • The Western Australian Parks and Wildlife Service conducts evening guided turtle eco-education tours from the Jurabi Turtle Centre (Ninglaoo Coast) for people wanting to view nesting turtles and hatchlings.
• The Western Australian Ningaloo Turtle Program takes out volunteers to help with track monitoring on nesting beaches on Ningaloo Coast.
• In Queensland, a turtle ecotourism and information centre exists at Mon Repos Conservation Park, Queensland providing comprehensive interpretative and educational information. From november to March, visitors can see nesting and hatching turtles on the beach at night.
• Some eco-tourism activities to watch nesting flatback turtles occur on Bare Sand Island near Darwin.

References and links:

››› References and links1:
• https://parks.des.qld.gov.au/parks/mon-repos/attractions/mon-repos-turtle-centre
• https://seadarwin.com/darwin-tours/turtle-tracks/
• https://ningalooturtles.org.au/
• https://www.ningaloocentre.com.au/tours/turtle-tours-exmouth-parks-and-wildlife

## 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?
☑ YES

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

Details, examples:
››› Aboriginal and Torres Strait Islander Ranger Programs, Joint Management Rangers

### 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:
››› • The Australian National Marine Turtle Symposium is held biennially. The 6th Australian Marine Turtle Symposium will be held in 2024 in Townsville, Queensland. It is expected that the symposium will bring together scientists, industry, government, and community and Indigenous groups to share knowledge and build partnerships to conserve turtles in Australia. The 5th Australian Marine Turtle Symposium (hybrid) was held in New South Wales in 2020.
• In 2021 Australia hosted the International Sea Turtle Symposium in Perth (virtual symposium), which brought together stakeholders and scientists from all over the globe.
• In Western Australia, a number of partners are involved in the turtle monitoring programs at Ningaloo, Port Hedland and Wickham, Barrow Island and Mundabullangana and include: Cape Conservation Group, Care for Hedland, Rio Tinto, Environmental Association, BHP Billiton Iron Ore, Pilbara Iron, Woodside Energy, Chevron Australia, Apache Energy, Gorgon, and Dampier Primary School.
• The Raine Island Recovery Project: The Raine Island Recovery Project (RIRP) is delivered by the Queensland Government in collaboration with the Great Barrier Reef Marine Park Authority (GBRMPA) and Traditional Owners (Wuthathi and Meriam Nation [Ugar, Mer, Erub]). See section 1.1. for further details.

References and links:

››› References and links1:
• https://www.ists40perth.com.au/
• https://flatbacks.dbca.wa.gov.au/news/5th-australian-marine-turtle-symposium
• https://www.barrierreef.org/what-we-do/projects/raine-island-recovery-project
• https://parks.des.qld.gov.au/raineisland

# 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 c**ooperation 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**

☑ LIMITED

**d) Illegal fishing in EEZ**

☑ IMPORTANT

**e) Incidental capture by foreign fleets in EEZ**

☑ LIMITED

**f) Enforcement/patrolling of EEZ**

☑ ESSENTIAL

**g) Harvest exploitation of turtles and eggs**

☑ ESSENTIAL

**h) Illegal trade in turtle parts and products**

☑ ESSENTIAL

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

☑ IMPORTANT

**j) Marine pollution, including oil spills and marine debris**

☑ ESSENTIAL

**k) Training / capacity-building**

☑ IMPORTANT

**l) Alternative livelihood development**

☑ ESSENTIAL

**m) Characterisation of turtle populations/genetic stocks**

☑ ESSENTIAL

**n) Identification of migration routes**

☑ ESSENTIAL

**o) Tagging / satellite tracking**

☑ IMPORTANT

**p) Habitat studies**
☑ IMPORTANT

**q) Genetic studies**

☑ IMPORTANT

## 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:
››› CITES, CBD, CMS, UNCLOS, RFMOs, PSMA, Ramsar Convention, IOSEA Marine Turtle MOU, CTI-CFF, London Declaration (Illegal Wildlife Trade)

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

Details:
››› The Australian Government provides funding support and has partnership arrangements with universities, researchers, provincial governments, community groups and Indigenous communities. Furthermore, the Australian Government actively collaborates with all State and Territory Governments, Oceania Range States, SPREP, NGOs (WWF, HSI), Government bodies and research centres, consultancies (e.g. Pendoley Environmental) and private industry (e.g. Chevron).

**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 secretarat at iosea@un.org

| | Name of the regional/sub-regional action plan (include web links to plan if available) | Species covered | Geographic coverage | Objectives | Threats addressed by the plan |
|---|---|---|---|---|---|
| | All threats that may impact marine turtle populations foraging, migrating and nesting in Australia | The objective of the Recovery Plan is to minimise anthropogenic threats to a level that enables removing marine turtle species from the EPBC Act threatened species list. | Australian waters (Commonwealth and State and Territory waters) | All marine turtle species occurring in Australia | Recovery Plan for Marine Turtles in Australia 2017-2027 (2017) |
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### 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:
››› The Australian Government seeks to ensure that relevant RFMOs take appropriate approaches towards turtle conservation, in line with approaches implemented domestically. Australia supports the implementation of the United Nation Food and
Agriculture (FAOs) Technical Guidelines for Responsible Fisheries, as well as the FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Guidelines.

## 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:
››› The Australian Government continues to build on and resource current initiatives that increase the capacity of Indigenous communities to implement marine turtle management and monitoring activities at a local level.

### 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:
››› • Australian Government Light Pollution Guidelines: The Guidelines aim to raise awareness of the potential impacts of artificial light on wildlife and provide a framework for assessing and managing these impacts on susceptible wildlife, including migratory species. The Guidelines are built around a concept of best practice lighting design principles and a risk assessed and adaptive management approach to light management near protected wildlife.
• TurtleNet: TurtleNet (Turtle Nesting Distribution Abundance and Migration) is an interactive atlas that shows nesting, courtship, feeding and migration routes of marine turtles at a global scale. TurtleNet was developed by Queensland Department of Environment and Science (DES) and CMS, and provides publicly-available data for stakeholders to use for reporting and decision-making actions.
• Australian Government National Guidelines for the Survey of Cetaceans, Marine Turtles and the Dugong: The Guidelines provide guidance and advice on best practice approaches and methods to conduct surveys of cetaceans, marine turtles (in-water) and the dugong. The aim of the Survey Guidelines is to provide best practice survey methodologies to ensure adequate data of a high standard is obtained to answer specific questions on species biology and ecology.
• Australian Government National Anthropogenic Underwater noise Guidelines (under development): these Guidelines to provide best-practice standards and mitigation measures to reduce the risk of anthropogenic underwater noise impacts to marine species protected under the national regulatory framework.
• National nesting guidelines (under development).

References and links:

››› • https://www.cms.int/sites/default/files/document/cms_cop14_doc.30.4.4_annex3_cms-light-pollution-guidelines_e.pdf
• https://apps.information.qld.gov.au/TurtleDistribution/
• https://www.dcceew.gov.au/environment/epbc/publications/national-guidelines-survey-cetaceans-marine-turtles-dugong
•
https://static1.squarespace.com/static/5b80290bee1759a50e3a86b3/t/5baba6f6419202c5985626d8/1537976057241/SWOT_MDS_handbook_v1.0.pdf

### 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:
››› The Australian Government provides funding support and has partnership arrangements with universities, researchers, provincial governments, community groups and Indigenous communities. Some good examples include:
• Raine Island Recovery Project Phase 2
• James Cook University dugong and turtle monitoring project along Queensland’s coast (PI: Christophe Cléguer)
• Projects funded though the Marine Turtle Climate Change Resilience and Nest Protection and Reducing Light Pollution in Coastal Communities grants programs
• Torres Strait Regional Authority (TSRA): In the Torres Strait region, the TSRA actively collaborates with expertise from several research institutes in conjunction with Traditional Owners, rangers and communities, including the Australian Institute of Marine Science.
• TurtleNet: The Australian Government provided voluntary contributions to CMS to advance the development of this interactive atlas.

## 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:
››› Recovery Plan for Marine Turtles in Australia 2017-2027 (2017):
The objective of the Recovery Plan is to minimise anthropogenic threats to a level that enables removing marine turtle species from the EPBC Act threatened species list. The Recovery Plan promotes a coordinated approach to management and is used to inform decision-making (e.g., environmental assessments); develop work plans (e.g., proponent management plans); and prioritise funding at the national, state and local levels. The plan also helps guide state and territory and regional areas to develop marine turtle conservation plans and initiatives that are nested within the National framework (e.g., the Queensland Marine Turtle Conservation Strategy). The plan continues to provide a framework that enables the Commonwealth to meet its obligations within Australia under international agreements for regional marine turtle conservation (CMS, IOSEA MoU, SSAPs). In this manner, the plan successfully supports a strong basis for management programs, prioritised research, on-ground funding, targeted engagement and guided policy initiatives.
https://www.dcceew.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

#### c) List the genetic stocks (marine turtle populations) identified as priorities in the national action plan or in other action plans for conservation of biodiversity in your country.

Details/future plans:
››› All genetic stocks should benefit from a maintained and improved efficacy of legal and management protection. Genetic stocks which are in decline (or likely to be in decline) and that would strongly benefit from increased conservation measures, are:
• Green turtle, Northern Great Barrier Reef stock
• Loggerhead turtle, south-west Pacitic stock
• Hawksbill turtle, North Queensland stock
• Olive Ridley turtle, north-western Cape York stock
Please note that the conservation status of several other stocks is pending assessment.

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

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

Please list up to 5 corresponding activities from the IOSEA Conservation and Management Plan (**CMP**).
››› The main threats to marine turtles in Australia are:
• Climate Change
• Marine debris (entanglement and ingestion)
• Chemical and terrestrial discharge
• Bycatch (including bycatch events outside of Australia’s jurisdiction)
• International take (including take outside of Australia’s jurisdiction)
• Light pollution
We consider that all the activities listed in the Plan are relevant to the above-mentioned threats. Generic actions should include:
1 Collect baseline data on the populations at risk and on their habitat use, as well as on the cumulative impacts of threats. Assess the level of cumulative impact of these threats on those populations.
2 Engage with multi-disciplinary stakeholders and generate funding for conservation and management activities.
3 Provide training, education and resources to stakeholders and the public.
4 Implement the required conservation measures to reduce turtle mortality (all life stages).
5 Enact, where not already in place, legislation to regulate the identified threats.

References and links:

››› Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.

https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

### 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:

››› EPBC Act Reform:
The Government's full response to Professor Samuel's review of the EPBC Act was released in the form of the "Nature Positive Plan: better for the environment, better for business" in December 2022.
The Nature Positive Plan makes specific reference to reforms to the conservation planning process – from the suite of activities associated with listing a threatened species or ecological community as threatened through to development of an associated conservation plan.
The purpose of the reforms is to reduce administrative burden, better direct resources to on-ground conservation activities and to make conservation plans easier to access, interrogate and use in regulatory decisions and decisions associated with Commonwealth investment.
The Protected Species and Ecological Communities Branch has developed a suite of policies to inform legislative drafting. This will be an iterative process and the final legislation will ultimately be a decision of Parliament.
On 12 October 2023, Minister Plibersek announced the Government will soon begin consultation on the detail of our new environment laws, press release linked below.
Recovery Plan for Marine Turtles in Australia 2017-2027 (2017):
The Recovery Plan is reviewed on a five-year basis, with the last review occurring in 2022. The implementation of the proposed actions has effectively allowed for management of anthropogenic threats at the stock level and at specific foraging and nesting sites. However, the main objective of the plan -to reduce threats to a level that marine turtle species can be removed from the EPBC Act threatened species list - has not been met. The conservation status of the six marine turtle species has not improved to warrant removal from the EPBC Act threatened species list.

References and links:
››› References and links1:
• https://www.dcceew.gov.au/environment/epbc/epbc-act-reform
• https://minister.dcceew.gov.au/plibersek/media-releases/delivering-our-strong-new-nature-positive-laws
• Commonwealth of Australia (2017). Recovery Plan for Marine Turtles in Australia.
https://www.agriculture.gov.au/sites/default/files/documents/recovery-plan-marine-turtles-2017.pdf

### 5.4.4 Which of the threats to marine turtles are not currently addressed by any policy or law in your country?

Details:
››› Climate change, diseases and pathogens, underwater anthropogenic noise pollution (under development). Please note that legislation does exist for these threats, however not to the levels required to minimise their effect on marine turtles. No legislation exists for minimising or avoiding the impact of cumulative threats on marine turtle populations.

### 5.4.5 Does your country have legislation that explicity 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:
››› The EPBC Act is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the Act as matters of national environmental significance.

References and links:

››› References and links1:
https://www.dcceew.gov.au/environment/epbc
https://www.dcceew.gov.au/environment/protection

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

References and links:

››› The Australian Government has committed to establishing an independent Environment Protection Agency (EPA) to provide assurance and restore public trust in the government’s national environmental law. The EPA will be resourced and empowered to ensure compliance and enforcement under the new EPBC Act. It will be responsible for project assessments, decisions, post-approvals and for assuring the operations of states, territories and other Commonwealth decisions-makers under accreditation arrangements.

# 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.

### 6.1.1 What has your country already done in the past 5 years to encourage other States to sign the IOSEA MOU?

Details/future plans:
››› Australia has made representations to other States in the region on the benefits of signing the MoU, with limited results.
Although outside the geographical scope of the IOSEA Turtle MoU, an Australian continues to be represented at the Secretariat of the Pacific Regional Environment Programme regional marine turtle conservation program workshops and meetings. SPREP has worked to ensure that their marine turtle Action Plan complements the work of the IOSEA Marine Turtle MoU.

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

☑ NO VIEW

Use the text box to elaborate on your response, if necessary.
››› Australia would need to consider the potential benefits and implications that moving to a legally binding instrument would entail. Australia would be supportive of investigating this issue further.

## 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 acitivty or IOSEA Work Programme measure:
››› Australian Government funding for domestic implementation of marine turtle conservation activities related to the IOSEA Marine Turtle MoU is primarily provided through Working on Country Programs, Parks Australia, the Oceans Leadership Package and the National Environmental Science Program (NESP).

References and links:

››› • https://nntc.com.au/working-on-country/
• https://www.niaa.gov.au/indigenous-affairs/environment/indigenous-rangers-program
• https://parksaustralia.gov.au/marine/parks/
• https://www.dcceew.gov.au/climate-change/policy/ocean-sustainability
• https://www.dcceew.gov.au/sites/default/files/documents/environment-oceans-factsheet.pdf
• https://www.dcceew.gov.au/science-research/nesp

### 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)
››› Please see previous question

### 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?

☑ UNKNOWN

## 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 secretarat at iosea@un.org

| | Name of the agency | Role in the conservation of marine turtles and their habitats |
|---|---|---|
| | The Australian Government has responsibility for the management of marine turtles and their habitats in Commonwealth marine areas. The Australian Government is also responsible for the development and implementation of national approaches to turtle management, such as the Recovery Plan for Marine turtles in Australia 2017 and the National Light Pollution Guidelines. The Australian Government also leads on international affairs. GBRMPA, which is part of DCCEEW, is Australia's Great Barrier Reef management agency. Parks Australia, which is part of DCCEEW, is Australia's national parks management agency | Department of Climate Change, Energy, the Environment and Water (DCCEEW) Great Barrier Reef Marine Park Authority (GBRMPA) Parks Australia |
| | State and territory governments oversee marine turtle monitoring and conservation within state and territory jurisdictions. | State and territory governments: •Queensland Government •New South Wales Government •Northern Territory Government •Tasmanian Government •South Australian Government •Victorian Government •Western Australia Government |
| | CSIRO's research supports the protection of Australia's wildlife and ecosystems. | Commonwealth Scientific and Industrial Research Organisation (CSIRO) (Australian government corporate entity) |
| | AIMS' research supports the sustainable use and protection of Australian waters. | Australian Institute of Marine Science (AIMS) (Commonwealth Statutory Authority) |
| | The TSRA manage program for Torres Strait Islander people, develop policy proposals and advice on matters relating to Torres Strait Islander and Aboriginal affairs. | Torres Strait Regional Authority (TSRA) (Commonwealth Statutory Authority) |
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### 6.3.2 What are the main limitations of enforcing the laws in relation to marine turtles and their habitats across and between jurisdictions?

Details:
››› Lack of funding and resources; differing views across stakeholders

# OTHER REMARKS

### Please provide any comments/suggestions to improve the present reporting format.

››› Migratory Species Section (DCCEEW) comments:
The IOSEA MoU Secretariat might want to consider merging several sections with repetitive questions, particularly those related to section 0.2 (index beaches). As Range States fill out the information, they will likely start with section 0.2, and as they arrive to a later section asking similar questions, they might have to go back and check the documents consulted for section 0.2 a second time. In our case, this process proved very time-consuming, and involved repeated consultations with stakeholders. A possible solution could be to group related questions together, so that they can be answered in one go.
A further suggestion would be to use genetic stocks (or Regional Management Units, RMUs) instead of index sites, but we understand if you prefer focusing on sites, especially in the case of those Range States that might not have identified their genetic stocks yet.
We would like to highlight that several of the questions asked were very legislative in nature, and the corresponding Department might not have the expertise to provide detailed answers to such questions. This issue might need some follow-up discussions to find a way that suits all parties.
Finally, we would also like to note the usefulness of the National Reports when used to gather, analyse and share information with other Range States and stakeholders. We would appreciate if the IOSEA MOU Secretariat could detail how this information will be used, and / or, if needed, develop a detailed strategy for making use of the information provided.

### Feel free to include additional information not covered above:

››› Comments from Parks Australia:
• Instead of the repetitive reporting on a large list of index beaches, it is recommended that these issues be addressed in tabular form focussing on each genetic stock. Index beaches for each stock, composite threats by stock, proportion of nesting sites/nesting population within protected habitat; proportion of foraging range within marine protected areas, proportion of inter-nesting habitat within marine protected area, etc can be listed within tables by stocks.
• Australia is at a disadvantage for effective reporting, since Australia is reporting at Continental scale. Individual Australian States typically encompass a wider geographical region than many of the IOSEA MOU signatory states. Increased emphasis on reporting on the genetic stocks may make reporting more effective in these multi-state jurisdictions.
Additional comments on section 1.2 (Migratory Species Section, DCCEEW):
Please note that we have only reported the fisheries with known interactions with marine turtles. We have used publicly available 2023 data reported by the Commonwealth, Queensland and Western Australia. South Australia did not report any interactions with marine turtles. Commonwealth data generally indicates interactions that occurred over three nautical miles from the coastline, and these data are a reliable source of information. Since Australia has seven different management jurisdictions and the provision of information has been variable, the information provided in this report is only a rough indication of fisheries interactions with marine turtles in Australia. All reported interactions indicated that the turtles were caught alive. We were only able to acquire information on type of fishery and on turtle interactions reported. Therefore, the mitigation measures reported in this report might be non-exhaustive.
Additional comments on section 1.2.1 (Australian Fisheries Management Authority):
This section requests to provide information on “each of the different fisheries below”. However, these appear to be fishing gear types rather than fisheries. Consider updating the wording in future reports. We would also suggest adding a sub-section on Danish seine after 1.2.5 Purse seine.
Additional comments on section 1.4.1 (Migratory Species Section, DCCEEW):
We would appreciate if questions c-k could be added to section 0.2. Since Range States are filling this document out starting from the beginning, it is extremely time-consuming to have to dig out again all the information on each nesting site, and to check whether the listed measures are being implemented. In our case, we did not have capacity to go over the 25 index beaches a second time to check each of these measures, hence questions c-k won't have been fully answered.
Additional comments on section 3.1.6 (Migratory Species Section, DCCEEW):
The literature list (see section g - Other) was provided by Australia's Marine Turtle Round Table Members, as well as academics specialised in turtle research. As the total number of studies since 2019 is significant and the staff from DCCEEW did not have capacity to assign a category to each study, we added all studies to the "Other" section. The search function should facilitate finding the topic of interest. Aim of study and results are detailed in the abstracts of each study. To access the abstract, please click on the doi link provided in the reference. Should there be no doi provided, please copy paste the name of the publication into a search engine to access the relevant website with the study’s details. We would be happy to share the Endnote database containing all the references and PDFs. Please feel free to reach out should you have further questions.
Additional comments on section 3.2.1 (Migratory Species Section, DCCEEW):
Consider merging this section with section 1.1.1, as the questions are very similar. Alternatively, rewording

the questions might help to avoid duplication.
Additional comments on section 3.3.2 (Migratory Species Section, DCCEEW):
Consider merging this question with section 3.1.5.