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**DRAFT REPORT OF AN ON-GOING MARINE TURTLE LEGISLATIVE REVIEW
FOR THE ASIA-PACIFIC REGION**

(Prepared by the World Wide Fund for Nature)

Summary:

This document answers the calls of CMS under Doc.27.6.2/Annex 2 (Hawksbill Turtle SSAP), while also supporting activities recommended relating to all species of marine turtles (Doc.27.6.1/Rev.1) and bycatch (Doc.27.1.1/Rev.1), and CITES Resolution Conf. 19.5, to assess the status of national marine turtle legislation, aiming to inform Parties, strengthen coordination and harmonize legislation.

DRAFT REPORT OF AN ON-GOING MARINE TURTLE LEGISLATIVE REVIEW FOR THE ASIA-PACIFIC REGION

Background

1. Many marine turtle populations remain at risk of extinction. Because of the high migratory activity of these species, nesting in one country and foraging in another, their life cycle traverses ocean basins and encompasses various coastal and marine habitats.
2. At a national level, many countries have granted marine turtles some level of protection: whether by including them in the definition of their wildlife or fish-species, by including sections on marine turtle protection in their wildlife and/or fisheries acts, by designating them as protected species, by drafting marine turtle action plans, by issuing marine turtle-specific legislation, or by protecting their habitats.
3. Legislation, however, differs between countries, which are likely to share the same or different (genetically distinct) marine turtle populations. If these migratory animals are protected in one country, but not protected in the next, this may render conservation efforts in the former fruitless leading to stagnate marine turtle population recovery or decline, or decision maker demotivation.
4. To better understand where differences between countries' legislations may lie and may need to be harmonized, calls have become louder in the international arena to conduct a legislative review, which has been enshrined in the objectives and activities of several reports, decisions, and action plans, such as:
 - a. **Resolution** Conf. 19.5 as adopted at the **CITES COP19** “[U]rges Parties whose national legislation is not sufficient to control the unsustainable harvest of and trade in marine turtles, to enact legislation to protect and manage these species appropriately”, which requires a legislative review in the first place.
 - b. The **Single Species Action Plan for the Hawksbill Turtle (*Eretmochelys Imbricata*) in South-East Asia and the Western Pacific Ocean Region (2022)** confirmed that there are varying levels of national and state laws, legislative frameworks, policies and a wide range of penalties afforded to (hawksbill) turtles throughout the South-East Asia and western Pacific region. It was also observed that, in some cases, different laws are used across jurisdictions that are conflicting, which can be problematic when managing highly migratory species that travel between countries and are afforded different levels of protection across its range. This was taken up under
 - i. Action 1.1.1 “Conduct a review of protective legislation and identify problematic inconsistencies between countries”, with possible modes of deliveries noted as “Contribute and participate in WWF’s marine turtle legislative and baseline status review” and “Undertake as part of National and Regional Plans of Action for marine turtles”
 - ii. Action 1.2.1 “Update, complete and implement Marine Turtle National Plans of Action (CTI-CFF or equivalent management plans), community-led traditional use agreements, and in consultation with other range states, CTI-CFF Regional Plan of Action (RPOA) and SPREP’s Regional Marine Turtle Action Plan 2023-2028, ensuring that they address relevant recommendations in CITES information document CoP18 Inf. 18 and related Decisions 18.211-18.213 (...)”

- c. The **IOSEA Work Programme 2020-2024**, under Objective 1 “Reduce direct and indirect causes of marine turtle mortality” of the Conservation Management Plan
- i. Programme No. 1.5 *“Prohibit the direct harvest (capture or killing) of, and domestic trade in, marine turtles, their eggs, parts or products, whilst allowing exceptions for traditional harvest by communities within each jurisdiction provided that: such harvest does not undermine efforts to protect, conserve and recover marine turtle populations and their habitats; and the marine turtle populations in question are able to sustain the harvest”*
 - ii. Programme No. 5.2 *“Assist Signatory and non-Signatory States, upon request, to develop and implement national, sub-regional and regional action plans for the conservation and management of marine turtles and their habitats”*
 - iii. Programme No. 5.5 *“Strengthen and improve enforcement of conservation legislation”*
- d. The **Pacific Islands Regional Marine Species Programme 2022–2026** under the **Multi-species Action Plan (MSAP)** and the **Marine Turtle Action Plan (MTAP)**:
- i. MSAP No. 6.1.1 *“Encourage the creation or review of national action plans (or equivalent) for each marine species group”* – Timeframe: 2026
 - Indicator: *“Members have national action plans updated, completed, or drafted for two or more species groups.”*
 - ii. MSAP No. 6.1.3 *“Ensure the conservation status of threatened and migratory marine species is considered when developing new legislation or policy. Reduce inconsistencies between different Acts and policies relating to these species, e.g. between fisheries and environment.”*
 - Indicator: *“New and reviewed legislation considers the conservation status of threatened and migratory marine species, and resolves any legislative or policy inconsistencies.”* – Timeframe: 2026
 - iii. MSAP No. 6.1.4 *“Proactively strengthen marine species and habitat protection in national legislation and policy, including national biodiversity strategies and action plans. Ensure collaboration between government agencies to achieve cross-sector integration.”*
 - Indicator: *“There is increased protection for marine species in legislation and actions are incorporated into national implementation plans, action plans, strategies or other national programmes or projects.”* – Timeframe: 2025
 - iv. MSAP No. 6.1.5 *“Review and update national CITES and fisheries legislation and regulations relating to traded marine species to: ensure inter-operability and improve management; support the use of electronic CITES permit systems.”*
 - Indicator: *“CITES and fisheries legislation has been reviewed.”* – Timeframe: 2026
 - v. MTAP No. 8.1.3 *“Build in-country capacity to enforce turtle conservation policies and legislation. Support governments seeking to develop or revise national CITES legislation to improve the conservation status of all marine turtles.”*
 - Indicators: *“Monitoring, Control, and Surveillance regional training workshops undertaken to support CITES and CMS.”* and *“Governments are supported to update national CITES legislation to further protect marine turtles.”*

Activities (on-going)

5. The World Wide Fund for Nature (WWF), in collaboration with the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Secretariat and the Secretariat of the Pacific Regional Environment Programme (SPREP), has taken on the endeavour to conduct a marine turtle legislative review, and initiated consultations with 51 countries and territories in 2023. For this purpose, a dedicated, replicable Excel Matrix was developed (with the support of the Marine Research Foundation), asking countries/territories to indicate which marine turtle protection measures are regulated by national legislation in the following categories: 1. Harvest, Direct take; 2. Permitted Fishing Gear (only to be filled in by countries where marine turtle harvest is legal); 3. Bycatch I - Fishing Gear; 4. Bycatch II – Prevention; 5. Captivity, excl. Tourism; 6. Tourism; 7. Trade; 8. Enforcement; 9. Habitat Protection; 10. Research; and 11. Treaties.
6. Over the course of 2023, the Matrix was sent out by the CMS and SPREP Secretariats to 450 stakeholders in 51 countries and territories in the Asia-Pacific region, reaching 390 of these, after email addresses were verified. Several follow-up emails, dispersed throughout the year, were sent by the Consultant contracted by WWF for this task and the Secretariats. Once the Matrix was received back from the country, a country profile was drafted based on the Matrix results, desktop research, and conversations by phone and email, including information on Marine Turtle History and Status, Presence and Nesting of Marine Turtle Species in the Country, National Laws, Protection Status (fully/partially/not protected), Opportunities and Challenges, International and Regional Instruments, and Matrix results.
7. For those countries that did not respond, desktop research was conducted, as well as conversations with WWF country office staff. Once the first draft of the Country Profile had been completed, it was shared back to the country representatives, who had sent in the Matrix, asking for their approval.

Results and Analysis (on-going)

8. In total, Matrix responses from 17 countries and five territories were received, which were used for this preliminary analysis, but are in different stages of approval (see draft report methodology chapter). To date, the review has been fully completed by 10/51 countries/ territories (20%). In total, 4/9 (44%) countries responded in Southeast Asia, 2/3 (67%) countries responded in East Asia, 3/5 (60%) countries responded in South Asia, 4/8 (50%) countries responded in Western Asia, and 8/26 (31%) countries responded in the Pacific/Oceania.
9. The status of completion per country can take one of the following stages and is per submission of this draft report in December 2023:
 - Matrix not filled in and Country Profile not reviewed (3 territories, 25 countries)
 - Matrix not filled in, but Country Profile reviewed (1 country)
 - Matrix filled in, but Country Profile not reviewed (3 territories, 5 countries)
 - Matrix filled in and Country Profile reviewed (minor outstanding items) (2 territories, 2 countries)
 - Matrix filled in and Country Profile reviewed (complete) (10 countries)
10. For all countries that submitted the Matrix, a preliminary analysis was conducted. Some of the preliminary results are shared below:
 - a. Regarding **Harvest/Direct Take** (n=21) the legislation of four countries/ territories was reported to *incorporate relevant traditional knowledge, customary marine*

- tenure and practices*, and seven countries/territories indicated to have a *National Conservation Action Plan for Marine Turtles in place*. In total 19 countries/territories selected that there is a *strictly no take* legislation in place under their jurisdiction.
- b. On **Bycatch I – Fishing Gear** (n=15) *Trawl nets, gill nets, purse seine, and other relevant fishing gear* were the gear types selected most often to be regulated by national legislation.
 - c. On **Bycatch II – Prevention** (n=17), most (12) responding countries/territories have legislation that *requires them to report marine turtle bycatch of all marine turtles to relevant authorities*. Eleven countries/territories have legislation that *regulates use marine turtle-friendly fishing gear*, such as TEDs and circle hooks, and 10 *published a marine turtle handling guide*. Nine have legislation *requiring vessel tracking systems for fishing vessels*, and stipulating to *assess and record the marine turtle status when accidentally caught*.
 - d. Regarding **Captivity, excl. Tourism** (n=17), keeping marine turtles in captivity is strictly not allowed for most responding countries/territories (11).
 - e. On **Tourism** (n=13), most (8) responding countries/territories allow *marine turtle tourism-related activities in the wild, where a permit IS required*.
 - f. Regarding the **Trade** of marine turtles (n=21), the large majority of responding countries/territories has *legislation that strictly prohibits the local sale of marine turtles (19), strictly prohibits the sale of marine turtle eggs (18), and strictly prohibits the local sale of any products derived from marine turtles (17)*. The *legislation of most responding countries and territories prohibits harming marine turtles, which is enforced by law (20)*.
 - g. Regarding **Enforcement** (n=21), *harming marine turtles is punishable by incarceration* in 17 countries. In three countries/territories, these actions are *punished by imposing a fine only*. Ten countries/territories indicated to *use community members as marine turtle rangers/guardians/monitors and governmental programs are used to support these efforts*, and eight reported that *Wildlife Rescue Centres are available and adequately equipped to house marine turtles temporarily or long-term after confiscation*.
 - h. On **Habitat Protection** (n=18), most countries/territories protect both their nesting beaches and foraging grounds (16). This is followed by the establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats (12).
 - i. No country or territory allows **Research** (n=19) on marine turtles or the collection of genetic samples without a permit. Most countries (18) *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*
11. Most countries/territories in the Asia-Pacific have legislation in place that *fully protects* marine turtles, either explicitly, through legislation specifically protecting marine turtles and/or National Marine Turtle Action Plan present (14 countries/territories) or implicitly, through legislation protecting wildlife in general, or marine turtles listed as protected species, or mentioned in an Act (17 countries/territories). In another 18 countries/territories, marine turtles are *partially protected*, which often is due to exceptions made for local tribes and communities, e.g. for subsistence hunting, or a geographical limitation and/or different levels of protection throughout the country, with certain States or Islands exempted. According to the review, there are only two countries/territories, where marine turtles are *not yet protected*.
 12. Although a brief Chapter in the report has been added on Marine Turtle Connectivity in the Asia-Pacific, information on the ecological connectivity of genetically distinct marine turtle populations ('genetic stock') between countries is largely missing, since it is not readily available or currently being built at a global scale (e.g. [ShellBank](#); [Regional Management Unit designation 2.0](#)). This information is critical for countries and territories

to understand which genetic stocks are nesting and residing within their national boundaries and how do they connect to others. It is foundational to protecting marine turtle populations and reversing their trajectory towards extinction.

Recommended actions

13. This issue relates directly to the COP, in that range states of marine turtles that are Parties to CMS and/or IOSEA all share the responsibility to protect these species, whose highly migratory nature makes a harmonized regional legal basis a necessity. Fully protected in one and only partially protected in another State and/or country, may be counterproductive to conservation efforts and not yield the expected results. In order to achieve a comprehensive picture of marine turtle protection legislation – for now of the Asia-Pacific region – the CMS COP is considered an important platform to convince those countries/territories that have not yet responded and/or where some last information is outstanding, to join this process.
14. Similarly, this is a call to contribute and participate in ShellBank – the world’s first traceability toolkit and global database of marine turtle DNA. It enables the tracking and tracing of marine turtle populations globally and the identification of genetically distinct marine turtle populations, how they are interconnected, which populations are most at-risk, and those that require greatest protection.
15. The Conference of the Parties is recommended to:
 - a) take note of this document;
 - b) note the Report contained in Annex 1 of this document;
 - c) note the ShellBank brief contained in Annex 2 of this document;
 - d) contact the CMS Secretariat, or the SPREP Secretariat, or WWF if they would like to make any edits to the Country Profile, or if their Matrix/Country Profile is still incomplete, in order to receive assistance filling it in;
 - e) contact WWF to help financially support the completion of the review, and the inclusion of ecological connectivity; and
 - f) contact WWF or shellbank@wwfint.org if they would like to find out more, contribute, participate or help fund ShellBank.



Marine Turtle Legislative Review in the Asia-Pacific Region

Draft Report

Prepared by Cecilia Fischer and Christine Madden

Note: There are comments in all incomplete Country Profiles, which were removed for the purpose of this Information Document. Parties interested to complete their profile are kindly requested to contact Ms. Cecilia Fischer (cfischer.consultant@gmail.com) and Ms. Christine Madden (cmadden@wwf.org.au).

December 2023

Prepared by Cecilia Fischer and Christine Madden

Cover Picture © Bastien Preuss / WWF France

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Abbreviations

ACES	Act on Conservation of Endangered Species of Wild Fauna and Flora (<i>Japan</i>)
ACMP	Arnavons Community Marine Park (<i>Solomon Islands</i>)
AFMA	Australian Fisheries Management Authority (<i>Australia</i>)
ASEAN	Association of Southeast Asian Nations
BIOT	British Indian Ocean Territory
BMB	Biodiversity Management Bureau (<i>Philippines</i>)
CBD	Convention on Biological Diversity
CCL	Curved Carapace Length
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNMI	Commonwealth of the Northern Mariana Islands
CTI-CFF	Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COP	Conference of Parties
DAO	Department Administrative Order (<i>Philippines</i>)
DAWR	Department of Agriculture Division of Aquatic and Wildlife Resources (<i>Guam, US</i>)
DENR	Department of Environment and Natural Resources (<i>Philippines</i>)
EEZ	Exclusive Economic Zone
EPBC	Environment Protection and Biodiversity Conservation Act (<i>Australia</i>)
ESA	Endangered Species Act (<i>US</i>)
FMS	Federated States of Micronesia
GEF	Global Environment Facility
IMO	International Maritime Organization
IOSEA	Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia
IUCN	International Union for Conservation of Nature
IWT	Illegal Wildlife Trade
KEPA	Kuwait Environment Public Authority (<i>Jordan</i>)
MA	Management Authority
MMR	Ministry of Marine Resources (<i>Cook Islands</i>)
MOU	Memorandum of Understanding
MPA	Marine Protected Area
MSAP	Multi-species Action Plan
MTAP	Marine Turtle Action Plan
MTLR	Marine Turtle Legislative Review
MTSG	Marine Turtle Specialist Group
NCW	National Center for Wildlife (<i>Saudi Arabia</i>)
NES	National Environment Service (<i>Cook Islands</i>)
NGO	Non-governmental organization
NOAA	National Oceanic and Atmospheric Administration
NParks	National Parks Board (<i>Singapore</i>)
OCC	Ocean Conservation Commitment
PCSD	Palawan Council for Sustainable Development (<i>Philippines</i>)
PERSGA	Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden
PNG	Papua New Guinea
PSMA	Port State Measures
RFMO	Regional Fisheries Management Organization

RMI	Republic of the Marshall Islands
RMU	Regional Management Unit
RPOA	Regional Plan of Action
SPREP	Secretariat of the Pacific Regional Environment Programme
SSME	Sulu-Sulawesi Marine Ecoregion
SWD	Sabah Wildlife Department (<i>Malaysia</i>)
TED	Turtle Excluder Device
TIHPA	Turtle Islands Heritage Protected Area
UAE	United Arab Emirates
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WARPA	Wild Animal Reservation and Protection Act (<i>Thailand</i>)
WRC	Wildlife Rescue Centre
WWF	World Wild Fund for Nature

Regional Fisheries Management Organizations

CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCBSP	Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CECAF	Fisheries Committee for the Eastern Central Atlantic
GFCM	General Fisheries Commission for the Mediterranean
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
NAFO	Northwest Atlantic Fisheries Organization
NASCO	North Atlantic Salmon Conservation Organisation
NEAFC	North-East Atlantic Fisheries Commission
NPFC	North Pacific Fisheries Commission
SEAFO	South-East Atlantic Fisheries Organisation
SIOFA	Southern Indian Ocean Fisheries Agreement
SPRFMO	South Pacific Regional Fisheries Management Organisation
WCPFC	Western and Central Pacific Fisheries Commission
WECAFC	Western Central Atlantic Fisheries Commission

Executive Summary

Marine turtle protection legislation differs between countries, which are likely to share the same or different (genetically distinct) marine turtle populations. If these migratory animals are protected in one country, but not protected in the next, this may render conservation efforts in the former fruitless, leading to stagnate marine turtle population recovery or decline, or decision maker demotivation. To better understand where differences between countries' legislations may lie and may need to be harmonized, calls have become louder in the international arena to conduct a legislative review, which has been enshrined in the objectives and activities of several reports, decisions, and action plans.

To head these calls, and assess the legislations and status of marine turtle protection in the Asia-Pacific Region, a Marine Turtle Legislative Review (MLR) has been underway since 2023, led by the World Wild Fund for Nature (WWF), supported by the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Secretariat and the Secretariat of the Pacific Regional Environment Programme (SPREP), and in close collaboration with the countries and territories in the region.

The World Wide Fund for Nature (WWF), in collaboration with the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Secretariat and the Secretariat of the Pacific Regional Environment Programme (SPREP), has taken on the endeavour to conduct a marine turtle legislative review, and initiated consultations with 51 countries and territories¹ in 2023. For this purpose, a dedicated, replicable Excel Matrix was developed (with the support of the Marine Research Foundation), asking countries to indicate which marine turtle protection measures are regulated by national legislation in the following categories: 1. Harvest, Direct take; 2. Permitted Fishing Gear (only to be filled in by countries where marine turtle harvest is legal); 3. Bycatch I - Fishing Gear; 4. Bycatch II – Prevention; 5. Captivity, excl. Tourism; 6. Tourism; 7. Trade; 8. Enforcement; 9. Habitat Protection; 10. Research; and 11. Treaties.

Over the course of 2023, the Matrix was sent out by the CMS and SPREP Secretariats to 450 stakeholders in 51 countries and territories in the Asia-Pacific region, reaching 390 of these, after email addresses were verified. Several follow-up emails, dispersed throughout the year, were sent by the Consultant contracted by WWF for this task and the Secretariats. Once the Matrix was received back from the country, a country profile was drafted based on the Matrix results, desktop research, and conversations by phone and email, including information on Marine Turtle History and Status, Presence and Nesting of Marine Turtle Species in the Country, National Laws, Protection Status (fully/partially/not protected), Opportunities and Challenges, International and Regional Instruments, and Matrix results.

For those countries that did not respond, desktop research was conducted, as well as conversations with WWF country office staff. Once the first draft of the Country Profile had been completed, it was shared back to the country representatives, who had sent in the Matrix, asking for their approval.

In total, Matrix responses from 17 countries and five territories were received, which were used for this preliminary analysis, but are in different stages of approval (see draft report methodology chapter). To date, the review has been fully completed by 10/51 countries/territories (20%). In total, 4/9 (44%) countries responded in Southeast Asia, 2/3 (67%) countries responded in East Asia, 3/5 (60%) countries responded in South Asia, 4/8 (50%)

¹ In the following only the term “country/ies” is used, which includes responses from territories. Only in the analysis, are these terms used separately.

countries responded in Western Asia, and 8/26 (31%) countries responded in the Pacific/Oceania.

The status of completion per country can take one of the following stages and is per submission of this draft report in December 2023:

- Matrix not filled in and Country Profile not reviewed (3 territories, 25 countries)
- Matrix not filled in, but Country Profile reviewed (1 country)
- Matrix filled in, but Country Profile not reviewed (3 territories, 5 countries)
- Matrix filled in and Country Profile reviewed (minor outstanding items) (2 territories, 2 countries)
- Matrix filled in and Country Profile reviewed (complete) (10 countries)

This preliminary assessment yielded the following results:

Harvest/Direct Take (n=21)

In total, nine countries and four territories selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. Six more countries/territories also indicated *strictly no take*, totalling 19 territories and countries selecting that option. The “sub-category” focus was on *no egg taking, no direct take/purposeful capture and removal of turtles from the sea, and no taking from within management area/protected area*.

Taking for research/educational purposes where a permit IS required was selected by most countries/territories (13), followed by *taking/using for traditional purposes where a permit IS required* (5). Three countries/territories allowed *taking of marine turtles according to a minimum/maximum size limit* (New Caledonia; Japan; Saudi Arabia) and *according to a certain sex preference* (Okinawa, Japan (some prefectures only); Kuwait (only for scientific research), and Saudi Arabia), and four countries/territories allowed *taking according to a maximum quota* (New Caledonia; Okinawa, Japan; Kuwait (only for scientific research), and Saudi Arabia).

The legislation of Japan, Kuwait, New Caledonia (South), and Palau was reported to *incorporate relevant traditional knowledge, customary marine tenure and practices*, and Kuwait and New Caledonia (South) stated to have *developed and published indigenous or community-based conservation or protection plans that regulate marine turtle use*. Seven countries/territories indicated to have a *National Conservation Action Plan for Marine Turtles in place*: India; Iran; New Caledonia; Sarawak, Malaysia; Saudi Arabia; Sri Lanka; and UAE.

Least selected were options, where either no permit was required for certain activities or harvest was allowed in an unrestricted manner. Only one country/territory each selected *taking/using for traditional purposes where a permit IS NOT required* (Sabah, Malaysia, however, only for own consumption, not for sale), *taking of marine turtles according to a minimum/ maximum size limit, where a permit IS NOT required* (Palau), and *all taking of eggs and marine turtles allowed without restrictions* (Cook Islands, only on Palmerston Island).

It should be noted that the number of countries/territories to which the *taking without restrictions* statement applies is most probably higher, if the exceptions are counted that many countries have with regard to the harvest of marine turtles by specific tribes, communities, or other selected groups, which may or may not be part of the country’s legislation. Of the countries known to have these exceptions, none other were indicated in the Matrix.

Permitted Fishing Gear (n=1)

Only Saudi Arabia selected all four options (Spearing; Hook and Line; Turtle Rodeo/hand-caught; Other relevant fishing gear/types of nets), but indicated that this is only allowed for scientific research. No other country/territory filled in this Sheet, even though several were identified, where at least some of the harvest is legal for certain local tribes and/or

communities. It is assumed, however, that the fishing gear used for these purposes falls into the three main categories above, as turtles are caught on a small scale, mostly for own consumption/subsistence purposes by these island tribes.

Bycatch I – Fishing Gear (n=15)

Trawl nets, gill nets, purse seine, and other relevant fishing gear were the gear types selected most often to be regulated by national legislation. Other relevant fishing gear mentioned were: giant set bag net, set net, push net, harpooning for marine mammals, moxi net fishing operations, trammel net, electric shock, explosives, chemicals and toxic substances, or methods that are harmful in any other way to living aquatic resources, kesokes/gill net/surround net, and dip nets. It should be noted that, where marine turtle take by any method is prohibited in the legislation, countries selected all listed gears, even though these may not be mentioned specifically by name in the legislation.

Bycatch II – Prevention (n=17)

In total, most (12) countries/territories have legislation that *requires them to report marine turtle bycatch of all turtles to relevant authorities*. Eleven countries/territories have legislation that *regulates use turtle-friendly fishing gear*, such as TEDs and circle hooks, and 10 *published a turtle handling guide*. Nine have legislation *requiring vessel tracking systems for fishing vessels*, and stipulating to *assess and record the turtle status when accidentally caught*. Six countries/territories have *no guidelines in place for marine turtle release if caught accidentally*, and two *only report marine turtle bycatch to the authorities if the turtle is tagged*.

Captivity, excl. Tourism (n=17)

For most countries/territories (11), *keeping marine turtles in captivity strictly not allowed*. Ten countries/territories indicated that turtles can be *translocated for rehabilitation purposes, where a permit IS required*. Eight countries also have a legislation that allows this, if the nest is in a *high-risk area*. Another eight countries' legislation provides for *turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required*.

Only three countries/territories have legislation that allows *turtles to be kept in captivity in zoos and aquaria*, and only the legislation of one part of a country allows for *turtle eggs to be translocated if the nest is in a high-risk area, without a permit*.

All countries/territories required a *permit for hatchlings to be released, for turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, and for turtles to be translocated for rehabilitation*. The size of a turtle was no decisive criteria for the turtle to be kept in any country/territory. All countries/territories had certain *restrictions on captivity in relation to marine turtles*.

Tourism (n=13)

Most (8) countries and territories allow *marine turtle tourism-related activities in the wild, where a permit IS required, except in New Zealand*, whereas in five countries/territories, *turtle-related tourism activities are strictly not allowed*. Whereas two countries, Korea and the Philippines (PCSD), *prohibit the head-starting of hatchlings*, the legislation of four countries, Japan, New Caledonia (South), Saudi Arabia, and UAE, *allows it*. Malaysia (Federal level and Sabah), Saudi Arabia, and UAE allow for turtles to be *kept in captivity for tourism/income-generating/hobby purposes, where a permit IS required*. *Guidelines for tourism best practices were developed and published* in four countries: Japan; Malaysia (Federal level); Pitcairn Islands, UK; and Sri Lanka.

Trade (n=21)

The large majority of responding countries/territories has *legislation that strictly prohibits the local sale of turtles (19), strictly prohibits the sale of turtle eggs (18), and strictly prohibits the*

local sale of any products derived from turtles (17). The large majority of responding countries/territories also strictly prohibits the export of turtles (18), strictly prohibits the export of turtle eggs (18), and strictly prohibits the export of any products derived from turtles (15).

When Japan and Saudi Arabia indicated that the *export of turtles, turtle eggs, and other derivatives/products is allowed with a permit*, they most probably referred to CITES (like Saudi Arabia explicitly stated). However, countries that selected *export of turtles strictly prohibited* will most probably also allow trade under CITES.

No permit is required for the local sale of turtles in New Caledonia (North Province) and in Palau (except hawksbills), for the local sale of turtle eggs in Japan and New Caledonia (North Province), and for any products derived from turtles in New Caledonia (North Province) and in Palau (except from hawksbills and eggs of any species). A permit is required for the local sale of turtles in Malaysia (Federal level/Johor: eggs can only be sold to the Department of Fisheries) and for the local sale of any products derived from turtles in Japan.

Enforcement (n=21)

The legislation of most countries and territories prohibits harming marine turtles, which is enforced by law (20). In 17 of these, harming marine turtles is punishable by incarceration. In three² countries/territories, these actions are punished by imposing a fine only: Cook Islands, Saudi Arabia, and Wallis and Futuna. The max. no. of years in prison for harming a marine turtle, ranges from 1 month to 12 years, and the max. fine for harming a marine turtle, ranges from USD 4.72-614,321 across all countries/territories.

Ten countries/territories indicated to use community members as turtle rangers/guardians/monitors and governmental programs are used to support these efforts, and eight reported that WRCs are available and adequately equipped to house marine turtles temporarily or long-term after confiscation.

A national red list assessment of marine turtles, which follows IUCN Red List Criteria, was done and has been published by 12 countries/territories, and WRC manuals were developed and published by Iran and Korea.

Habitat Protection (n=18)

Most countries and territories protect both their nesting beaches and foraging grounds (16). This is followed by the establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats (12). The lowest number of countries/territories have legislation that regulates light pollution near nesting beaches (8) and the minimum distance from high-tide mark to buildings (5).

Research (n=19)

No country or territory allows research on marine turtles or the collection of genetic samples without a permit. Most countries (18) allow the collection of genetic samples from marine turtles conducted, where a permit IS required. For 12 countries, only non-lethal sampling of turtles for research is allowed, where a permit IS required, however, several countries selected exceptions where lethal sampling is indeed allowed, at most, activity 1) (selected by 11 countries/territories, including the ones allowing lethal sampling). In 10 countries/territories, lethal sampling of marine turtles for research allowed, where a permit IS required. No country developed and published euthanasia guidelines.

International/Regional Treaties and Agreements

With 45 countries/territories, UNCLOS is the convention most ratified, closely followed by the CBD, with 44 ratifications. CITES (41), Ramsar (40), and RFMOs (39) follow suit. Least ratified

² Results for New Caledonia require confirmation.

are the PSMA (21), the CMS (22), and the IOSEA Marine Turtle MOU (26). Some agreements are very regional in nature, such as the ASEAN Marine Turtle MOU, CTI-CFF, SSME Regional Action Plan, or SPREP, which explains their lower numbers.

Marine Turtle Protection Status

Most countries/territories in the Asia-Pacific have legislation in place that fully protects marine turtles, either explicitly, through legislation specifically protecting marine turtles and/or National Marine Turtle Action Plan present (14) or implicitly, through legislation protecting wildlife in general, or turtles listed as protected species, or mentioned in the Act (18). In 18 countries/territories, turtles are partially protected, which often is due to exceptions made for local tribes and communities, e.g. for subsistence hunting, or a geographical limitation and/or different levels of protection throughout the country, with certain States or Islands exempted. According to the review, there are only two countries/territories, where turtles are not yet protected.

Based on these results, 10 recommendations were developed at the end of the review. It is planned that the current draft will be presented at the CMS COP14 in February 2024 via an information document, as well as at subsequent IOSEA and SPREP meetings to Parties and Members, respectively.

DRAFT

1. Introduction

Marine turtles provide crucial ecosystem services to humans and to their natural environment (Brander et al., 2021). But they also ensure that reefs remain healthy, that seagrass beds grow, and that beach vegetation receives nutrients to thrive. Turtles continue to astonish us, with their physiology, their longevity, how little they have changed over the millions of years they have been in existence. And yet, this very existence is in peril because of anthropogenic threats: bycatch, overexploitation, illegal trade, coastal development, net entanglement, pollution, and climate change are only some of the high-level challenges all seven species of marine turtles are facing.

Many countries have granted turtles some level of protection: whether by including them in the definition of their wildlife or fish-species, by including sections on marine turtle protection in their wildlife and fisheries acts, by designating them as protected species, by drafting marine turtle action plans, by issuing marine turtle-specific legislation, or by protecting their habitats. Legislation, however, differs between countries, which may share the same turtle populations. Protected in one, but not protected in the next, may render conservation efforts in the former fruitless, which may lead to demotivated law enforcement officers, as well as dwindling turtle populations. This is exacerbated by the high migratory activity of these species, nesting in one country, and foraging in another. To better understand where stark differences between countries' legislations may lie and may need to be harmonized, calls have become louder in the international arena to conduct a legislative review, which has been enshrined in the objectives and activities of several reports, decisions, and action plans.

To head these calls, and assess the legislations and status of marine turtle protection in the Asia-Pacific Region, this Marine Turtle Legislative Review (MTLR) was conducted, led by the World Wild Fund for Nature (WWF), supported by the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Secretariat of the Pacific Regional Environment Programme (SPREP), and in collaboration with the countries and territories in the region.

It is envisioned for the MTLR to be shared with all countries that have been part of this review, to better understand their neighbours' and others' legislation and to possibly initiate talks on how certain legal aspects can be adjusted and matched. The overall objective, of course, is to ensure healthy marine turtle populations and stable population numbers, as well as a balance between marine turtle protection and sustainable use by indigenous tribes. The MTLR is supposed to be used as a tool, also providing information on the global status of turtles, connectivity in the region, Regional Management Units (RMUs), and relevant international and regional agreements and treaties.

If we want to honour the role these species play for our well-being, institutionalized protection is the first step, in order to distinguish right from wrong, and to be able to convict those, who did not value the life and benefits marine turtles provide. It is hoped that the information provided in this review can help advance legislative alterations and progress, for the sake of marine turtle survival. The next step then is to ensure that the laws in place are also implemented: over 1.1 million marine turtles are estimated to have been exploited between 1990 and 2020 against existing laws prohibiting their use (Senko et al., 2022).

2. Rationale for a Marine Turtle Legislative Review

2.1. Marine Turtle Population Trends and Conservation Efforts

For centuries, marine turtles have played a central role for coastal communities in the Asia-Pacific region: used for traditional, cultural, social and economic purposes, turtles are part of many stories and used to be served only to kings and priests in many islands. Later on, turtle meat and eggs were valued as sustenance, while shells were sought after for ornamental and ceremonial purposes (WWF, 2005). What started out as a traditional source of food became a business over time, with customary beliefs about the supposed medicinal and aphrodisiac properties of turtle eggs encouraging a large commercial market, especially in Southeast Asia (WWF, 2005). Demand for tortoiseshell items increased especially in East Asia, where demand for ornaments and jewellery was high.

A 2014 Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia (IOSEA) report on the “[Illegal Take and Trade of Marine Turtles in the IOSEA Region](#)” revealed that the consumption of turtle meat reportedly occurs in 75% of IOSEA Signatory States. The direct exploitation of turtles (shells, meat, eggs) to be largely concentrated in the Coral Triangle region, with products mostly shipped to East Asia, where demand was said to be on the rise (CMS-IOSEA and WWF, 2015). Illegal trade patterns and routes in the sub-region were confirmed in a [2019 TRAFFIC report](#), stating that illegal trade of marine turtles persists, as well as some of the challenges in its regulation and enforcement.

In more detail, global patterns of illegal marine turtle exploitation show that, from 1990 to 2020, green turtles were the most exploited species (56%), followed by hawksbills (39%) (Senko et al., 2022). The authors also analysed species-specific exploitation data across RMUs, and found that The RMUs with the highest exploitation for each species between 1990 and 2010 included, among others, the West Pacific/Southeast Asia hawksbill RMU, and the Southwest Pacific green turtle RMU, and among the RMUs with an overall increase in exploitation, the West Pacific/Southeast Asia hawksbill RMU belonged to one of four “high-risk” populations (Senko et al., 2022).

The International Union for Conservation of Nature (IUCN) Red List categorizes all turtles as “threatened”, except for the flatback turtle, which remains data deficient. The respective species categories are listed in Table 1.

Table 1. Marine Turtle IUCN Red List Status, Source: (IUCN, 2023)

Marine Turtle Species	IUCN Red List Status	Trend
Green turtle <i>Chelonia Mydas</i>	Endangered	Decreasing
Hawksbill turtle <i>Eretmochelys imbricata</i>	Critically Endangered	Decreasing
Olive ridley turtle <i>Lepidochelys olivacea</i>	Vulnerable	Decreasing
Loggerhead turtle <i>Caretta caretta</i>	Vulnerable	Decreasing
Leatherback Turtle <i>Dermochelys coriacea</i>	Vulnerable	Decreasing
Kemp's ridley turtle <i>Lepidochelys kempii</i>	Critically Endangered	Unknown
Flatback turtle <i>Natator depressus</i>	Data deficient	Data deficient

International and regional protection regimes for marine turtles increased: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), under CMS and IOSEA, the SPREP Regional Marine Turtle Action Plan 2021-2025, a CMS-IOSEA Single Species Action Plan for the Hawksbill Turtle (*Eretmochelys Imbricata*) in South-East Asia and the Western Pacific Ocean Region, among others. All of these ensured that turtle catch, trade, import, and export are much more closely regulated today than before these treaties were in place. Domestic trade and possession, however, remains a loophole that only national legislation and appropriate enforcement can close.

The enforcement of national legislation depends on various factors, such as the availability of human and financial resources, required equipment, trained law enforcers, political will, level of corruption, security issues in the area, remoteness of islands, informal reliance on the “cultural use” exemption, etc. These are implementation barriers, which would need to be identified and addressed, in order to ensure the legislation will have the intended impact on the ground. This can help identify priority actions for each country.

Transboundary efforts to protect fauna and flora in general from wildlife crime have picked up over the last years, with countries training for joined operations and developing formal and informal networks to collaborate, which includes marine turtles. In 2022, Operation Thunder - a joint INTERPOL - World Customs Organization law enforcement operation taking place in over 100 countries, confiscated 1,190 turtles and tortoises, 1,304 units and 8 kg body parts, and in 2023, the annual operation confiscated thousands of turtle eggs (INTERPOL, 2023, 2022). This is particularly of value, seeing the importance of marine turtle migration routes and to recognise the responsibility in safekeeping these species during their migration by researching and protecting marine turtle connectivity (see Chapter 2.2). The transboundary nature of marine turtles poses significant challenges for conservation efforts. When turtle populations span multiple countries, it becomes essential for governments to collaborate and coordinate their conservation policies.

Other effort to better protect turtles include, among others, [ShellBank](#) – a global marine turtle genetic database developed by WWF, and a [marine turtle database](#), containing thousands of nesting data records and sea turtle telemetry tracks.

There have been previous endeavours to assess countries’ environmental or even marine turtle legislation on a regional scale, however, these efforts have been spatially limited to date, such as to the Indian Ocean (Al Ameri et al., 2022) or Oceania (conducted by SPREP in 2010 for marine turtle legislation, e.g. [in Fiji](#), and in 2018 for environmental legislation, e.g. [in Kiribati](#)). In conducting a review for the entire Asia-Pacific region, it is hoped to identify large-scale patterns, gaps, and opportunities, and to visualise the status of marine turtle protection.

2.2. Marine Turtle Connectivity in the Asia-Pacific

Marine turtles are known for their remarkable migratory behaviours, capable of travelling long distances to link distant foraging and nesting habitats. Understanding these connectivity patterns is fundamental for effective conservation strategies to protect these threatened species. Satellite telemetry has helped our understanding of marine turtle movements, providing precise and continuous tracking data. These technologies have revealed migratory routes between nesting and foraging habitats, showing the variability in migratory behaviour between and within species. While some studies have shown very regional movement, for example, hawksbill turtles in the eastern Pacific or green turtles on the southern Great Barrier Reef, others, such as loggerhead and leatherback turtles, have been tracked traversing entire ocean basins between nesting sites in Southeast Asia and foraging areas in the Central and Eastern Pacific.

While satellite telemetry offers unparalleled insights into specific migration tracks in real-time, flipper tagging has played a pivotal role in long-term studies of marine turtle movements. It has provided valuable information about life history traits and the movement of adult turtles between nesting and foraging sites. Genetic analysis can complement tracking methods to reveal the population structure and genetic diversity of marine turtles. Mitochondrial DNA studies have shown that there is significant genetic differentiation among populations, which suggests that there is limited gene flow over evolutionary timescales. Populations are generally identified as demographically independent when they are at distances of more than 500 km, but they have also been found to have population structures at distances as little as 75 km. Mixed stock analysis is a powerful tool that can be used to connect turtles in the marine environment, such as foraging areas and fisheries bycatch, to regional nesting populations. This statistical method analyses genetic data from multiple populations to determine the origin of turtles sampled in different locations. Therefore, it is an effective tool used to estimate the connectivity between foraging and nesting populations. These studies have revealed that foraging areas are often made up of turtles from multiple nesting populations, which are referred to as mixed stocks.

These studies have revealed complex patterns of connectivity, ranging from extensive transoceanic journeys to localized movements within regional seas. The process of turtle connectivity is complex and is influenced by ocean currents that carry turtles from their nesting beaches to different regional foraging areas. But while certain connectivity patterns are shared among marine turtle species, each species exhibits unique behaviours and challenges.

Green Turtles: Exhibiting strong site fidelity to both nesting and foraging areas.

Hawksbill Turtles: Their connectivity is often localised, with most movements occurring within regional seas. This restricted connectivity reflects their dependence on coral reef habitats, which provide essential foraging and nesting grounds.

Loggerhead Turtles: These turtles are renowned for their trans-oceanic journeys, demonstrating a broad range of migratory behaviours linked to ocean currents and temperature gradients. Their migratory routes can span entire ocean basins, highlighting their resilience and adaptability to diverse marine environments.

Leatherback Turtles: These turtles are the most pelagic marine turtles, traversing vast distances across entire ocean basins. Their extensive movements highlight their role as ecological connectors, facilitating the exchange of genetic material and ecological interactions among distant populations.

The intricate connectivity patterns revealed through satellite telemetry, flipper tagging, and genetic studies underscore the complexity of marine turtle life histories and the challenges in their conservation. These patterns vary significantly among species, ranging from extensive long-range movements to localised connectivity. Understanding these migratory patterns is crucial for developing effective conservation strategies that transcend national boundaries.

For instance, if a specific nesting beach is negatively impacted by coastal development in one country, the consequences could extend to foraging grounds in neighbouring countries, potentially impacting the survival of turtles from multiple populations. Therefore, effective conservation strategies must consider the connectivity of marine turtle populations, ensuring that protection measures are implemented across the entire range of each species. For nesting sites of green, hawksbill, olive ridley, loggerhead, and leatherback turtles, please refer to the [Pacific Islands Regional Marine Species Programme 2022–2026](#) by SPREP.

Collaboration among countries is essential for safeguarding marine turtle populations. International agreements, such as the CMS, or regional bodies, like SPREP, provide a

framework for cooperation and joint conservation efforts. By establishing and maintaining protected areas, regulating fishing activities, and reducing pollution, countries can collectively contribute to the long-term survival of marine turtles.

For some species and regions, we have a relatively comprehensive understanding of connectivity. However, for other species and regions, our knowledge is much more limited.

Despite these gaps, our growing understanding of marine turtle connectivity suggests that we can expect connectivity within several thousand kilometres for many species. These localised movements are often linked to the distribution of essential foraging and nesting habitats. However, there is also evidence of long-distance migrations, with individual turtles travelling over 10,000 kilometres or more. These rare events can connect populations across entire ocean basins, highlighting the interconnectedness of marine turtle populations worldwide.

As we continue to gather more data and refine our tracking technologies, our understanding of marine turtle connectivity will undoubtedly deepen. This knowledge will be crucial for developing effective conservation strategies that safeguard these threatened species and the ecosystems they rely on.

2.3. International and Regional Agreements and Bodies calling to strengthen and harmonise Marine Turtle Legislation

2.3.1. Association of Southeast Asian Nations

- Article 4, Paragraph 2 of the 1997 **Memorandum of Understanding (MOU) on Association of Southeast Asian Nations (ASEAN) Sea Turtle Conservation and Protection** states under “Proposed Mechanism”: *“When necessary, Parties to this MOU would consider harmonizing their existing national laws and regulations, and enact new laws on sea turtle conservation and protection to suit with current situations.”*

2.3.2. CITES

- **Resolution Conf. 19.5** “Conservation of and trade in marine turtles”, as adopted at the **CITES Conference of Parties (COP) 19**, “[U]rges Parties whose national legislation is not sufficient to control the unsustainable harvest of and trade in marine turtles, to enact legislation to protect and manage these species appropriately”,³ which requires a legislative review as a first step.

2.3.3. Convention on Migratory Species

- The **Single Species Action Plan for the Hawksbill Turtle (*Eretmochelys Imbricata*) in South-East Asia and the Western Pacific Ocean Region (2022)** confirmed that there are varying levels of national and state laws, legislative frameworks, policies and a wide range of penalties afforded to (hawksbill) turtles throughout the South-East Asia and western Pacific region. It was also observed that, in some cases, different laws are used across jurisdictions that are conflicting, which can be problematic when

³ <https://cites.org/sites/default/files/documents/COP/19/resolution/E-Res-19-05.pdf>

managing highly migratory species that travel between countries and are afforded different levels of protection across its range. This was taken up under

- Action 1.1.1 *“Conduct a review of protective legislation and identify problematic inconsistencies between countries”, with possible modes of deliveries noted as “Contribute and participate in WWF’s marine turtle legislative and baseline status review” and “Undertake as part of National and Regional Plans of Action for marine turtles”*
- Action 1.2.1 *“Update, complete and implement Marine Turtle National Plans of Action (Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF) or equivalent management plans), community-led traditional use agreements, and in consultation with other range states, CTI-CFF Regional Plan of Action (RPOA) and SPREP’s Regional Marine Turtle Action Plan 2023-2028, ensuring that they address relevant recommendations in CITES information document CoP18 Inf. 18 and related Decisions 18.211-18.213 (...)”*
- The **IOSEA Work Programme 2020-2024**, under Objective 1 “Reduce direct and indirect causes of marine turtle mortality” of the Conservation Management Plan
 - Programme No. 1.5 *“Prohibit the direct harvest (capture or killing) of, and domestic trade in, marine turtles, their eggs, parts or products, whilst allowing exceptions for traditional harvest by communities within each jurisdiction provided that: such harvest does not undermine efforts to protect, conserve and recover marine turtle populations and their habitats; and the marine turtle populations in question are able to sustain the harvest”*
 - Programme No. 5.2 *“Assist Signatory and non-Signatory States, upon request, to develop and implement national, sub-regional and regional action plans for the conservation and management of marine turtles and their habitats”*
 - Programme No. 5.5 *“Strengthen and improve enforcement of conservation legislation”*

2.3.4. International Maritime Organization

- In 2022, the International Maritime Organization (IMO) issued **Guidelines for the Prevention and Suppression of the Smuggling of Wildlife on Ships Engaged in International Maritime Traffic (FAL.5/Circ.50)**, wherein it states: *“CITES Member Parties have designated management, scientific and enforcement authorities, as well as proper procedures, for effective implementation of the CITES licensing system. IMO Member States are therefore encouraged to the greatest extent possible to examine, enact, amend or adapt existing legislation, to enhance protection of wildlife and the protection status of national endangered species, and combat illegal wildlife trade.”*

2.3.5. Secretariat of the Pacific Regional Environment Programme

- The **Pacific Islands Regional Marine Species Programme 2022–2026** under the **Multi-species Action Plan (MSAP)** and the **Marine Turtle Action Plan (MTAP)**:
 - MSAP No. 6.1.1 *“Encourage the creation or review of national action plans (or equivalent) for each marine species group”* – Timeframe: 2026
 - Indicator: *“Members have national action plans updated, completed, or drafted for two or more species groups.”*

- MSAP No. 6.1.3 *“Ensure the conservation status of threatened and migratory marine species is considered when developing new legislation or policy. Reduce inconsistencies between different Acts and policies relating to these species, e.g. between fisheries and environment.”*
 - Indicator: *“New and reviewed legislation considers the conservation status of threatened and migratory marine species, and resolves any legislative or policy inconsistencies.”* – Timeframe: 2026
- MSAP No. 6.1.4 *“Proactively strengthen marine species and habitat protection in national legislation and policy, including national biodiversity strategies and action plans. Ensure collaboration between government agencies to achieve cross-sector integration.”*
 - Indicator: *“There is increased protection for marine species in legislation and actions are incorporated into national implementation plans, action plans, strategies or other national programmes or projects.”* – Timeframe: 2025
- MSAP No. 6.1.5 *“Review and update national CITES and fisheries legislation and regulations relating to traded marine species to: ensure inter-operability and improve management; support the use of electronic CITES permit systems.”*
 - Indicator: *“CITES and fisheries legislation has been reviewed.”* – Timeframe: 2026
- MTAP No. 8.1.3 *“Build in-country capacity to enforce turtle conservation policies and legislation. Support governments seeking to develop or revise national CITES legislation to improve the conservation status of all marine turtles.”*
 - Indicators: *“Monitoring, Control, and Surveillance regional training workshops undertaken to support CITES and CMS.”* and *“Governments are supported to update national CITES legislation to further protect marine turtles.”*
- In 2022, SPREP published the Pacific Islands Regional Marine Species Programme 2022-2026, which consists of five different Action Plans for managing and conserving marine species. These include the Whales and Dolphins Action Plan, Dugongs Action Plan, Marine Turtles Action Plan, Sharks and Rays Action Plan, and Seabirds Action Plan. The Turtle Action Plan has the goal to conserve marine turtles and their habitats, recognizing the traditions of the peoples of the Pacific islands region. One Theme of the Action Plan is “Legislation, policy, and management”, with the objective to “[e]nsure a cohesive, proactive, and transboundary approach in policy and legislation that incorporates traditional knowledge and customary marine tenure”. Suggested actions focus on phasing out the harvest of hawksbill and leatherback turtles and their eggs.

2.3.6. The Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)

- In 2004, the PERGSA published the Regional Action Plan for the Conservation of Marine Turtles and their Habitats in the Red Sea and Gulf of Aden. In Chapter 7, Integrated Management for Marine Turtles, it is acknowledged that, within the PERSGA member states, there often exists a level of overlap, or gaps in the legal mandates of environmentally-associated agencies and legislation is often lacking or insufficiently focused on marine turtles and their conservation needs. It is further mentioned that marine turtle conservation will ultimately depend on the effective integration of management actions based on sound legislative frameworks, land-use planning, stakeholder participation, and regional cooperation. Action 2: Enforcement

and Legislation, calls for a review of national policies and laws, where appropriate, to address gaps or impediments to marine turtle conservation, among others, addressing the illegal trade.

2.4. Regional Management Units

The RMU framework was developed in 2010 and is meant to organize marine turtles into units of protection below the level of species, but above the level of nesting populations, within regional entities (Wallace et al., 2010). RMUs can thus provide valuable guidance to marine spatial planning initiatives, allow for identification of geographic barriers to gene flow, provide a framework for identifying data gaps, and evaluating the conservation status of marine turtles (Wallace et al., 2010). An updated version of the RMUs was published in 2023 (Wallace et al., 2023). To better understand the connectivity of populations, and ensuing conservation actions, the RMUs were attributed to the countries included in this review, presented in Table 2.

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Table 2. Marine Turtle Regional Management Units

	Green Turtle <i>Chelonia Mydas</i>	Hawksbill turtle <i>Eretmochelys Imbricata</i>	Olive ridley turtle <i>Lepidochelys olivacea</i>	Loggerhead turtle <i>Caretta caretta</i>	Leatherback turtle <i>Dermochelys coriacea</i>	Flatback turtle <i>Natator depressus</i>
Legend:	Wallace et al. (2023)	Marine Turtle Specialist Group (MTSG) Regional Reports (2020, 2021)	Wallace et al. (2023) and MTSG Regional Reports			
Southeast Asia						
Brunei Darussalam						
Cambodia						
Indonesia	East Indian Ocean (CM-EIO)	West Pacific/Southeast Asia (CM-W PAC)	West Pacific (LO-W PAC)		West Pacific (DC-WPAC)	
	West Pacific/Southeast Asia (CM-W PAC)					
Malaysia	East Indian Ocean (CM-EIO)	West Pacific/Southeast Asia (CM-W PAC)	West Pacific (LO-W PAC)		West Pacific (DC-WPAC)	
	West Pacific/Southeast Asia (CM-W PAC)					
Myanmar						
Philippines	East Indian Ocean (CM-EIO)					
	West Pacific/Southeast Asia (CM-W PAC)					
Singapore						
Thailand						
Vietnam	East Indian Ocean (CM-EIO)					

	Green Turtle <i>Chelonia Mydas</i>	Hawksbill turtle <i>Eretmochelys Imbricata</i>	Olive ridley turtle <i>Lepidochelys olivacea</i>	Loggerhead turtle <i>Caretta caretta</i>	Leatherback turtle <i>Dermochelys coriacea</i>	Flatback turtle <i>Natator depressus</i>
	West Pacific/Southeast Asia (CM-W PAC)					
East Asia						
China	Pacific Northwest (CM-PNW) (HK and TW)	Pacific West (EI-PW) (HK and TW)	Pacific West (LO-PW) (HK and TW)	Pacific North (CC-PN) (HK and TW)	Pacific West (DC-PW) (HK and TW)	
	East Indian Ocean (CM-EIO)					
	West Pacific/Southeast Asia (CM-W PAC)					
Japan	Pacific Northwest (CM-PNW)	Pacific West (EI-PW)	Pacific West (LO-PW)	Pacific North (CC-PN)	Pacific West (DC-PW)	
	West Central Pacific (CM-WC PAC)	West Pacific/Southeast Asia (EI-W PAC)		North-West Pacific (CC-NW PAC)		
Korea	Pacific Northwest (CM-PNW)	Pacific West (EI-PW)	Pacific West (LO-PW)	Pacific North (CC-PN)	Pacific West (DC-PW)	
South Asia						
Bangladesh	North-East Indian Ocean (CM-NEIO)	North-East Indian Ocean (EI-NEIO)	North-East Indian Ocean (LO-NEIO)		North-East Indian Ocean (DC-NEIO)	
India	North-East Indian Ocean (CM-NEIO)	North-East Indian Ocean (EI-NEIO)	North-East Indian Ocean (LO-NEIO) <i>Arr.</i>		North-East Indian Ocean (DC-NEIO)	
	North-West Indian Ocean (CM-NWIO)	North-West Indian Ocean (EI-NWIO)	North-East Indian Ocean (LO-NEIO)			
			West Indian Ocean (LO-WIO)			
Iran	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)				

	Green Turtle <i>Chelonia Mydas</i>	Hawksbill turtle <i>Eretmochelys Imbricata</i>	Olive ridley turtle <i>Lepidochelys olivacea</i>	Loggerhead turtle <i>Caretta caretta</i>	Leatherback turtle <i>Dermochelys coriacea</i>	Flatback turtle <i>Natator depressus</i>
Pakistan	North-East Indian Ocean (CM-NEIO)		West Indian Ocean (LO-WIO)			
Sri Lanka	North-East Indian Ocean (CM-NEIO)	North-East Indian Ocean (EI-NEIO)	North-East Indian Ocean (LO-NEIO)	North-East Indian Ocean (CC-NEIO)	North-East Indian Ocean (DC-NEIO)	
			West Indian Ocean (LO-WIO)			
Western Asia						
Bahrain	North-West Indian Ocean (CM-NWIO)	North-West Indian Ocean (EI-NWIO)	West Indian Ocean (LO-WIO)			
Jordan						
Kuwait	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)				
	North-West Indian Ocean (EI-NWIO)					
Oman	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)	West Indian Ocean (LO-WIO)	North-West Indian Ocean (CC-NWIO)		
	North-West Indian Ocean (EI-NWIO)					
Qatar	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)				
Saudi Arabia	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)				
	North-West Indian Ocean (EI-NWIO)					
UAE	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)				

	Green Turtle <i>Chelonia Mydas</i>	Hawksbill turtle <i>Eretmochelys Imbricata</i>	Olive ridley turtle <i>Lepidochelys olivacea</i>	Loggerhead turtle <i>Caretta caretta</i>	Leatherback turtle <i>Dermochelys coriacea</i>	Flatback turtle <i>Natator depressus</i>
Yemen	North-East Indian Ocean (CM-NEIO)	North-West Indian Ocean (EI-NWIO)	West Indian Ocean (LO-WIO)	North-West Indian Ocean (CC-NWIO)		
Pacific/Oceania						
Australia	East Indian Ocean (CM-EIO)	South-East Indian Ocean (EI-SEIO)	West Pacific (LO-W PAC)	South-West Pacific (CC-SW PAC)		South-East Indian Ocean (ND-SEIO)
	Southwest Pacific (CM-SW PAC)	South-West Pacific (EI-SW PAC)				South-West Pacific (ND-SW PAC)
Cook Islands	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)				
		West Central Pacific (EI-WC PAC)				
Federated States of Micronesia	West Central Pacific (CM-WC PAC)	West Central Pacific (EI-WC PAC)	West Pacific (LO-W PAC)		West Pacific (DC-W PAC)	
Fiji	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)		South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
French Overseas Departments and Territories						
A. French Polynesia	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
B./C. New Caledonia	Southwest Pacific (CM-SW PAC)	South central Pacific (EI-SC PAC)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
				South-West Pacific (CC-SW PAC)		
D. Wallis and Futuna						
Kiribati	South Central Pacific (CM-SC PAC)	Unidentified (EI-UnID)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
	West Central Pacific (CM-WC PAC)		East Pacific (LO-E PAC)			
Marshall Islands	West Central Pacific (CM-WC PAC)	West Central Pacific (EI-WC PAC)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	

	Green Turtle <i>Chelonia Mydas</i>	Hawksbill turtle <i>Eretmochelys Imbricata</i>	Olive ridley turtle <i>Lepidochelys olivacea</i>	Loggerhead turtle <i>Caretta caretta</i>	Leatherback turtle <i>Dermochelys coriacea</i>	Flatback turtle <i>Natator depressus</i>
Nauru	South Central Pacific (CM-SC PAC)	West Central Pacific (EI-WC PAC)				
New Zealand	South Central Pacific (CM-SC PAC)		West Pacific (LO-W PAC)		West Pacific (DC-W PAC)	
	West Central Pacific (CM-WC PAC)					
	Southwest Pacific (CM-SW PAC)					
Niue	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)				
Palau	West Central Pacific (CM-WC PAC)	West Central Pacific (EI-WC PAC)	West Pacific (LO-W PAC)		West Pacific (DC-W PAC)	
Papua New Guinea	South Central Pacific (CM-SC PAC)	Southwest Pacific (EI-SW PAC)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	Southwest Pacific (ND-SW PAC)
	Southwest Pacific (CM-SW PAC)	Unidentified (EI-UnID)				
	West Central Pacific (CM-WC PAC)					
Samoa	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)		South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
		West Central Pacific (EI-WC PAC)				
Solomon Islands	Southwest Pacific (CM-SW PAC)	Southwest Pacific (EI-SW PAC)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
Timor-Leste						
Tokelau	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)		South Pacific (CC-S PAC)		
		Unidentified (EI-UnID)				

	Green Turtle <i>Chelonia Mydas</i>	Hawksbill turtle <i>Eretmochelys Imbricata</i>	Olive ridley turtle <i>Lepidochelys olivacea</i>	Loggerhead turtle <i>Caretta caretta</i>	Leatherback turtle <i>Dermochelys coriacea</i>	Flatback turtle <i>Natator depressus</i>
Tonga	South Central Pacific (CM-SC PAC)	West Central Pacific (EI-WC PAC)		South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
Tuvalu	Southwest Pacific (CM-SW PAC)	Southwest Pacific (EI-SW PAC)		South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	
United Kingdom – British Overseas Territories						
A. Pitcairn Islands						
B. BIOT		South-West Indian Ocean (EI-SWIO)				
United States of America – Territories in the Pacific						
A. American Samoa (US)	South Central Pacific (CM-SC PAC)	South central Pacific (EI-SC PAC)	West Pacific (LO-W PAC)		West Pacific (DC-W PAC)	
		West Central Pacific (EI-WC PAC)				
B. Commonwealth of Northern Mariana Islands	West Central Pacific (CM-WC PAC)	West Central Pacific (EI-WC PAC)				
C. Guam	West Central Pacific (CM-WC PAC)	West Central Pacific (EI-WC PAC)			West Pacific (DC-W PAC)	
Vanuatu	Southwest Pacific (CM-SW PAC)	Southwest Pacific (EI-SW PAC)	West Pacific (LO-W PAC)	South Pacific (CC-S PAC)	West Pacific (DC-W PAC)	

3. Methodology

3.1. Data Gathering Process

Parties to the CMS and Members of SPREP were informed via an email and attached letter about the MTLR, sent by the two respective Secretariats, and were asked for their support in this endeavour led by the WWF-Coral Triangle Programme. In parallel, WWF national offices were contacted and asked to provide assistance, should countries require it, and to actively reach out to the relevant agencies.

Based on a previous CMS survey conducted on marine turtle legislation in Fiji, the Republic of the Marshall Islands, the Solomon Islands, and Tuvalu in October 2010, a questionnaire was developed in an Excel format. Countries were asked to select (“X”) specific statements related to the conservation of marine turtles, e.g. *“Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required”* or *“Turtles kept in captivity for tourism/income-generating/hobby purposes, where a permit IS NOT required”*, and thus to decide whether these activities are allowed or prohibited under national legislation, and to attribute each selected statement to the corresponding legislation. Some open questions were added, as well, e.g. asking for the maximum number of years of imprisonment for harming a marine turtle. The Excel file consisted of a sheet with instructions, as well as sheets focusing on the following categories: 1. Harvest, Direct take; 2. Permitted Fishing Gear (only to be filled in by countries where marine turtle harvest is legal); 3. Bycatch I - Fishing Gear; 4. Bycatch II – Prevention; 5. Captivity, excl. Tourism; 6. Tourism; 7. Trade; 8. Enforcement; 9. Habitat Protection; 10. Research; and 11. Treaties.

The Matrix was sent out by the CMS and SPREP Secretariats to 450 stakeholders in 51 countries and territories⁴ in the Asia-Pacific region, reaching 390 of these, after email addresses were verified. Several follow-up emails, dispersed throughout the year, were sent by the Consultant and the Secretariats. Once the Matrix was received back from the country, a country profile was drafted based on the Matrix results, desk research, and conversations by call and email, with information on Marine Turtle History and Status, Presence and Nesting of Marine Turtle Species in the Country, National Laws, Opportunities and Challenges, International and Regional Instruments, and the Matrix results. For those countries that did not respond, desk research was conducted, as well as conversations with WWF country office staff. Once the first draft of the Country Profile had been completed, it was shared back to the country representatives who had sent in the Matrix, asking for their approval.

In total, Matrix responses from 17 countries and five territories were received, which were used for this preliminary analysis, but are in different stages of approval (see draft report methodology chapter). To date, the review has been fully completed by 10/51 countries/territories (20%). In total, 4/9 (44%) countries responded in Southeast Asia, 2/3 (67%) countries responded in East Asia, 3/5 (60%) countries responded in South Asia, 4/8 (50%) countries responded in Western Asia, and 8/26 (31%) countries responded in the Pacific/Oceania.

The status of completion per country can take one of the following stages and is per submission of this draft report in December 2023:

- Matrix not filled in and Country Profile not reviewed (3 territories, 25 countries)
- Matrix not filled in, but Country Profile reviewed (1 country)
- Matrix filled in, but Country Profile not reviewed (3 territories, 5 countries)

⁴ In the following only the term “country/ies” is used, which includes responses from territories. Only in the Analysis Chapter, these terms are used separately.

- Matrix filled in and Country Profile reviewed (minor outstanding items) (2 territories, 2 countries)
- Matrix filled in and Country Profile reviewed (complete) (10 countries)

It is planned that the current draft will be presented at the CMS COP14 in February 2024 via an information document, as well as at subsequent IOSEA and SPREP meetings to Parties and Members, respectively.

3.2. Interpretation

Protection Status

Each Country Profile contains a summary box, which concisely states whether marine turtles are protected in the country or not. The different categories of protection status are:

- Not protected
- Partially protected
- Fully protected (by general wildlife conservation laws)
- Fully protected (by marine turtle-specific laws)

If marine turtles are fully protected in a country, but there are exceptions on hunting and use by certain tribes or communities, both for own consumption/use or for sale, the protection status is set to “partially protected”. This may require a debate on sustainable use – and where and how this can be truly sustainable – and possibly a distinction between “partially protected – sustainable use” and “partially protected – unregulated”, but for the purpose of this report, “partially protected” has been used based on the criteria mentioned above.

Marine Turtle Presence and Nesting

Each Country Profile also contains a figure showing the status of marine turtle presence and nesting, such as the one below. “Presence” includes e.g. foraging, migration, mating etc., meaning the use of the waters surrounding the respective country as the turtles’ developmental habitats, except as nesting grounds. “Nesting” implies that there have been records of marine turtles nesting in the country.

Green circles indicate that the turtle species in question is present and/or nesting. Yellow circles illustrate that the turtle species is present and/or nesting, but occurrences are rare. Grey circles signify that there is a lack of data. Red crosses negate the presence and/or nesting of the turtle species, e.g. when no sightings have been confirmed.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	✗	●	●	✗	✗
Nesting	●	●	✗	✗	✗	✗	✗

Information Approved/Not Approved by the Government

Not all countries replied to the enquiry to fill in the Matrix or review the Country Profile. The status of completion, as per the five categories listed on the previous page, is therefore indicated in the beginning of each Country Profile. Profiles that are not yet complete and

require additional review and approval from the respective government representatives should be read and treated with care, since the information included may change.

Regional Fisheries Management Organizations

The Regional Fisheries Management Organizations (RFMOs) were identified through desk research, based on information provided on the websites of the: Western and Central Pacific Fisheries Commission (WCPFC), Indian Ocean Tuna Commission (IOTC), South Pacific Regional Fisheries Management Organisation (SPRFMO), Commission for the Conservation of Southern Bluefin Tuna (CCSBT), International Commission for the Conservation of Atlantic Tunas (ICCAT), Inter-American Tropical Tuna Commission (IATTC), North-East Atlantic Fisheries Commission (NEAFC), Northwest Atlantic Fisheries Organization (NAFO), North Atlantic Salmon Conservation Organisation (NASCO), South-East Atlantic Fisheries Organisation (SEAFO), Southern Indian Ocean Fisheries Agreement (SIOFA), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), General Fisheries Commission for the Mediterranean (GFCM), Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (CCBSP), North Pacific Fisheries Commission (NPFC), Western Central Atlantic Fisheries Commission (WECAFC), and the Fisheries Committee for the Eastern Central Atlantic (CECAF). Only contracting Parties to these RFMOs were listed.

3.3. Limitations

As with every data collection, some limitations should be considered when reading through the Country Profiles, analysis, discussion, and recommendations.

First, the number of countries that responded is large seeing the task at hand, which was completed by the respective governments on their own time. However, for only 11 countries the information is complete and for five countries complete with minor outstanding items. To obtain a comprehensive view of the situation of marine turtle protection legislation in the Asia-Pacific, it is recommended that those countries that have not yet submitted the Matrix and/or reviewed the Country Profile do so at their earliest convenience. Therefore, the report, as submitted in December 2023, is only in a draft stage. Remaining comments to countries were retained to ensure that these can be resolved in an efficient manner. Where a Country Profile and Matrix have not yet been approved, this is indicated in red font at the top of the respective Country Profile.

Second, legislation is in flux and constantly changing. A law that applied at the time of writing may not apply anymore, as an amendment may recently have rendered the entire, or parts of the concerned legislation obsolete. This is why a regular re-assessment of this review is recommended (every three years) to adjust the text, the Matrix selections, and possibly the overall country marine turtle protection status rating.

Third, some statements in the Matrix were interpreted differently by some countries and, depending on the selection, some of these items include or exclude others automatically. To ensure coherence across the report, and to ensure that the analysis is standardised, some country selections were altered, but 1) ONLY for the analysis and not in the Matrices attached to each Country Profile, and 2) ONLY if the statement selected by the country automatically included or excluded other options. Below is a list of items where this was the case. Clearly contradictory statements were excluded from the analysis, and, if statements differed among provinces/states in one country, the lowest protection level was taken to apply to the country.

Fourth, the results of the Matrix are not understood as responses to the question “what conservation measure is in place”, but rather “what conservation measure is regulated by any legislation, rule, or statute”. These can differ, as informal customs or habits may e.g. regulate

the release of turtles, but, if done in the wrong manner, there may be no legal provision under which this method could be disputed in court.

DRAFT

Harvest, Direct Take: Strictly no take

	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.
Selection	X	X	X	X	X	X	X
Read as	This is read like <i>strictly no take</i> encompassing the following six columns (grey checkmarks), as “sub-categories” of a strict no-take policy.						

	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.
Selection	X	X	X	X	X	X	X
Read as	When ALL options were selected, this is still read like <i>strictly no take (green)</i> , with the other six columns acting as “sub-categories” of a strict no-take policy. This is why, for analysis purposes, the checkmarks in the sub-category columns (red) will be omitted. It should be noted, however, that the understanding of the word “strictly” may differ among the respondents, which is why there is some room for ambiguity.						

	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.
Selection	X	X	X				
Read as	When <i>strictly no take</i> and only SOME of the following six column statements were selected, the interpretation is not entirely clear. One assumption is that this may indicate that these “sub-categories” are specifically mentioned in the legislation that specifically stipulates this. However, the meaning is not conclusive. The checkmarks were therefore retained.						

	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/ purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.
Selection			X		X	X	
Read as	When only SOME of the following six column statements were selected, BUT NOT <i>strictly no take</i> , it seems that legislation regulates only some specific aspects of harvest and direct take. The checkmarks were therefore retained.						

Captivity, excl. Tourism:

	Keeping marine turtles in captivity strictly not allowed	Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres	Keeping marine turtles in captivity strictly not allowed, except for zoos and aquaria
Selection	X	X	
Read as	The second and the third statement mention exceptions to “strictly not allowed”. In the case when BOTH column 1 and column 2 OR column 1 and column 3 contain a checkmark, the checkmark in column 1 (red) will be omitted, since an exception (green) is given.		

Tourism

	Turtle related tourism activities strictly not allowed	Turtles kept in captivity for tourism/ income-generating/ hobby purposes, where a permit IS NOT required	Turtles kept in captivity for tourism/ income-generating/ hobby purposes, where a permit IS required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS NOT required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required
Selection	X		X	X	
Read as	If turtle-related tourism activities are strictly not allowed, then this excludes keeping turtles in captivity for tourism/income-generating/hobby purposes and even tourism-related activities in the wild. Therefore, in this case, the checkmark in the first column is omitted (red), and the ones specifying the exceptions are retained (green).				

4. National Marine Turtle Conservation Legislation

4.1. Southeast Asia

4.1.1. Brunei Darussalam

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Brunei began protecting marine turtles in the 1990s since the country's turtle population had been severely reduced, because of poaching and other forms of overexploitation (Kamit, 2015).

Presence and Nesting of Marine Turtle Species in the Country

Three out of seven species of marine turtles nest in Brunei, i.e. the green turtle, hawksbill turtle, and olive ridley turtle (Kamit, 2015; Taha, 1999).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Brunei. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations. However, turtles in Brunei are likely to be connected to surrounding countries like Malaysia, Indonesia and the Philippines.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X	X	X		X (n*?)		

*nesting

National Laws

There are three laws in Brunei that are relevant to the protection of marine wildlife, including marine turtles: 1) [the Wild Fauna and Flora Order \(2007\)](#), which is the country's main CITES-implementing legislation and governs international trade; 2) [the Wildlife Protection Act \(1981, revised 1984\)](#), which governs wildlife conservation and protection, the establishment of wildlife sanctuaries in the country (Forestry Department Brunei, n.d.), and strengthened the regulatory power of the government to control, apprehend and prosecute illegal wildlife gatherings (Government of Brunei Darussalam, 2014); and 3) the Fisheries Order (2009), which regulates the protection and management of marine biodiversity, among others via the establishment and management of marine reserves and marine parks (Government of Brunei Darussalam, 2014). The CITES Management Authority (MA) is the Wildlife Division in the Ministry of Primary Resources and Tourism.

The killing, hunting, possession and trade of any protected animal, and the possession of flesh and trophies of these animals, are offences under the Wildlife Protection Act, which carry penalties of up to one year imprisonment and a fine of \$2,000 (Kamit, 2015). Engaging in the trade of species listed in CITES Appendix I without appropriate permits or certificates is liable on conviction and possessing specimens listed in the CITES Appendix is liable on conviction: "a) In the case of an individual, to imprisonment for a term not exceeding 5 years, a fine not exceeding \$100,000 or both; b) In the case of a corporate body, to a fine not exceeding \$200,000" (Article 47/2, 48/2) (UNEP et al., 2022).

Protected animals are specified in the First Schedule of the Wildlife Protection Act, which lists the green turtle, the hawksbill turtle, and the leatherback turtle as protected species under Part

A. However, licenses to export, hunt, and kill can also be issued for protected animals, which diminishes the strength of this legislation considerably. The Wild Fauna and Flora Order, 2007, prohibits the trade in any specimen of any species listed in CITES Appendix I, which includes all turtle species found in Brunei, without appropriate permits or certificates (Article 47/1a), meaning that any person in possession of a specimen of any species listed in the CITES Appendix is guilty of an offence (Article 48/1) (UNEP et al., 2022). Trade of turtle eggs was recorded in 2011, when 4,700 eggs were seized in Brunei that had been smuggled into the country from Sarawak, Malaysia, with turtle eggs reportedly consumed for pleasure in Brunei (IOSEA, 2014).

FULLY PROTECTED (through general wildlife legislation)

The green turtle, the hawksbill turtle, and the leatherback turtle are fully protected under Brunei Darussalam's legislation, as well as marine turtle eggs and other derivatives (named "flesh and trophy" in the Act). However, licenses to export, hunt, and kill protected animals can be issued without listing explicit exceptions for when these licences can be granted. Other turtle species are not considered protected.

Exceptions: XXX

Opportunities and Challenges

One of the challenges identified, is a lack of marine turtle experts in the country, which is, however, addressed by attending trainings in neighbouring countries and inviting foreign experts to Brunei to strengthen capacity in-country (Mohd, 2016). Moreover, the legislation in Brunei is rather broad and not very detailed, therefore creating some legal loopholes that may enable the illegal and unsustainable collection of marine wildlife with impunity (Ezekiel, 2018). It is, however, mandated that any marine turtle found as bycatch, whether dead or alive, must be passed on to the country's wildlife division to enable the relevant authorities to study the marine creature (Kamit, 2015). Other opportunities and challenges concerning legislation protecting marine wildlife in Brunei Darussalam are listed in the report ["Review of Marine Wildlife Protection Legislation in ASEAN"](#).

International and Regional Instruments

Brunei is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CITES
- United Nations Convention on the Law of the Sea (UNCLOS)

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.1.2. Cambodia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Up to the early 20th century, Cambodian waters supported significant nesting populations of marine turtles (Duffy et al., 2023). Today, available data indicate that a small and highly threatened marine turtle population persists, the remnants of a decline caused by intense historical harvesting, loss of nesting habitat, widespread bycatch, marine wildlife trade and poor compliance with wildlife protection regulations that is still on-going (Duffy et al., 2023). Because of internal conflicts in the country, the generation and collection of data and information on marine turtles in Cambodia were halted for more than two decades, and only resumed in 1987 (Try, 1999). Thought to have gone extinct in Cambodia in the last decade, researchers have discovered a total of 140 marine turtles, of which 90 were green and 43 were hawksbill turtles, as well as turtle nests, since 2001 (Chakrya, 2022).

Presence and Nesting of Marine Turtle Species in the Country

Historically, five species of turtles were found in the country: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback (Try, 1999).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Cambodia. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations. However, turtles in Cambodia are likely to be connected to surrounding countries like Malaysia, Thailand, and Vietnam.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*?)	X (n?)	X (n?)	X (n?)	X (n?)		

*nesting

National Laws

The [Law on Forestry \(2003\)](#) is Cambodia's main wildlife legislation, but it covers forest ecosystems only (Ezekiel, 2018). Marine species protection is included in the [Law on Fisheries \(2006\)](#), which prescribes the rules governing fishery resource management, including the management of marine reptiles, and in the [Law on Protected Areas \(2008\)](#), complemented with various Sub-Decrees and Proclamations (Ezekiel, 2018; UNEP et al., 2022).

Lists of protected wildlife species are provided in [Sub Decree No. 123 On the Determination of Fish Species and Products that are Endangered \(2009\)](#), [Proclamation No. 020 On the Classification and List of Wild Animal Species \(2007\)](#) (only terrestrial species), [Sub-Decree No. 209 On the Enforcement of the List of Prohibited and Restricted Goods \(2007\)](#), which includes reptiles and meat of reptiles, and [Proclamation on Protected Measure on Endangered Fisheries Resources \(2010\)](#) (Ezekiel, 2018).

In 2017, Cambodia published an [Action Plan for the Protection of Sea Turtles in Cambodia 2016-2026](#), which states that all five species of marine turtles found within the country are listed as an Endangered Fisheries Resource (Vibol et al., 2017).

It is illegal under the Cambodian Law on Fisheries to capture, collect, process, trade or kill any marine turtle in the country. Article 23 of the Law prohibits, among others, the following activities to take place without a permit: 1) Catching, selling, buying, stocking, and transporting fingerling or fish eggs and other aquatic animals' offspring or eggs; 2) Transporting, processing, buying, selling, and stocking endangered fishery resources; 3) Buying or selling

ornamental shells of rare species. Article 2 of the Law on Fisheries protects the rights on traditional use of fishery resources for local communities. The penalties for fishery offenses correspond to Class 1 offences, which, as per Article 89, correspond to imprisonment from 3 to 5 years and all evidences seized for the state property, as well as the transactional fining, termination, seizing or suspending of agreements or licenses, with the market price of fishery product and fishing gears, and the proportional levels of the fishing fee used as a basis of fining shall be defined by the Ministry of Agriculture. The CITES MA is the Ministry of Agriculture, Forestry and Fisheries.

FULLY PROTECTED (through Marine Turtle Action Plan)

It is illegal under the Cambodian Law on Fisheries to capture, collect, process, trade or kill any marine turtle in the country, including eggs and shells. The green, hawksbill, olive ridley, loggerhead, and leatherback turtles are listed as Endangered Fisheries Resources.

Exceptions: XXX

Opportunities and Challenges

Some of the challenges identified were that there are no measures to require the release of marine wildlife taken as bycatch or accidentally entangled in fishing equipment, the difficulty in obtaining regulations, such as the protected species list, and that the catching, selling, exporting etc. of endangered fishery resources may be allowed with a permit. There are, however, strong maximum sentences under the Law on Protected Areas and the Law on Fisheries, and both laws attribute a higher grade of severity to repeat offences (Ezekiel, 2018). Moreover, there is an explicit criminalisation of officials involved in wildlife crime (Ezekiel, 2018). Other opportunities and challenges concerning legislation protecting marine wildlife in Cambodia are listed in the report [“Review of Marine Wildlife Protection Legislation in ASEAN”](#).

International and Regional Instruments

Cambodia is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- Convention on Biological Diversity (CBD)
- CITES
- IOSEA
- London Declaration (Illegal Wildlife Trade (IWT))
- Port State Measures (PSMA)
- Ramsar Convention

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.1.3. Indonesia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Indonesia provides important foraging and nesting grounds for marine turtles due to its extensive coastline and coastal and marine ecosystems, and especially Papua is known as a rookery for leatherback turtles. Lying at the cross-roads of the Pacific and the Indian Ocean, the country also hosts numerous migration routes (WWF, n.d.). Early monitoring data suggests that many marine turtle species in Indonesia are reduced to up to 90% of previous levels, with the government responding by introducing conservation measures.

Still, Indonesia continues to play an important role as a source and consumer country, supplying turtle meat, eggs, and processed and unprocessed forms of turtle carapace (WWF, 2022). Traditional practices continue to be used to capture marine turtles and their eggs, taken from beaches, or at sea, during nesting season, with reports of fishermen sometimes engaging in targeted expeditions (WWF, 2022). Several national and international non-governmental organizations (NGOs) are working together, carrying out campaigns to educate about the plight and trade of turtles (WWF, 2022).

Further information on distribution and migration, genetic structure, and population trends can be found in the report [Status of Sea Turtles in the Arafura and Timor Seas](#).

Presence and Nesting of Marine Turtle Species in the Country

Six out of seven species of marine turtles are found in Indonesia: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, leatherback turtle, and flatback turtle (WWF, n.d.).

Satellite telemetry studies have shown that green turtles nesting in Indonesia migrate to countries such as Malaysia and the Philippines (WWF, n.d.). Furthermore, satellite tagging data indicate that green turtles originating from Thailand (Charuchinda and Monanunsap, 2000) and Malaysia (Pilcher et al., 2019) have been recorded migrating into Indonesian waters. For leatherback turtles, satellite telemetry shows broad migratory routes across the Pacific Ocean, including Australia, Indonesia, Malaysia, New Zealand, Papua New Guinea, Philippines, Solomon Islands, and the west coast of the United States (Benson et al., 2011). Genetic analyses have identified migratory connections for green turtles between nesting and/or foraging sites in Indonesia and Australia, as documented by Dethmers et al. (2010). Similarly, genetic research by Jensen et al. (2013) has established a migratory link between olive ridley turtles in West Papua, Indonesia, and Australia.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*?)	X (n?)	X (n?)	X (n?)	X (n?)	X (n?)	

*nesting

National Laws

All species of marine turtles are protected from domestic trade and consumption by national law (WWF, n.d.). Marine wildlife protection is regulated in Indonesia through the [Conservation of Living Resources and their Ecosystems Act \(1990\)](#), the [Law on the Management of Coastal Areas and Isles \(2007\)](#) and the [Fishery Law \(2004, amended 2009\)](#) (Ezekiel, 2018). Other relevant laws include the [Law on the Sea \(2014\)](#), the [Customs Law \(1995, amended 2006\)](#), and the [Penal Code \(1915\)](#) (Ezekiel, 2018). Government regulations relating to the conservation of marine wildlife are Regulation No. 60/2007 on the Conservation of Fishery Resources, No. 7/1999 on Preserving Flora and Fauna Species, and No. 8/1999 on Wild Flora

and Fauna Exploitation, which are complemented by numerous Ministerial Regulations that provide detailed measures for the management and control of activities relating to marine wildlife (Ezekiel, 2018).

All turtle species in Indonesia are included in [NOMOR P.20/MENLHK/SETJEN/KUM.1/6/2018](#), a revision to the No. 7/1999 regulation, banning trading and hunting in these species. Act No. 5 /1990 concerning conservation of living resources and their ecosystems provides prohibition for and sanction of direct harvest of protected species: no harvest or trade of protected species, whether alive or dead or parts and derivatives, is allowed.(UNEP et al., 2022).

The Indonesian CITES MAs are the Directorate of Biodiversity Conservation of Species and Genetic / Directorate General of Conservation on Natural Resources and Ecosystem under the Ministry of Environment and Forestry, and the Directorate for Marine Conservation and Biodiversity under the Ministry of Marine Affairs and Fisheries.

FULLY PROTECTED (through general wildlife legislation)

All species of marine turtles are protected from domestic trade, hunting and consumption by national law, which includes parts and derivatives.

Exceptions: XXX

Opportunities and Challenges

Indonesia has a generally strong legislative framework, a requirement to release wildlife that has been accidentally caught alive, detailed registration for vessel registration and logbooks, and the penalties for some offences under the Fisheries Law and the Customs Law increase by one third if an official is involved (Ezekiel, 2018). However, weaknesses are that conservation institutions, including zoos, are allowed to take wildlife that is not protected from nature, there is no requirement for Turtle Excluder Devices (TEDs), and the capture, killing, possession etc. of numerous species of sharks and rays is allowed, as well as of seahorses, sea cucumbers, and some species of corals, which results in a challenge for law enforcement to identify whether the species caught is protected or not (Ezekiel, 2018). Other opportunities and challenges concerning legislation protecting marine wildlife in Indonesia are listed in the report [“Review of Marine Wildlife Protection Legislation in ASEAN”](#).

International and Regional Instruments

Indonesia is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CTI-CFF
- IOSEA
- London Declaration (IWT)
- Ramsar Convention
- RFMOs (CCSBT, IOTC)
- Sulu-Sulawesi Marine Ecoregion (SSME) Regional Action Plan
- UNCLOS

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.1.4. Malaysia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Malaysia is home to important developmental habitats for marine turtles, such as feeding grounds with coral reefs and seagrass beds for turtles to forage, nesting beaches for female turtles to lay eggs, and migratory pathways for turtles between feeding grounds and nesting beaches. Despite these suitable environmental condition, marine turtles are under threat, including direct take and sale, egg poaching, illegal trade, consumption, fishing mortalities, marine pollution, and negative impacts of tourism (Chan, 2006).

All four turtle species present in Malaysia have faced serious population declines on the account of various threats and stressors, including turtle egg consumption (Shanker and Pilcher, 2003, in Poti et al., 2021). In most of Peninsular Malaysia, marine turtle eggs are freely and legally traded in the local Markets, with the exceptions of Perak, Melaka, and leatherback turtle egg trade in Pahang (CITES Secretariat, 2019, in WWF, 2022). However, Terengganu state passed an amendment that bans the sale of all eggs of all turtle species in June 2022, and in Sabah and Sarawak, marine turtles are listed as totally protected animals, but egg harvest and trade is on-going in some locations (CITES Secretariat, 2019, in WWF, 2022).

However, with the support of the national and state governments, there are countless marine turtle conservation projects being implemented in the country, such as Turtle Conservation and Information Centres (DOF, n.d.), gazettelement of marine parks, as well as turtle sanctuaries and hatcheries, which are often supported by non-governmental organizations.

Presence and Nesting of Marine Turtle Species in the Country

Four species of marine turtles have been recorded in Malaysia: the green turtle, hawksbill turtle, olive ridley turtle, and leatherback turtle.

Satellite telemetry and flipper tagging studies have shown that green turtles nesting in Malaysia migrate to countries such as Indonesia, Singapore and the Philippines (Hamann et al., 2022, in WWF, 2022), and that that turtles nesting in Sabah utilise foraging areas within Sabah, but also at the east coast of Kalimantan in Indonesia, and in the southern Philippines (Pilcher et al., 2019) (see Figure 1). Furthermore, satellite tagging data indicate that green turtles originating from Vietnam (Charuchinda and Monanunsap, 2000) and Australia, among others, are known to migrate into Malaysian waters. Complementing these findings, genetic analyses have identified migratory connections for green turtles between nesting and/or foraging sites in Malaysia and Indonesia (2013).

[more on connectivity to be added]

Green and hawksbill turtles are the most common species in all States, both in presence and in nesting, whereas olive ridley and leatherback turtles are very rare. Whereas the Department of Fisheries, Malaysia, recorded 43,586 nests for green turtles and 4,807 nests for hawksbill turtles at the Federal level⁵ between 2017-2022, only 2 nests were recorded for olive ridley and leatherback turtles each, in the same time period (DOF, 2023).

⁵ Federal level for the purpose of this report encompasses all States in Peninsular Malaysia and the Federal Territory of Labuan, where marine turtles are present.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
FEDERAL LEVEL							
Presence	●	●	●	✗	●	✗	✗
Nesting	●	●	●	✗	●	✗	✗
SABAH							
Presence	●	●	●	✗	●	✗	✗
Nesting	●	●	●	✗	●	✗	✗
SARAWAK							
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	✗	●	✗	✗	✗

The following figure shows the post-nesting migration routes of all satellite-tracked green sea turtles deployed at key Malaysian nesting beaches.

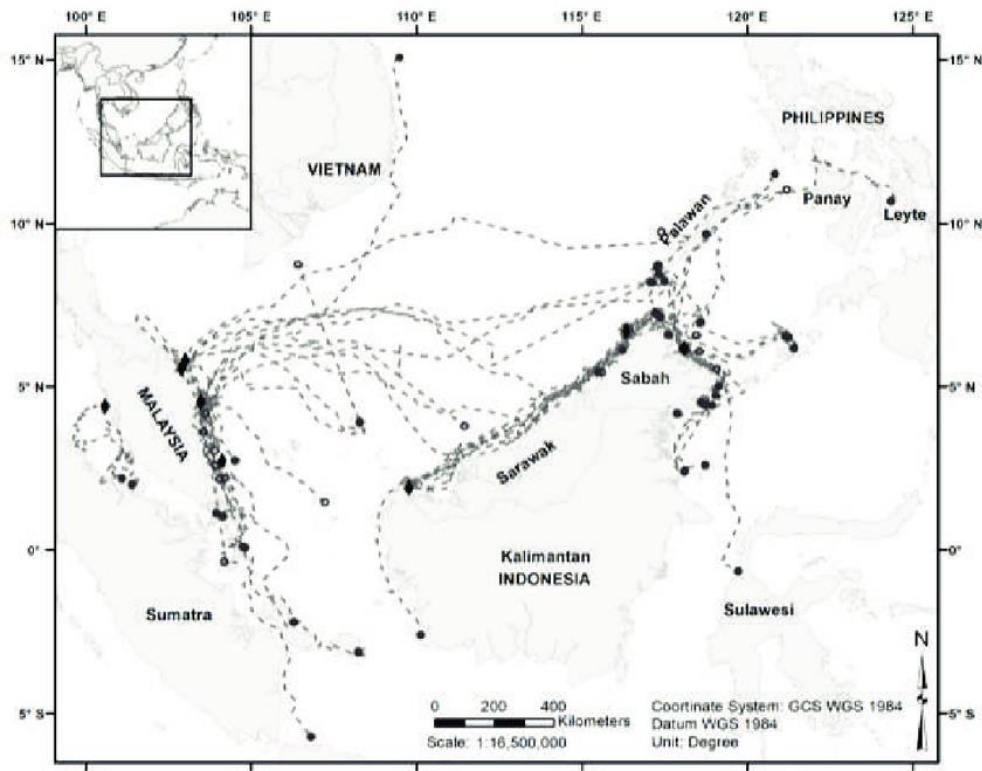


Figure 1. Post-nesting migration routes of all satellite-tracked green sea turtles deployed at key Malaysian nesting beaches, Source: (Pilcher et al., 2019)

National Laws

In Malaysia, wildlife conservation legislation exists in concurrence at the federal and the state-level. At the state-level, there are three wildlife agencies in Peninsular Malaysia, Sabah and Sarawak, using different legislation and enforcement structures (Koshy, 2020). Marine turtles are protected under State Jurisdiction, and beyond the State Waters the species are under the Federal purview.

Federal Legislation

The main Federal Legislation for wildlife conservation and management is the [Fisheries Act No. 317 \(1985\)](#), as [amended in 2012](#) and [2019](#), since the Wildlife Conservation Act (2010), does not cover marine species (Ezekiel, 2018). Sections 27, 38, and 58 of the Fisheries Act addresses the proper conservation, development, management and regulation of marine turtles. The Fisheries Act is implemented by the Department of Fisheries. Responsibility for managing turtles is assigned to the states by the Malaysian Constitution, however, the Fisheries Act makes the Minister of Agriculture and Food Security and Director General of Fisheries responsible only for turtles outside state waters (Art. 3) (Ezekiel, 2018; Federal Constitution Parliament, 1985). Turtles inside state waters are managed by the respective states. The Act addresses fishing licenses, fishing and passage of foreign vessels in Malaysian waters, and lists numerous offences. Among others, these include fishing with explosives and poisons (Art. 26); to fish for, disturb, harass, catch or take any aquatic mammal or turtle which is found beyond the jurisdiction of any State in Malaysia (Art. 27); and destroying incriminating evidence (Art. 29) (Federal Constitution Parliament, 1985).

Provisions for turtles and inland fisheries, marine parks and marine reserves, aquaculture, and enforcement are stipulated in more detail in subsequent sections of the Act. In marine reserves and parks, it is, among others, prohibited to fish; take, remove or possess any aquatic animal or aquatic plant or part thereof, whether dead or alive; possess or collect any coral; dredge or extract any gravel or sand; anchor any vessel to a coral; and destroy, deface or remove any object, whether animate or inanimate (Art. 43) (Federal Constitution Parliament, 1985). Egg collection is regulated via state legislation for conservation purposes (UNEP et al., 2022).

In addition, Turtle Conservation and Information Centres were established under the Department of Fisheries, Malaysia, in 1985. They serve as centres for learning, information, shelter, hatching and research on turtles, and are also used as a treatment centre for turtles that are found injured or stranded. There are six centres and one turtle showroom throughout Peninsular Malaysia, namely:

- Pantai Kerachut, Pulau Pinang Turtle Conservation and Information Centre
- Segari, Perak Turtle Conservation and Information Centre
- Turtle Showroom, Port Dickson, Negeri Sembilan Ornamental Fish Centre
- Padang Kemunting, Melaka Turtle Conservation and Information Centre
- Cherating, Pahang Turtle Conservation and Information Centre
- Rantau Abang, Terengganu Turtle Conservation and Information Centre
- Ma'Daerah, Kerteh, Terengganu Turtle Conservation Centre

Federal legislation governs the import, export, and re-export of wildlife through Malaysia's CITES-implementing legislation, the [International Trade in Endangered Species Act \(2008\)](#), [and the Customs Act \(1967\)](#) (Ezekiel, 2018). There are various CITES Management and Scientific Authorities in Malaysia, with the names of these authorities listed here. Measures to prevent the mistreatment of animals are provided in the federal Wildlife Protection Act (2015).

Malaysia also published a National Plan of Action for Sea Turtles in 2008, and is currently in the process of drafting an updated National Plan of Action.

State Legislation - Sabah

The main State Legislation for wildlife conservation and management in Sabah is the [Wildlife Conservation Enactment \(1997\)](#), amended in 2002 and 2016. The law covers protected areas, protection of animals and hunting, possession of and trade in animals, protection of plants, utilization of wildlife, enforcement, offences, penalties, and power of the Minister. According to Article 40, every protected live animal and animal product are considered the property of the state government. In addition to listed prohibitions, such as hunting or possession of Totally Protected animals (see below); making articles from selling or dealing in protected animals or their parts; and accidentally killing or injuring a Totally Protected or Protected animal due to recklessness, among others, the Enactment provides measures to protect wildlife within Wildlife Sanctuaries, Wildlife Hunting Areas and turtle protection areas (Ezekiel, 2018). It is implemented by the Sabah Wildlife Department, whereas Sabah Parks is responsible for (marine) protected areas. In the case of an injured turtle, Sabah Parks will report the incident to the Sabah Wildlife Department (SWD) for further action, since wildlife rescue is under the Department's purview. SP will assist in keeping turtles safe until SWD vets arrive. A protected animal is defined as any species listed on the CITES Appendices or Schedules 1–3 in the Annex of the Wildlife Conservation Enactment. Schedule 1, Part I lists Totally Protected Animals, including the green turtle, hawksbill turtle, and olive ridley turtle.⁶ Schedule 1, Part II lists four Totally Protected Plants. Schedule 2, Part I lists 229 Protected Animals, including 12 species of cetaceans. Schedule 2, Part II lists 13 Protected Plants. Schedule 3 lists nine protected animals for which a hunting license is required, and Schedule 4 lists government and non-government edible birds' nests caves. The states of Sarawak and Sabah completely protect turtle eggs of all species (Yusof, 2019), whereas egg sale and consumption is still widely allowed in Peninsular Malaysia, where it is either regulated through trade concessions (in nine federated states) or not at all regulated (in Perlis and Selangor where nesting is insignificant) (Mohd Jani et al., 2020). The state of Terengganu banned the consumption of leatherback eggs in 1989 (Mohd Jani et al., 2020), and, on 01 June 2022, banned the sale of marine turtle eggs in the state (Yong, 2021). Protected areas are covered by the Parks Enactment (1984), and the collection of natural resources by the Sabah Biodiversity Enactment (2000).

State Legislation - Sarawak

The main State Legislation for wildlife conservation and management in Sarawak is the [Wild Life Protection Ordinance \(1998\)](#), wherein all species of marine turtles (*Cheloniidae* and *Dermochelyidae*) are listed as Totally Protected Animals (First Schedule (Section 2 (1) Part I.) and are fully protected under the law (Hassan and Yahya, 2022). Protected areas are covered by the National Parks and Nature Reserves Ordinance (1998). Since 1st January 2020, both of the ordinances are enforced by the Sarawak Forestry Corporation, which is the Management Authority for totally protected areas and management of wildlife in Sarawak. A Conservation Action Plan for Marine Turtles is in place.

PARTIALLY PROTECTED

At the **Federal level**, marine turtle protection differs in the 11 States:

- Terengganu: marine turtle egg consumption and trade is banned completely for all species, as is the killing and taking of marine turtles
- Perlis and Selangor: no marine turtle legislation passed, since turtle nesting is rather insignificant
- **Melaka, Johor, Penang, Negeri Sembilan, Kelantan, Kedah, Perak, Pahang?**

In **Sabah**, the green turtle, hawksbill turtle, and olive ridley turtle* are considered Totally Protected Animals and they, as well as their eggs and derivatives, are completely protected.

Exceptions: XXX

⁶ The leatherback turtle is not included here, since the species is very rarely seen in Sabah.

In **Sarawak**, all species of marine turtles are listed as Totally Protected Animals, which includes their eggs and derivatives, and are completely protected.

Exceptions: XXX

* The leatherback turtle was not listed as Totally Protected Species because of its rareness. However, in the Parks Enactment 1994, any species found within the park's boundary is protected.

Opportunities and Challenges

The mixture of federal and state legislation, i.e. in Sarawak and Sabah, to protect wildlife can create inconsistencies, gaps, and overlap, marine species are not covered by the Wildlife Protection Act, and marine turtles are not covered by the Fisheries Act (Ezekiel, 2018). However, four Malaysian States made the use of TEDs mandatory in shrimp trawl fisheries in 2017, there is a requirement to release marine turtles if caught accidentally, and penalties are doubles for repeat offences in Sabah and Sarawak (Ezekiel, 2018; MRF, n.d.). Other opportunities and challenges concerning legislation protecting marine wildlife in Malaysia are listed in the report ["Review of Marine Wildlife Protection Legislation in ASEAN"](#).

International and Regional Instruments

Malaysia is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CITES
- CTI-CFF
- IOSEA Marine Turtle MOU
- London Declaration
- Ramsar Convention
- RFMOs (IOTC, WCPFC)
- SSME Regional Action Plan
- Turtle Islands Heritage Protected Area (TIHPA) MOU
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking/using for traditional purposes where a permit IS NOT required	Taking/using for traditional purposes where a permit IS required	Taking for research/educational purposes where a permit IS required	Taking of marine turtles according to a maximum quota where a permit IS required	Taking of marine turtles according to a certain sex preference of marine turtles (female or male) where a permit IS required	Indigenous or community based conservation or protection plans were developed and published that regulate marine turtle use*	A National Conservation Action Plan for Marine Turtles is in place*
FEDERAL Level														
Fisheries Act 1985	X	X	X											
Fisheries (Turtle) (Perak) Rules 2021, Rules 3(1)	X	X	X											
Fisheries (Turtle) (Perak) Rules 2021, Rules 10 (1) (a)				X										
Fisheries (Turtle) (Perak) Rules 2021, Rules 16 (1)									X					
Fisheries (Turtles And	X	X	X											

Turtle Eggs) (Pulau Pinang) Rules 1999, Rules 5														
Fisheries (Turtles And Turtle Eggs) (Pulau Pinang) Rules 1999, Rules 6 (1) (b)	X	X				X								
Fisheries (Turtles And Turtle Eggs) (Pulau Pinang) Rules 1999, Rules 6 (2)©										X				
Fisheries Rules (Turtles And Turtle Eggs) (Johor) 1984 , (Government of Johor Act)	X										X			
Fisheries Rules 1985, Fisheries Rules (Turtles And Turtle Eggs) (Melaka) 1989	X										X			
Turtle Enactment 1951 (Terengganu), Section 7A “ Prohibition of owning eggs of all types of turtles”	X										X			
The Fisheries Enactment State of Pahang 1937	X	X		X										
SABAH														

Sabah Wildlife Conservation Enactment 1997, Section 87 (1), Declaration of turtle egg traditional collection area									X (only for own consumption, not for sale)					
Sabah Wildlife Conservation Enactment 1997, Section 2, Part I Section 25 (1), Totally Protected Animals (8 & 9)									X	X				
Parks Enactment 1984, Control of Parks or Nature Reserves, Section 48 (1 (d))										X				
SARAWAK														
Wild Life Protection Ordinance, 1998 .Chapter 26. Part IV, Section 29 (1)	X	X	X	X	X	X	X			X				
National Plan for Action for Malaysia is outdated. Species Conservation Action Plan for Marine Turtle in Sarawak (2023-														X

Standard Operating Procedure for Turtle's Management by Malaysian Fisheries Department	X	X*				X	X
The Fisheries Enactment State of Pahang 1937							
SABAH							
XXX							
SARAWAK							
Wild Life Protection Ordinance, 1998, Section 29(1)	X						

*At the time of writing, the Department of Fisheries is developing an SOP for turtle management

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed	Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres	Keeping marine turtles in captivity strictly not allowed, except for zoos and aquaria	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS NOT required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
FEDERAL Level								
Fisheries (Turtle)(Perak) Rules 2021, Kedah 3(1)(b)	X							
Fisheries (Turtle)(Perak) Rules 2021, Kedah 5(1)(b)				X	X			
Fisheries (Turtle)(Perak) Rules 2021, Kedah 5(1)(a)						X		X
Fisheries (Turtles And Turtle Eggs) (Pulau Pinang) Rules 1999, Rules 6 (1)(b)	X							

Fisheries (Turtles And Turtle Eggs) (Pulau Pinang) Rules 1999, Rules 6 (2)©					X			
Fisheries Rules 1985, Fisheries Rules (Turtles And Turtle Eggs)(Melaka) 1989	X							
Turtle Enactment 1951 (Terengganu)		X (must be acknowledged by the government/ have a license)		X	X		X	
SABAH								
Sabah Wildlife Enactment 1997, Section 25 "Animals that shall not be hunted"		X	X					
Sabah Wildlife, Standard Operating Procedure for Opening Turtle Rehabilitation Centre 2016					X	X		X
Sabah Wildlife Enactment 1997, Section 42 "Keeping animals in captivity"					X			
Sabah Wildlife Enactment 1997, Section 45 "Security of captive animals and limitation of danger to the public"								
Sabah Wildlife Enactment 1998, Section 47 "Certificate of legal ownership"					X			
SARAWAK								
Wild Life Protection Ordinance, 1998, Chapter 26. Part IV, Section 29 (1)		X				X		X

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed	Turtles kept in captivity for tourism/ income-generating/	Tourism-related activities in the wild (e.g. watching turtles nest and/or	Guidelines for tourism best practices were developed and published*
---	--	---	---	---

		hobby purposes, where a permit IS required	forage), where a permit IS required	
FEDERAL Level				
Fisheries (Turtle)(Perak) Rules 2021, Kedah 10(1)(d)	X			
Fisheries (Turtles And Turtle Eggs)(Pulau Pinang) Rules 1999, Rules 6 (1)©	X			
Fisheries (Turtles And Turtle Eggs)(Pulau Pinang) Rules 1999, Rules 6 (2)©		X*		
Fisheries Rules (Turtles And Turtle Eggs)(Johor) 1984 , (Government of Johor Act)		X*		
Fisheries Rules 1985, Fisheries Rules (Turtles And Turtle Eggs)(Melaka) 1989	X			
Turtle Enactment 1951 (Terengganu)		X*	X	
XXX Guidelines (2010)				X
SABAH				
Sabah Wildlife, Standard Operating Procedure for Opening Turtle Rehabilitation Centre 2016		X	X	
SARAWAK				
Wild Life Protection Ordinance, 1998, Chapter 26. Part IV, Section 29 (1)	X			

*The State government shall not grant licenses/permits for tourism, unless supported with a strong justification focusing on conservation

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles allowed, where a permit IS required	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
FEDERAL Level							
Fisheries (Turtle)(Perak) Rules 2021, Rules 10(1)(d)			X				
Fisheries Rules (Turtles And Turtle Eggs)(Johor) 1984 , (Government of Johor Act)	X (eggs can only be sold to the Department)						

	of Fisheries)						
Fisheries Rules 1985, Fisheries Rules (Turtles And Turtle Eggs)(Melaka) 1989		X	X	X			
Turtle Enactment 1951 (Terengganu)		X	X	X			
SABAH							
Sabah Wildlife Conservation Enactment 1997, Section 87 (4)			X	X	X	X	
SARAWAK							
Wild Life Protection Ordinance, 1998, Chapter 26. Part IV, Section 29 (1)		X	X		X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and government al programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
FEDERAL Level							
Fisheries (Turtle)(Perak) Rules 2021, Kedah 10(1)(a)		X					
Fisheries (Turtle)(Perak) Rules 2021, Kedah 13			X				
Fisheries Act 1985, Seksyen 25 (b)				2*	RM 20,000 (= USD 4,284.38)		

Fisheries Rules (Turtles And Turtle Eggs)1999, Rules 13 (1)(b)		X					
Fisheries Rules (Turtles And Turtle Eggs)1999, Rules 17			X	0.5*	RM 5,000 (=USD 1,071.10)		
Fisheries Rules 1985, Fisheries Rules (Turtles And Turtle Eggs)(Melaka) 1989	X			0.5*	RM 1,000.00 (= USD 214.22)	X	
Turtle Enactment 1951 (Terengganu)	X		X	1*	RM 250,000 (= USD 53,554.8)	X	
SABAH							
Sabah Wildlife Conservation Enactment, Section 87 (4), Declaration of turtle egg traditional collection area		X	X	5	RM 250,000 (= USD 53,554.8)		X
Parks Enactment 1984, Control of Nature Parks or Nature Reserves, Section 48 (2)		X	X	5	RM 500,000 (= USD 107,110)		
SARAWAK							
Wild Life Protection Ordinance, 1998, Chapter 26. Part IV, Section 29 (1)		X	X	2	RM 25,000 (= USD 5,355.47) ⁷		
Wild Life Protection Ordinance, 1998						X	

* The punishment varies based on Federal and State jurisdiction for marine turtles. If the offence has taken place within Federal jurisdiction, the max. sentence will be 2 years.

Habitat Protection

⁷ Currency exchange rate: 06 Dec 2023

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
FEDERAL Level					
Fisheries Rules (Turtles And Turtle Eggs) (Johor) 1984, (Government of Johor Act)	X				
Fisheries Rules 1985, Fisheries Rules (Turtles And Turtle Eggs) (Melaka) 1989	X				
Section 62 National Land Code	X				
SABAH					
Parks Enactment 1984, Control of Parks or Nature Reserves, Section 48	X	X			
SARAWAK					
National Parks and Nature Reserves Ordinance, 1998, Chapter 27. Laws of Sarawak	X	X	X		
Wild Life Protection Ordinance, 1998. Chapter 26. Laws of Sarawak	X	X	X		
Natural resources and Environment Ordinance, 1958. Chapter 84. Laws of Sarawak				X	X

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:				Collection of genetic samples from marine turtles conducted, where a permit IS required
			Parts and samples from turtles legally harvested or stranded dead can be used for research	Hatchlings resulting from incubation under controlled conditions can be sacrificed for gonad histology etc. under an approved project or research	Hatchlings trapped in nests that would otherwise die may be sacrificed for research into sex ratio etc.	Turtles that have a low probability of surviving (e.g. extremely emaciated turtles or turtles with severe health issues)	
FEDERAL Level							
Fisheries Act 1985	X	X	X	X	X	X	X
SABAH							
Sabah Biodiversity Enactment 2000, Section 25 (1)	X		X	X	X	X	X
Parks Enactment 1984, Control of Parks or Nature Reserves, Section 49	X						
SARAWAK							
Wild Life Protection Ordinance, 1998, Chapter 26. Part IV, Section 29 (1)		X					X

4.1.5. Myanmar

Marine Turtle History and Status

Although on paper, the Fisheries Act protected marine turtles as of 1905, the Department of Fisheries leased beaches to the highest bidder prior to 1986, and all marine turtle eggs were collected. The egg collection program was run through local fishing communities from 1986 to 1996, who were required to leave one-third of the eggs in the sand to hatch, however, reportedly compliance with these regulations was almost non-existent (Thorbjarnarson et al., 2000). Only after 1997, the Department fully protected all offshore turtle nesting beaches, and created a conservation program in collaboration with the Southeast Asian Fisheries Development Center and the IOSEA Technical Support and Capacity-Building Programme, involving nest-monitoring, establishment of hatcheries, and even the relocation of villages to reduce the impact on nesting turtles (Myanmar Ministry of Livestock and Fisheries et al., 2014; Thorbjarnarson et al., 2000).















However, turtles turtle eggs are still collected illegally for local consumption and are sold illegally at urban markets, since enforcement of existing laws is weak (AFP, 2018; Myanmar Ministry of Livestock and Fisheries et al., 2014; Platt et al., 2017; Sittwe, 2021). Turtle eggs can sell for one dollar each, which is around 10 times the price of a chicken egg (AFP, 2018). Other threats are for marine turtles to drown in shrimp trawls, become entangled in fishing gear like long lines, fall victim to dynamite fishing, eat ocean trash, and nests being destroyed by monitor lizards, semi-feral dogs, and macaques (Myanmar Ministry of Livestock and Fisheries et al., 2014; Platt et al., 2017). This is one reason why the enforcement of regulations requiring the use of TEDs on commercial fishing trawls is considered essential, but it is unclear to which degree trawlers use TEDs (Myanmar Ministry of Livestock and Fisheries et al., 2014; Platt et al., 2017).

In 2015, a turtle nest protection and monitoring program was initiated by the Wa Ale Resort (Lampi Foundation), which was working together with the Nature and Wildlife Conservation Division. Locally hired “Beach Wardens” conduct daily patrols of Honey Moon and Wah Ale Kyun beaches as part of this effort, to search for signs of turtle nesting activity.

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles known to nest in Myanmar, off the coast of Myanmar’s Arakan State, and Ayeyawady and Tanintharyi regions (Sittwe, 2021): the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Myanmar. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp’s ridley turtle
Presence							
Nesting							

National Laws

The main laws protecting wildlife in Myanmar are: the [Conservation of Biodiversity and Protected Areas Law No. 12 \(2018\)](#), which superseded the [Protection of Wildlife and Conservation of Natural Areas Law No. 6 \(1994\)](#), the [Myanmar Marine Fisheries Law No. 9 \(1990\)](#), as *amended in 1993*, the [Law Relating to the Fishing Rights of Foreign Fishing Vessels No. 11 \(1989\)](#), as *amended in 1993*, and the [Export and Import Law No. 17 \(2012\)](#) (Ezekiel, 2018). The [Environmental Conservation Law](#) was enacted in March 2012.

The country's legislation prohibits direct harvest and domestic trade in marine turtles, their eggs, parts and products. The sea turtle conservation programme was started in Myanmar early on - in 1905 - under the Burma Fisheries Act (III - 1905). This included protection for marine turtles and turtle hatching areas, and trespassing on those areas without official consent was prohibited (11/2905) (UNEP et al., 2022). Under Agriculture Notification No. 1/2005 (1924), it is forbidden to eat turtle eggs and to trespass within three miles of a turtle hatching area (Myanmar Ministry of Livestock and Fisheries et al., 2014).

Marine turtle protection legislation was continued thereafter, with the Marine Fisheries Law, under which no person shall search for and collect any marine products, which includes marine turtles and eggs, without a license (Section 40). The Department of Fisheries declared Notification No. 2/93 for "Sea Turtle Conservation" in 1993, wherein it states that TEDs must be used on trawling gear in all fishing areas, all turtles caught accidentally must be released, damaged fishing gear cannot be thrown into the ocean, and marine turtles cannot be consumed (Myanmar Ministry of Livestock and Fisheries et al., 2014).

Article 41 of the Conservation of Biodiversity and Protected Areas Law prohibits the

- (a) *killing, hunting, or wounding, collecting, selling, or transferring, in any manner, a completely protected wild fauna or animals regulated for international trade, or possessing or transporting such animals or any part or blood, derivatives or products of them without permission;*
- (b) *extracting, collecting or destroying, in any manner, a completely protected wild flora or plants regulated for international trade without permission or collecting, possessing, selling, transporting or transferring, in any manner, such plants or any part or derivatives or products of them without permission;*
- (c) *import, export or re-export animals and plants regulated for international trade without the endorsement prescribed under sub-sections (a) and (b) of section 23 (Myanmar Law Information System, n.d.).*

The Forest Department Notification No: 583/94 of 1994 listed the hawksbill turtle as completely protected wild animals within Myanmar (UNEP et al., 2022). The list of threatened wild animals was updated by [Notification 690-2021](#). The notification declares the following three categories of threatened wildlife: 1) Completely protected species of wild animals; 2) Normally protected species of wild animals; 3) Seasonally protected species of wild animals. All five species of marine turtles present in Myanmar's waters are listed under "Category 1: Completely protected species of wild animals".

FULLY PROTECTED (through marine turtle-specific legislation)

The country's legislation prohibits direct harvest and domestic trade in marine turtles, their eggs, parts and products. All five species of marine turtles present in Myanmar's waters are listed under "Category 1: Completely protected species of wild animals".

Exceptions: Scientific research, scientific species identification, propagation

Opportunities and Challenges

Even basic scientific literature is unavailable in Myanmar, technical resources are extremely limited, and the Yangon University library receives no foreign journals (Thorbjarnarson et al., 2000). Moreover, wildlife protection laws in the country are very brief and general, and some allow considerable latitude to the officials in charge in implementing, and in some cases even overturning, their provisions (Ezekiel, 2018). However, all CITES-listed marine species have a protected status in the country, there are strong custodial sentences under Myanmar's laws, the fisheries laws and the Forest Law explicitly criminalise the involvement of officials in wildlife crime, and trawl nets are to be equipped with TEDs (Ezekiel, 2018). Other opportunities and challenges concerning legislation protecting marine wildlife in Myanmar are listed in the report ["Review of Marine Wildlife Protection Legislation in ASEAN"](#).

International and Regional Instruments

Myanmar is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CITES
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	Taking for research/educational purposes where a permit IS required
Myanmar Marine Fisheries Law, Chapter 11, Section 40	X	X	X	
Directive Letter No. 3/2020 ⁸	X	X	X	X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Trawl Nets	Other relevant fishing gear
Directive Letter No. 6/2018 ⁹	X	X Giant set bag net

Bycatch II – Prevention

⁸ According to Myanmar Marine Fisheries Law, Chapter 7, Section 23, promulgation of Prohibition to Protect Sea turtles: except with the permission of the Department of Fisheries, all persons are prohibited from capturing, killing, harassing, transporting, storing, trading, or possessing any endangered marine turtles; in addition, all persons are prohibited from moving, digging, transporting, storing, selling, possessing, marine turtle eggs, or to exert and any other form of marine turtle harassment. Fishermen must release marine turtles alive, if they become entangle in fishing gear. Those who fail to comply with this instruction, will be dealt with in accordance with the Myanmar Marine Fisheries Law.

⁹ According to Myanmar Marine Fisheries Law, Chapter 7, Section 23, trawl nets and giant set bag nets are to be equipped with TEDs: if it is found that a TED is not installed, action will be taken against the fishing vessels: if it is the first time, a fine of MMK 500,000 (=USD 236, as per 10 Aug 2023), if it is the second time, the fine will be doubled, and if it is the third time, the license will be terminated.

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practices	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	A turtle handling guide/ standard operating procedure is published*
Directive letter No. 3/2020, according to Myanmar Marine Fisheries Law, Chapter 7, Section 23, promulgation of Prohibition to Protect Sea Turtles	X	X	X		
Directive letter No. 6/2018, according to Myanmar Marine Fisheries Law, Chapter 7, Section 23, trawl nets are to be equipped with TEDs				X	
In local leaflet and calendar for local conservation awareness activities: (A) remove carefully sea turtle from fishing gear, if entanglement in fishing gear occurred; (B) cover the sea turtle with a wet cloth and spray with water, to release the sea turtle under safe conditions; (C) report data on this sea turtle such as date, type of fishing gear, species, size, and condition to the nearest Fisheries Department. (D) if the turtle has a tag number, record the number and inform the nearest Fisheries Department.					X

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed
Myanmar Marine Fisheries Law, Chapter 11, Section 40, No person shall search for and collect any marine product without a licence.	X
Directive letter No. 3/2020, according to Myanmar Marine Fisheries Law, Chapter 7, Section 23, promulgation of Prohibition to Protect Sea Turtles	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited
Directive letter No. 3/2020, according to Myanmar Marine Fisheries Law, Chapter 7, Section 23, promulgation of Prohibition to Protect Sea Turtles	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?
Notification No. 690/2020, according to Chapter 5, Section 19, Subsection (A) of Conservation of Biodiversity and Protected Areas Law of Forestry Department	X				
Conservation of Biodiversity and Protected Areas Law of Forestry Department, Chapter 11, Section 41-A ¹⁰		X	X	X 3-10 years	no description of the amount
Myanmar Marine Fisheries Law, Chapter 11, Section 39 and Section 45 ¹¹		X	X	X 1 year	MMK 10,000 (=USD 4.72) ¹²
Myanmar Marine Fisheries Law, Chapter 11, Section 40 and Section 45 ¹³		X	X	X 1 year	MMK 10,000 (=USD 4.72)

¹⁰ Whoever commits any of the following acts shall, on conviction, be punished with imprisonment for a term from a minimum of 3 years, to a maximum of 10 years and also with a fine: for killing, hunting or wounding, collecting, selling, or transferring, in any manner, a completely protected animal regulated by international trade, possessing or transporting such animals or any part or blood, derivatives or products of them without permission.

¹¹ Section 39: No person shall dispose of living aquatic creatures or any materials into the Myanmar Marine Fisheries Water causing pollution of water, or to lease fishes and other marine organisms. Section 45: whoever is found guilty of violating any of the provisions of section 34, section 37, section 39 or section 40 shall be liable to be punished with a fine that may extend to MMK 10,000 or with imprisonment, which may extend to 1 year, or with both.

¹² Currency exchange rate from 10 August 2023.

¹³ Section 40: No person shall search for and collect any marine product without a licence. Section 45: whoever is found guilty of violating any of the provisions of section 34, section 37, section 39 or section 40 shall be liable to be punished with a fine that may extend to MMK 10,000 or with imprisonment, which may extend to 1 year, or with both.

Research

<p>In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>Only non-lethal sampling of turtles for research allowed, where a permit IS required</p>	<p>Collection of genetic samples from marine turtles conducted, where a permit IS required</p>
<p>Chapter 5, Section 21-A, Chapter 8 Section 31-C, Chapter 8 Section 32-A: Conservation of Biodiversity and Protected Areas Law of Forestry Department</p>	<p>X</p>	<p>X</p>

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4.1.6. The Philippines

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtle protection has a long history in the Philippines. The Pawikan Conservation Project was already initiated in 1979, with the objective to halt turtle egg poaching and thus to conserve marine turtle generations to come (Sagun, 2002). Being part of the largest green turtle nesting ground in ASEAN, the Turtle Islands Heritage Protected Area (UNESCO World Heritage Centre, 2015), and located in the centre of the Coral Triangle, the country is a major player in providing developmental habitats, such as coral reefs and seagrass meadows, and serves as one of the main transit points for turtle migration in the region.

In the past 10 years, the country's population of marine turtles has declined by as much as 80% (MWWP, n.d.), due to threats like poaching, coastal development/habitat destruction, unsustainable fishing practices/net entanglement, pollution (plastics, ghost nets, light pollution, etc.), and others. There are also several reports indicating that the country is a major source of hawksbill shells destined for other countries, such as China and Viet Nam (Nahill et al., 2020, in WWF, 2022). The Department of Environment and Natural Resources (DENR)-Biodiversity Management Bureau (BMB) Philippine Marine Turtle Country Assessment and Conservation Action Plan (2018) provides a review of threats to marine turtles in the country and proposes actions to address or mitigate these

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles to be found along the Philippine coastline: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback. All species except the loggerhead also nest in the country, however, leatherback nesting is rare.

Tag recoveries from turtles in the Philippines showed connections to Guam; Indonesia; Japan; Malaysia; Micronesia; Palau; and Taiwan, China (Sagun, 2002). Satellite tracking shows connectivity to/from the Philippines to areas in Malaysia, Indonesia, Commonwealth of the Northern Mariana Islands (CNMI)/Guam, Marshall Islands, Vietnam and others. Satellite telemetry and flipper tagging studies have equally shown that green turtles nesting in the Philippines migrate to countries such as Indonesia, Malaysia, and Singapore (Sagun, 2002). Furthermore, tagging data indicate that green turtles originating from CNMI and Yap, among others, are known to migrate into Philippine waters.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X (n)	X	X (n, rare)		

*nesting

National Laws

The lead agency for marine turtles is the DENR-BMB, whose mandate covers all terrestrial wildlife, including birds, as well as marine turtles and dugongs, as stipulated in Section 4 of the [Wildlife Resources Conservation and Protection Act \(RA 9147\) \(2001\)](#) (Fischer, 2021). With its implementing rules and regulations, it stipulates that taking, killing, and the possession of any parts of protected wildlife are prohibited. RA 9147 is the main legislative instrument in the country regarding wildlife matters, and it is accompanied by [DAO 2019-09](#), listing the native fauna protected in the Philippines, and by Department Administrative Order [\(DAO\) 2017-11](#), listing the native flora protected in the country, categorizing all species according to their national conservation status (Fischer, 2021). According to DAO 2019-09, the hawksbill

and the leatherback turtle are classified as Critically Endangered in the Philippines, whereas the green turtle, the olive ridley and the loggerhead are classified as Endangered.

The jurisdiction for the remaining marine and aquatic wildlife that is not covered by the DENR remains with the Department of Agriculture. For aquatic species falling under its mandate, the key legislation to be consulted is the [Fisheries Code \(RA 8550\) \(1998\)](#), as amended by [RA 10654 \(2015\)](#) (Fischer, 2021). Another important law relating to marine wildlife conservation is the [National Integrated Protected Areas System \(NIPAS\) Act \(RA 7586\) \(1992\)](#), as amended by [RA 11038 \(2018\)](#), and several departmental Administrative Orders.

The environment and natural resources of the Province of Palawan are governed by the Strategic Environmental Plan for Palawan Act, or RA 7611, which is implemented by the Palawan Council for Sustainable Development (PCSD) (Fischer, 2021). Moreover, the [PCSD Resolution 19-682](#) provides “Guidelines for the Determination and Classification of the Categories of Terrestrial and Aquatic Wildlife Flora and Fauna found in the Province of Palawan”, meaning that whenever species are confiscated in the Palawan Province, the classification and penalties of Resolution 19-682 apply (Fischer, 2021). Under “*Approving the 2014 Updated List of Threatened Terrestrial and Marine Wildlife in Palawan and their Categories Pursuant to Republic Act 9147 or the Wildlife Act*” per [PCSD Resolution No. 15-521 Series of 2015](#), all of the five marine turtle species found in the country are listed as Critically Endangered. This means that any form of trading, capture, trapping, among other such acts, of any marine turtle species in the province, is not allowed and is therefore punishable by law.

The Philippines also has a [National Biodiversity Strategy and Action Plan \(2015-2028\)](#), informing about conservation programs for marine and terrestrial species, national policies, and threats like illegal wildlife trade, aligning the plan with the Aichi Targets, and identifying priority conservation programs.

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species in the Philippines are listed as protected species on the country’s Red List, prohibiting the that taking, killing, and the possession marine turtles, eggs, and any parts, and therefore completely protected.

Exceptions: XXX

Opportunities and Challenges

The Wildlife Act is over 20 years old and contains provisions that need to be adapted, as well as low penalties that need to be increased in order to truly act as a deterrent. Under a counter-illegal Wildlife Project implemented by the Asian Development Bank from 2018-2021, an initiative was launched to revise the Act, with the Bill being reviewed at the time of writing by the Philippine Congress. Corruption is considered another enabler of illicit activities, including the direct take of turtles and sale of turtle eggs (Fischer, 2021). The main inter-agency wildlife task force of the country, the Philippine Operation Group on Ivory and Illegal Wildlife Trade, is one of the main institutions of the country to detect wildlife crime and arrest perpetrators. Moreover, the Philippines has a comprehensive list of legislation regarding biodiversity conservation, and a Marine Turtle Conservation Action Plan has been drafted, but not yet been published. Other opportunities and challenges concerning legislation protecting marine wildlife in the Philippines are listed in the report [“Review of Marine Wildlife Protection Legislation in ASEAN”](#).

International and Regional Instruments

The Philippines is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CITES
- CMS
- CTI-CFF
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (ICCAT, IOTC, WCPFC)
- SSME Regional Action Plan
- TIHPA MOU
- UNCLOS

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.1.7. Singapore

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtle nesting occurs in Singapore, with the largest threats to the eggs being monitor lizards, inundation by the high tide, and plant roots (NParks, 2017). Light pollution is another challenge, with nesting taking place on the shores of a city-state with over 5 million people. Turtle smuggling cases seem to be rare (WWF, 2022). Marine turtle conservation is high on the agenda of the National Parks Board (NParks), and the local team even attended a hatchery training programme in Mon Repos, Australia (NParks, 2017). In 2018, the country's first turtle hatchery was opened at the Sisters' Islands Marine Park in, a protected area zoned for conservation and research (NParks, 2019).

The hatchery comprises non-magnetic metal cages, where the turtle eggs are kept, smart technology, such as temperature sensors and Bluetooth water level data sensors and loggers, which enable the remote monitoring of various environmental conditions, which in turn can increase hatching success (NParks, 2019). Bluetooth sensors monitor water levels around the nests, ensuring that the incubating eggs will not be negatively impacted by saltwater intrusion. Nest temperature is also monitored remotely to ensure that the eggs, whose viability is temperature dependent, will develop and hatch successfully (NParks, 2019).

Presence and Nesting of Marine Turtle Species in the Country

Singapore is home to two species of turtles, both nesting on Singapore's sandy shores: the green turtle and the hawksbill turtle (NParks, 2017).

Satellite telemetry and flipper tagging studies have shown that green turtles nesting in Singapore migrate to countries such as Indonesia, Malaysia, and the Philippines. Additionally, tagging data indicate that green turtles originating from Vietnam (Charuchinda et al. 2000) and Indonesia and Malaka in Peninsular Malaysia, occasionally migrate into Singaporean waters.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	✗	✗	✗	✗	✗
Nesting	●	●	✗	✗	✗	✗	✗

National Laws

CITES is implemented by the Endangered Species (Import and Export) Act (2006, as amended in 2020), while the Wild Animals and Birds Act (1965), as [amended in 1985](#), regulates the possession, collection, and trade of wildlife within Singapore (Ezekiel, 2018). The Parks and Trees Act (2005), as [amended in 2020](#), contains some provisions relevant to the protected areas in the country that involve marine and coastal areas, and the Fisheries Act (1966), as [amended in 2020](#), controls fisheries activities within Singaporean waters and of Singapore vessels and nationals outside territorial (Ezekiel, 2018). All marine turtles are protected under the Wild Animals and Birds Act and its [Wildlife \(Protected Wildlife Species\) Rules 2020](#).

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species, their eggs, and derivatives, are fully protected.

Exceptions: XXX

Opportunities and Challenges

Whereas the country's measures to regulate international trade are clear, detailed, and strong in general, controls on marine natural resource protection and fisheries activities, which are provided by the Fisheries Act, are less developed, e.g. it does not contain provisions on threatened species and there are no measures to mitigate bycatch (Ezekiel, 2018; UNEP et al., 2022). There is no marine turtle tourism industry in Singapore. There are strong fines for some wildlife offences and a prohibition of mistreatment of wildlife in captivity (Ezekiel, 2018). Other opportunities and challenges concerning legislation protecting marine wildlife in Singapore are listed in the report "[Review of Marine Wildlife Protection Legislation in ASEAN](#)".

International and Regional Instruments

Singapore is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CITES
- London Declaration (IWT)
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking for research/educational purposes where a permit IS NOT required	Taking for research/educational purposes where a permit IS required
Wild Animals and Birds Act (1965, as amended in 2020)	X	X	X	X	X	X	X	DG's approval	X

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
Wild Animals and Birds Act (1965, as amended in 2020)	X	X	X	X	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Endangered Species (Import and Export) Act (2006, as amended in 2020); note Singapore ESA is aligned with CITES, permits will only be issued under exceptional circumstances	X	X	X	X	X	X
Wild Animals and Birds Act (1965, as amended in 2020)	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
Wild Animals and Birds Act (1965, as amended in 2020)	X	X	2	SGD 50,000 (=USD 37,324.30) ¹⁴	X	X

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
Parks and Trees Act (2005, as amended in 2020) - note the designation of marine parks	X	X

¹⁴ Currency exchange rate: 06 Dec 2023

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:	Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	
Wild Animals and Birds Act (1965, as amended in 2020)	X	X	X

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4.1.8. Thailand

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

In the middle of the 20th century, the Thai government gave concessions to marine turtle egg harvesters, in order to control egg poaching activities, in which people were required to release hatchlings to the equivalent of 20% of the eggs collected (Chantrapornsyl, 1992 in Aureggi, n.d.). In 1995, it was reported that because of this long-term excessive egg harvesting, the population numbers of leatherback and olive ridley and leatherback turtles in the Andaman Sea of Thailand had been decimated to only tens of females nesting annually (Limpus, 1995 in Aureggi, n.d.). The Thai government banned marine turtle egg collection, **possession and sale** in 1982, and since then numerous marine turtle, including egg, conservation programmes have been implemented, some since 1971 (AFP, 2021; Government of Thailand, 2019; WTO, 1998). Activities were the construction of a marine turtle and marine mammal hospital at the Phuket Marine Biological Center, development of the stranding network, establishment of marine protected areas, capacity building of marine rangers covering the country's coastline, and participation of communities (Government of Thailand, 2019). The direct take of marine turtles was never as prevalent as in other countries in the region, since the Thai culture embraces a traditional belief that it is sinful to kill marine turtles.

There are two main areas for nesting marine turtles in Thailand: on Khram Island at the inner Gulf of Thailand for green and hawksbill turtle nesting, and at the Andaman Sea coast of Thailand along the west coast line, mainly for olive ridley and leatherback nesting on the Phratong Islands, Thaimuang beach, and Phuket Island, and some nesting of green and hawksbill turtles along Surin and Similan Islands (Chantrapornsyl, 1996). The loggerhead turtle is believed to be extinct from Thai waters (Chantrapornsyl, 1996). Nesting numbers of leatherbacks in particular increased tremendously in Phuket during the COVID-19 pandemic, due to less disturbance by tourists and light pollution (AFP, 2021). Plastic and discarded fishing nets and lines, and fisheries activities, in particular trawling, drift gill nets and long-line hooks, have become the primary cause of injury and death (AFP, 2021; Government of Thailand, 2019).

Presence and Nesting of Marine Turtle Species in the Country

Four species of marine turtles have been recorded in Thai waters: the green turtle, hawksbill turtle, olive ridley turtle, and leatherback turtle.

Satellite telemetry and flipper tagging studies have shown that green turtles nesting in Thailand migrate to countries such as Indonesia, the Philippines, and Singapore (Sagun, 2002). Complementing these findings, genetic analyses have identified migratory connections for green turtles between nesting and/or foraging sites in Malaysia and Indonesia, as documented by Jensen et al. (2013).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X (n)	X?	X (n)		

*nesting

National Laws

Marine turtles have been protected by law in Thailand since 1947 via the Fisheries Act, prohibiting the catching, harvesting or harming of any marine turtle, demanding the immediate release of a turtle if accidentally caught, and prohibiting the collection or harm of sea turtle eggs on any beach in Thailand (WTO, 1998). In 1981, the export of any marine turtle species

was prohibited without an export license, and in 1993, the same followed through for the import of protected marine turtles (WTO, 1998). The [Fisheries Act \(B.E. 2490/1947\)](#) was [amended in B.E. 2558/2015](#) and, together with the [Marine and Coastal Resources Management Act \(B.E. 2558/2015\)](#), provides measures for the conservation and management of marine wildlife and marine and coastal and resources and ecosystems (Ezekiel, 2018; UNEP et al., 2022). This further includes prohibiting fishing operations during a season of aquatic animals' ovulation and egg-spawning (Section 70), possessing aquatic animals or aquatic animal products for commercial purposes (Section 61), and prohibiting the importation, exportation, bringing in transit, culturing or possession of any kind of aquatic animal (Section 65) (UNEP et al., 2022).

The country's main wildlife protection legislation is the [Wild Animal Reservation and Protection Act \(WARPA\) \(B.E. 2557/1992\)](#), which was [amended in B.E. 2562/2019](#), and entailed enhancing the protection levels of threatened species and dramatically increasing the penalties in most cases, e.g. with a 25-fold increase of maximum fines for offences in trafficking of CITES species (USAID Wildlife Asia, 2019). The Act also includes a list of conserved wild species, however, only the leatherback turtle is listed.

Other relevant Acts are the [Park Act \(B.E. 2504/1961\)](#), as [amended in 2019](#) and the [National Reserved Forests Act \(B.E. 2507/1964\)](#), as [amended in B.E. 2559/2016](#), which provide some protection for nesting marine turtles, as well as the [Customs Act \(B.E. 2469/1926\)](#) (as [amended in B.E. 2560/2017](#)), and the [Export and Import of Goods Act \(B.E. 2522/1979\)](#), as [amended in B.E. 2558/2015](#) that regulate the import and export of wildlife (Ezekiel, 2018).

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species, their eggs, and derivatives, are completely protected via the Fisheries Act, prohibiting the catching, harvesting or harming of any marine turtle, demanding the immediate release of a turtle if accidentally caught, and prohibiting the collection or harm of sea turtle eggs on any beach in Thailand. The WARPA List of conserved wild species only includes the leatherback turtle so far.

Exceptions: XXX

Opportunities and Challenges

With the passage of the revised WARPA, Thailand has significantly strengthened its wildlife conservation framework, including marine turtles. Challenges that remain pertain to plastic pollution, unsustainable fisheries and ghost nets, and excessive tourism, which entails issues with light pollution, disturbance of nesters, and coastal development, among others. There is a requirement for TEDs, although only in gulfs and bays, and the release of turtles caught accidentally is required. Other opportunities and challenges concerning legislation protecting marine wildlife in Thailand are listed in the report [“Review of Marine Wildlife Protection Legislation in ASEAN”](#).

International and Regional Instruments

Thailand is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CITES
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention

- RFMOs (IOTC, SIOFA)
- UNCLOS

[add results from matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.1.9. Vietnam

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Vietnam has a maritime territory and an Exclusive Economic Zone (EEZ) of about 1,000,000 km² including more than 3,000 near shore and offshore islands and major marine turtle nesting beaches scattered from the southern border with Cambodia to the northern border with China (Stiles, 2009). Concentrated nesting areas, although some may no longer be active, have been recorded in central provinces, the Gulf of Tonkin, the islands in the south-eastern waters, and the Gulf of Thailand (Stiles, 2009).

Over the last decades, many eggs and nesting turtles have been collected for food, or for their shell, in the case of hawksbill turtles, which is why these numbers have declined in most places (Stiles, 2009). Involved in regular trade are only the green and the hawksbill turtle. Still, large-scale and regular wholesale exports of marine turtle products seem to no longer occur, and the scale of the retail marine turtle market, as well as the demand, has decreased considerably since the early 2000s (Stiles, 2009). Still, and even though marine turtles have been protected in Vietnam since 2002, the largest current threats to the country's marine turtle populations are the direct take of nesting females and their eggs, accidental and opportunistic capture by fishermen, especially through gill nets, long-line fishing, bottom trawlers, and commercial crustacean and mollusc divers, and through habitat degradation (Stiles, 2009).

In 2003, the government undertook an awareness campaign to educate souvenir business owners/managers and relevant government agencies that the sale of marine turtle products was illegal (Stiles, 2009). Since then many marine turtle conservation programmes have contributed to protecting Vietnam's turtles, e.g. in Con Dao National Park (Nguyen, 2021). The government decided to utilize tracking devices, deploy rangers, organize waste collection on the beaches, and to implement other conservation measures (MONRE, 2015).

Presence and Nesting of Marine Turtle Species in the Country

Five species of marine turtles reside in Vietnam's waters: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and the leatherback turtle. All species, except the loggerhead turtle, have also been observed nesting on the country's beaches (Stiles, 2009).

Turtles in Vietnam are likely to be connected to surrounding countries like Cambodia, Malaysia and Thailand, e.g. satellite tagging data indicate that green turtles originating from Vietnam (Charuchinda and Monanunsap, 2000) and Australia, among others, are known to migrate into Malaysian and Singaporean waters. Satellite tracking from/to the Philippines also shows connectivity to Vietnam.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X (n)	X	X (n)		

*nesting

National Laws

Marine turtles have been protected in Vietnam since 22 April 2002, which was initiated by [Government Decree 48/2002/ND-CP](#) prohibiting the use and exploitation of wild marine turtles, and by [Circular 02/2006/TT-BTS](#) of the Ministry of Fisheries since 30 March 2006, which complemented [Government Decree 59/2005/ND-CP](#) of 4 May 2005 (Stiles, 2009).

These laws prohibited the catching and commercial exploitation of marine turtles and their products (Stiles, 2009). Today, marine wildlife protection in Vietnam is framed by the following key legislation: the [Fisheries Law \(2003\)](#), as [amended in 2017](#), the [Biodiversity Law \(2008\)](#), the Law on the [Vietnamese Sea \(2012\)](#), the [Law on Environmental Protection \(2005\)](#), as amended in 2020, the [Law on Customs \(2014\)](#), the [Law on Marine and Island Resources and Environment \(2015\)](#), and the [Vietnam Maritime Code \(2015\)](#), which are all implemented by numerous regulations issued by the government (Gomez and Krishnasamy, 2019). Penalties for administrative violations and crimes are provided separately in [Penal Code No. 100/2015/QH13](#) and [Law 12/2017/QH14](#), known as the amended Penal Code (Gomez and Krishnasamy, 2019). Even though amended, Decree 59/2005/ND-CP still prohibits the harvesting of any species considered to be “threatened by extinction” by the Ministry of Fisheries (Gomez and Krishnasamy, 2019).

The list of species “threatened with extinction” is issued by the Ministry of Agriculture and Rural and can be found in [Decision 82/2008/QD-BNN](#). It includes the hawksbill turtle, green turtle, olive ridley turtle, leatherback turtle, and loggerhead turtle (Gomez and Krishnasamy, 2019). Moreover, Decree 59 is also supplemented by guiding document [Circular 02/2006/TT-BTS](#), which lists four species of marine turtles that are “prohibited from exploitation”: hawksbill turtle, green turtle, leatherback turtle, and olive ridley turtle (Gomez and Krishnasamy, 2019). [Decree 160/2013/ND-CP](#) provides exceptions to this rule, but only for conservation and/or research purposes and with proper permits. Vietnam’s CITES implementing legislation, by [Decree 82/2006/ND-CP](#), regulated the international trade in marine turtles to/from Vietnam (Gomez and Krishnasamy, 2019).

In 2004, the Vietnamese Government formulated its first Marine Turtle Conservation Action Plan to 2010, which was updated in 2016 with a new Action Plan for the period 2016-2025 (MONRE, 2016). The first plan called for expanding the awareness programme initiated in 2003 aimed at fishermen, designing an awareness programme for business owners/managers, and confiscating and destroying all marine turtle products that remain for sale in all stores and warehouses (Stiles, 2009). The new Action Plan XXX.

FULLY PROTECTED (through marine turtle-specific legislation)

Vietnam prohibits the use, catching, and exploitation of wild marine turtles and their products. The hawksbill turtle, green turtle, olive ridley turtle, leatherback turtle, and loggerhead turtle are listed as “threatened with extinction”, and the hawksbill turtle, green turtle, leatherback turtle, and olive ridley turtle are “prohibited from exploitation”.

Exceptions: Conservation and/or research purposes

Opportunities and Challenges

Even though Vietnam’s legal system is challenging to navigate, seeing a proliferation of laws and implementing regulations at different levels, the legislation addresses marine resource exploitation, prohibits and penalises activities harmful to marine wildlife, and provides a solid framework to protect marine wildlife in trade (Gomez and Krishnasamy, 2019). However, there is no requirement to release marine wildlife that has been captured accidentally and there are several lists of protected wildlife in use, which complicates law enforcement (Ezekiel, 2018). Other opportunities and challenges concerning legislation protecting marine wildlife in Vietnam are listed in the report [“Review of Marine Wildlife Protection Legislation in ASEAN”](#).

International and Regional Instruments

Thailand is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- ASEAN Sea Turtle Conservation and Protection MOU
- CBD
- CITES
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs
- UNCLOS [add results from matrix Excel file]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.2. East Asia

4.2.1. China

Country Profile and Matrix not approved, yet

Mainland, China

Marine Turtle History and Status

Due to the vast ocean area and countless shipping and fishing activities, the South China Sea is considered a haven for illegal trade and capture of marine turtles (Wild Aid, 2018 in Gomez and Krishnasamy, 2019). Lam et al. (2012) found a consistent illegal trade route to mainland China, mainly from Indonesia, Malaysia, and the Philippines, with over 9,180 turtle derivatives traded between Southeast Asia and East Asia between 2000-2008. The poaching of marine turtles in these waters was reported to be perpetrated mostly by Chinese fisheries, operating out of Hainan province, and by Vietnamese fisheries (traded at sea to China) (IOSEA, 2014 in Gomez and Krishnasamy, 2019; Nuwer, 2016; WWF, 2007). Mainland China was identified as one of the destinations for illegal trade flows of marine turtles, especially with hawksbill shells found in the luxury arts and crafts market, meat and for Traditional Chinese Medicine, with the demand reportedly on the rise (Lam et al., 2012 and CITES, 2016 in Gomez and Krishnasamy, 2019) (see Figure 2). This was confirmed by a recent study, stating that whereas Vietnam is the biggest source of poached turtles, almost 90% of these turtles end up in China or Japan (Senko et al., 2022). Taiwan also appeared to be a significant market for processed shell items, whereas in Hong Kong the confiscated items were mostly shell scutes hidden in cargo consignments (Lam et al., 2012).



Figure 2. International trade routes for Indonesia and Malaysia based on seizure data between 2015 and August 2018. Source: (Gomez and Krishnasamy, 2019)

In mainland China itself, there are only few records of marine turtles nesting: due to the over-harvesting and habitat degradation, population numbers have dwindled, and only limited nesting occurs on some beaches of the Paracel Islands (Xisha Islands) in the South China Sea (Wang et al., 2019 in Lin et al., 2021). In addition, a growing number of aquariums has created an increased demand for marine turtles to be displayed, with a 2018 national survey finding that only 25.7% of the displayed turtles had legal permits of display and purchase (National Aquatic Wildlife Conservation Association, 2019 in Lin et al., 2021). Private individuals also keep marine turtles in turtle farms for sale, claiming they have been bred in captivity, whereas genetic sampling showed this to be a false statement (Lin et al., 2021).

In 2021, the “National Key Protected Wildlife List” was revised in 2021 and upgraded all marine turtles to first-level key protected wild animals. Conservation initiatives, like the U.S.-China Eco-Partnership between Sea Turtles 911 and Hainan Normal University was formed, including the definition of boundaries of a proposed marine protected area, tracking of marine turtles with satellite telemetry, public education, local community empowerment and research (Yeh et al., 2021). In 2018, the China Sea Turtle Conservation Alliance was founded in Sanya, Hainan, which comprises more than 90 members, among others the fisheries administration of the Ministry of Agriculture and Rural Affairs (China Daily, 2018). A public awareness survey conducted in 2020 also revealed greater support for sea turtle conservation and positive trends toward reduced purchases of marine turtle products since 2017, but also showed that 18% of respondents had purchased marine turtle products in the last year, and 12% of respondents would even consider buying sea turtle products in the future (Wild Aid, 2021).

Presence and Nesting of Marine Turtle Species in the Country

Five species of marine turtles have been recorded in the waters of Mainland China: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*?)	X (n?)	X (n?)	X (n?)	X (n?)		

*nesting

National Laws

In 2021, China revised its “National Key Protected Wildlife List”, upgrading all five species of marine turtles in China to Level I protection (Wild Aid, 2021). This list sits under China’s Wildlife Protection Law of 1989, which was revised for the fifth time, broadening the scope of protection, expanding protection to over 140 marine species (Kwan et al., 2023). Listing wildlife as level I-species prohibits killing, hunting, trading or smuggling the protected animals with jail sentences up to 10 years for those caught (Wild Aid, 2021). Level-I-listed protected wildlife may only be hunted and captured for scientific research, epidemic source and disease monitoring, population control, or other special circumstances. The consumption of protected animals is prohibited (China Development Brief, 2023). Legal protection is also provided by the law for wildlife habitats, defined as important wild areas for wildlife populations to breed and live (China Development Brief, 2023).

FULLY PROTECTED (through general wildlife legislation)

The green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle are listed as species under Level I protection, which prohibits killing, hunting, trading, consuming, or smuggling marine turtles, their eggs, and their derivatives.

Exceptions: Scientific research, epidemic source and disease monitoring, population control, or other special circumstances

Opportunities and Challenges

As one of the main destinations for marine turtles poached in the region, it seems that the demand in China remains high and a challenge for the protection of this species. The recent up-listing of all marine turtle species, which came into effect in May 2023, presents a great opportunity to turn the tide, however, as long as the law is enforced accordingly.

International and Regional Instruments

China is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- London Declaration (IWT)
- Ramsar Convention
- RFMOs (CCAMLR, CCBSP, IATTC, ICCAT, IOTC, NPFC, SIOFA, SPRFMO, WCPFC)
- UNCLOS

[add results from matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

Hong-Kong, China

Marine Turtle History and Status

Decades ago, marine turtles used to nest in many remote beaches in Hong-Kong, according to historical records (Chan et al., 2007). Because of the intense human activities and the rapid development, turtles no longer nest on these sites and most of these sites do not exist anymore. At present, the only nesting site in Hong-Kong is called Sham Wan on Lamma Island – a small sandy beach of about 0.005 km².

Presence and Nesting of Marine Turtle Species in the Country

There are five species of turtles in Hong-Kong: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback, with only the green turtle nesting there.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n)	X	X	X	X		

National Laws

There are two relevant Hong Kong ordinances which help conserve sea turtles: All wild turtles in Hong Kong including marine turtles are "Protected Wild Animals" under the [Wild Animals Protection Ordinance \(Chapter 170\)](#). Hunting, wilful disturbance, possession, sale or export of marine turtles, including their nests and eggs, are subject to a maximum fine of HKD 100,000 (=USD 12,771)¹⁵ and an imprisonment of 1 year (AFCD, n.d.).

The sandy beach at Sham Wan was designated as one of the Restricted Areas under the Wild Animals Protection Ordinance in 1999. Since 2021, the Sham Wan Restricted Area has been expanded to the adjacent waters in the inlet of the sea. The restricted period is April to October each year. Unauthorised entry is subject to a maximum fine of HKD 50,000 (=USD 6,386) (AFCD, n.d.).

Import, export, or possession of marine turtles, as also strictly regulated by CITES, without permission is liable to a maximum fine of HKD 10,000,000 (=USD 1,277,140) and an imprisonment of 10 years (AFCD, n.d.)

FULLY PROTECTED (through general wildlife legislation)

The green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle are listed as protected wild animals, which includes a protection of their nests and eggs.

Exceptions: XXX

Opportunities and Challenges

Despite the small size of the breeding population, loss of the few nesters remaining in Hong-Kong would result in an important loss of genetic diversity in the region (Ng et al., 2014). This requires to continue and expand monitoring and research of nesting populations at potential nesting sites in the region, and to enforce legal protection. Future research studies in Hong-Kong should focus on habitat use and genetic composition of migrating or foraging marine turtles to identify and mitigate threats to the population/s.

[Note: The Matrix will not be submitted by Hong-Kong.](#)

¹⁵ Exchange rate from: 30 May 2023

Taiwan, China

Marine Turtle History and Status

Taiwan has three primary sea turtle rookeries: Lanyu Island in Taitung County, Wan-an Island in the Penghu Archipelago, and Liuchiu Island in Pengtung County (Cheng et al., 2018). Little Liuchiu and Taiping Island are also the two major feeding areas for the green turtles in Taiwan (Huang, 2022). Threats identified is illegal poaching of marine turtles on the high seas along the migratory corridor of the turtles (Cheng et al., 2018), as well as fishing disturbances and heavy metals, e.g. through increased eutrophication resulting in more cases of fibropapillomatosis, leading to strandings (Chou et al., 2023).

Presence and Nesting of Marine Turtle Species in the Country

There are five species of turtles in Taiwan: the green turtle, which is the most common species, the hawksbill turtle, olive ridley turtle, loggerhead, and leatherback, with only the green turtle nesting there.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n)	X	X	X	X		

National Laws

The Wildlife Conservation Act, as [amended in 2013](#), is Taiwan's main law governing wildlife, which is divided into general or protected wildlife. All marine turtle species are classified as protected on the Protected Species List. People hunting or killing protected species will be subject to six months to five years imprisonment, and/or a fine of TWD 200,000 to TWD 1,000,000 (=USD 6,395-31,974).¹⁶ However, Article 21-1 states that wildlife, including protected wildlife, may be hunted or killed for traditional cultural or ritual hunting, killing or utilization needs of Taiwan aborigines, once a permit is approved.

PARTIALLY PROTECTED

The green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle are listed as protected wild animals, which includes a protection of their nests and eggs.

1. Danger to public safety or human life;
2. Damage to crops, poultry, livestock or aquaculture;
3. Being a disease vector of zoonoses or other pathogens;
4. Danger to the safety of air transportation;
5. (Abolished)
6. Other reasons approved by the Authorities.

Exceptions: XXX

Opportunities and Challenges

A "TurtleSpot Taiwan" community submits photos of turtles to a database in order to help identify individuals. The database has over 700 entries to date (Kuo, 2023). The Green Turtle Tourism and Conservation Centre advocates tourists and helps in efforts to protect nesting beaches.

¹⁶ Currency exchange rate from 22 December 2023.

4.2.2. Japan

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Japan is one of the world's leading loggerhead turtle nesting grounds, and the only nesting area for this species in the Northern Pacific (Ministry of the Environment Japan, n.d.). Between 30 and 40% of all loggerhead turtles coming ashore to nest in Japan do so on Nagata Beach, which is located on the northwestern part of Yakushima Island, part of the Yakushima National Park (Ministry of the Environment Japan, n.d.). Bycatch was considered a significant source of mortality for this species in earlier decades, but Japan went back to its long-held traditions of nature stewardship (Matsuzawa, 2018). The Yakushima ranger office is working with local stakeholders to conserve marine turtles and their developmental habitats.

Historically, however, Japan has been one of the world's largest tortoiseshell markets (TRAFFIC, 2021). Skilfully carved tortoiseshell pieces, called *bekko* in Japan, including jewellery, spectacle frames, combs, and traditional ornaments, have been high in demand since ancient times. Until the early 1990s, the country was a major importer of *bekko*, a practice that threatened especially the hawksbill turtle with extinction (Matsuzawa, 2018).

Japan withdrew its CITES reservation to the Appendix-I listing of the hawksbill turtles and on *bekko* trade in 1994. However, there have been many reports that the trade continues: seizure records of Japan Customs show that between 2000 and 2019, an estimated total of 564kg of hawksbill tortoiseshell were seized in 71 illegal importation incidents (TRAFFIC, 2021). In contrast to other countries that are illegally importing entire specimen, the *bekko* imports into Japan mainly consist of raw scutes, making it difficult to estimate the number of turtles (Lam et al., 2012).

Based on a previous conservation and research project, beach ranger systems were implemented, ordinances were passed, and night patrols initiated, among others to conduct nutritional analysis of marine turtle eggs, which resulted in education campaigns communicating to the public that marine turtle eggs are no more nutritious than chicken eggs (Matsuzawa, 2007). Voluntary, community-led initiatives, which are often founded by a unique brand of local ocean heroes, have advocated nature stewardship (Matsuzawa, 2018).

Presence and Nesting of Marine Turtle Species in the Country

Five species of marine turtles have been recorded in the waters of Japan: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle. Only the green turtles (Nansei and Ogasawara islands), hawksbill turtles (Nansei islands) and loggerhead turtles (Honshū, Shikoku, Kyūshū, Ogasawara Islands, and Nansei islands) also nest in the country (Ministry of the Environment Japan, 2007).

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	✗	●	✗	✗	✗

The nesting biogeography of marine turtles is also shown in Figure 3:

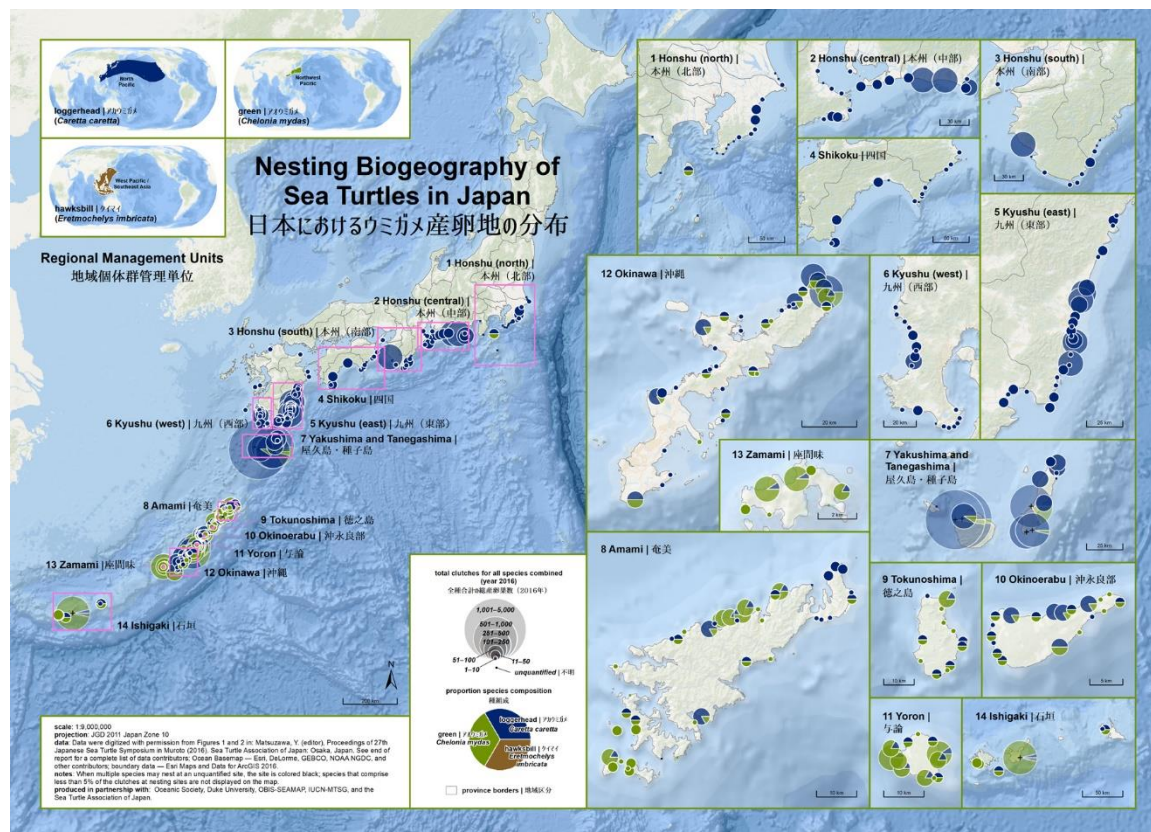


Figure 3. Nesting biogeography of marine turtles in Japan, Source: [SWOT Report, vol. XIII \(2018\)](#)

National Laws

Japan's [Act on Conservation of Endangered Species of Wild Fauna and Flora](#) (ACES) (Act No. 75 of 1992) stipulates necessary measures for the conservation of species that live or grow in Japan and internationally threatened species of wild fauna or flora. Nationally threatened species are based on the [Red List](#), etc. The Red List was revised and published in 2020 and the Red Data Book on Land and Freshwater Molluscs was published and revised in 2015 by the Ministry of Environment, and other institutions. The Red Data Book compiles the habitat status of listed species as an explanation of the Red List. The [Red List 2020](#) lists the loggerhead and the hawksbill turtle as Endangered, and the green turtle as Vulnerable. In addition, a [Marine Life Red List](#) was created in 2017, which includes marine fish, corals, marine crustaceans, cephalopods and other marine invertebrates. ACES regulates/prohibits the trade in marine turtles as internationally endangered species (Ministry of the Environment Japan, n.d.).

Measures under ACES taken for endangered species of wild fauna and flora are divided into three major categories: 1) regulation of treatment of individual organisms, 2) protection of habitat, and 3) programmes for the rehabilitation of natural habitats and maintenance of viable populations (Ministry of the Environment Japan, n.d.). In 2017, ACES was strengthened, e.g. the domestic trade in “International Endangered Species”, by validating trade registration cards for a finite period of time, and ivory trading businesses are now required to register their stock (TRAFFIC, 2017). The [Natural Parks Law](#) (No. 161 of 1957), prohibits the capture of marine turtles and the harvest of their eggs in some protected areas designated in several natural parks (including national parks).

The [Law for the Protection of Cultural Properties](#) (1950, as amended in 2007), as well as local government Ordinances implementing this law, requires to ask permission from the Agency of Cultural Affairs for acts that would affect the habitat and capture of turtles in designated areas. The [Ecotourism Promotion Act](#) (No. 105 of 2007), which regulates the designation of, by the Mayor of a municipality, and interaction with Specified Natural Tourism Resources that require protection.

The purpose of the [Fishery Act](#) (Act No. 267 of 1949, as amended in 2019)¹⁷, and the [Act on the Protection of Marine Resources](#) (Act No. 313 of 1951, as amended in 2018), is to conserve and manage the living marine resources. According to Act No. 267, possession, harvesting, and sale of olive ridley and leatherback turtle are prohibited (Lam et al., 2012). These species' harvest can only be permitted for the purpose of scientific research under a licence issued by the Ministry of Agriculture, Forestry and Fisheries (Lam et al., 2012). The harvest of green, hawksbill, and loggerhead turtles (nesting in Japan) may be allowed for scientific research, local traditional use, and for the transfer of eggs to hatcheries, which is regulated by the Prefectural Fishery Adjustment Rule and Fishery Adjustment Commission. Turtle hatchlings may be retained in hatcheries for conservation, rehabilitation or research purposes.

This government structure allows individual prefectures (with a total of 66 administrative sea areas in the country) to establish marine fisheries adjustment regulations at a local or regional level that may then differ from the national ones, thus e.g. permitting marine turtle catch by licensed commercial fishers, in addition to scientific and captive breeding purposes (Lam et al., 2012). Okinawa prefecture, for example, sets a catch quota for marine turtles (Lam et al., 2012).

CITES is implemented through Japan's [Foreign Exchange and Foreign Trade Law](#) (1949) (international implementation of the Convention), with issuance of import/export permission by the Ministry of Economy, Trade and Industry. ACES prohibits, in principle, mainly domestic trade and display and advertisement for the purpose of sale and advertising leading to trade.

Japan also published a [National Biodiversity Strategic Action Plan \(2023-2030\)](#) in 2023, which includes as targets a) reduction of bycatch through the development and promotion of bycatch mitigation technologies, b) conservation of coastal and island biodiversity for the protection of marine turtles and other species.

A "[Guidebook for Marine Turtle Protection](#)" was published in 2006 and revised in 2007.

PARTIALLY PROTECTED

The possession, harvesting, and sale of olive ridley and leatherback turtles are prohibited.
Exceptions: Scientific research

The harvest of green, hawksbill, and loggerhead turtles (nesting in Japan) may be allowed for scientific research, local traditional use, and for the transfer of eggs to hatcheries.

Turtle hatchlings may be retained in hatcheries for conservation, rehabilitation or research purposes.

Opportunities and Challenges

With its history and culture interwoven closely with tortoiseshell products, there seems to be a need to further strengthen marine turtle conservation efforts, e.g. by deterring illegal activities and by encouraging e-commerce platforms to phase out the sale of tortoiseshell (see

¹⁷ Basic resources management methods for fisheries catch provided for in the Act include Maximum Sustainable Yield) and Total Allowable Catch, however, these are not used for/applicable to marine turtles.

<https://www.endwildlifetraffickingonline.org>). Even though any trade of whole marine turtle specimens (whole body or carapace shape) requires registration with the Ministry of the Environment, domestic legislation relies primarily on manufacturers self-reporting their stockpile balance and transaction records, and most finished tortoiseshell products are exempt from registration requirements (TRAFFIC, 2021). Being listed on the national Red List shows that the government is aware of the turtles' conservation status and the perils they face.

International and Regional Instruments

Japan is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- London Declaration (IWT)
- PSMA
- RFMOs (WCPFC, IATTC, IOTC, ICCAT, CCSBT, NAFO, SEAFO, NPFC, SIOFA, CCAMLR)
- Ramsar Convention
- UNCLOS

DRAFT

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking/using for traditional purposes where a permit IS required	Taking for research/educational purposes where a permit IS required	Taking of marine turtles according to a minimum / maximum size limit, e.g. >XX< cm where a permit IS required	Taking of marine turtles according to a maximum quota where a permit IS required	Taking of marine turtles according to a certain sex preference of marine turtles (female or male) where a permit IS required	Legislation incorporates relevant traditional knowledge, customary marine tenure and practices *
Fishery Act; <i>Lepidochelys olivacea</i> , <i>Dermochelys coriacea</i> and other	X	X	X	X	X	X	X	X	X	X ¹⁸	X (HB: 28, LH: 6, GT: 205 in	X ¹⁹	X

¹⁸ The maximum size limit of taking HB is 25cm in accordance with Fishery Adjustment Commission. The minimum/maximum size limit of taking HB, LH, GT are 30-60cm in accordance with Prefectural Fishery Adjustment Rule.

¹⁹ There is no description about prohibiting to take females in Fishery Act. However, some prefectures prohibit it by each Fishery Adjustment Commission.

turtles if applicable.											Okinawa)		
Law for the Protection of Cultural Properties (in certain areas)*		X	X	X	X	X	X	X	X				X
Local government ordinance for the Protection of Cultural Properties (for some local governments)		X	X	X	X	X	X	X	X				X
Natural Parks Law (in certain areas)		X	X	X	X	X	X	X	X				X

* Two coasts for nesting were designated as natural monuments (Omaezaki of Shizuoka Pref. and Ohama of Miyazaki Pref.) by the government. Seven other sites were designated as protected areas by the local government.

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Hook & Line	Purse seine	Other relevant fishing gear
Fishery Act ("Other relevant fishing gear": set net)	X	X	X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practices	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	External observers required on (some) fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
Fishery Act ("Vessel Monitoring Systems": required for vessels >10 gross tons.)	X	X	X	X*	X	X	X	X	
Guidebook for Marine Turtle Protection (2006, revised 2007)									X

* The Fishery Act ensures that relevant long-line fishing vessels use circle hooks to prevent marine turtle bycatch.

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS NOT required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
Law for the Protection of Cultural Properties (in certain areas)	X	X		X	X	X
Local government ordinance for the Protection of Cultural Properties (for some local governments)	X	X		X	X	X

Natural Parks Law (in certain areas)	X		X		X	X
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Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	Head-starting of hatchlings allowed, where a permit IS NOT required	Guidelines for tourism best practices were developed and published*
Ecotourism Promotion Act (*only in certain areas with approved ecotourism plans), Tourism guidelines: Rules for marine turtle observation in Yakushima	X	X	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs allowed, where a permit IS NOT required	Local sale of any products derived from turtles allowed, where a permit IS required	Export of turtles allowed, where a permit IS required	Export of turtle eggs allowed, where a permit IS required	Export of any products derived from turtles allowed, where a permit IS required
Act on the Conservation of Endangered Species of Wild Fauna and Flora	X	X	X*			
Foreign Exchange and Foreign Trade Act				X	X	X

* Exemption: no regulation of finished marine turtle products.

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
The National Red List of Japan or Local government Red Lists	X						
Natural Parks Law (in certain areas)		X	X	0.5	JPY 500,000 (= USD 3,398.93)	X	
Law for the Protection of Cultural Properties (in certain areas)		X	X	5	JPY 1,000,000 (= USD 6,797.85) ²⁰	X	X

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats
Natural Parks Law (in certain areas)	X	X	X
Law for the Protection of Cultural Properties (in certain areas)	X	X	
Local government ordinance for the Protection of Cultural Properties (for some local governments)	X	X	

²⁰ Currency exchange rate: 06 Dec 2023

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:		Collection of genetic samples from marine turtles conducted, where a permit IS required
			Parts and samples from turtles legally harvested or stranded dead can be used for research	Hatchlings trapped in nests that would otherwise die may be sacrificed for research into sex ratio etc.	
Fishery Act	X				
Natural Parks Law (in certain areas)	X				
Law for the Protection of Cultural Properties (in certain areas)		X	X	X	X
Local government ordinance for the Protection of Cultural Properties (in some governments)		X	X		X

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4.2.3. Republic of Korea

Marine Turtle History and Status

Historically, marine turtles are closely connected to Korea, as it was the turtle god who sent six kings down to the country to govern ancient Korean kingdoms (Jo and Hykle, 2012). In other fairy tales, marine turtles are depicted as sea gods or messengers of gods, which is why Koreans often share a common sentiment to keep turtles safe (Jo and Hykle, 2012).

Even though the low water temperatures in Korea's ocean do not seem to be attractive for turtles, research suggested that marine turtles live in Korean waters all year round, with intermittent nesting at Jung-moon Beachon Jeju Island, as a result of increasing water temperatures due to global warming and inflows of warm currents and prey species (Jo and Hykle, 2012; Kim et al., 2017).

Presence and Nesting of Marine Turtle Species in the Country

Korea's waters host four species of marine turtles: the green turtle, hawksbill turtle, loggerhead, and leatherback turtle (Jo and Hykle, 2012), with the loggerhead turtle being the only species nesting in the Republic of Korea (Kim et al., 2020). However, no case of a marine turtle laying eggs naturally in Korea has been recorded since 2007. Evidence is inconclusive for the presence of olive ridleys in Korea waters, however, Kim et al. (2021) state that this species was reported recently for the first time.

[more on connectivity to be added]

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	✗	✗	✗	●	✗	✗	✗

National Laws

All five turtle species, with the olive ridley turtle included in 2021 (Yonhap, 2021), were designated as "Marine Organisms under Protection" in Article 19 of the [Conservation and Management of Marine Ecosystems Act \(2021\)](#), under the Ministry of Oceans and Fisheries (Kim et al., 2021). Article 18 addresses the rescuing and treating of marine animals in distress or wounded. Article 25 of the Act addresses the importance of the designation and management of MPAs, and Article 20 prohibits the capturing, collecting, transplanting, processing, distributing, storing or damaging of marine organisms under protection, and installing explosives, nets or fishing gear, or use harmful substances or electric currents to capture these species. Article 42 restricts imports and exports, except holding a permission from the Ministry, and Article 46 addresses restoration of marine ecosystems, where the major spawning areas or habitats of marine organisms under protection are damaged or destroyed, which threatens the existence of species (UNEP et al., 2022).

Another relevant Act is the [Wildlife Protection and Management Act \(2014\)](#), which restricts international trade, etc. of globally endangered species (Article 16), restricts advertisement of endangered wildlife (Article 17), and prohibits the capture and collection of wildlife (Articles 14 and 19), and regulates the export and import of wildlife (Article 21).

South Korea also published A Guide to Sea turtles (2014, hardcopy only), and a Guideline on report and rescue of marine species, both published by the Ministry of Oceans and Fisheries.

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species in the Republic of Korea were designated as “Marine Organisms under Protection”, prohibiting the capturing, collecting, transplanting, processing, distributing, storing or damaging of these species, their eggs, and derivatives.

Exceptions: Non-lethal sampling (with permit) for scientific research

Opportunities and Challenges

Due to the low occurrence frequency of marine turtles, research is lacking. Whereas the shores of Korea may not be the main habitat of marine turtles, seeing that they are usually not found in waters below 10 degrees Celsius, appearances become more frequent and studies, e.g. on occurrence patterns and feeding ecology, are conducted (Kim et al., 2021). Examples of research on marine turtles taking place in Korea includes research on artificial breeding of marine turtles (Cho et al., 2022, p. 202), movement patterns of artificially propagated juvenile loggerhead and green turtles in the wild (Kim et al., 2022), and causes of marine turtle death (Kim et al., 2017; Moon et al., 2022). Moreover, South Korea is working on establishing a plan to preserve biodiversity of marine species, including the protected marine species. The plan is expected to be established in 2024.

International and Regional Instruments

The Republic of Korea is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- PSMA
- Ramsar Convention
- RFMO (CCAMLR, CCBSP, CCSBT, CECAF, IATTC, ICCAT, IOTC, NAFO, NPFC, SEAFO, SIOFA, SPRFMO, WCPFC, WECAFC)
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	Taking for research/educational purposes where a permit IS required
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 18-2 (Prevention of Incidental Catch of Marine Organisms under Protection)			X	
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection)	X	X	X	X
WILDLIFE PROTECTION AND MANAGEMENT ACT Article 19 (Prohibition against Capture and Collection of Wildlife)	X (green turtle, leatherback turtle)*			

* By the time a list of non-endangered species for which taking and/or capturing was to be banned in accordance with Article 19 of Wildlife Protection and Management Act was established, the hawksbill and olive turtles were not found to live in the Korean waters. Loggerhead turtles were not included in the list as it was assessed that the status for this turtle was stable.

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Trawl Nets	Gill nets	Purse seine	Draft nets
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 18-2 (Prevention of Incidental Catch of Marine Organisms under Protection)	X	X	X	X	X	X
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection)	X	X	X	X	X	X
WILDLIFE PROTECTION AND MANAGEMENT ACT Article 19 (Prohibition against Capture and Collection of Wildlife)	X (green turtle, leatherback turtle)	X (green turtle, leatherback turtle)	X (green turtle, leatherback turtle)	X (green turtle, leatherback turtle)	X (green turtle, leatherback turtle)	X (green turtle, leatherback turtle)

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	A turtle handling guide/ standard operating procedure is published*
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 18 (Rescue and Treatment of Marine Animals)_해양동물전문구조·치료기관의 관리와 지원 등에 관한 고시 제11조(구조 및 조치보고)	X	X	
Guideline on report and rescue of marine species (Ministry of Oceans and Fisheries), and Guide to Sea Turtles (Ministry of Oceans and Fisheries, 2014):			X

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection)	X	X
WILDLIFE PROTECTION AND MANAGEMENT ACT Article 19 (Prohibition against Capture and Collection of Wildlife)	X	X

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed	No head-starting of hatchlings allowed
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection)	X	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
WILDLIFE PROTECTION AND MANAGEMENT ACT Article 19 (Prohibition against Capture and Collection of Wildlife)	X	X	X	X	X	X
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection)	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*	Wildlife Rescue Center manuals were developed and published*
Red Data Book of Republic of Korea (2019, Volume 2, Amphibians and Reptiles)	X (green turtle, loggerhead turtle)*						
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection), and Articles 61-62 (Penalty Provisions)		X	X	imprisonment with labour for not more than three years	KRW 30 million (= USD 22,819.5) ²¹		
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 18 (Rescue and Treatment of Marine Animals), and A Guide to Sea turtles (2014)						X	X

*The remaining three species are planned to be assessed in 2024.

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Collection of genetic samples from marine turtles conducted, where a permit IS required
CONSERVATION AND MANAGEMENT OF MARINE ECOSYSTEMS ACT, Article 20 (Prohibitions against Capturing or Collecting Marine Organisms under Protection)	X	X

²¹ Currency exchange rate: 06 Dec 2023

4.3. South Asia

4.3.1. Bangladesh

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

In 2023, a record number of olive ridley turtle eggs laid on the country's beaches was recorded, 7,528 eggs on three islands, which was attributed to extensive conservation efforts in the past (Parvin, 2023). This includes awareness raising in communities, the set-up of nesting grounds, and the set-up of five conservation centers in Cox's Bazar (Parvin, 2023). St. Martin is one of the most prominent nesting islands, and olive ridley turtles have been found to nest along the coast, stretching from St. Martin's Island in the southeast to the Sunderban mangrove forests in the southwest (Sea Turtles of India, 2016). Apart from St. Martin's, marine turtles are found in Sahporirdwip~Cox's Bazar, Inani, Teknaf Bordal Kochopia, Monkhali, Sonadia Island, Sandwip, Kutubdia Island, Egg Island, Mandarbaria, Dubla Island and the sandy beaches of the Sundarban area (Government of Bangladesh, 2010).

Marine turtles were not prioritized in any agenda for research or conservation since the country's independence until the early 21st century (Government of Bangladesh, 2010). When Rashid and Islam (2006) conducted their study in 2006, they noticed that there had been no systematic surveys or scientific research conducted until then. In the early 2000s, the Ministry of Environment and Forests developed a management plan for St. Martin's Island to protect and manage important nesting beaches (Rashid and Islam, 2006).

Other conservation activities followed, especially after the country's submission of its 2015 report to the Convention on Biological Biodiversity, wherein it was noted that turtle nesting grounds on beaches were being destroyed due to increased tourist traffic, including noise and light pollution, and development activities. Moreover, commercial fishing nets at sea ensnared marine turtles and left them dead, especially trawl, drift, gill, and mesh nets, which impacted the number of nesting turtles and eggs (Parvin, 2023). Islam et al. (2011) and the Government of Bangladesh (2010) also reported the illegal harvesting of turtle eggs, wild dog predation, alterations of sand dunes and nesting beaches, bycatch in offshore fisheries, shrimp farms, pollution, flooding, and collision with fishing vessels as the main threats to marine turtles in Bangladesh. Local communities seem not to have exploited marine turtles (direct take), which might be due to religious taboos or a lack of knowledge of the turtle trade (Rashid and Islam, 2006).

Presence and Nesting of Marine Turtle Species in the Country

Bangladesh has a coastline of about 710 km and supports five species of marine turtles in its waters: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle. Only the green, hawksbill, and olive ridley turtles also nest in the country, predominantly the latter (Parvin, 2023).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Bangladesh. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n - rare)	X (n)	X	X		

*nesting

National Laws

In 2011, a [new Article \(18A\)](#) was inserted into the Constitution of Bangladesh, which guarantees to safeguard the natural resources, wildlife, biodiversity, forests, and wetlands for present and future citizens (Golder et al., 2022).

Even though marine turtles were first omitted from the list of protected species of the [Bangladesh Wildlife Preservation Act \(1973\)](#), all species were listed in Schedule 1 of the revised [Wildlife Preservation and Security Act \(2012\)](#), which replaced the former Act and gave marine turtles complete legal protection (Islam et al., 2011; Rahman, 2023). Another key provision of the Act was that the government can convene a “Wildlife Advisory Board”, which will periodically conduct an evaluation of the current state of wildlife, biodiversity, forest resources, as well as issue guidance for their future growth and management (Rahman, 2023). Protected wild animals are listed in Schedules: Schedule-1 lists wildlife that cannot be traded, captured, harassed or hunted except when it directly threatens human life. Schedule-2 lists less-protected wildlife, which, however, can also not be traded, captured, harassed, cur, or hunted except with a formal permission from the Wildlife Advisory Board. Schedule-3 comprises wildlife that can be hunted, harassed or killed if they damage the crops (bdnews24.com, 2010).

Other laws on biodiversity conservation include the [Bangladesh Biodiversity Act \(2017\)](#), which regulates biodiversity conservation and assessment through management committees, the [Protection and Conservation of Fish Act \(1950\)](#), as [amended in 1995](#), which includes provisions for the establishment of sanctuaries, and the Marine Fisheries Act (2020) with a provision for establishing a marine reserve in the water body in Bangladesh. The country declared its first Marine Protected Area (MPA), Swatch of No Ground MPA, in 2014, and the second MPA for the conservation of some species of whales, dolphins, porpoises, and sharks near Nijhum Island in 2019.

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species occurring in Bangladesh are listed as protected species in Schedule X, therefore prohibiting the XXX.

Exceptions: XXX

Opportunities and Challenges

One challenge in Bangladesh is the lack of awareness of the ecological roles of marine turtles and a large part of fishermen even perceiving turtles to be harmful or they are not sure (Hossain et al., 2022; Sarker et al., 2021). Moreover, law enforcement was reported to be poor, with one issue being that inter-agency relations seem not to be strong, and another that poachers and illegal wildlife traders seem to be connected to high-level persons, facilitating their trade (Golder et al., 2022). Moreover, the court cannot take action without prior written permission from the Department of Environment or the concerned authority. Illegal nets seem a persistent problem since they are a death trap for returning female turtles, in particular. In 2021, around 5,000 turtles were found dead in nets, mostly in St. Martin’s, Sonadia, the Maheshkhali Island and Sundarbans (Golder et al., 2022).

The MPAs Bangladesh declared serve as important natural habitats for several key species and are integral in population conservation and recovery. Bangladesh has made [even more commitments](#) in this regard, to fulfil the Sustainable Development Goals. Awareness on marine turtle protection seems to have significantly increased, as well, with all species included under Schedule 1 and several marine turtle conservation projects having been implemented.

International and Regional Instruments

Bangladesh is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- PSMA
- Ramsar Convention
- RFMOs (IOTC)
- UNCLOS

[add results from matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.3.2. India

Country Profile and Matrix not approved, yet















Marine Turtle History and Status

A large number of marine turtles and eggs used to be captured off the coast of Tamil Nadu and Odisha for consumption until all marine turtle species were included in the Indian Wildlife (Protection) Act (1972) in 1980 (Shanker and Choudhury, 2006; Upadhyay and Upadhyay, 2002). The enforcement of the act by the forest department and coast guard helped stabilize the populations of marine turtles, since, in the past, marine turtle eggs were traded, and their meat was consumed. Currently the threats are more indirect than direct exploitation. Developmental activities, such as port construction activity in and around turtle nesting sites, large scale construction activities along the coast, and urbanisation of the coast including bright lighting are reported to have caused a decline in turtles, especially in Andaman and Nicobar (Murugan, 2010; Upadhyay and Upadhyay, 2002). This is aggravated countrywide by threats like incidental catch, beach erosion, predation by wild animals, as well as habitat destruction through destructive fishing modes, including overfishing and trawling, oil spills and pollution along the coast, beach sand mining (Andrews et al., 2006; Bhaskar, 1996; Kumar and Choudhury, 2009; Manoharakrishnan and Swaminathan, 2021; Murugan, 2010; Tripathy et al., 2002; Upadhyay and Upadhyay, 2002). However, coastal development is minimal at the two olive ridley mass nesting beaches and offshore waters, of which one area (Gahirmatha) is declared a Marine Protected Area, and the mass nesting populations are protected. There is a ban for fishing during the turtle congregation period, which is strictly enforced.

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles distributed along India's coastline: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback. All species except the loggerhead are known to nest in the country (Andrews et al., 2006; Bhaskar, 1996; Kumar and Choudhury, 2009; Tripathy et al., 2002).

[more on connectivity to be added]

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence							
Nesting							

National Laws

All five marine turtle species occurring in India are legally protected under Schedule I, Part C of the [Wildlife Protection Act \(1972\)](#), as amended in 2023, which also establishes a network of protected areas protecting the habitats of marine turtles, among others, and is thus considered the country's most powerful wildlife protection act, which accords the highest protection to both the species as well as the habitats of turtles in India (Upadhyay and Upadhyay, 2002). The act includes "reptiles and their eggs", and hunting, which includes damaging or destroying the eggs and nests of the reptiles is strictly prohibited and entails maximum penalties under the Act (Upadhyay and Upadhyay, 2002). All species of turtles in India are protected from trade under Chapter V-A. This includes meat, which, by definition, includes eggs and shell (Upadhyay and Upadhyay, 2002). However, Chapter 7, Article 65

grants an exception for tribes of the Nicobar Islands in the Union territory of Andaman and Nicobar Islands.

The [National Biodiversity Bill \(2000\)](#), Section 38, also empowers the Central Government to list any species on the verge of extinction, and to take the necessary actions to preserve and rehabilitate species (Upadhyay and Upadhyay, 2002). In addition, the Ministry of Environment, Forest & Climate Change published a [National Marine Turtle Action Plan \(2021-2026\)](#) and, in 2021, [Marine Megafauna Stranding Management Guidelines](#).

Fisheries-specific legislation containing elements that can be applied to the protection of marine turtles is the [National Policy on Marine Fisheries \(2017\)](#). Relevant at the State level is the [Orissa Marine Fishing Regulation Act \(1981\)](#), [Kerala Marine Fisheries Regulation Rules \(2018\)](#), and the [Marine Fisheries Regulation Acts in Odisha \(1982\) & Kerala \(1980\)](#).

In addition to the ones listed above, laws that protect the marine habitat are the [Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act \(1976\)](#), the [Coast Guard Act \(1978\)](#), the [Environment Protection Act \(1986\)](#), the [Coastal Regulation Zone Notification \(1991\)](#), and the [Ocean Regulation Zone Notification \(1997\)](#) (Upadhyay and Upadhyay, 2002).

India does also have a National Biodiversity Action Plan, which lists 12 National Biodiversity Targets, Target 6 reading: *“Ecologically representative areas under terrestrial and inland water, and also coastal and marine zones, especially those of particular importance for species, biodiversity and ecosystem services, are conserved effectively and equitably, based on protected area designation and management and other area-based conservation measures and are integrated into the wider landscapes and seascapes, covering over 20% of the geographic area of the country by 2020.”*

PARTIALLY PROTECTED

All marine turtle species occurring in India are legally protected, and killing, hunting, and trade, including eggs, meat, and shell, are prohibited. Damaging or destroying the eggs and nests of marine turtles is equally strictly prohibited.

Exceptions:

- 1) Conservation and research activities regarding marine turtles (permit for special purposes needs to be granted).
- 2) An exception to the protection of marine turtles in India is given in Chapter 7, Article 65 of the Wildlife Protection Act: Rights of Scheduled Tribes to be protected. It states that “[n]othing in this Act shall affect the hunting rights conferred on the Scheduled Tribes of the Nicobar Islands in the Union territory of Andaman and Nicobar Islands”, who are thus able to legally hunt marine turtles in this area.

Opportunities and Challenges

To better understand the science of turtle conservation, more technological and scientific inputs are required, while taking into account the bona fide and occupational interests of local people. It is also essential to provide the fisherfolk alternative livelihood options to ease the fishing pressure, as well as to involve other stakeholders who are considered vital to effectively protect marine resources (Murugan, 2010). Fisherfolk can also be employed/volunteer to monitor the turtle populations in the nesting areas.

An opportunity may be to reemphasize the mythological and historical significance of marine turtles in India, as reverence for these animals significantly contributed to their survival in such large numbers on the Indian coast until today (Upadhyay and Upadhyay, 2002). In addition, seeing that the United States has banned wild shrimp imports from India due to non-

compliance of using TEDs in trawl nets, the TEDs are currently modified and will be made mandatory for trawl nets for all coastal states of India.

International and Regional Instruments

India is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- Ramsar Convention
- RFMOs (CCAMLR, IOTC)
- UNCLOS

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Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	A National Conservation Action Plan for Marine Turtles is in place*
Wildlife Protection Act, 1972	X	X	X	X	X	X	X	
National Marine Turtle Action Plan (2021-2026), Government of India, Ministry of Environment, Forest & Climate Change								X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Trawl Nets
The Orissa Marine Fishing Regulation Act (OMFRA), 1981, Usage of TEDs in bottom trawl nets for marine turtle protection	X
Kerala Marine Fisheries Regulation Rules, 2018, Usage of TEDs in bottom trawl nets	X
OMFRA, 1981, Government of Orissa, Fisheries & Animal Resources Dev. Department Prohibiting fishing by trawlers up to a seaward distance of 20 km from the high tide mark (shore) of Orissa Coast from Jatadhar River Mouth to Devi River mouth and from Chilika Mouth (Magarmukha) to Rushikulya River Mouth for a period of five months from January to May of every calendar year	X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practices	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
Wildlife Protection Act, 1972	X*	X			
Marine Fisheries Regulation Act, Odisha, 1982, and in Kerala, 1980			X		
National Policy on Marine Fisheries, 2017, for 16-20 feet length of vessel				X	
Marine Megafauna Stranding Management Guidelines, Govt. of India Ministry of Environment, Forest and Climate Change, January 2021					X

*Handling practices for release are included in the marine megafauna stranding management guidelines.

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
Wildlife Protection Act, 1972	X	X	X	X	X
National Marine Turtle Action Plan (2021-2026), Government of India, Ministry of Environment, Forest & Climate Change					X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Wildlife Protection Act, 1972, chapter on prohibition of trade or commerce in trophies, animal articles, etc., derived from certain animals	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
National Marine Turtle Action Plan (2021-2026), Government of India, Ministry of Environment, Forest & Climate Change	X	X					
Wildlife Protection Act, 1972, Chapter V: Trade or Commerce in Wild Animals, Animal Articles and Trophies		X				X	
Wildlife Protection Act, 1972, Chapter VI: Prevention and Detection of Offences			X	3-7 years	Minimum of INR 25,000= USD 305* for 1 st offence and a minimum of		

					INR 100,000 = USD 1,199.28 for 2 nd offence ²²	
No legislation. This is considered common practice. Any injured/dead marine turtle also has to be brought to the notice of the Forest Department.						X

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Minimum distance to high-tide mark set for buildings	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
Wildlife Protection Act, 1972, Chapter IV: Protected Areas	X	X	X		
Coastal Regulation Zone Notification CRZ-I A, 1991, Ministry of Environment, Forest and Climate Change	X	X		X	X

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Collection of genetic samples from marine turtles conducted, where a permit IS required
National Marine Turtle Action Plan (2021-2026), Government of India, Ministry of Environment, Forest & Climate Change, Objective 3: Improve understanding of marine turtle ecology and populations through research, monitoring and information exchange	X	X

²² Currency exchange rate from: 21 July 2023

4.3.3. Iran

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Nesting of marine turtles in Iran concentrates on islands, with the most important nesting sites of hawksbills located in the Persian Gulf: Sheedvar, Hengam, Hendourabi, Qeshm, Farour in Hormozgan province, and Ommolkaram, Nakhiloo, Kharkoo Islands and Nayband Bay in the Booshehr province (Government of Iran, 2010). The main nesting sites for green turtles have been recorded in the Oman Sea area, in particular Cholotr, Karatti, Ahmad Rizeh, Kachoo, Kohpansar, and Tang, with feeding grounds in Pozm, Tang, Miami, and Djodd (Government of Iran, 2010).

Threats identified by the Government of Iran (2010) are: by-catch, gill nets, tourism, traditional use, coastal development, mismanagement, unsuitable cooperation, complicated bureaucracy, lack of understanding, lack of sufficient support, and lack of attention. In addition, Zare (2011) points to the use of powered boats in turtle hunting, the large-scale harvesting of eggs in rookeries, and the breakdown of traditional conservation practices as other reasons for the decline in marine turtle populations in the country. A marine turtle threat table was developed for some of the Iranian islands:

Table 3. Current anthropogenic threat to sea turtle populations in Some of Iranian Islands, Source: (Zare, 2011)

Threat	Shidvar	Lavan	Qeshm	Hormuz	Farour	Hendura bi
Habitat alteration and loss	X	X	X	-	-	-
Beach armouring (e.g., concrete sea walls)	-	X	X	-	-	-
Beach nourishment/sand mining	-	X	X	-	-	-
Beach cleaning and beach driving	-	-	X	-	-	-
Human presence on beach	X	X	X	X	-	X
Artificial light	-	-	X	-	-	-
Boat strikes	X	X	X	X	-	X
Animal predation at rookeries	X	-	-	X	X	-
Oil pollution	?	X	X	?	-	-
Other pollution sources and entanglement	X	X	X	X	-	-
Fishing and incidental capture	-	X	X	X	-	-
Shrimp trawling	-	-	X	-	-	-
Pelagic fishing gear	X	X	X	X	-	-
Gill nets	-	-	X	-	-	-
Traditional and commercial fishing	X	X	X	-	-	-
Egg harvests	X	X	-	-	-	-
Adult harvests	X	X	-	-	-	X

To counteract these challenges, a tagging programme was initiated as early as in 2005, supported by the IOSEA Marine Turtle MOU Secretariat and beach cleaning projects in some of the main sites (Nakhiloo-Sheedvar) (Government of Iran, 2010). Other conservation measures were the classification of marine turtles in the country as “Threatened Species”, and techniques that reduce the incidental catch of adult and juvenile turtles in fishing gears e.g.: the use of Turtle Excluder Devices in trawlers (shrimp and fishing) (Zare, 2011). The lack of research was initially addressed in the early 2000s, with surveys conducted in Sheedvar, Nakhiloo, Hendorabi, and in the Ommolkaram Islands (Government of Iran, 2010).

A National Conservation Action Plan for Marine Turtles is in place.

Presence and Nesting of Marine Turtle Species in the Country

Iran’s waters support five species of marine turtles in its waters: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle. Only the green and the hawksbill turtle also nest in Iran.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp’s Ridley turtle
X (n*)	X (n)	X	X	X		

*nesting

National Laws

Protecting the environment is enshrined in Iran’s constitution (Vanda Law Firm, 2019). Iran’s Department of the Environment is responsible for any activities related to the environment, and within the Department, it is the Wildlife and Aquatic Affairs Bureau that is the legally authorized section for work on wildlife species (Government of Iran, 2014).

Under the Environmental Protection and Enhancement Act of 1974, or Environmental Protection Law, four categories of protected natural areas are defined, which are managed by the Department of Environment: National Park, Wildlife Refuge, Protected Area and National Natural Monument.

The [Law on the Protection and Exploitation of the Fisheries Resources of the Islamic Republic of Iran \(1995\)](#) regulates fisheries and use of fishing gear in Iran.

The [Law on Hunting and Fishing \(1968\), as amended in 1974](#), regulates XXX

The Law on Coastal Lands regulates XXX

All marine turtle species are classified as “threatened animals” under the XXX and any harvest of marine turtles is prohibited and subject to a fine (Government of Iran, 2014). Marine turtle habitats are equally under management, with the most important nesting sites designated as "Protected areas" (Government of Iran, 2014).

FULLY PROTECTED (through Marine Turtle Action Plan)

All marine turtle species in Iran are classified as “threatened animals” and any harvest of marine turtles, their eggs, and other derivatives is prohibited.

Exceptions: XXX

Opportunities and Challenges

There still seem to be data gaps regarding the population numbers, behaviour, migration patterns, etc. of marine turtles, with research efforts having only started in the early 2000s and concentrating on some specific islands and coastal stretches. Based on the table by Zare above, turtles seem to be facing particularly many threats in Shidvare, Lavan, and Qeshm. In 2021, the Department of Environment announced the development of a "National Action Plan for the Protection of Sea Turtles" (Bakhtiari, 2021), which would be a large step towards an effective framework law enforcers and other stakeholders could use to protect these species.

International and Regional Instruments

Iran is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- Ramsar Convention
- RFMOs (IOTC)

DRAFT

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking/using for traditional purposes where a permit IS NOT required	Taking/using for traditional purposes where a permit IS required	Taking for research/educational purposes where a permit IS NOT required	Taking for research/educational purposes where a permit IS required	A National Conservation Action Plan for Marine Turtles is in place*
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X	X	X	X	X	X	X	X	X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Trawl Nets	Gill nets	Purse seine	Draft nets	Other relevant fishing gear
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X	X	X	X
The Law on the Protection and Exploitation of the Fisheries Resources of the Islamic Republic of Iran	X	X	X	X	X	X	X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practices	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Report to relevant authorities only if turtle is tagged	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X	X	X	X		X
The Law on the Protection and Exploitation of the Fisheries Resources of the Islamic Republic of Iran					X				
Comprehensive guidelines for the organization of vessels and the discipline of maritime traffic in internal and territorial waters								X	

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS NOT required	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS NOT required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X	X

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS NOT required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	Head-starting of hatchlings allowed, where a permit IS NOT required	Head-starting of hatchlings allowed, where a permit IS required
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Implementation of CITES at the national level	X	X	X	X	X	X
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	Wildlife Rescue Center manuals were developed and published*
National Action Plan for the Protection of Sea Turtles of Iran	X	X				X	X
Law on Hunting and Fishing			X	1	IRR 10,000,000 (=USD 235) ²³		

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Light pollution near nesting beaches	Minimum distance to high-tide mark set for buildings	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X		X
The Law on the Protection and Exploitation of the Fisheries Resources of the Islamic Republic of Iran						X
The Law of Coastal Lands				X	X	X

²³ Currency exchange rate from: 08 August 2023

Environmental Impact Assessment rules					X	X
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Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Only non-lethal sampling of turtles for research allowed, where a permit IS NOT required	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:		Collection of genetic samples from marine turtles conducted, where a permit IS NOT required	Collection of genetic samples from marine turtles conducted, where a permit IS required
				Parts and samples from turtles legally harvested or stranded dead can be used for research	Hatchlings trapped in nests that would otherwise die may be sacrificed for research into sex ratio etc.		
National Action Plan for the Protection of Sea Turtles of Iran	X	X	X	X	X	X	X

DRAFT

4.3.4. Pakistan

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Nesting of green turtles and olive ridley turtles in Pakistan occurs at Hawke's Bay and Sandspit along Karachi Coast, Cape Monz along the Sindh coast, Taq (Ormara), Astola Island, Pasni Garwadar, Gwadar Headland and Daran and Jiwani along Balochistan Coast (Anadolu Agency, 2022; Government of Pakistan, 2010; Khan et al., 2010). For a long time, surveys on nesting sites were complicated by the terrain, as many of the coastal stretches were not easily accessible. There are studies on nesting trends available today, and others on threats like fisheries, with WWF Pakistan finding in 2012 that 30,000 sea turtles were caught annually, mostly olive ridley's, in tuna gillnet fisheries in the offshore waters of Pakistan (Anadolu Agency, 2022). To protect the turtles, WWF developed a modification in the operation of the gillnets and has trained some 100 "skippers and crew members" to safely release the entangled turtles, which has reduced the entanglement of sea turtles by 85% (Anadolu Agency, 2022).

Other anthropogenic threats threatening the turtles in Pakistan are plastic pollution and coastal development: following the construction of huts along beaches in the southwestern Balochistan province and in the port city of Karachi, major nesting grounds of marine turtles are adversely affected, with rubble and waste making it difficult for female turtles to come ashore and nest, and for hatchlings to crawl towards the sea (Anadolu Agency, 2022). This is further aggravated by reports about turtle egg poaching and the removal of hatchlings from their nests to be sold in aquarium shops (Anadolu Agency, 2022)

However, Pakistan's government agencies have taken several steps in recent years to protect marine turtles along Pakistan's coasts, such as the amendment of fisheries-related legislation of both maritime provinces, and marine turtles were declared protected in addition to the declaration of marine protected areas, and the initiation of awareness programmes (Anadolu Agency, 2022). Officials from the Sindh Wildlife Department protect eggs in hatcheries until the turtles hatch, when they are taken to the beach immediately and released into the ocean (Thompson, 2021). In addition, villagers at Taak (Ormara), Juddi (Pasni), Kapsi and Rack Pack (Gawadar), among others, were encouraged to establish a small community based organization, such as Daran Conservation Society at Jiwani, for the conservation of turtles, which was first financially supported by the Pakistan Wetland Programme (Government of Pakistan, 2010). Turtle conservation activities are now continued by the "Ten Billion Tree Tsunami Programme", a government project.

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles in Pakistan's waters: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle. Only green turtles nest in the country. Nestings of olive ridley turtles had also been recorded, but no nestings of the species have been reported since 2001 (Anadolu Agency, 2022).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Pakistan. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	✗	✗	✗	✗	✗	✗

National Laws

There are a series of legal and regulatory provisions in Pakistan that marine turtles are protected under, either directly or indirectly (Khan et al., 2010). All marine turtle species have been declared legally protected, listed in the first Schedule, under the Sindh Wildlife Protection Ordinance (1972), later the Sindh Wildlife Protection Act (1993), and in 2020 amended as the [Sindh Wildlife Protection, Preservation, Conservation, and Management Act](#), as well as the Balochistan Wildlife Protection Act (1974), as [amended in 1996](#). Also, Clause 5 (Export Restriction) in the [Pakistan Fish Inspection and Quality Act of 1997](#) prohibits the export and domestic consumption of aquatic turtles (Khan et al., 2010).

Other relevant wildlife and fisheries laws of Pakistan are the following:

- The [Pakistan Trade Control of Wild Fauna and Flora Rules 2018](#) (CITES Rules), Department: Ministry of Climate Change
- The [Pakistan Trade Control of Wild Fauna and Flora Act 2012](#) (CITES Act), Department: Ministry of Climate Change
- The [Pakistan Fish Inspection and Quality Control Rules 1998](#), Department: Trade Development Authority of Pakistan
- The [Pakistan Fish Inspection and Quality Control Act 1997](#), Department: Ministry of National Food Security & Research
- The [Customs Act 1969](#), Department: Federal Board of Revenue
- The [Exclusive Fishing Zone \(Regulation of Fishing\) Act 1975, 1976](#), Department: Ministry of Maritime Affairs
- The [Islamabad Wildlife \(Protection, Preservation, Conservation and Management\) Ordinance 1979](#), Department: Islamabad Wildlife Management Board
- The [Punjab Protected Areas Act 2020](#), Department: Punjab Government
- The [Punjab Wildlife \(Protection, Preservation, Conservation and Management\) Act 1974](#), Department: Punjab Wildlife & Parks Department
- The [Sindh Wildlife Protection, Preservation, Conservation and Management Act 2020](#), Department: Sindh Wildlife Department
- Amendment to 1971 [Balochistan Sea Fisheries Rules 2014](#), Department: Government of Balochistan, Coastal Development & Fisheries Department
- The [Balochistan Sea Fisheries Act No. IX, 1971](#), Department: Balochistan Fisheries Department
- [Balochistan \(Wildlife Protection, Preservation, Conservation and Management\) Act 2014](#), Department: Balochistan Forest & Wildlife Department
- Amendment to [Sindh Fisheries Ordinance 1980, 2016](#), Department: Government of Sindh, Livestock & Fisheries Department
- [Khyber Pakhtunkhwa Wildlife and Biodiversity \(Protection, Preservation, Conservation and Management\) Act 2015](#), Department: Khyber Pakhtunkhwa Wildlife Department
- [Azad Jammu and Kashmir Wildlife \(Protection, Preservation, Conservation and Management\) Act 2014](#), Department: Wildlife & Fisheries Department, Azad Jammu and Kashmir

- The [Gilgit-Baltistan \(Northern Areas\) Wildlife Protection Act 1975](#), Department: Gilgit-Baltistan Wildlife Department

The government also published a National Biodiversity Strategy and Action Plan (2017-2030).

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species in Pakistan have been declared legally protected, which includes their eggs and other derivatives.

Exceptions: For scientific research purposes, e.g. tissue samples

Opportunities and Challenges

Even though marine turtles are still facing numerous challenges, foremost the entanglement and drowning in fishing nets, conservation activities are underway. There is a well-established legislative framework for environmental management in Pakistan, under which all species of marine turtles are legally protected. Monitoring programmes and surveys need to be conducted at sufficient intervals to provide accurate population trends (Khan et al., 2010).

International and Regional Instruments

Pakistan is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- Ramsar Convention
- RFMOs (IOTC)
- UNCLOS

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.3.5. Sri Lanka

Marine Turtle History and Status

With a coastline of about 1,585 km, Sri Lanka provides suitable nesting beaches to its five marine turtle species.

The first marine turtle hatchery was started in 1956 at Yala National Park and, whereas others followed, only some remained functional. The rapid depletion of nesting grounds through erosion and sand mining, increase in fishing activities and abandoned nets, pollution of seagrass beds, light pollution, and predation of eggs by monitor lizards, jackals, dogs, and wild pigs pose additional threats to by marine turtles in Sri Lanka (de Silva, 2017). This is further aggravated by records of marine turtle egg collection from the rookeries for human consumption and marketing eggs to hatcheries (Jayathilaka et al., n.d.).

Conservation activities, like the Turtle Conservation Project (1996-2012), in collaboration with the Department of Wildlife Conservation, were thus initiated, with this project turning former poachers into protectors, patrolling the beaches 24/7 to protect the turtle nests in-situ (UNDESA, n.d.). In addition, there are currently guidelines for turtle hatchery management prepared in collaboration with the Department, marine turtle bycatch surveys were conducted from Kalpitiya to Mannar along the coast, and awareness programs for school kids and fishermen about the need for marine turtle conservation conducted (Government of Sri Lanka, 2022).

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles found in Sri Lanka: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback.

[more on connectivity to be added]

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	●	●	●	✗	✗

National Laws

Department of Wildlife Conservation is the government agency responsible for the implementation and enforcement of marine turtle conservation measures. Marine turtles are protected under the [Fauna and Flora Protection Ordinance \(1938\)](#), as [amended in 1993](#), wherein it is considered an offence to capture, kill, injure or possess sea turtles or their eggs (Section 30) (Rajakaruna et al., 2009). In 1970, the leatherback turtle was the first species of turtle to be protected by law, and in 1972, under the amendment of the Fauna and Flora Protection Act, the other four species of marine turtles were given legal protection. Since 1979, Sri Lanka has also been a member of CITES, however, shops selling turtle products to tourists have been observed (Rajakaruna et al., 2009).

In 2005, the [Marine Turtle Conservation Strategy and Action Plan](#) for Sri Lanka was prepared, which highlights the socio-economic benefits of marine turtle conservation (de Silva, 2005 in Rajakaruna et al., 2009). The role of local community in sea turtle conservation is considered

in the Plan, which provides alternatives to the people in the coastal communities through increasing awareness in the sustainable use of natural resources and developing their talents (de Silva, 2005 in Rajakaruna et al., 2009).

The country also recently published a [National Environmental Action Plan 2022-2030](#), which under Theme 4 – Conservation and Sustainable Use of Marine and Coastal Resources, Strategy 2. Conserve marine mammals and other threatened species, calls for providing protection to breeding grounds of turtles and their hatcheries (2.3) and minimising target and non-target removal of protected coastal and marine species. Moreover, Article 28 of the Constitution of Sri Lanka states that “it is the duty of every person in Sri Lanka to protect nature and conserve its riches” (de Silva, 2017).

De Silva (2017) states that some of the laws mentioned above could benefit from a more effective implementation, since only a few beaches are protected, the enforcement of CITES could be stronger, and marine turtle trade seems to be on-going, albeit in lower numbers.

FULLY PROTECTED (through Marine Turtle Action Plan)

It is considered an offence to capture, kill, injure or possess marine turtles or their eggs. All marine turtle species in Sri Lanka are protected.

Exceptions: XXX

Opportunities and Challenges

Even though fisherfolk involved in eating and/or selling turtle meat is significantly lower compared with the past, the meat is still in demand, which people believe has medicinal and aphrodisiac value, and turtle meat and soup have also been popular among tourists (de Silva, 2017; Rodrigo, 2022). However, the government is further strengthening marine turtle protection in this regard, as currently tourism guidelines are developed, which will be published soon. Another challenge is bycatch and turtles entangled in fishing nets, which can lead to severe injuries and death (Rodrigo, 2022). Passing legislation on the handling of bycatch may lead to further conservation improvements.

International and Regional Instruments

Sri Lanka is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA
- London Declaration (IWT)
- Ramsar Convention
- RFMOs (IOTC)
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	A National Conservation Action Plan for Marine Turtles is in place*
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009 - Schedule II	X	
Marine Turtle Conservation Strategy and Action Plan for Sri Lanka (2005)		X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Gill nets	Other relevant fishing gear
*Sections 6, 28, 29 and 61/Fishing Operations Regulations of 1996 (Gazette, No. 948/25 of 07- 11-1996); No person should catch, land, transport, sell, buy, receive or have in his possession any marine mammals or turtles.	X	
*Sections 6, 28, 29 and 61/Fishing Operations Regulations of 1996 (Gazette, No. 948/25 of 07- 11-1996) – Push net, Harpooning for marine mammals, Moxi net fishing operations, trammel net		X

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009	X	X	X	X

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	Guidelines for tourism best practices were developed and published*
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009	X	
Guidelines are currently developed and under the approval of Legal Draftsman Department (to be published)		X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009 - Schedule No.II (Five turtle species are	X						

highly protected and the other two species are protected)							
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009		X	X			X	X
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009 - for Sea turtles under Schedule II (5 Turtle Species)				Not less than 2 years and not more than 5 years	Not less than LKR 30,000.00 (= USD 90.92) and not more than LKR 100,000.00 (= USD 303.06)		
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009 - for sea turtles not in Schedule I (2 Turtle Species)				Not less than 2 years and not more than 5 years	Not less than LKR 20,000.00 (= USD 60.61) and not more than LKR 50,000.00 (= USD 151.53) ²⁴		

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Light pollution near nesting beaches	Minimum distance to high-tide mark set for buildings	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009	X	X	X	X	X	X	X

²⁴ Currency exchange rate: 06 Dec 2023

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:				Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	Hatchlings resulting from incubation under controlled conditions can be sacrificed for gonad histology etc. under an approved project or research	Hatchlings trapped in nests that would otherwise die may be sacrificed for research into sex ratio etc.	Turtles that have a low probability of surviving (e.g. extremely emaciated turtles or turtles with severe health issues)	
Fauna and Flora Protection Ordinance (Amendment) Act, No.22 of 2009 - Guidelines & General Conditions for Research on Wildlife Resources Department of Wildlife Conservation - According to the recommendation of the Research Committee, the approval of the Director General of the Department of Wildlife Conservation will be given.	X	X	X	X	X	X

DRAFT

4.4. Western Asia

4.4.1. Bahrain

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles had been found stranded on local beaches and observed in Bahrain's waters, however, no attempts had been made to assess the size and causes of the problem, until a special programme was initiated in 2007 to monitor and quantify dead marine turtles and the threats they face in Bahrain (Abdulqader and Miller, 2012).

Bahrain has also developed a network of collaboration with NGOs to rehabilitate injured marine turtles (Government of Bahrain, 2019). Since 2013, these stranded turtles have also been rescued and treated by the Bahrain Sea Turtle Rescue Team, in particular from December until April, before they are released back into the ocean (Al-Muhannadi et al., 2020). Moreover, cleanup campaigns, fishermen, and people on the beach report and deliver turtles requiring treatment to the Rescue Team, often including hatchlings stranded with beach debris.

Among the threats turtles face in Bahrain are continuous dredging and reclamation impacting marine turtle habitats, by-catch in shrimp trawling, and caught in big wire traps, Spanish mackerel-gillnets, and longline fisheries, as well as fast boats, waste (plastic bags), and fishermen's attitudes, who are reported to be aggressive towards turtles (Abdulqader and Miller, 2012; Government of Bahrain, 2010). Direct exploitation of turtle meat, eggs, and carapace was also reported more recently (Al Ameri et al., 2022).

Presence and Nesting of Marine Turtle Species in the Country

There are two species of marine turtles in Bahrain's waters: the green turtle and the hawksbill turtle. Bahrain has no nesting reported (Al Ameri et al., 2022).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Bahrain. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X	X					

National Laws

Marine turtles are protected from hunting by Legislative Decree No. 2 of 1995, as amended by [Legislative Decree No. 12 of 2000](#), on the protection of the wildlife in Bahrain. The Decree addresses the protection of species and their environment, the rehabilitation of suitable habitats for wildlife, the banning or restricting of human activities that may cause damage to wildlife (The Supreme Council for Environment, n.d.). The Public Commission for the Protection of Marine Resources, Environment and Wildlife also issued a [Resolution No. 3 in 2003](#) to prohibit hunting marine turtles, dugongs, and dolphins. Bahrain also held a [workshop](#) in 2009 to develop a National Action Plan for Marine World Heritage (2009-2014).

FULLY PROTECTED (through marine turtle-specific legislation)

Marine turtles are protected from hunting in Bahrain, including the harvest of their eggs and other derivatives, which are equally prohibited.

Exceptions: XXX

Opportunities and Challenges

Bahrain's seagrass beds provide important foraging grounds for marine turtles and dugongs. The country [joined the Convention on Migratory Species in](#) 2022 and is also a Signatory of the IOSEA Marine Turtle MOU. The mortality number of marine turtles was reported to be reduced by about 90% in 2019 compared to the previous years after Bahrain banned the shrimp trawls in the territorial waters of the country in 2019 (Government of Bahrain, 2019). Bahrain further imposed mandatory vessel monitoring devices to prevent illegal fishing during the shrimp and Spanish mackerel season (Government of Bahrain, 2019). Bahrain's wildlife legislation may benefit from more recent amendments, seeing these decrees/regulations were issued over 20 years ago.

International and Regional Instruments

Bahrain is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- Ramsar Convention
- RFMOs
- UNCLOS

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.4.2. Jordan

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

A preliminary study was conducted on the population of marine turtles in the Gulf of Aqaba, where most of the observed turtles belonged to the hawksbill species, and were in an adult development stage (Government of Jordan, 2019). Other turtle species were rarely seen, such as the green turtle.

To protect turtles, patrols are carried out regularly, e.g. of beaches, coastal waters, and fishing areas by rangers of the Aqaba Marine Park (Government of Jordan, 2019). Moreover, awareness and outreach campaigns targeting fishermen and ocean visitors are initiated.

The main threats to marine turtle populations in Jordan range from incidental capture and fishing mortalities to rare pollution incidents, which is why the government strives to reduce the threats of coastal urban development and commercial fisheries, promote turtle rescue and rehabilitation training to the public, including beach users, and to promote outreach and public awareness activities (Government of Jordan, 2019). Rapid urbanization of the Jordanian coast in the past three decades, including shoreline development, such as artificial lighting, refinery facilities, coastal sand mining, and beachfront stabilization structures have reduced nesting habitat of marine turtles along the coast with almost 100% occupation (Al-Zibdah, 2013). This is aggravated by the limited coastline and conflicts between land uses (Government of Jordan, 2010). Scientific research is considered essential, as much to attract international funding for regional scientific research, as to establish local sources mainly from the private sector (Government of Jordan, 2010).

Presence and Nesting of Marine Turtle Species in the Country

There are **two** species of marine turtles found in Jordan's waters: the green and the hawksbill turtle. None of these species nests in the country, and it is therefore assumed that the turtle population in the country is present only to forage in this area, and then these turtles migrate to the coastlines of other countries, such as Saudi Arabia or Egypt (Al-Zibdah, 2013).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Jordan. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X – rare (n?)	X (n?)					

National Laws

The [Environmental Protection Law of 2017](#), Article 12, prohibits to “engage in any activity or action that might have a negative effect on the environment in the national network of nature reserves, marine and terrestrial ecosystems, causing its degradation, or any action that might disrupt the balance of nature, as follows” and mentions as one example the “destroying, removing, hunting birds, wildlife, sea creatures and coral, or in terms of killing, hurting, possessing, or any action that might terminate them partially or completely, selling them, or showing them dead or alive”. [Law No. 13 of 2015 concerning Agriculture Law](#) also regulates wildlife protection and protected species.

Whereas a [National Red data book of mammals in Jordan](#) was published in 2020, of which 39% of the species are considered “threatened” (Al Nawas, 2020), there is no list available for reptiles, yet, categorizing the species according to their threat status.

Jordan's National Action Plan for the Conservation of Marine Turtles and Their Habitats was prepared for Jordan with logistical support from the PERSGA (Al-Zibdah, 2013). The Plan includes actions and recommendations on protecting turtle research and monitoring, community participation in conservation activities, feeding habitat, the capacity of national agencies to carry out the necessary management activities and to enforce the Environment Law No. 21, 22 at the Aqaba Special Economic Zone Authority (Government of Jordan, 2019). Moreover, the Action Plan is designed for the use of appropriate agencies in Jordan that have the mandate to protect marine turtles (Al-Zibdah, 2013). [The four main modules of the Plan](#) are 1) Reducing direct and indirect causes of marine turtle mortality; 2) Protecting, conserving and rehabilitating marine turtle habitats; 3) Research and monitoring; and 4) Public awareness, information and education. The [National Environment Strategy for Jordan](#) was published in 1991 and also contains a chapter on Wildlife and Habitat.

FULLY PROTECTED (through Marine Turtle Action Plan)

The destroying, removing, hunting birds, wildlife, sea creatures and coral, or in terms of killing, hurting, possessing, or any action that might terminate them partially or completely, selling them, or showing them dead or alive is prohibited, which includes marine turtles, their eggs, and other derivatives.

Exceptions: XXX

Opportunities and Challenges

The private sector is included in marine turtle conservation activities, e.g. the Ayla Oasis Development Company [signed an MOU](#) with the Jordan Society for the Conservation of Turtles and Tortoises in 2023. [Another initiative](#), supported by the Small Grants Program funded by the Global Environment Facility and implemented through the United Nations Development Program, is the “Using citizen science to monitor coral bleaching and hawksbill sea turtle populations in the Red Sea” project, in coordination with Fulbright Commission in Jordan and Ministry of Environment.

An assessment of the country’s marine turtle populations in terms of “threatened” status, and making the National Action Plan for the Conservation of Marine Turtles and Their Habitats publicly accessible for all concerned citizens, may very much strengthen marine turtle conservation activities. In addition, many awareness activities are taking place (Government of Jordan, 2010).

International and Regional Instruments

Jordan is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- Ramsar Convention
- RFMOs (Regional Organization for the Conservation of the Environment of Red Sea and Gulf of Aden (PERSGA))
- UNCLOS

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.4.3. Kuwait

Marine Turtle History and Status

Covid-19 impacted marine turtle populations in Kuwait negatively. Deaths due to boat strikes and entanglement in ghost gear increased in 2020, when beach chalet owners from the city flocked to their beach houses, and usually remote beaches became the main attraction for local residents – all in the peak nesting season (Al-Zaidan et al., 2020). The increased human presence, and with it noise and light pollution, dumped waste, and compacted sand, among others, acted as a significant deterrent to marine turtles (Al-Zaidan et al., 2020). Other threats to marine turtles in the country are coastal development and beach erosion, leading to reduced nesting habitats, the collection of eggs, natural hatchling predators, oil pollution and gun shots (Al-Mohanna and George, 2006; CMS, 2014a).

The Kuwait Environment Public Authority (KEPA) is working with local and international specialists to protect marine turtles and their habitats via protecting nesting beaches and their surrounding waters during the nesting. This is in compliance with KEPA law No. 42, 2014, aiming to guarantee sustainable development while conserving biodiversity. There are also some [private initiatives](#) saving marine turtles.

Presence and Nesting of Marine Turtle Species in the Country

Five species of marine turtles have been identified in Kuwait: Hawksbills are the most common marine turtle species in Kuwait, and both hawksbill and green turtles nest in three principal locations: Qaru and Umm Al-Maradim islands and Ras Al Zour on the mainland. However, green turtle nesting in the Umm Al-Maradim islands declined after a customs facility, an extended Coast Guard station, and harbour were constructed (Rees et al., 2018). Non-breeding species, and less common are the olive ridley, the loggerhead, and the leatherback turtle (Rees et al., 2018).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Kuwait. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	✗	✗	✗	✗	✗

National Laws

The [Law No. 42 of 2014 on Environmental Protection](#), as amended in 2015, is implemented by the Environment Public Authority and, in Section 5, concerns the protection of “Endangered Wild Organisms”. It is prohibited “to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats” without a permit and “[i]t is banned to trade in endangered species of wild organisms or any part of it or its products as specified in the CITES Convention and other valid international agreements”. The law also regulates Environmental Impact Assessments, and coastal and marine protection from pollution, among others. The executive regulation of the Environmental Protection Law, i.e. Resolution of the Environment Public Authority No. (9) of 2022 regarding the biological diversity Regulations issued by Decision No. (3) of 2017,

regulates the taking of organisms, marine and terrestrial, for scientific purposes and the requirements needed for applying for a permit, set by the Environment Public Authority.

Resolution number 341 of 2022 issued by the Public Authority for Agriculture Affairs and Fish Resources regulates the prohibition of catching marine turtles, mammals, sharks and some rare fish, based on the previous resolution number 521 of 2008.

In 2014, the Kuwait Institute for Scientific Research, a government-affiliated research institute, organised a workshop to gather input for the development of a national plan for marine turtle conservation and to mitigate the threats they face, i.a. via the establishment of turtle rescue establishments serving at the same time as visitor and research centres, regulating visits to beaches, and building turtle excluding devices into fishing nets (CMS, 2014a). The Environment Public Authority along with other authorities and parties in Kuwait release harmed marine turtles after having taken care of them in a rescue centre (the Scientific Center in Kuwait), and trackers are placed on the turtle's back upon releasing them into the sea to monitor its migration path and thus to protect its feeding and nesting habitats.

The country published a report on “Reptiles and amphibians of the State of Kuwait” in 2022, which includes guidance on marine turtle handling, data recording and sample collection, as well as information on distribution range, diagnosis, biology, and remarks on the marine turtle species found in the country, and a brief paragraph on marine turtle bycatch.

FULLY PROTECTED (through marine turtle-specific legislation)

It is prohibited to hunt, kill, catch, collect, harm, acquire or transport marine turtles, whether alive or dead, or prejudice their juveniles, eggs, nests or their habitats.

Exceptions: XXX

Opportunities and Challenges

Despite many existing laws and regulations, it seems that these laws could be better enforced (CMS, 2014a), and coastal development seems to be a serious threat to marine turtle nesting. However, marine turtle conservation efforts are underway, e.g. the Environment Public Authority published beach signs that were set up to increase public awareness regarding marine turtle nests and nesting seasons in different coastal locations. Moreover, the publishing of a national marine turtle conservation action plan could significantly facilitate the protection of these species in Kuwait. The Kuwait Institute for Scientific Research also conducted studies on applying TEDs in trawl nets. The legislation regarding the usage of TEDs in fishing nets to protect marine living organisms, especially marine turtles, is still work in progress.

International and Regional Instruments

Kuwait is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- Ramsar Convention
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking for research/educational purposes where a permit IS required	Taking of marine turtles according to a maximum quota where a permit IS required	Taking of marine turtles according to a certain sex preference of marine turtles (female or male) where a permit IS required	Legislation incorporates relevant traditional knowledge, customary marine tenure and practices*	Indigenous or community based conservation or protection plans were developed and published that regulate marine turtle use*
Environment protection law number 42 for year 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity) Chapter 1, Article 100. ²⁵	X	X	X	X	X	X	X	X	X*	X*	X	X
Environment protection law number 42 of 2014, with its modifications in Law	X	X	X	X	X	X	X				X	X

²⁵ It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

number 99 of 2015, Section 5 - Chapter 3 (Kuwait Bay), Article 108. ²⁶																			
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*Note: The only permission to take marine turtles is granted for scientific research. As for the quota and the sex taken, this is set depending on the conducted research, as per Resolution of the Environment Public Authority No. (9) of 2022 regarding the biological diversity Regulations issued by Decision No. (3) of 2017.

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Trawl Nets	Gill nets	Purse seine	Draft nets
Resolution number (341) of 2022 regarding the prohibition of catching marine turtles, mammals, sharks and some rare fish and its previous resolution number 521 of 2008 - Public Authority of Agriculture Affairs and Fish Resources (PAAF), Article 1. ²⁷		X	X	X	X	
Resolution number 341 of 2022 regarding the prohibition of catching marine turtles, mammals, sharks and some rare fish and its previous resolution number 521 of 2008 - (PAAF), Article 3. ²⁸		X	X	X	X	X
Environment protection law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 – Chapter 3 (Kuwait Bay), Article 108. ²⁹	X	X	X	X	X	X

²⁶ It is prohibited in Kuwait Bay, as an area of special nature, to practice any activity that harm the environment, particularly the following activities: disposal of sewage or industrial waste or throwing any type of waste, carrying out reclamation operations using degraded materials from deepening works of navigational waterways, the establishment of fishing areas and fish farms, building chalets on the Bay shores, fishing of all marine organisms, with exception of where is specified in the executive regulations subject to time provisions of article 121 of this law. It is possible through a decision from the Supreme council to prohibit any other activities that may negatively affect the Bay upon recommendation by the Authority in this regard. In all cases the approval of the supreme council is required for establishing projects withing the waters or shores of Kuwait Bay.

²⁷ It is prohibited to catch marine turtles and mammals and sharks (except *Rhizoprionodon oligolinx*), rays, fish and other rare marine organisms of all types and sizes and ages, as well as banning the taking or (disrupting) of their offspring, eggs or their marine habitats, as well as prohibition of collecting shells and marine turtles' eggs and disrupting their reproduction areas on Kuwait islands and Kuwait coasts.

²⁸ All workers in the fishing activity including companies or fishermen or leisure fishing have to release any captured marine organisms that are mentioned in the resolution and return it to its marine environment or habitat directly upon its capture in fishing gears and nets and inform the related authority in the Public Authority of Agriculture Affairs and Fish Resources in such cases.

²⁹ It is prohibited in Kuwait Bay, as an area of special nature, to practice any activity that harm the environment, particularly the following activities: disposal of sewage or industrial waste or throwing any type of waste, carrying out reclamation operations using degraded materials from deepening works of navigational waterways, the establishment of fishing areas and fish farms, building chalets on the Bay shores, fishing of all marine organisms, with exception of where is specified in the executive regulations subject to time provisions of article 121 of this law. It is possible through a decision from the Supreme council to prohibit any other activities that may negatively affect the Bay upon recommendation by the Authority in this regard. In all cases the approval of the supreme council is required for establishing projects withing the waters or shores of Kuwait Bay.

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, but no guidelines in place	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity) - Chapter one (Endangered Wild Organisms) Article 100. ³⁰	X		
Resolution number 341 of 2022 - (PAAF), Article 3. ³¹	X	X	
Legislation regarding the specification of trawl nets to prevent the capture of marine turtles (EPA and PAAF)			X*

* The drafting of the legislation regarding the installation of TEDs in fishing nets to protect marine living organisms, especially marine turtles, is currently on-going.

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity) – Chapter one (Endangered Wild Organisms), Article 100 ³² and Article 101 ³³	X	X*

* The Environment Public Authority along with other authorities and stakeholders in Kuwait releases harmed marine turtles after having taken care of them in a rescue centre (the Scientific Center) in Kuwait.

³⁰ It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

³¹ All workers in the fishing activity including companies or fishermen or leisure fishing have to release any captured marine organisms that are mentioned in the resolution and return it to its marine environment or habitat directly upon its capture in fishing gears and nets and inform the related authority in the Public Authority of Agriculture Affairs and Fish Resources in such cases.

³² It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

³³ It is banned to trade in endangered species of wild organisms or any part of it or its products as specified in CITES Convention and other valid international agreements.

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity), Article 100 ³⁴	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity), Chapter 1, Article 101 ³⁵	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity) - Chapter	X	X			X	

³⁴ It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

³⁵ It is banned to trade in endangered species of wild organisms or any part of it or its products as specified in CITES Convention and other valid international agreements.

one (Endangered Wild Organisms), Article 100 ³⁶						
Resolution number 341 of 2022 (PAAF), Article 3 ³⁷						X
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 7 (Penalties) – Article 149 ³⁸			Not more than 1 year (Article 100)	Not more than KWD 5,000 (=USD 16,221) (Article 100)		
			Not more than 3 years (Articles 107 and 108)	Not more than KWD 50,000 (=USD 162,213) (Articles 107 and 108)		
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 7 (Penalties) – Article 151 ³⁹			Not more than 3 years	Not more than KWD 50,000 (=USD 162,213) ⁴⁰		
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 – Chapter 3 (Kuwait Bay), Article 108 ⁴¹	X					

³⁶ It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

³⁷ All workers in the fishing activity including companies or fishermen or leisure fishing have to release any captured marine organisms that are mentioned in the resolution and return it to its marine environment or habitat directly upon its capture in fishing gears and nets and inform the related authority in the Public Authority of Agriculture Affairs and Fish Resources in such cases.

³⁸ Whoever violates the provisions of the first paragraph of Article 100 of this law shall be punished with the imprisonment for a period not exceeding one year and a fine of not less than five hundred Kuwaiti Dinars and not exceeding five thousand Kuwaiti Dinars or with either of the two penalties, along with confiscation of the seized wild organisms, and the used tools. Also, whoever violates the provision of the third paragraph of Article 107 and 108 of this law shall be punished with imprisonment of not less than one year and not exceeding three years and a fine not less than five thousand Kuwaiti Dinars and not exceeding fifty thousand Kuwaiti Dinars or with either of the two penalties.

³⁹ Whoever violates the provision of articles 101 and 124 of this law shall be punished with imprisonment of a period not less than one year and not exceeding three years and a fine not less than five thousand Kuwaiti Dinars and not exceeding fifty thousand Kuwaiti Dinars or with any of the two penalties. In all cases, the seized wild organisms and heritage pieces, the subject of the crime, should be confiscated.

⁴⁰ Currency exchange rate from 08 August 2023.

⁴¹ It is prohibited in Kuwait Bay, as an area of special nature, to practice any activity that harm the environment, particularly the following activities: disposal of sewage or industrial waste or throwing any type of waste, carrying out reclamation operations using degraded materials from deepening works of navigational waterways, the establishment of fishing areas and fish farms, building chalets on the Bay shores, fishing of all marine organisms, with exception of where is specified in the executive regulations subject to time provisions of Article 121 of this law. It is possible through a decision from the Supreme council to prohibit any other activities that may negatively affect the Bay upon recommendation by the Authority in this regard. In all cases the approval of the supreme council is required for establishing projects withing the waters or shores of Kuwait Bay.

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Light pollution near nesting beaches	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 (Biodiversity), Article 100 ⁴²	X	X			
Resolution number 341 of 2022 (PAAF), Article 1 ⁴³	X	X		X	X
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 5 – Chapter 3 (Kuwait Bay), Article 108 ⁴⁴				X	
Environment Protection Law number 42 of 2014, with its modifications in Law number 99 of 2015, Section 1 – Chapter 1 (Environmental Impact Assessment), Article 16 ⁴⁵	X	X		X	X
Environment Protection Law number 42 of 2014, with its modification in Law number 99 of 2015, Section 4 (Protecting Water and Coastal Environment Against Pollution), Chapter 1: Protecting Marine Environment Against Pollution. Articles number 66, 67,68, 70, and 73 concern the protection of the marine environment from any pollution, therefore protecting the marine organisms and their habitats.	X	X		X	

⁴² It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

⁴³ It is prohibited to catch marine turtles and mammals and sharks (except *Rhizoprionodon oligolinx*), rays, fish and other rare marine organisms of all types and sizes and ages, as well as banning the taking or (disrupting) of their offspring, eggs or their marine habitats, as well as prohibition of collecting shells and marine turtles' eggs and disrupting their reproduction areas on Kuwait islands and Kuwait coasts.

⁴⁴ It is prohibited in Kuwait Bay, as an area of special nature, to practice any activity that harm the environment, particularly the following activities: disposal of sewage or industrial waste or throwing any type of waste, carrying out reclamation operations using degraded materials from deepening works of navigational waterways, the establishment of fishing areas and fish farms, building chalets on the Bay shores, fishing of all marine organisms, with exception of where is specified in the executive regulations subject to time provisions of Article 121 of this law. It is possible through a decision from the Supreme council to prohibit any other activities that may negatively affect the Bay upon recommendation by the Authority in this regard. In all cases the approval of the supreme council is required for establishing projects withing the waters or shores of Kuwait Bay.

⁴⁵ All entities subject to the provisions of this law are prohibited to commence the implementation of any project or conducting any alterations or expansions to the existing activities, or obtaining any licenses of the same, but after carrying out environmental impact assessment studies pursuant to the rules regulations and procedures set by the Executive Bylaw of this law.

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:	Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	
Environment Protection Law number 42 of 2014, with its modification in Law number 99 of 2015, Section 5 (Biodiversity), Article 100 ⁴⁶	X	X	X

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⁴⁶ It is prohibited to hunt, kill, catch, collect, harm, acquire or transport wild land and marine organisms, whether alive or dead or prejudice their juveniles, eggs, nests or their habitats and the executive bylaw of this law shall determine the types and numbers of organisms allowed to be hunted or fished in certain seasons and specific areas. Hunting or fishing for scientific purposes shall be exempted after the approval of competent concerned authorities in coordination with the Environment Public Authority.

4.4.4. Oman

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

One island in Oman hosts one of the most important loggerhead turtle rookeries in the world: Masirah Island was turned into a turtle safe haven already in the mid-1970s, when young fishermen became turtle rangers through a training, e.g. on antipoaching regulations, under an initiative by the International Union for Conservation of Nature and the World Wildlife Fund (Willson et al., 2019). The rangers are today employed by Oman’s Ministry of Environment and Climate Affairs to patrol in local protected areas. In 2015, a decline of the island’s populations was determined, and the Masirah loggerheads were classified as “Critically Endangered” (Willson et al., 2020, 2019). Preliminary results indicated that, each year, approximately 3,000–9,000 turtles were being captured in net fisheries, of which 2,000 were thought to be loggerheads (Willson et al., 2019). Especially trawling and drift gill nets, and the illegal poaching of green turtle on a small scale, have affected the population of marine turtles (Government of Oman, 2019).

This prompted a remote fisheries observer program backed by a full-time coordinator, which is still in progress today, complemented by telemetry to plot the co-occurrence of turtle movements with fishing effort to monitor and reduce levels of bycatch (Willson et al., 2019). These efforts were supplemented by beach clean-ups on nesting beaches, campaigns encouraging local fishermen to adopt more sustainable fisheries practices, and implementing low-cost, high-impact solutions among beachside residents along 2km of prime nesting habitat, targeting reduced light use (Willson et al., 2019). The Environment Society of Oman has been managing a Marine Turtle Conservation programme since 2008 focusing on loggerhead turtles on Masirah Island (Government of Oman, 2019). In 2018, research was conducted to [value the economic opportunities](#) that are generated from the conservation programmes of marine turtles in Oman at two sites : Masirah Island and Ras Al Hadd .

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles found in Jordan’s waters: the green, hawksbill, olive ridley, loggerhead, and leatherback turtle: the green turtle is found on most Omani beaches and plentiful in Ras Al Jinz, Ras Al Hadd, Masirah Island and Ad Daymaniyat Islands; the loggerhead turtle nests, in addition to Masirah Island, on the shores of Dhofar and Daymaniyat Islands; the hawksbill turtle nests on the shores of the Daymaniyat Islands and Muscat; the olive ridley turtle nests on Masirah Island; and the leatherback turtle is found in Omani waters, however, that species does not nest in the Sultanate (Oman - Ministry of Tourism, 2013).

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp’s Ridley turtle
X (n*)	X (n)	X (n)	X (n)	X		

*nesting

National Laws

Oman’s most relevant law to the conservation of marine turtles is the Royal Decree No. 6 of 2003 issuing the [Law on Nature Reserves and Wildlife Conservation](#), which is implemented by Ministerial Decree No. 110/2007. Articles 10-14 of the law refer to the establishment and management of nature reserves and wildlife conservation, with provisions stipulating that a permit shall be obtained from the Ministry to, among others, practice hunting, keeping, rearing or transporting any protected animal or its product within or outside a reserve, collecting

samples of live or dead wildlife or their parts for scientific, research, economic or trade purposes, and possession of any wildlife or its product or genetic material within or outside a reserve. The Law includes two Appendices with lists of protected species. Green, hawksbill, olive ridley, and loggerhead turtles are listed in Appendix 2.

Royal Decree 20/2019 Promulgating the Marine Living Resources Law regulates....

In addition, a national committee for marine turtle conservation was formed in 2013, wherein different agencies participate. The committee...

PARTIALLY PROTECTED

Green, hawksbill, olive ridley, and loggerhead turtles are listed in Appendix 2, which means that XXX.

Exceptions: hunting, keeping, rearing or transporting any protected animal or its product within or outside a reserve, collecting samples of live or dead wildlife or their parts for scientific, research, economic or trade purposes, and possession of any wildlife or its product or genetic material within or outside a reserve.

Opportunities and Challenges

There is strong evidence of government commitment to develop nature-based tourism in the country, and a potential to increase the contribution of sustainable marine turtle tourism to Oman's gross domestic product was identified (Busaidi et al., 2019). Moreover, the Environment Authority and the U.S. Fish and Wildlife Service signed a contract in May 2022 to chart a plan for the preservation of marine turtles in the Sultanate of Oman, in particular the Al Rimani turtles nesting in Wilayat Masirah, to be monitored via satellite tracking (TAS News Service, 2022).

International and Regional Instruments

Oman is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- IOSEA Marine Turtle MOU
- PSMA
- Ramsar Convention
- RFMOs (IOTC)
- UNCLOS

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.4.5. Qatar

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Dedicated projects have been implemented by conservationists over two decades to save Qatar's hawksbill turtles, such as the "Sea Turtle Protection Project" by the Environmental Studies Center at Qatar University, and a study implemented by the Supreme Council for the Environment and Natural Reserves in 2004 to determine the status of marine turtles and their habitats in Qatar (Pilcher et al., 2015; The New Arab, 2022).

However, the hawksbill turtles along Qatar's coast are still considered Critically Endangered, which is due to erosion from industrial and urban development, pollution changing the chemical composition of the sand, plastic pollution, light pollution, cars being driven on the sand, entanglement in fishing nets, poaching, marine traffic, and climate change (The New Arab, 2022; Wong, 2022). According to the Qatar Turtle Management Project, hawksbill turtles nest along approximately 50 km of the north-east coast from Umm Tais to Ras Laffan, and on the sandy beaches of the eastern offshore islands.

The Ministry of Environment and Climate Change is taking actions to improve protection of its marine resources, which includes marine turtles, within in its territorial waters, amongst others by supporting regional activities on marine biodiversity via a collaboration with the other Gulf countries (Wong, 2022).

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles found in the waters of Qatar: the green, hawksbill, olive ridley, loggerhead, and leatherback turtle: the green turtle is the most common species, whereas only the hawksbill nests on the country's beaches (Wong, 2022). Leatherback turtles are rare.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X	X (n*)	X	X	X (rare)		

*nesting

National Laws

The most relevant law for marine turtle protection in Qatar is the [Law No 19 of 2004 on the Conservation of Wildlife and their Natural Habitats](#). Article 4 prohibits the following, among others: "Hunting, transferring or killing land or sea organisms, or committing any act which would destroy or injure the same; Taking, transferring or injuring any living or other organic matter such as natural and artificial seashells and coral reefs for any reason whatsoever, Construction of buildings or erection establishments, roads, driving vehicles, or the exercise of any agricultural, industrial, pastoral or other activity at the natural reserve; and Acquiring or killing any natural organisms."

This is complemented by [Law No. 10 of 2019 regulating the possession of dangerous animals or creatures](#), and prohibiting the ownership, import, export or trade of any dangerous animals and creatures without a license from the competent authority in order to protect the wildlife and its natural habitats, as well as regulating the trade in threatened species and their products (FAOLEX, 2019). Species included under Law No. 10 are lions, tigers, leopards, jaguars, cougars, cheetahs, spotted hyenas, and various ape species, amongst others.

Qatar also published a [National Biodiversity Strategy and Action Plan \(2015-2025\)](#) in 2014, which, as one of its strategic goals and targets, includes Goal 3: Preservation of coastal ecosystems and sustainability of marine resources. Under Goal 3, the following targets concerning marine turtle conservation are listed:

- Qatar National Target 3.3: By 2025, a marine turtle conservation action plan is in place and being implemented;
- Qatar National Target 3.4: By 2020, a Marine Action Plan is developed, taking an ecosystem approach and identifying Ecologically and Biologically significant Areas;
- Qatar National Target 3.5: By 2025, 3 new adequately selected key representative coastal/marine protected areas are declared for conservation, including nesting and habitats for marine turtles, migratory birds, coral reef habitat and/or sea grass habitat.

FULLY PROTECTED (through general wildlife legislation)

The acquisition, taking, hunting, transferring or killing of marine turtles, or committing of any act that would destroy or injure the same, is prohibited. It is equally prohibited to harvest, possess, or trade marine turtle eggs and other derivatives.

Exceptions: XXX

Opportunities and Challenges

Marine turtles in Qatar have been under study and protection for the last two decades and marine turtles were mainstreamed into on-going conservation initiatives (Pilcher et al., 2015). Beach closures to the public during nesting season and appropriate monitoring, including taking DNA samples from the turtles and affixing tracking devices, are only some of the steps the government has taken to protect its turtles (Ibrahim, 2022).

International and Regional Instruments

Qatar is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- London Declaration (IWT)
- RFMOs
- UNCLOS

[add results from matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.4.6. Saudi Arabia

Marine Turtle History and Status

Hawksbill and green turtles are found in many nesting places in Saudi waters by the Red Sea and the Arabian Gulf, including, among others, the islands of Karan and Jurayad, Ras Al-Shaaban, Farasan Island, and Sanafir Island (Tag, 2022). There is still relatively little published information about marine turtle nesting distribution and seasonality in the Saudi Arabian Red Sea, with some research pointing towards possibly widespread nesting activity, which is, however, sparsely distributed (Scott et al., 2022).

The harvest of eggs has already declined, but is still severe enough to impact population numbers (Al-Shair, 2021). Moreover, marine turtles are still caught for their shells, which are sold on the black market and used to make bracelets, sunglasses, and hair combs, among others (Al-Shair, 2021). However, several conservation initiatives are underway to counter this trend, such as the tracking of turtle nesting sites along the central Saudi Arabian Red Sea coast, conducted by the King Abdullah University of Science and Technology (KAUST, 2022). Moreover, artificial light is considered a big threat (Government of Saudi Arabia, 2010).

Presence and Nesting of Marine Turtle Species in the Country

Two species of turtles nest and forage along the Saudi Arabian Red Sea coast: the green turtle and the hawksbill turtle (Tanabe, 2022).

[more on connectivity to be added]

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	✗	✗	✗	✗	✗

National Laws

Marine turtles and their nesting areas are strictly protected in Saudi Arabia, and any practices or activities related to them, whether research or tourism, require approval from the National Center for Wildlife (NCW) during the season or out of season.

In 1442/2020, the [Executive Regulation for Sustainable Management of the Marine and Coastal Environment](#) was passed, which prohibits, amongst others, the hunting, extracting, or collecting endangered wildlife species in the marine and coastal environment, including their products and derivatives; collecting, transporting, destroying, or damaging the eggs, nests, or habitats of wildlife species in the marine and coastal environment; and failing to release or return endangered or prohibited wildlife species to the sea in case of bycatch. The penalties for the hunting and/or extraction of all five species of marine turtles ranges from SAR 10,000 to SAR 100,000 to be estimated by the NCW, according to the age, size, and type of the species.

Saudi Arabia also issued an [Environmental Law \(1443/2021\)](#), which, in Chapter 4, prohibits any activities harming the marine and coastal environment and its living and non-living components, and, in Chapter 5, prohibits the trading in any wildlife species, or their products or derivatives, whether locally or through import or export; as well as killing, selling, transport,

possession, etc., amongst others. The revised law [increased penalties and expanded the range for prohibitions](#). The Law, approved by the Royal Decree No. M/165, governs the work of the Environmental Centers (the NCW, the National Center for Environmental Compliance, and the National Center for Vegetation Cover). Regulations relevant to each Environmental Center has been issued, identifying the task of each center. Turtles are completely protected, except if a prior request is reviewed and approved by the NCW.

According to the latest [IOSEA Saudi Arabia National Report \(2014\)](#), marine turtle protection in Saudi Arabia is also governed by the [Executive Regulation of Law of Fishing, Investment and Preservation of Live Aquatic Resources within Territorial Waters of the Kingdom of Saudi Arabia \(1409/1988\)](#), which, in Article 61, prohibits the taking of marine turtles and marine mammals, and to collect their eggs, or to trade in their meat and products, except for scientific purposes, provided that a license is obtained from the Ministry in coordination with the National Authority. The Marine Scientific Research Regulations regulates all research in the territorial waters of the country, which includes all scientific and technical activities conducted in marine areas including aquatic studies and research, recording, and marine treasures.

A [National Conservation Action Plan for Marine Turtles \(2023-2030\)](#) is in place, and the NCW is using the official channels and social media to increase the awareness of the community about the importance of conserving wildlife and how to sustainably use and handle them.

FULLY PROTECTED (through Marine Turtle Action Plan)

Marine turtles and their nesting areas are strictly protected in Saudi Arabia, and any practices or activities related to them, whether research or tourism, require approval from the NCW during the season or out of season. The hunting, extracting, or collecting endangered wildlife species in the marine and coastal environment, including their products and derivatives; collecting, transporting, destroying, or damaging the eggs, nests, or habitats of wildlife species in the marine and coastal environment; and failing to release or return endangered or prohibited wildlife species to the sea in case of bycatch are prohibited. It is also an offence to trade in any wildlife species, or their products or derivatives, whether locally or through import or export; as well as kill, sell, transport, possess, etc., wildlife, amongst others.

Exceptions: XXX

Opportunities and Challenges

Saudi Arabia aims to develop several large-scale projects along the Red Sea coast, known as “giga-projects” and part of the country’s Vision 2030, which poses threats to marine turtles and other marine resources due to high pressure from coastal development (Tanabe, 2022). So far, however, the Red Sea’s coral reefs seem to be in very good health, so the turtles can find good feeding grounds (Al-Shair, 2021). Several initiatives, like the Ras Baridi Marine Turtle Conservation Initiative were launched to protect nesting beaches and marine turtles, in close collaboration with the country’s ministries and the King Abdullah University of Science and Technology (Saudi Green Initiative, 2022), next to other programmes, such as the restoration of nesting sites implemented by the Saudi National Center for Wildlife (Tag, 2022).

International and Regional Instruments

Saudi-Arabia is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- London Declaration (IWT)

- RFMO (PERSGA)
- UNCLOS

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Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking for research/educational purposes where a permit IS required	Taking of marine turtles according to a minimum/maximum size limit, e.g. >XX< cm where a permit IS required	Taking of marine turtles according to a maximum quota where a permit IS required	Taking of marine turtles according to a certain sex preference of marine turtles (female or male) where a permit IS required	A National Conservation Action Plan for Marine Turtles is in place*
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH*	X	X	X	X	X	X	X	X	X		X	
CITES									X	X	X	
National Conservation Action Plan for Marine Turtles (2023-2030)												X

*Note: Collecting eggs, transporting them, or entering their nesting places is prohibited. or taking samples of tissue or blood or any part thereof. Scientific research is not permitted except after requesting a permit from the National Center of Wildlife (NCW). A presentation is made on the objectives of the study, the method of work, its size and time, for review by the experts of the NCW. After approval, a copy of the research results is required after completion. No maximum or minimum level of approval is required, but it is up to the discretion of NCW experts and the extent of failure or success of the study and is within the objectives of NCW to protect sea turtles. No maximum or minimum level of approval is required, but it is up to the discretion of NCW experts and the extent of failure or success of the study and is within the objectives of NCW to protect sea turtles.

Permitted Fishing Gear

In SA: Only for permitted scientific research

In relation to fishing gear for catching turtles in countries, where captures are allowed, please list below any legislation/rule/statute (name, section and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Turtle Rodeo/ Hand caught	Other relevant fishing gear/ types of nets
A system for hunting, investing and protecting living aquatic resources in the territorial waters of the Kingdom of Saudi Arabia No/5 14/01/1408 AH	X	X		X*
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH	X	X	X	

* Hunting marine turtles is prohibited and a fine of SAR 200,000 is imposed. The presentation and purpose of the research should be presented and consideration should be given to whether there are risks to marine turtles from their capture that result in their killing.

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Trawl Nets	Gill nets	Purse seine	Draft nets	Other relevant fishing gear
A system for hunting, investing and protecting living aquatic resources in the territorial waters of the Kingdom of Saudi Arabia No/5 14/01/1408 AH; Other relevant gear: electric shock, explosives, chemicals and toxic substances, or methods that are harmful in any other way to living aquatic resources (Article 89)	X	X	X	X	X	X	X
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH.	X	X					

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, but no guidelines in place	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	Vessel tracking systems (VMS and/or AIS) required for fishing vessels
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH	X*	X	X	X	
In accordance with the regulations of the Transport Authority, the regulations of the Ministry of Environment, Water and Agriculture, and the regulations of the Coast Guard					X

*Ranger inspectors at sea monitor fishing boats to impose penalties on violators. When a turtle is caught as by-catch, it is sometimes released just before the boat returns to the dock, but now there is a rangers to enforce the release as they inspect the fishing gear and by-catch and impose penalties on offenders.

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed	Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required	Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required	Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH.	X	X*	X*	X*	X*

*NWC approval required.

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed	Turtles kept in captivity for tourism/ income-generating/ hobby purposes, where a permit IS required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	Head-starting of hatchlings allowed, where a permit IS required
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH.	X	X	X*	X*

*NWC approval required.

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles allowed, where a permit IS required
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH.	X	X	X	X	X	X*

* Permit may be issued from NCW-CITES

Enforcement

<p>In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria</p>	<p>Legislation prohibits harming marine turtles, which is enforced by law</p>	<p>Harming marine turtles is punishable by fines only</p>	<p>What is the max. fine to be paid for harming (e.g. killing) a marine turtle?</p>	<p>Use of community members as turtle rangers/guardians/monitors and governmental programs to support</p>	<p>After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*</p>
<p>Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH.& Killing or harming a turtle carries a penalty of SAR 100,000.The penalty for destroying or damaging marine turtle nest is SAR 1,000,000.</p>		X	X	<p>SAR 100.000 (= USD 26,638.10) (killing or harming a turtle)</p> <p>SAR 1,000,000 (= USD 266,381)⁴⁷ (destroying or damaging a turtle nest)</p>	X	
<p>"Endangered and Rare Wild Species", 12/2023</p>	X (for green and hawksbill turtle)					
<p>This is done through community cooperation and partnership with specialized centres, and the establishment of three search, rescue and shelter centres affiliated with the NCW, which will be completed by the end of 2023. This is part of the National Plan 2030.</p>						X

⁴⁷ Currency exchange rate: 06 Dec 2023

Habitat Protection

<p>In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>Protection of nesting beaches</p>	<p>Protection of foraging grounds (seagrass beds, coral reefs, etc.)</p>	<p>Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats</p>	<p>Light pollution near nesting beaches</p>	<p>Minimum distance to high-tide mark set for buildings</p>	<p>Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*</p>	<p>Nesting beaches and foraging grounds considered in coastal development plans and EIAs*</p>
<p>Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH</p>	<p>X</p>	<p>X</p>					<p>X</p>
<p>According to the Saudi Vision 2030, 30% of the sea, coasts and islands will be protected, and nesting areas and habitats are considered within the protected ranges</p>			<p>X</p>			<p>X</p>	<p>X</p>
<p>The light pollution study project for areas with high sea turtle activity in the Red Sea and the Arabian Gulf will be completed in the fourth quarter of 2023.]</p>				<p>X</p>			
<p>Environment System 1441 AH Royal Decree No. (M/165) dated 11/19/1441 AH - Chapter Four (Marine and Coastal Environment) Article 21</p>					<p>X</p>	<p>X</p>	<p>X</p>

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:				Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	Hatchlings resulting from incubation under controlled conditions can be sacrificed for gonad histology etc. under an approved project or research	Hatchlings trapped in nests that would otherwise die may be sacrificed for research into sex ratio etc.	Turtles that have a low probability of surviving (e.g. extremely emaciated turtles or turtles with severe health issues)	
Executive regulations for the management of the marine and coastal environment in the Kingdom, based on the environment system issued by Royal Decree No. (M / 165) dated 11/19/1441 AH: Collecting eggs, transporting them, or entering their nesting places is prohibited. or taking samples of tissue or blood or any part thereof. Scientific research is not permitted except after requesting a permit from the NCW. A presentation is made on the objectives of the study, the method of work, its size and time, for review by the experts of the NCW. After approval, a copy of the research results is required after completion.	X	X		X	X	X
Collecting eggs, transporting them, or entering their nesting places is prohibited. or taking samples of tissue or blood or any part thereof. Scientific research is not permitted except after requesting a permit from the NCW. A presentation is made on the objectives of the study, the method of work, its size and time, for review by the experts of the NCW. After approval, a copy of the research results is required after completion. No maximum or minimum level of approval is required, but it is up to the discretion of NCW experts and the extent of failure or success of the study and is within the objectives of NCW to protect sea turtles. No maximum or minimum level of approval is required, but it is up to the discretion of NCW experts and the extent of failure or success of the study and is within the objectives of NCW to protect sea turtles.	X		X	X		

4.4.7. United Arab Emirates

Marine Turtle History and Status

The waters of the United Arab Emirates (UAE) provide a significant feeding and nesting habitat for marine turtles (Pilcher et al., 2021), with the Arabian Gulf also sustaining a range of coastal and marine ecosystems essential for turtles. However, due to the rapid industrial and economic development in the Arabian Gulf countries, these ecosystems are under increasing pressure from human activities (IOSEA, 2019). There are 16 protected marine sites in the UAE, which amount to a combined area of about 12 % of the country's territorial waters.

Presence and Nesting of Marine Turtle Species in the Country

Although there are five species of marine turtles in the UAE, only the hawksbill turtle nests on its shores (Environment Agency - Abu Dhabi, n.d.).

[more on connectivity to be added]

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	✗	●	✗	✗	✗	✗	✗

National Laws

Marine turtles and their habitats are protected by [UAE Federal Law No. 23 of 1999](#), regarding the Exploitation, Protection and Development of the Living Aquatic Resources in the waters of the state of the United Arab Emirates, and [UAE Federal Law No. 24 of 1999](#), for the Protection and Development of the Environment. A list of protected species is available in the Annexes of these laws. In 2019, the UAE launched a three-year [National Action Plan for the Conservation of Marine Turtles \(2019-2021\)](#), which was unveiled by the Ministry of Climate Change and Environment, to effectively protect marine turtles in the country's waters (IOSEA, 2019). The vision of the Plan is to sustainably manage and effectively conserve the marine turtle populations and their habitats in the UAE, which will be achieved through enhancing coordination and cooperation, reducing causes of turtles' mortality, and raising public awareness (IOSEA, 2019). It further intends to promote the adoption of relevant laws to protect threatened species and prevent their direct and indirect causes of death (Goumbook.com, 2020). Moreover, provisions for increased research and information exchange will be included, e.g. on incidents of poaching, accidental catch of marine turtles in fishing gear, and trends and changes in turtle populations (IOSEA, 2019).

A National Conservation Action Plan for Marine Turtles is in place.

FULLY PROTECTED (through Marine Turtle Action Plan)

Marine turtles, including their eggs and other derivatives, and their habitats are fully protected in the UAE.

Exceptions: XXX

Opportunities and Challenges

In 2020, Abu Dhabi's Environment Agency launched a programme to aid turtles distressed by climate change and other issues (AP, 2023), and also requires Sustainable Environment Impact Assessments to ensure sustainable development (Gulf News, 2023). Another initiative, the Dubai Turtle Rehabilitation Project, which was assisted by the Emirates Wildlife Protection Office, has been helping injured and sick marine turtles for nearly two decades (AP, 2023). In addition, the Emirates Wildlife Society, in collaboration with the World Wildlife Fund, has launched the Gulf Green Turtle Conservation project (Goumbook.com, 2020).

International and Regional Instruments

The UAE is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA
- London Declaration (IWT)
- Ramsar Convention

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Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	A National Conservation Action Plan for Marine Turtles is in place*
Federal Law No. 24 for year 1999 regarding the protection and development of the environment	X	X	X	X	X	X	X	
Federal Law No.23 for year 1999 concerns to the exploitation, protection & development of living aquatic resources in waters of the UAE, Article 28	X	X	X	X	X	X	X	
National Action Plan for the Conservation of Marine Turtles (2019-2021)								X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Trawl Nets	Gill nets	Purse seine	Draft nets
Ministerial decree no (21) for year 2018 regarding the bylaw of Federal Law 23 for the year 1999 Concerning The Exploitation, Protection and Development of Living Water Resources in The United Arab Emirates	X	X	X	X	X
Ministerial Decree No.468 for the year 2019 on regulating fishing of pelagic fish using encircling nets		X	X	X	X
Ministerial Resolution No. (253) of 2021 amending certain provisions of the Ministerial Decree No. (468) of 2019 on regulating fishing of pelagic fish using encircling nets		X	X	X	X
Ministerial Decree No.471 for the year 2016 on regulating fishing of pelagic fish using purse seine		X	X	X	X

Ministerial Decree No.163 for the year 2021 on regulating fishing and diving for amateurs	X				
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Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, but no guidelines in place	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
Federal Law 23 for the year 1999 Concerning The Exploitation, Protection and Development of Living Water Resources in The United Arab Emirates	X	X	X	X	X	X	X	X (for internal use only)

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed
Federal Law No. 24 of 1999 on the Protection and Development of the Environment	X

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtles kept in captivity for tourism/ income-generating/ hobby purposes, where a permit IS required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	Head-starting of hatchlings allowed, where a permit IS required
Federal Law No. 24 of 1999 on the Protection and Development of the Environment	X	X	X
Federal Law 23 for the year 1999 Concerning The Exploitation, Protection and Development of Living Water Resources in The United Arab Emirates	X	X	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Federal Law 23 for the year 1999 Concerning The Exploitation, Protection and Development of Living Water Resources in The United Arab Emirates	X	X	X			
Federal Law No. 11 for year 2002 concerns regulating and controlling the international trade in endangered species of wild fauna and flora				X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
UAE National Red List of Herpetofauna: Amphibians and Terrestrial Reptiles, Sea snakes and Marine Turtles (2019)	X						
Federal Law No. 24 for year 1999 regarding the protection and development of the environment		X	X	6 Months	No Max Limit		
Federal Law No.23 for year 1999 concerns to the exploitation, protection & development of living aquatic resources in waters of the UAE		X	X	6 Months	AED 50,000 (= USD 13,613.30) ⁴⁸		
National Action Plan for the Conservation of Marine Turtles (2019-2021)						X	X

⁴⁸ Currency exchange rate: 06 Dec 2023

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
Federal Law No. 24 for year 1999 regarding the protection and development of the environment	X	X	X	X	X
Federal Law No.23 for year 1999 concerns to the exploitation, protection & development of living aquatic resources in waters of the UAE, Article 28	X	X			

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Collection of genetic samples from marine turtles conducted, where a permit IS required
Federal Law No. (8) of 2021 regarding access to genetic resources and their derivatives and the fair and equitable sharing of benefits arising from their use	X	X

4.4.8. Yemen

Marine Turtle History and Status

The Yemen coastline has been identified as the second most important nesting site for green turtles in the Indian Ocean (EPA Aden, 2019). But years of human predation have led to a decline in the numbers of turtles arriving on the beaches, such as in the Sharma Protectorate (Al Batati, 2017). Similar observations were made in the "Khor Omaira" reserve. One of the reasons given is that, in Yemen, hunting turtles is considered an old tradition, however, an increase in hunting has been observed due to a lack of fish in the region and the end of the catching season coinciding with the migration of the turtles to "Khor Omaira" (Al-Qadi, 2023). Moreover, it is not only the locals who are poaching: a nearby refugee camp was implicated, as well (Al-Qadi, 2023). It was found that fishing gear also poses a substantial threat to marine turtles in Yemen, with artisanal fishing accounting for 90% of the total landing (Awadh et al., 2017). The main artisanal fishing gears interacting with turtles were identified as shrimp trawls, longlines, gillnet, purse seine net and stake net, with nearly 50 turtles caught accidentally by those gears during fishing seasons yearly (Awadh et al., 2017).

Currently, there are no existing programs for the conservation of marine turtles, but Yemen is in the process of developing programs in the near future. The country does have natural reserves, which require attention and care.

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles found in Yemen, the green, hawksbill, olive ridley, loggerhead, and leatherback turtle. Only the green, hawksbill and loggerhead turtle nest on the country's shores.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Yemen. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	✗	●	✗	✗	✗

National Laws

The total number of Yemeni legislation, including laws, Republican decrees, and Cabinet decrees, related to biological diversity amounts to about 21 legislations (Akhdar, 2020). Even the Yemeni constitution states that "environment protection is the responsibility of the state and society, and it is a religious and national duty of every citizen" (Art. 35).

The [Environmental Protection Law No. 26 of 1995](#) is the main piece of legislation ensuring the protection of marine turtles in the country. The law requires authorities and individuals to protect the environment and its natural resources and to conserve wildlife and marine ecosystems (Art.4), and, in protected areas, it is prohibited to "hunt, transport, kill or disturb the fauna or marine creatures organisms that are not harmful or to carry out activities that lead to their destruction and extinction" (Art. 11 (2)). Art. 24 requires Environmental Impact Assessments to be conducted. Art. 28 calls for all ministries and governmental institutions to

take all measures and arrangements which ensure (...) the conservation of the natural resources and the protection of wild life and marine organisms especially those endangered and threatened of extinction". An internal draft document lists the country's protected species, which is available upon request from the Ministry of Water and Environment Protection Authority.

Public Laws No. 2 of 2006 and 104 of 2002 regulate fishing and exploitation of aquatic organisms, and the trade in Wild Animals and Plants, including the Endangered Species List, respectively. The Fisheries Law aims to protect aquatic life and the marine environment from indiscriminate fishing practices and prohibits the hunting of marine turtles or the use of their eggs, except for scientific research purposes with permission from the ministry.

Public Law No.104 of 2002, Article 7, states that all species within protected and proposed protected areas are subject to protection, and trading or hunting of these species is prohibited. Article 16 of this law prohibits the hunting of endangered animals, and anyone who hunts an endangered animal shall be subject to the prescribed penalties.

Yemen also published a Biodiversity Strategy and Action Plan in 2005, led by the Environment Protection Authority under the Ministry of Water and Environment. Goal 1. Conservation of natural resources, Target 2. Endemic and Endangered Species; and Goal 2. Sustainable use of natural resources, Target 6. Coastal/Marine Life and Fisheries

All types of scientific research are permitted according to an agreement, but for each case certain controls are put in place that need to be approved by the competent departments in cooperation with the relevant authorities.

FULLY PROTECTED (through general wildlife legislation)

The hunting of marine turtles, listed as protected species, and the use of their eggs is prohibited in Yemen.

Exceptions: Scientific research

Opportunities and Challenges

The Key Issues listed under Goal 1, Target 2 of the Biodiversity Strategy and Action Plan are

- Weak monitoring capabilities for endangered and rare species
- Lack of enforcement of wildlife protection measures
- Inadequate systematic population monitoring of species, specially endangered ones
- Lack of information on the status and habitat requirements of species at risk
- Habitat destruction caused by activities associated with development

The Key Issues listed under Goal 2, Target 6 of the Biodiversity Strategy and Action Plan are

- Marine and coastal habitat degradation caused by unplanned coastal reclamation
- Over-exploitation, pollution and mismanagement of fishing in the Red Sea, Arabian Sea, Gulf of Aden and Yemeni Islands
- Degradation of coastal and marine habitats caused by ship dumping, industrial, agricultural and sewage waste
- Sharp decline in important marine resources especially lobsters, cuttlefish, shrimps and sharks caused by over-fishing, poaching of foreign vessels, uncontrolled gear and fishing effort, and lack of quality controls
- Destruction of coral reefs and underwater habitats caused by bottom trawling, ornamental fishing

The civil war in Yemen further complicates the implementation of conservation agendas and effects the readiness of donors to invest in environmental protection in the country. Some

projects have been launched, however, e.g. the [Global Environment Facility \(GEF\) Small Grants Programme](#) has invested in turtle conservation in Socotra. The pursuit to complete a National Sea Turtle Action Plan will advance conservation goals, in addition to publishing the State's list of protected species, which can then be accessed online by every concerned citizen.

International and Regional Instruments

Yemen is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA
- Ramsar Convention
- RFMOs (IOTC)
- UNCLOS

DRAFT

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking for research/educational purposes where a permit IS required
Public Law 26, 1995, Article 11, "Environmental Protection Law"	X	X	X	X	X	X	X	
Public law 26, 1995, Article12, "Environmental Protection Law"	X	X	X	X	X	X	X	X
Prime Minister's Decision No.148, 2000, Section 4"Natural Reserves" Article 35, Executive Regulations of the Environmental Protection Law"	X	X	X	X	X	X	X	
Prime Minister's Decision No.148, 2000, Section 4"Natural Reserves "Article 36, Executive Regulations of the Environmental Protection Law"	X	X	X	X	X	X	X	X
Public Law 2, 2006, Article 52, "Regulation of fishing and exploitation of aquatic organisms".	X	X	X					X
Public law 104, 2002, Article 16" Protection of Endangered Species List and Regulation of Trade in Wild Animals and Plants."	X	X	X	X	X	X		
Public Law 104, 2002, Article 7 "Protection of Endangered Species List and Regulation of Trade in Wild Animals and Plants"	X	X	X	X	X	X		

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook and Line	Trawl Nets	Gill nets	Purse Seine	Draft nets
Law No. 2 of 2006 regarding the organization and exploitation and protection of marine life	X	X	X	X	X	X
Ministerial Decision No. 10 of 2010 regarding the specifications and regulations for coastal fishing boats and their associated fishing equipment	X	X	X	X	X	X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Report to relevant authorities only if turtle is tagged
There are no binding texts to release turtles to the sea, but there is a tendency to update laws and legislations, because most of them were approved 25 years ago.	X

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed
Prime Minister's Decision No.148 2000, Section 4 "Natural Reserves" Article 36, Executive Regulations of the Environmental Protection Law"	X

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed
Public Law 104, 2000, Article 25, "The Cabinet decision regarding the regulation of the trade and protection of endangered species of wild animals and plants."	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Public Law 104, 2000, Article 8, "The Cabinet decision regarding the regulation of the trade and protection of endangered species of wild animals and plants."	X	X	X			
Public Law 104, 2000, Article7, "The Cabinet decision regarding the regulation of the trade and protection of endangered species of wild animals and plants."	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?
Public Law 2, 2006, Article 56, "Regulation of fishing and exploitation of aquatic organisms".	X	2-6 months Anyone who violates the provisions of any of the Articles (7), (8/5), (9), (18), (25/2), (38), or (52/c.d.e) shall be subject to punishment. These articles include the prohibition of hunting turtles or using their eggs, except for scientific research purposes with permission from the ministry. In addition to that, the competent court may rule to confiscate the fishing boats, the equipment used, and all seized materials. It may also cancel the licenses granted for fishing.	USD 1,0000-100,000
Public Law 2, 2006, Article 57, "Regulation of fishing and exploitation of aquatic organisms".	X	1-3 months Anyone who violates the provisions of any of Articles (36) or (52.f,g) shall be subject to punishment. These articles include the prohibition of importing and transporting designated aquatic species for breeding purposes without permission from the ministry. In addition to that, the competent court may rule to confiscate the fishing boats, the equipment used, and all seized materials. It may also cancel the licenses granted for fishing.	USD 1,000-10,000

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Light pollution near nesting beaches	Minimum distance to high-tide mark set for buildings
Public Law 26, 1995, Article 11, Environmental Protection Law	X	X			X
Public Law 26, 1995, Article 12, Environmental Protection Law	X	X		X	
Public Law 26, 1995, Article 28, Environmental Protection Law	X			X	
Prime Minister's Decision No.148, 2000, Section 4, "Natural Reserves", Article 35 Executive Regulations of the Environmental Protection Law"	X	X	X		X

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4.5. Pacific/Oceania

4.5.1. Australia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles have important social and cultural values for Torres Strait Islander and Aboriginal people living in coastal areas of northern Australia. First Nations communities are working collaboratively with scientists and government agencies to develop and implement community-based management for sustainable hunting of marine turtles (DCCEEW, n.d.).

Harvesting of marine turtles by Aboriginal and Torres Strait Islander people is legal under Section 211 of the Native Title Act 1993 (see below) for personal, domestic or non-commercial communal needs. The species usually targeted for meat is the green turtle, mostly adult females (refer to the Recovery Plan for Marine Turtles in Australia 2017-2027). Eggs are harvested from all turtle species. However, harvest levels remain unquantified and quotas or equivalent are self-managed by community groups (WWF, 2022).

Most of the tortoiseshell items in the country are thought to have been brought into Australia before the CITES ban of 1977, but confiscation records at Australian borders show that many Australians continue to buy illegal tortoiseshell products while on vacation abroad (Madden Hof et al., 2022, in WWF, 2022).

Collection of data on marine turtles started as early as 1968, when the State of Queensland became the first jurisdiction in the world to protect all marine turtle species within its borders (QLD Government, n.d.). More than 50 years of continuous marine turtle monitoring and research has occurred at Mon Repos, near Bundaberg, producing, amongst numerous other achievements, the [Queensland Marine Turtle Field Guide](#) (QLD Government, n.d.). This is complemented by the Western Australia Turtle Monitoring Field Guide. Other examples of highly successful long-term monitoring programs of marine turtles in Australia are the Land and Sea Rangers of the Torres Strait Regional Authority and the Northwest Shelf Flatback Turtle Conservation Program.

Still, all marine turtle species have experienced population declines in Australia, as well, which are usually multifactorial and linked to the effects of the cumulative impacts of a multitude of threats, including, but not limited to, bycatch and entanglement in fishing nets, loss of habitat, egg predation, poaching, pollution, climate change/extreme weather events, habitat loss, degradation of foraging habitat, and diseases (e.g. soft-shell disease).

Indigenous take was identified as a high-risk threat for green turtles in the Gulf of Carpentaria, flatback turtles in the Arafura Sea, and hawksbill turtles in north-east Arnhem Land (DCCEEW, 2017). International take outside of Australia's jurisdiction, involving marine turtle stocks that nest or forage within Australia, but are impacted by take when they migrate outside Australia's jurisdiction was recorded as high for green turtles in the Gulf of Carpentaria, and as very high for hawksbill turtles in the north Queensland, hawksbill turtles in north-east Arnhem Land, and hawksbill turtles in Western Australia (DCCEEW, 2017). International take within Australia's jurisdiction was mostly identified as moderate to low (DCCEEW, 2017).

The Australian Fisheries Management Authority (AFMA) collects data on fisheries interactions with protected species through their monitoring programs: 1) all fishers are required to report any interactions through their logbooks, and 2) officers from the AFMA travel on Australian fishing boats as Observers to make environmental observations and collect biological data,

thus contributing to the monitoring of fishing interactions with protected species (AFMA, n.d.). The State/Territorial Fisheries Management Authorities also monitor protected species interactions, including Environment Protection and Biodiversity Conservation Act (EPBC) Act listed migratory species, and report these to the Department of Agriculture and Water Resources.

Presence and Nesting of Marine Turtle Species in the Country

Australia has some of the largest marine turtle nesting areas in the Indo-Pacific region and hosts the only nesting populations of the flatback turtle (DCCEEW, n.d.). Out of seven marine turtle species worldwide, six occur in Australian waters: the green, hawksbill, olive ridley, loggerhead, leatherback, and flatback turtle. All of these species are also known to nest in Australia (Work et al., 2020, in SPREP, 2022a).

Satellite telemetry and flipper tagging studies have shown that green turtles nesting in Australia migrate to countries and territories, such as Indonesia, New Caledonia, and Papua New Guinea, among others (Limpus 2002). Satellite tracking and tag recovery data also show that adult green turtles nesting in French Polynesia, the Cook Islands (Batisbasaga et al. 2006), French Polynesia (Petit, 2013) and Australia (Rubeni et al., 2002; Jit, 2007) can be found foraging in Fiji. Furthermore, tagging data indicate that green turtles originating from the Marshall Islands, are known to migrate into Australian waters. Complementing these findings, genetic analyses have identified migratory connections for green turtles between nesting and/or foraging sites in Indonesia, Malaysia, New Caledonia, and XXX. Similarly, genetic research by [Author/Study X] has established a migratory link between [Turtle Species] in Australia and [Destination Country].

As for connectivity, hawksbills are known to forage across the region, and limited tagging and genetic results show that turtles from neighbouring countries, such as Timor-Leste, forage in Australia (Hamilton et al., 2021, and Fossette et al., 2021, in WWF, 2022). The remaining Northeast Queensland stock does not migrate beyond Australia’s continental shelf, as was revealed by recent satellite tracking studies (Barr et al., 2021, in WWF, 2022). Hawksbills tracked from six rookeries in Western Australia show that turtles remained in Western Australian waters post nesting (WWF, 2022).

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp’s ridley turtle
Presence	●	●	●	●	●	●	✗
Nesting	●	●	●	●	●	●	✗

National Laws

The Australian national government is responsible for the marine environment from 3 nautical miles out to the edge of the EEZ. The eight State and Territory governments have responsibility for matters within their jurisdictional borders, which include State/Territory waters (UNEP et al., 2022). Rookeries and waters within the western Cape York Peninsula regions or Torres Strait, while outside of protected areas, fall under the ownership of Indigenous groups (UNEP et al., 2022). In addition, under the Torres Strait Treaty, Papua New Guineans from 13 Treaty villages are allowed to engage in traditional fishing activities within the Torres Strait Protected Zone (e.g. the harvest of marine turtles for subsistence and traditional activities). It should be noted that traditional fishing activities do not include harvest for commercial sale.

In Australia, all marine turtle species are protected under the [EPBC Act \(1999\)](#), last [amended in 2023](#) in response to the independent reviews of 2009 and 2020, and various State and Northern Territory legislation. Under the Act, the green, hawksbill and flatback turtle are classified as “Vulnerable”, and the leatherback, loggerhead and olive ridley turtle are each listed as “Endangered” (DCCEEW, 2023). The EPBC Act is the country’s key piece of environmental legislation and also gives effect to Australia’s international obligations, such as CMS, CITES, and CBD (UNEP et al., 2022).

It is an offence to kill, take, injure, keep, trade or move marine turtles in a Commonwealth area, unless the person taking the action holds a permit under the EPBC Act, the activity is carried out in accordance with a State/Territory or Australian Government fishery plan of management accredited by the Minister for the Environment, or the Act is consistent with native title rights under the Native Title Act (1993) (see below).

The [Native Title Act \(1993\)](#), as amended in 2023, grants Traditional Owners the right to take marine resources, including hunting of marine turtles, for domestic, personal, or non-commercial communal needs and in enjoyment and exercise of their native title rights and interests (Section 211) (DCCEEW, n.d.). The [Torres Strait Fisheries Act \(1984\)](#), as amended in 2016, equally grants rights to the Traditional Owners of the land, but has only a limited geographical reach.

Other relevant legislation is the [Great Barrier Reef Marine Park Act \(1975\)](#), as amended in 2020, which stipulates that, in the case of an offence, the amount of penalty units is tripled, if that protected species concerned is a marine turtle

The national [Recovery Plan for Marine Turtles in Australia](#) was jointly made with the New South Wales and Queensland Environment Ministers in May 2017. The plan identifies research and management actions, and mechanisms to implement these, to be taken to stop the decline in marine turtles, to recover marine turtles in Australia and to remove them from the threatened species list, and thus to ensure the species long-term viability in nature (DCCEEW, 2017; UNEP et al., 2022). The Plan stipulates the following four targets:

- Current levels of legal and management protection for marine turtles are maintained or improved both domestically and throughout the migratory range of Australia’s marine turtles;
- The management of marine turtles is supported;
- Anthropogenic threats are demonstrably minimised; and
- Trends at index beaches, and population demographics at important foraging grounds are described.

Queensland published a [Marine Turtle Conservation Strategy](#) in 2018, and, in the same year, the national government launched its [Reef 2050 Long-Term Sustainability Plan](#).

In December 2022, the Australian Government released the “[Nature Positive Plan: better for the environment, better for business](#)”.

In Commonwealth waters, several Management plans for Australian Marine Parks, which cover covering 48% of the country’s waters (Parks Australia, n.d.), recognize marine turtles as important values and, subject to the EPBC Act, allow research to occur with an authorization on a case-by-case basis. Habitat for marine turtles such as cays, coral reefs and seagrass are protected within different zoning arrangements. The parks and management arrangements were established to protect representative areas of marine biodiversity, including turtles and their habitat.

Other relevant Acts and Legislation for Marine Turtle Protection are the:

- [Threat Abatement Plan for the Impacts of Marine Debris on Vertebrate Marine Life](#) (under the EPBC Act);
- [Great Barrier Reef Marine Park Act 1975](#) and the [Reef 2050 Long-Term Sustainability Plan](#)
- [National Light Pollution Guidelines for Wildlife 2023](#)
- [AS/NZ 4282:2019 – Control of the obtrusive effects of outdoor lighting](#) (Standards Australia, NGO)
- [National Policy on Fisheries Bycatch 1999](#)
- National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances (now called the [National Plan for Maritime Environmental Emergencies](#))
- [Criminal Code Act 1995](#)

Several States and Territories equally have conservation acts that enforce marine turtle protection, such as:

- QLD
 - Nature Conservation Act 1992
 - Marine Parks Act 2004
- NSW
 - Biodiversity Conservation Act 2016
 - National Parks and Wildlife Act 1974
- NT
 - Territory Parks and Wildlife Conservation Act 2000
- WA
 - Biodiversity Conservation Act 2016

PARTIALLY PROTECTED

All marine turtle species in Australia are protected and it is an offence to kill, take, injure, keep, trade or move marine turtles.

Exceptions: Scientific research

Traditional owners are allowed to hunt marine turtles, for domestic, personal, or non-commercial communal needs and in enjoyment and exercise of their native title rights and interests

Opportunities and Challenges

The Northern Prawn Fishery developed and adopted an industry code of conduct to minimize interactions with turtles. The code encourages fishers not to fish in areas where turtles are abundant or to trawl near major nesting beaches, and encourages using modified nets that allow large animals to be removed easily. TEDs are mandatory in the Northern Prawn Fishery, Torres Strait Prawn Fishery, and in the Western Australian trawl fisheries and East Coast Otter Trawl Fishery (UNEP et al., 2022), and is supported through the AFMA Bycatch Program (AFMA, n.d.). Marine turtles in Australian waters would even more benefit if similar codes of conduct and gear modifications were mandatory in all its States and Territories, such as bycatch and discarding workplans that were developed for numerous fisheries in the country to minimize bycatch and the discarding of target species (AFMA, n.d.).

International and Regional Instruments

Australia is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES

- CMS
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (CCAMLR, CCSBT, IOTC, SIOFA, SPRFMO, WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

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Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.2. Cook Islands


Marine Turtle History and Status

For most of the 20th and beginning of the 21st century, there was a dearth of data on marine turtles in the Cook Islands. The majority of the islands remained un-surveyed for decades, and there was very little knowledge about the species of wildlife present in the area, their population status, distribution, abundance, and threats. Publications mostly relied on old surveys, and on reviews of data from the 1960s and 70s. This made it very difficult to establish trends of how marine turtle populations developed, which species used the islands and their waters as developmental habitat, and where nesting occurred (White, 2012).

Presence and Nesting of Marine Turtle Species in the Country

Four species of turtles have been confirmed to appear in the Cook Islands: the most common is the green turtle, which nests in the more sparsely populated outer islands. Nesting was also reported by the less common hawksbill turtle, but whether nesting occurs is uncertain due to a lack of data. There have been rare sightings of loggerhead turtles and satellite tracking technology has also tracked leatherbacks (Cook Islands Ministry of Marine Resources, 2008; Work et al., 2020, in SPREP, 2022a).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from the Cook Islands. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations. Satellite tracking and tag recovery data show that adult green turtles nesting in French Polynesia, the Cook Islands (Batisbasaga et al. 2006), French Polynesia (Petit, 2013) and Australia (Rubeni et al., 2002; Jit, 2007) can be found foraging in Fiji.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence							
Nesting							

National Laws

The [Marine Resources Act \(2005\)](#) provides for the protection and management of fishery resources throughout the EEZ, the definition of which includes marine turtles, and is complemented by Marine Resources Regulations, with the most relevant being the regulation on [Long-line Fisheries \(2008\)](#), and on [Licensing \(2012\)](#). The [Environment Act \(2003\)](#) provides provisions for listing species as protected in Section 55, even though marine turtles are not explicitly mentioned, they are included. Hence the development of regulations, also mandated under Section 70 (2) (1) (b) (c). The Environment Act applies to the islands of Rarotonga, Aitutaki, and Atiu (through Section 4 (2) of the Environment Act) and to Mitiaro, Mauke, and Manihiki (through an Executive Order). In 2008, two Southern Group islands: Takutea and Mitiaro, developed regulations within the provisions of this Act in 2008, which protects marine turtles and their nests, however, traditional use is allowed (MTSG, 2021; UNEP et al., 2022). For Mitiaro, Section 11, "Protection of Turtles", and for Atiu and Takutea Section 12 "Protection of Marine Turtles" of the [Environment Regulations](#) must apply to the Island Environment Authority if it is intended to harvest marine turtles/eggs for traditional practice. A draft regulation for Mauke with similar stipulations in Section 9 "Protection of Turtles" is underway, as well as a draft Environment (Biodiversity Conservation) Regulation of 2019, wherein

Section 10 brings forward that a permit is required to move the species for research, Section 11 that a permit is required for traditional use of endangered species; and Section 15, that a person must not kill, harm, catch, take, hold, disturb turtles and eggs in any way. Marine turtle conservation is also addressed by the [Palmerston Island Community Sustainable Development Plan 2017-2020 and 2021-2025](#) to "minimise the excessive harvest of resources... turtles", in the [Rakahanga By-laws \(2000\)](#) concerning the protection of female marine turtles crawling to or from the nesting place, and the [Suvarrow National Park Rules 2019, S.5](#) "No entry into bird or turtle nesting areas".

Cook Islanders have customary rights to harvest natural resources under the Cook Islands Act 1915 (UNEP et al., 2022). However, even though turtle egg take used to be common in the islands, the Marine Turtle Specialist Group (MTSG) notes that there is a noticeable generational shift as younger people prefer western food instead of relying on an entirely island food diet (MTSG, 2021). The [Prevention of Marine Pollution Act \(1998\), as amended in 2018](#), is rather difficult to enforce with an EEZ of 2M km². The [Marae Moana Act \(2017\), as amended by the Maritime Zones Act No. 1 of 2018](#), created a multi-use marine park throughout the EEZ, however, there is a 50 nautical mile buffer zone around each island, where these activities are prohibited (MTSG, 2021).

The country also has a [Biodiversity Strategy and Action Plan](#), which includes strategic goals and Actions for Endangered Species Management, *in particular the conservation of "marine animals harvested for food or financial gain"*.

In 2018, the SPREP conducted a Review of Natural Resource and Environment Related Legislation in the Cook Islands. Apart from the National Environment Service (NES) and the Ministry of Marine Resources (MMR), the review mentions the local Island Environment Authorities, that assist the NES in making recommendations to the Minister on regulations to be made, identifying environment priorities, formulating and publishing guidelines on specific issues of environmental protection, and determining applications for permits, among others.

PARTIALLY PROTECTED

All marine turtle species in the Cook Islands are protected and it is prohibited to kill, harm, catch, take, hold, disturb turtles and eggs in any way.

Exceptions: XXX

Cook Islanders have customary rights to harvest natural resources, thus, traditional use is allowed.

Opportunities and Challenges

Both the NES and the MMR have jurisdiction over territorial waters and the EEZ. The NES also regulates the 'foreshore', which is the area from the Mean High Water mark inland for 30 metres (White, 2012), which applies when a turtle comes on land to nest. Moreover, the Environment Act only applies to six islands, and of these, none host significant nesting. This signifies that most marine turtle reproduction in the Cook Islands falls outside of any legal protection. Since customary rights for marine turtle harvest exist, monitoring mechanisms need to be in place. The Cook Islands uses circle hooks, regulated in the Marine Resources Longline Fishery Regulations 2008, and bycatch reduction measures, which include the safe release of seabirds & turtles (MTSG, 2021).

International and Regional Instruments

The Cook Islands are part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CMS
- RFMOs (WCPFC, SPRFMO, SIOFA)
- SPREP
- UNCLOS

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Matrix Results

Harvest, Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking/using for traditional purposes where a permit IS required	Taking for research/educational purposes where a permit IS required	All taking of eggs and marine turtles allowed without restrictions
Environment Act 2003 (S.55 and S.70 (2) (1) (b) (c).)			X	X			
Environment (Mitiaro) Regulations 2008, S.11 "Protection of turtles"	X				X		
Environment (Atiu and Takutea) Regulations 2008, S.12 "Protection of Marine Turtles"	X				X		
DRAFT Environment (Mauke) Regulations 2009, S.9 "Protection of Turtles"	X				X		
DRAFT Environment (Biodiversity Conservation) Regulations 2019; S.10 - permit required to move the species for research; S.11 - permit required for traditional use of endangered species; S.15 - must not kill, harm, catch, take, hold, disturb in any way (applies to turtles and eggs)	X	X			X	X	
Suwarrow National Park rules 2019; 6. "No harassing, disturbing, harming or killing of any marine mammals"			X			X	
Rakahanga By-laws 2000 "females to or from nesting place"			X				
Palmerston Island Community Sustainable Development Plan 2017-2020 and 2021-2025; "minimise the excessive harvest of resources... turtles"							X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practices	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	Recording and reporting of by-catch on fishing vessels	External observers required on (some) fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels
Marine Resources (Long-line Fishery) Regulations 2008	X	X	X	X	X	
Marine Resources (Licensing) Regulations 2012 "All vessels fishing in Cook Islands waters"						X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Environment (Mitiaro) Regulations 2008, Section 11 "Protection of turtles"	X	X	X
Environment (Atiu and Takutea) Regulations 2008, Section 12 "Protection of Marine Turtles"	X	X	X
DRAFT Environment (Mauke) Regulations 2009, Section 9 "Protection of Turtles"	X	X	X
DRAFT Environment (Biodiversity Conservation) Regulations 2019	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by fines only	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?
Rakahanga By-laws 2000	X	X	NZD 200 (= USD 125) ⁴⁹

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches
Suwarrow National Park Rules 2019, S.5. No entry into bird or turtle nesting areas	X

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Collection of genetic samples from marine turtles conducted, where a permit IS required
Ministry of Marine Resources Act 2005 "The Minister may authorise any vessel or person to undertake scientific research operation in the fishery waters, and may, in granting any such authorisation, exempt that vessel or person from the requirements of any fisheries management and conservation measures specified in the authorisation"	X*	X*	X

* All marine research requires permission from the Minister of Marine Resources (as per the Marine Resources Act 2005, Section 36), and is considered on a case-by-case basis.

⁴⁹ Currency exchange rate from: 21 July 2023

4.5.3. Federated States of Micronesia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

The Federated States of Micronesia (FMS) consists of 607 islands divided into four states: Chuuk, Kosrae, Pohnpei, and Yap.

There have been observations of hawksbill turtles foraging on nearshore reefs of the FMS, but there is little documented information on the location or abundance of foraging activities, with only 12 records of hawksbill foraging from 1991 to 2018 in the Turtle Research and Monitoring Database System hosted by SPREP (Hof et al., 2022). Nesting of hawksbill turtles is believed to be rare, possibly less than 10 to 20 per year (Pilcher, 2021a). The number of green turtles surpasses the one of hawksbills, with an estimated 500 to 1000 green turtles nesting annually in the State, and the largest rookery appearing to be Ulithi Atoll (Pilcher, 2021a). No details are available on the current status of olive ridleys in the FSM.

The turtles that do frequent the waters of the FMS are threatened by the retention of hawksbills for their carapace, uncontrolled, long-term harvests of eggs and females, bycatch, and by nest predation by monitor lizards, ghost crabs, and wild pigs (Hof et al., 2022; Maison et al., 2010). Poisoning after the consumption of hawksbill turtles has been reported (Pavlin et al., 2015).

Presence and Nesting of Marine Turtle Species in the Country

The nesting of green turtles and hawksbill turtles is confirmed in FSM, as well as the presence of olive ridley and leatherback turtles (Pilcher, 2021a; Work et al., 2020, in SPREP, 2022a):.

Satellite tracking from Yap shows turtles migrated to the Ryukyu Islands, Japan, the Philippines, Sabah, Malaysia (Turtle Islands Park), and Peninsular Malaysia (Kolinski et al., 2014; Maison et al., 2010).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n – rare)	X		X		

*nesting

National Laws

The [Title 23 – Resource Conservation](#) covers marine species preservation (Chapter 1) and endangered species protection (Chapter 3). Chapter 1 prohibits the use of explosives, poisons or other substances that kill marine life and §105 stipulates limitations on taking of turtles. The provisions prohibit the

- taking or intentional killing of marine turtles while on shore
- taking of their eggs
- taking or killing of in-water hawksbill turtles with a Curved Carapace Length (CCL) of <27 inches
- taking or killing of in-water green turtles with a CCL of <34 inches
- taking or killing of marine turtles of any size from 01 June to 31 August inclusive, and from 01 December to 31 January inclusive

If none of these provisions are contradicted, the taking of marine turtles and their eggs shall be allowed for scientific purposes when specifically authorized by the High Commissioner. However, these regulations are only applicable within FSM waters outside the 12 mile-state territorial waters zone (Maison et al., 2010).

[Title 24 – Marine Resources](#) states the objective “to ensure the sustainable development, conservation and use of the marine resources in the exclusive economic zone by promoting development of, and investment in, fishing and related activities in the context of effective stewardship.” Under the Title, “fish” is defined as “any living marine resource” and hence encompasses marine turtles. Chapter 5 addresses the Conservation, Management and Sustainable Use of Fishery Resources and calls for protecting biodiversity in the marine environment. Fishing permits are required for marine scientific research, training and foreign recreational fishing, as well as for fishing on, over or within one nautical mile of the edge of a coral reef.

[Title 26 – Conservation and Resources](#) establishes a State Marine Sanctuary and Wildlife Refuge System, within whose boundaries animals, eggs, and nests may not be taken or possessed. It also establishes several marine sanctuaries, among others the Oroluk Marine Sanctuary and the Minto Reef Marine Sanctuary, due to the significant bird and turtle nesting and feeding areas found in and around the areas.

In addition, each of the four States of the FSM has additional individual regulations as described below:

Yap State

The [Yap State Code](#) (1987, as amended in 2000) and [Title 18](#), Chapter 10, prohibit the commercial sale of marine turtle eggs and meat and eggs. Traditionally, green turtles nesting throughout Ulithi Atoll have been conserved and managed and conserved by imposing cultural limitations on take for consumption, limits that were put in place by the leaders of the chief island, Mogmog (Lessa, 1983 in Maison et al., 2010). It was reported that, with these traditional practices curbed by the Code, turtle take has increased, although there is no record of how many turtles are taken annually within Ulithi Atoll (Maison et al., 2010).

Chuuk State

The [Chuuk State Code](#) was still in draft form at the time of drafting of this report (2001 draft version).

Pohnpei State

Pohnpei State laws stipulate that there is a minimum size limit for in-water take of green turtles (34 inches CCL) and hawksbills (27 inches CCL) and closed harvest seasons from 01 June-31 August and 01 December-31 January, and nesting turtles are protected and egg collection is prohibited at all times (Maison et al., 2010).

Kosrae State

There has been no nesting reported in Kosrae, however, the State Code regulates the take of turtles in-water, wherein it is stipulated that turtles must have a minimum size limit for all species of 27 inches CCL, lists the closed seasons, which are the same as for the Pohnpei State above, and also includes a prohibition of egg collecting and killing of turtles while onshore at all times.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in FSM. The report lists Title 23 and Title 24.

XXX

PARTIALLY PROTECTED

Within FSM waters (inside the 12 mile-state territorial waters zone)

The provisions in Title 23 prohibit the

- use of explosives, poisons or other substances that kill marine life

- taking or intentional killing of marine turtles while on shore
- taking of their eggs
- taking or killing of in-water hawksbill turtles with a CCL of <27 inches
- taking or killing of in-water green turtles with a CCL of <34 inches
- taking or killing of marine turtles of any size from 01 June to 31 August inclusive, and from 01 December to 31 January inclusive

Exceptions: Scientific purposes

In addition, the different States of the Cook Islands have differing regulations when it comes to marine turtle protection.

- Yap State: commercial sale of marine turtle eggs and meat and eggs prohibited, non-commercial harvest of marine turtles and their eggs is allowed
- Chuuk State: no marine turtle-related legislation
- Pohnpei State: same provisions as in Title 23
- Kosrae State: turtles taken must have a minimum size limit for all species of 27 inches CCL, other than that, the same provisions as in Title 23 apply

Opportunities and Challenges

XXX

International and Regional Instruments

The FSM is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.4. Fiji

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles have played an important role in the legends, cultures, and diets of coastal communities in the Pacific Island region, historically leading to certain taboos and cultural restrictions associated with consumption and harvesting, such as turtles capture having been limited to a selected group of traditional fishermen only (Batibasaga et al., 2022; Kitolelei et al., 2022). The introduction of the hawksbill shell trade into Fiji in the 1800's, however, encouraged indigenous Fijian communities (iTaukei) to hunt and process hawksbills, a process that, together with the sale of meat, eggs, and artefacts, continued for at least for two hundred years, for both hawksbill and green sea turtles (Batibasaga et al., 2022; Vierus, 2023).

Illegal use and trade remain some of the threats that turtles are facing in Fiji today. Even though existing environment and fisheries laws clearly protect marine turtles in the country and prohibit their consumption, harvest, sale and trade, turtle consumption is largely carried out without fear of penalty or legal action, leaving the turtle harvest, use and trade largely unchecked (Batibasaga et al., 2022). Enforcing the current ban on harvesting marine turtles in Fiji is extremely challenging, because of limited fisheries resources, the geographical remoteness of many communities, and the missing awareness of the ban (Vierus, 2023).

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles across the coastal and oceanic waters of the Fijian archipelago: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle. The green, hawksbill and leatherback turtles also nest in the country (Batibasaga et al., 2022).

Hawksbill turtle nesting in American Samoa use foraging areas in Fiji, as shown via satellite tracking studies (Madden Hof et al., 2022, in WWF, 2022). Satellite tracking and tag recovery data show that adult green turtles nesting in French Polynesia, the Cook Islands (Batisbasaga et al. 2006), French Polynesia (Petit, 2013) and Australia (Rubeni et al., 2002; Jit, 2007) can be found foraging in Fiji. Likewise, genetic studies indicate that foraging green turtles in Fiji originate from nesting sites in American Samoa, French Polynesia and New Caledonia (Piovano et al., 2019). Another turtle, which had been satellite tagged in French Polynesia, was found travelling towards Fiji, entering the waters of Tonga and heading toward the south of Fiji from Ono I Lau (WWF, 2011a).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X?	X	X (n?)		

*nesting

National Laws

To limit the marine turtle exploitation and dwindling populations, the (not yet independent) Fijian Government introduced a regulation concerning marine turtle harvest in the Fisheries Act in 1941 (Kitolelei et al., 2022). In 1995, a legal prohibition in the form of a one-year ban of marine turtle harvest was put in place, followed by a 3-year Moratorium from 1997-2000. No legislation on marine turtle harvest in place from 2001-2002 was followed by a second Moratorium for five years, from 2002-2007.

During that time period, the [Fisheries Act was amended in 2004](#), which transformed the Moratorium into law from February 2004 until 31 December 2008 (Vierus, 2023). Although the

amendment effectively prohibited the digging and poaching of eggs, killing of turtles, and sales of all turtle meat and shell, it also reserved the iTaukei the option to apply for a special “exemption for traditional use” permit from the Ministry of Fisheries to harvest turtles for traditional purposes (Kitolelei et al., 2022; Vierus, 2023).

The Moratorium was extended a third time from 2009-2018 for ten years after the previous one expired, through another amendment to the Fisheries Act, [the Fisheries \(Protection of Turtles\) \(Amendments\) Regulations of 2010](#). This is considered one output of the government-implemented Fiji Sea Turtle Recovery Plan, developed in 2006, which also saw to the establishment of the *Dau ni Vonu*, which is a community network of more than 80 volunteer turtle monitors (SPREP, 2013). In 2014, the [Offshore Fisheries Management Regulation](#) was passed, which states that it is prohibited to sell or offer or expose for sale, deal in, transport, receive or possess any fish listed in CITES Appendix I & II (UNEP et al., 2022).

In 2019, after the ten-year moratorium ended, a [public notice issued by the Fijian Ministry of Fisheries](#) reiterated the total “ban on the harvest, sale, possession and transport of sea turtles, their eggs or any part or product of a sea turtle”. Any exceptions were equally prohibited, as it states under point 7: “The current provisions of the Offshore Fisheries Management Regulation **DO NOT** allow for any exemptions to this ban, nor for permits to be issued by the Ministry of Fisheries for the harvest of any sea turtle, under any circumstances.” In XXXX, the 2020-2025 Sea Turtle Recovery Plan was published.

Figure 4 shows marine turtle harvest for iTaukei feasts between 1980-2021, and presents the constantly changing marine turtle legislation in Fiji at the top of the bars.

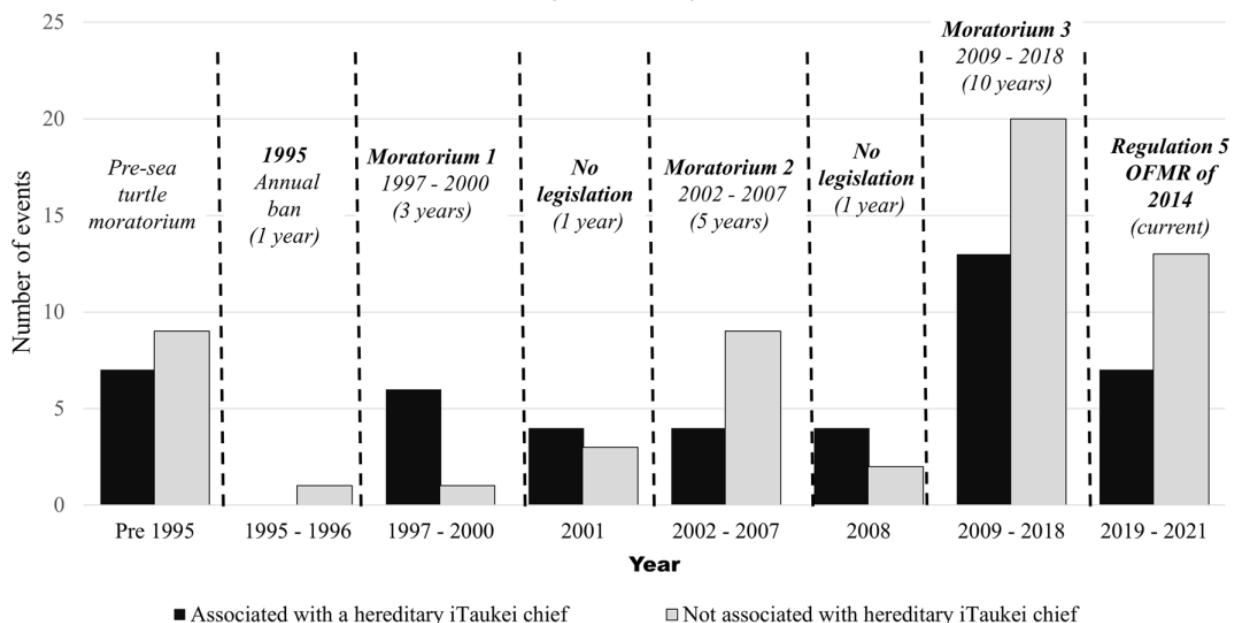


Figure 4. Marine turtle harvest for iTaukei feasts (1980-2021)

Today, marine turtle protection in Fiji falls under Regulation 5 of the Offshore Fisheries Management Regulation 2014 and the [Endangered and Protected Species Act 2002](#), as [amended in 2017](#), equally implementing CITES and listing the country’s protected species. However, despite these legislations and the 2019 public notice, it has been reported that today parallel management systems continue to coexist, where both the (unwritten) customary iTaukei rules and the (written) national legislation determine the quantity and time of marine turtle harvest (Kitolelei et al., 2022). Since, irrespective of the laws in place, under which it is now illegal to take, possess, or sell marine turtles, even for socio-cultural purposes, a

widespread harvest of marine turtles continues (Batibasaga et al., 2022). Recent surveys confirm the target of green and hawksbill turtles, using spearfishing, fishing nets, and specialised target methods (Kitolelei et al., 2022, in WWF, 2022). It seems that an amendment of this legislation is underway, to allow for permits to be issued to authorise limited cultural harvest by local iTaukei communities (Madden Hof et al., 2022, in WWF, 2022).

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Fiji. The review states that the Endangered and Protected Species Act 2002 establishes a Fiji Islands CITES Management Authority and a Fiji Islands CITES Council. It also lists the respective Regulations supporting each Act, such as the Fisheries Act – Fisheries (Protection of Turtles) Regulations, the Fisheries Act – Fisheries (Shark Reef Marine Reserve) (Serua) Regulations 2014, and the Fisheries Act – Fisheries (Wakaya Marine Reserve) Regulations (LN 40) 2015. The Marine Spaces Act 1978 (Chapter 158A) and the Continental Shelf Act 1970 (Chapter 149) are listed, as well, but rather address territorial matters concerning Fiji's sovereignty.

In 2010, the Secretariat conducted a [Marine Turtle Legislation Review](#), which, in addition to the legislation above, mentions the Subsidiary Legislation (to Fisheries Act), Section 9: Fisheries Regulations 1992, amended by the above listed 2010 regulations, and the Environment Management (EIA Process) Regulations 2007 as key regulations, however, with the latter not having a particular reference to turtles. The review also highlights the existence of a traditional custom to conserve marine fisheries for the plentiful supply of fish for significant festive occasions, in that a high chief would demarcate a particular area of a stream, river, or marine fisheries area for no fish taking, including turtles, for a specific period of time before the occasion. All members of the clan of the chief would observe this prohibition.

FULLY PROTECTED (through marine turtle-specific legislation and Marine Turtle Recovery Plan)

A total ban on the harvest, sale, possession and transport of marine turtles, their eggs or any part or product of a sea turtle is in place. However, it seems that an amendment of this legislation is underway, to allow for permits to be issued to authorise limited cultural harvest by local iTaukei communities.

Exceptions: XXX

Opportunities and Challenges

Several amendments over the years and public notices require a constant updating of communities, which legislation is currently in place and the prohibitions they carry. Seeing the remote locations of islands and archipelagic geography, this is an ambitious undertaking. The recent Sea Turtle Recovery Plan.... XXX

International and Regional Instruments

Fiji is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- CMS
- PSMA
- Ramsar Convention
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.5. French Overseas Departments and Territories

French Polynesia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

In pre-European times the Polynesian people considered marine turtles, or honu, to be sacred, connecting the land and the ocean – the two worlds of this island culture (Tetiaroa Society, n.d.). Historically, the consumption of marine turtles was restricted to the elite, i.e. priests, chiefs, and temple keepers throughout French Polynesia, with slight differences in traditional law within the country (Emory, 1947 and Balazs et al., 1995 in Rudrud, 2010). Later, marine turtles became a prominent component of the locals' diets, although seasonal and size restrictions on capture were introduced (Balazs et al., 1995).

Threats today vary: injuries can be obtained through fishing nets or harpoons, but also, turtle meat is considered a delicacy in Polynesia, and especially older people believe in a spiritual effect of eating the meat (Marek, 2015). Hunting because of cultural traditions competes with well-organised poaching networks, with up to 1,000 turtles killed each season (Marek, 2015).

Presence and Nesting of Marine Turtle Species in the Country

There are five marine turtle species that frequent French Polynesia's waters: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead turtle, and leatherback turtle. Of these, only the green turtle has been reported nesting on the country's islands (Rudrud, 2010), in particular at Tupai Atoll, Maupiti, Bellinghausen Atoll, Manihi Atoll, Tetiaroa Atoll, Bora Bora, Mopelia Atoll, and Scilly Atoll (Maison et al., 2010).

One turtle tagged in American Samoa migrated to foraging areas in French Polynesia (Craig et al., 2004) Another green turtle tagged in French Polynesia travelled west, passing through Cook Islands, Niue and Tonga to Fiji (WWF, 2011a). Genetic studies of green turtles foraging in Fiji also found that a small portion originated from French Polynesia (Piovano et al. 2022). Adult males and nesting females that were flipper tagged and/or satellite tagged at Scilly atoll have been recovered in the Cook Islands, Fiji, New Caledonia, Tonga, and Vanuatu (Balazs et al., 1995, and Craig et al., 2004, in Maison et al., 2010).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n?)	X	X	X		

*nesting

National Laws

As overseas territory of France, marine turtles have been completely protected since 1990 by the Polynesian government by [DELIBERATION No. 90-83 AT du 13 Juillet 1990 relative à la protection des tortues marines en Polynésie Française](#). Traditional harvest with seasonal and size restrictions was permitted prior to this date (Maison et al., 2010). Today, turtles are fully protected and it is strictly forbidden to own, harm, or hunt marine turtles or to engage in trade of any kind, such as the sale of meat, shell, and eggs (Maison et al., 2010). Moreover, the Scilly Atoll has been protected as a marine reserve for marine turtles since 1971 by [Vu l'arrêté No. 2559 DOM du 28 Juillet 1971 portant classement du lagon de l'île Manuae ou Scilly](#). Egg-laying sites known by the government are all classified "Territorial Reserve", as a result of the earlier decrease of the number of female turtles (Moana Voyages, n.d.).

FULLY PROTECTED (through marine turtle-specific legislation)

It is strictly forbidden to own, harm, or hunt marine turtles or to engage in trade of any kind, such as the sale of meat, shell, and eggs .

Exceptions: XXX

Opportunities and Challenges

There are two care centres in the country that treat and gather sick, hurt, or illegally captured turtles: in Bora Bora, the hotel “Le Méridien” established an ecological centre in 2000, which is dedicated to caring for and protecting any form of local marine life (Moana Voyages, n.d.). In Moorea, the “Clinique des tortues de Moorea” was created in 2004. It is located inside of the “Intercontinental Moorea Resort & Spa” and operates with the help of “*Te Mana o Te Moana*”, an association in partnership with the government. Both centres offer free visits (Moana Voyages, n.d.).

The *Te Mana o Te Moana* association further tries to involve local populations and raise awareness. However, since Polynesia is as big as Europe, there are challenges in gathering information and to involve all the local communities. Monitoring work by the NGO has also shown a substantial increase in nesting over the last 11 years, with a record number of nests in 2018 (Tetiaroa Society, n.d.).

In fulfilling the international plan of action for marine turtles, the following [guidelines](#) were issued: Boat crews are trained in marine turtle resuscitation, observers are required to have marine turtle release devices on board, incidentally caught by any fishing vessel shall be released or discarded etc., amongst others.

International and Regional Instruments

French Polynesia, by extension, is part to the following international legally and non-legally binding instruments and relevant bodies:

- CITES
- CBD
- CMS
- IOSEA Marine Turtle MoU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (IOTC, WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

New Caledonia

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

The coral reefs and the lagoons of New Caledonia provide essential habitats to a number of threatened marine species such as marine turtles, whales, and dugongs, with the third largest population in the world present in these waters (UNESCO, 2021). For the local community, the lagoon is equally important, as it provides coastal protection and their daily fish, and is vital to their unique traditions, of which many date back thousands of years (UNESCO, 2021).

New Caledonia is divided into three Provinces: the North Province, South Province, and Loyalty Islands Province, each with their own customs and laws. The management of marine turtles in the country therefore lies at a crossroads of tribal, local, provincial and international expectations, which leads to the species having a dual status in the country: the cultural and customary status that is recognized by clans and tribes, and the official status that is recognized by the New Caledonian government and the French nation-state (Sabinot and Bernard, 2016).

The turtle plays a significant role in the traditions of the indigenous, the Kanak, people. Turtles used to be hunted both for food and for rituals, however, hunting them for food is now prohibited, although ritual exceptions exist (see below) (Sabinot and Bernard, 2016). Still, overfishing had become a serious issue over the years, which is why in 2021, eight local tribes of one out of eight customary areas, agreed on their own sustainable management plans for their respective area to protect green turtles against over-fishing.

They signed a joint partnership protocol to determine types of ceremonies for which turtle fishing is allowed, to enact the methods of turtle fishing for customary ceremonies, and to determine maximum catch sizes (less than 80cm) and authorized quotas, in order to protect the adult breeding population (Great Barrier Reef Foundation, 2021; UNESCO, 2021). Under the agreement, tribes are allowed to hunt for turtles for important celebrations such as weddings, the appointment of tribal leaders, funerals, and the annual New Yam festival (Great Barrier Reef Foundation, 2021).

An important measure is to bridge the gaps between statutory law and customary governance regarding natural resource management, especially green turtles, and thus to acquire knowledge related to the green turtle's place within the indigenous society, especially Kanak society. This needs to be considered when devising management plans, as in the management plan for the Great Southern Lagoon marine park, since otherwise conservation actions may be set up for failure (Sabinot and Bernard, 2016).

Presence and Nesting of Marine Turtle Species in the Country

There are three species of marine turtles foraging in the waters of New Caledonia: the green and the loggerhead turtle, which also nest on the island, and the hawksbill turtle.

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X	X?	X (n)	X?		

*nesting

National Laws

The government passed the first ban on turtle fishing in 1977, between the months of November and March and on the collection of turtle eggs all year, even though exemptions were possible for customary and scientific purposes (Sabinot and Bernard, 2016). Whereas sanctions were strengthened in 1985, environmental matters became a provincial competence with the creation of the three Provinces in 1989.

South Province

In the South Province, the previous ban was repealed in 2002 and a limitation of capture in terms of quantity was agreed on, limiting the catch to one turtle per boat and per fishing trip (Sabinot and Bernard, 2016). If the local clans would like to hunt turtles for the annual celebrations, they must submit a request, detailing the date and name of the customary ceremony, the port of discharge, fishing dates and locations, and the phone number of the person in charge of the fishing activity (Sabinot and Bernard, 2016).

In 2006 then, the use of marine turtles and their products was totally banned, and competent authorities for the regulation's implementation were changed. In 2009, these changes became law with the passage of the Environmental Code of the South Province ([Code de l'environnement de la Province sud](#)) in that it is specified that all turtle species are fully protected in the context of the prohibition of the capture, intentional disturbance, collection, mutilation, destruction, stuffing, transport, peddling, possession, consumption or use, whether living or dead. Local protection can be further strengthened through tribal sustainable management plans (see above).

The possibility to obtain exemptions for the capture of green turtles for customary purposes prevails in the Environmental Code of the South Province, as, in the context of customary celebrations, the president of the South Province Assembly can grant authorisations for green turtle collection.

North Province

The North Province passed the Environmental Code of the North Province ([Code de l'environnement de la Province nord](#)) in 2008. The Code contains several references to traditional resource management practices. As for the Code of the South Province, existing regulations protecting rare, endemic, and threatened species were updated and strengthened.

Both codes, of South and North Province, contain a protected species list.

The Environmental Codes of both Provinces are compared in the report [New Provincial Environmental Legislation In New Caledonia: Continuity And Reform In Environmental Governance In A French Pacific Territory](#).

A National Conservation Action Plan for Marine Turtles in place.

FULLY PROTECTED (through Marine Turtle Action Plan)

In both, the South and North Province of New Caledonia, all marine turtle species and their eggs are fully protected in the context of the prohibition of the capture, intentional disturbance, collection, mutilation, destruction, stuffing, transport, peddling, possession, consumption or use, whether living or dead.

Exceptions: XXX

Opportunities and Challenges

Many of the other seven customary regions of New Caledonia face similar challenges with regard to over-fishing, and agreements on marine turtle protection, as issued for XXX, would significantly strengthen marine turtle management and protection in the entire country (Great Barrier Reef Foundation, 2021).

International and Regional Instruments

France is part to the following international legally and non-legally binding instruments and relevant bodies, which have been extended to New Caledonia:

- CITES
- CBD
- CMS
- IOSEA Marine Turtle MoU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (WCPFC; IOTC)
- SPREP
- UNCLOS

DRAFT

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking/using for traditional purposes where a permit IS required	Taking for research/educational purposes where a permit IS required	Taking of marine turtles according to a minimum/maximum size limit, e.g. >XX< cm where a permit IS required	Taking of marine turtles according to a maximum quota where a permit IS required	Legislation incorporates relevant traditional knowledge, customary marine tenure and practices*	Indigenous or community based conservation or protection plans were developed and published that regulate marine turtle use*	A National Conservation Action Plan for Marine Turtles is in place*
North Province														
Code de l'environnement de la province-Nord (2008), article 251-2	X	X	X											
Code de l'environnement de la province-Nord (2008), article 252-4								X	X	X	X			
Plan d'action tortue (2017)														X
South Province														

Code de l'environnement province Sud (2009) (240-1)	X	X	X	X	X	X	X	X	X					
Delibération 10167-2009/DENV/CM								X						
Guidelines in permits										X	X			
Indigenous engagement for traditional ceremonies/per council (in progress)												X	X	
Plan d'Action Tortues NC														X

Permitted Fishing Gear (where capture of marine turtles is allowed)

In relation to fishing gear for catching turtles in countries, where captures are allowed, please list below any legislation/rule/statute (name, section and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Turtle Rodeo/ Hand caught	Other relevant fishing gear/ types of nets	No fishing gear regulation in place
North Province					
Code de l'environnement province-Nord, Article 341-9 : Les engins autorisés à la pêche sont : - les lignes munies d'hameçons, - sagaies, tridents, harpons, foene, crochet à crabe, - palangre équipée d'un maximum de 30 hameçons, 2 nasses, casiers, balancines, - appareils de pêche sous marine, - eperviers et 1 filet d'une longueur maximum de 50 mètres, d'une chute maximum de 1,20 mètres et d'un maillage minimum de 45 mm.	X	X	X	X	
South Province					
Delibération 10167-2009/DENV/CM					X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Gill nets	Other relevant fishing gear
North Province				
Code de l'environnement province-Nord (2008), Article 341-9 : Les engins autorisés à la pêche sont : - les lignes munies d'hameçons, - sagaies, tridents, harpons, foene, crochet à crabe, - palangre équipée d'un maximum de 30 hameçons, 2 nasses, casiers, balancines, - appareils de pêche sous marine, - eperviers et 1 filet d'une longueur maximum de 50 mètres, d'une chute maximum de 1,20 mètres et d'un maillage minimum de 45 mm. + article 341-11 : La détention, le transport et la mise en œuvre des filets dits « filets à tortue », et plus généralement de tout filet dont le maillage est supérieur à 100 mm (maille carrée), sont prohibés.	X	X	X	
				X
South Province				
Code de l'environnement province Sud (2009) (art.340-10)				X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, but no guidelines in place	Release when accidentally caught and is alive, according to published handling practices	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Report to relevant authorities only if turtle is tagged	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	External observers required on (some) fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
North Province											
South Province											
Code de l'environnement province Sud (2009) (240-1)				X							
Guidelines in permits					X						
								new cal gov?	new cal gov?		

Captivity, excl. Tourism

<p>In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>Keeping marine turtles in captivity strictly not allowed</p>	<p>Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres</p>	<p>Keeping marine turtles in captivity strictly not allowed, except for zoos and aquaria</p>	<p>Minimum/maximum size of a turtle allowed to be kept</p>	<p>Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS NOT required</p>	<p>Turtle eggs reared in hatcheries and in which hatchlings are immediately released, where a permit IS required</p>	<p>Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS NOT required</p>	<p>Turtle hatchlings retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required</p>	<p>Keeping turtles is allowed without restrictions</p>	<p>Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS NOT required</p>	<p>Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required</p>	<p>Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS NOT required</p>	<p>Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required</p>
<p>North Province</p>													
<p>South Province</p>													
<p>Code de l'environnement province Sud (2009) (240-1)</p>		<p>X</p>	<p>X</p>					<p>X</p>			<p>X</p>		<p>X</p>

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed	Turtles kept in captivity for tourism/ income-generating/ hobby purposes, where a permit IS NOT required	Turtles kept in captivity for tourism/ income-generating/ hobby purposes, where a permit IS required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS NOT required	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	No head-starting of hatchlings allowed	Head-starting of hatchlings allowed, where a permit IS NOT required	Head-starting of hatchlings allowed, where a permit IS required	Turtle-related tourism activities allowed without restrictions	Guidelines for tourism best practices were developed and published*
North Province										
South Province										
Code de l'environnement province Sud (2009) (240-1)					X			X		

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles allowed, where a permit IS NOT required	Local sale of turtles strictly prohibited	Local sale of turtle eggs allowed, where a permit IS NOT required	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles allowed, where a permit IS NOT required	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
North Province									
	X								
			X		X				
South Province									
Code de l'environnement province Sud (2009) (240-1)		X		X		X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	Harming marine turtles is punishable by fines only	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?
North Province						
Code de l'environnement province-Nord (2008), article 251-1	X					
Code de l'environnement province-Nord (2008), article 251-2		X				
Code de l'environnement province-Nord (2008), article 253-1 suivants			X		X	CFP 1,073,000 (=USD 9,645) ⁵⁰
South Province						
Code de l'environnement province Sud (2009) (240-1)	X	X	X	1 year		CFP 1,780,000 (=USD 16,000) ⁵¹

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Light pollution near nesting beaches	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
North Province					
Code de l'environnement (2008), article 251-2 + 252-3.	X		X		
South Province					

⁵⁰ Currency exchange rate from 07 Sep 2023.

⁵¹ Currency exchange rate from 07 Sep 2023.

Code de l'environnement province Sud (2009) (240-3)	X			
Code de l'environnement province Sud (2009) (232-1)		X		
Code de l'environnement province Sud (2009) (130-1)			X	
				advisory opinion given to CITES

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:	Collection of genetic samples from marine turtles conducted, where a permit IS required
			Parts and samples from turtles legally harvested or stranded dead can be used for research	
North Province				
Code de l'environnement province-Nord (2008), article 312 et suivants + 252-4.	X		X	X
South Province				
Code de l'environnement province Sud (2009) (240-1)		X		X

Wallis and Futuna Islands

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

The status of marine turtles in the Wallis and Futuna Islands is almost entirely unknown (SWOT, 2018). Rudrud (2010) reports that, historically, marine turtle consumption in Wallis and Futuna was restricted to the chiefs, and it seems that later, turtles were consumed at feasts (everyculture.com, n.d.). XXX

Presence and Nesting of Marine Turtle Species in the Country

Green turtles are known to be present in the waters around Wallis and Futuna (Rudrud (2010), in Pilcher, 2021a), but there are no reports of nesting. There has been one recent report of a hawksbill hatchlings observed in Nukutapu, an islet of Wallis and Futuna (SPC, 2022).

[more on connectivity to be added]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n?)	X (n*)		X?	X?		

*nesting

National Laws

Relevant pieces of legislation for marine turtle protection are the Order n°2005-625 of 14 December 2005 approving and enforcing the Decision n° T3/AT/04 of 25 November 2005 ([Arrêté n°2005-625 du 14 décembre 2005 approuvant et rendant exécutoire la délibération n° T3/AT/04 du 25 novembre 2005. Art. 5](#)) and Decision n° 73/AT/05 on the modernization of fishing regulations and the marketing of fishing products ([Délibération n° 73/AT/05 du 25 novembre 2005 portant modernisation de la réglementation en matière de pêche et la commercialisation des produits de cette activité](#)) Title 2 ([Titre 2](#)) applies CITES to the local fisheries and regulates species-specific harvesting, such as in Article 5 on marine turtles. The Article states that the capture of marine turtles of all species, by any process whatsoever, is prohibited in the territory of Wallis and Futuna and in its surrounding waters. Specific acts that are prohibited at all times concern 1) the destruction of marine turtle nests, 2) the removal, the possession and sale of marine turtle eggs, 3) the possession, importation, offering for sale, purchase and export for commercial purposes of turtles alive or dead, and of any parts or products obtained from these animals.

Both species occurring in Wallis and Futuna are protected: the green turtle and the hawksbill turtle (TEMEUM, 2020). This is formalized through Order n° 2020-605 of 09 July 2020, enforcing the Decision n° 21/AT/2020 of 1st July 2020, approving the draft order relating to the creation of the protected species list on the territory of the Wallis and Futuna Islands (Arrêté n° 2020-605 du 09 juillet 2020 rendant exécutoire la délibération n° 21/AT/2020 du 1er juillet 2020 approuvant le projet d'arrêté portant création de la liste des espèces protégées sur le Territoire des îles Wallis et Futuna), and the Decision n° 21/AT/2020 of 1st July 2020, approving the draft order relating to the creation of the protected species list on the territory of the Wallis and Futuna Islands ([Délibération n° 21/AT/2020 du 1er juillet 2020 approuvant le projet d'arrêté portant création de la liste des espèces protégées sur le Territoire des îles Wallis et Futuna](#)). The Decision lists the relevant executing Ministers, as well as the protected species, both green and hawksbill turtles protected through the Order of 14 October 2005.

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species are protected at all times.

Exceptions: XXX

Opportunities and Challenges

XXX

International and Regional Instruments

Wallis and Futuna, by extension, is part to the following international legally and non-legally binding instruments and relevant bodies:

- CITES
- CBD
- CMS
- IOSEA Marine Turtle MoU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (WCPFC; IOTC)
- SPREP
- UNCLOS

DRAFT

Matrix Results

Harvest, Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.
Arrêté n°2005-625 du 14 décembre 2005 approuvant et rendant exécutoire la délibération n° T3/AT/04 du 25 novembre 2005. Art. 5	X	X	X	X	X	X	X

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Arrêté n°2005-625 du 14 décembre 2005 approuvant et rendant exécutoire la délibération n° T3/AT/04 du 25 novembre 2005. Art. 5	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by fines only
Arrêté n° 2020-605 du 09 juillet 2020 rendant exécutoire la délibération n° 21/AT/2020 du 1er juillet 2020 approuvant le projet d'arrêté portant création de la liste des espèces protégées sur le Territoire des îles Wallis et Futuna	X	X

Habitat Protection

Research

4.5.6. Kiribati

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Several traditional beliefs in Kiribati involve marine turtles, which are considered sacred in some areas (Bell et al., 2010a). Still, turtle meat is considered an important traditional food item – historically, consumption was limited to village chiefs only – with the methods to capture turtles kept as family secrets passed on from generation to generation, and the turtles usually kept alive until required by the family (Bell et al., 2010a). Turtle shell was also used for ornaments and decorations, and declines in populations resulting from overharvesting were recorded based on anecdotal information, especially between the early 1800s and 1990s on Fanning and Christmas Islands, when human habitation began (Bell et al., 2010a; Balazs, 1995, in Maison et al., 2010). In 2007/08, a turtle nesting monitoring programme was initiated in the villages of Noto and Marenamuka in North Tarawa, which confirmed that all nests in Noto were dug up and the eggs supposedly consumed. There have been several incidences of poisoning after eating marine turtle meat in the 1990s and in 2008 (Bell et al., 2010a).

The unsustainable harvesting of turtle eggs and turtles for consumption, and the sale of turtle meat as an alternative source of income remain threats to marine turtles in Kiribati (Bell et al., 2010a), however, in 2020 legislation prohibiting some turtle harvesting methods were introduced (see below). This is further aggravated by the dramatic increase of human population in the country, as well as negative impacts of climate change and coastal erosion on turtle nesting beaches (Bell et al., 2010a).

The [Kiribati Marine Turtles Profile Report of 2010](#) provides further information.

Presence and Nesting of Marine Turtle Species in the Country

Two species of marine turtles have been identified to occur in Kiribati's waters: the green turtle and the hawksbill turtle. The green turtle is the only species that also nests in the country (Work et al., 2020, in SPREP, 2022a).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Kiribati. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X					

*nesting

National Laws

In 2020, the [Fisheries Regulations](#) supporting the [Fisheries Act \(2010\)](#), as [amended in 2017](#), went into effect. In Article 12 "Special Restrictions for specific species", Paragraph 2, it states: "A person must not: (i) disturb, take, receive or have in his or her possession, purchase, sell any turtle species eggs found in Kiribati (green turtle, hawksbill, leatherback, olive ridley and loggerhead); (ii) interfere with any turtle nest; (iii) harvest turtles while on the beach; (iv) sell, purchase or export any turtle meat or shell; or (v) fish for tagged turtle." Minimum size limits for turtle catch at sea and seasonal closures are indicated in Schedule 1. For the green turtle, these are ≥ 86 cm carapace length, and for the hawksbill turtle ≥ 68 cm carapace length, with the Director to declare the closed season for both species. For the hawksbill turtle, the Schedule advises "not fit for consumption".

Before, the [Wildlife Conservation Ordinance](#) (Laws of the Gilbert Islands 1977), as amended in 1997, also prohibited hunting, killing or capturing any wild turtle on land (paragraph 7) and possession of turtle eggs (paragraph 9). The Ordinance also fully protects the green turtle in the following places: Birnie Island, Caroline Island, Christmas Island, Flint Island, Gardner Island (Nikumaroro), Hull Island (Orona), Malden Island, McKean Island, Phoenix Island, Starbuck Island, Sydney Island (Manra), and Vostock Island.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Kiribati. It lists the Environment Act 1999, [as amended in 2007](#), protecting coastal ecosystems, and the [Phoenix Islands Protected Area Regulations 2008](#), included the related [Phoenix Islands Protected Area Conservation Trust Act 2009](#).

PARTIALLY PROTECTED

It is prohibited to: (i) disturb, take, receive or have in his or her possession, purchase, sell any turtle species eggs found in Kiribati (green turtle, hawksbill, leatherback, olive ridley and loggerhead); (ii) interfere with any turtle nest; (iii) harvest turtles while on the beach; (iv) sell, purchase or export any turtle meat or shell; or (v) fish for tagged turtle.” Minimum size limits for turtle catch at sea and seasonal closures are indicated in Schedule 1. For the green turtle, these are $\geq 86\text{cm}$ carapace length, and for the hawksbill turtle $\geq 68\text{cm}$ carapace length, with the Director to declare the closed season for both species. For the hawksbill turtle, the Schedule advises “not fit for consumption”. Turtle harvest is allowed if the above regulations do not apply.

Exceptions: XXX

Opportunities and Challenges

Kiribati established the largest designated MPA in the world in 2008, which is also a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Listed site: the Phoenix Islands Protected Area. This allows countless marine species to thrive: 800 known species of fauna, including about 200 coral species, 500 fish species, 18 marine mammals and 44 bird species (UNESCO World Heritage Centre, 2010).

International and Regional Instruments

Kiribati is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- Ramsar Convention
- RFMOs (IATTC, WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.7. Republic of the Marshall Islands

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles in the Republic of the Marshall Islands (RMI) have played an important cultural role in the lives of the country's inhabitants and have also long been a food source or been offered to chiefs (Maison et al., 2010). The level of exploitation remains unknown, however, and there are no current data available on population numbers in the RMI, which renders it a challenge to determine with certainty whether stocks are increasing or decreasing (Maison et al., 2010). Anecdotal information from local people suggests that the number of nesters has decreased, possibly by as much as 50 percent over the last decades (Maison et al., 2010).

Seasonal turtle mating and nesting is concentrated in the uninhabited atolls, which in some cases have been used in the past as "game reserves" by the Marshallese people – as resource atolls for the gathering of food, whereas the occurrence of both adult and sub-adult marine turtles is also known in the inhabited atolls, but nesting is far less common (McCoy, 2004). Turtle meat is considered a basic food supplement, but also used as food at larger feasts, possibly providing affirmation of social, financial, and political status (McCoy, 2004).

In 2009, the Marshall Islands Marine Resources Authority launched an outreach and education program with support from the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service Pacific Island Regional Office.

Presence and Nesting of Marine Turtle Species in the Country

Four species of marine turtles are known to occur in the RMI: green, hawksbill, olive ridley, and leatherback turtles (McCoy, 2004). Green turtles are by far the most common ones and nest on the islands, with the largest green turtle rookery being Bikar Atoll, and nesting further concentrating on the Jaluit and Namdrik atolls (UNEP et al., 2022). Hawksbill turtle nesting is rare, as are sightings of olive ridleys and leatherbacks (McCoy, 2004).

Satellite telemetry of green turtles in 2007/08 showed that turtles migrated to Bikini Atoll, RMI, Tarawa Atoll in Kiribati, to the Philippines passing through CNMI, and to the FSM EEZ (PIRO and PIFSC, unpublished, in Maison et al., 2010).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n - rare)	X (rare)	X?	X (rare)		

*nesting

National Laws

Responsibility for management of all living marine resources in the RMI is vested in the Marshall Islands Marine Resources Authority, and the harvest of marine turtles is regulated by the [Marine Resources Act \(RMI 1997\)](#), as [amended in 2018](#). Part III, Section 33 – Limitations on taking turtles, prohibits egg collection and the take of green and hawksbill turtles while they are onshore at all times, and allows the harvest of these species for subsistence fishing only, if minimum size limits are observed: min. 27 inches CCL for hawksbill turtles and min. 34 inches CCL for green turtles. Apart from subsistence hunting, no person shall buy, sell, display for sale, offer for sale or otherwise market any turtle or turtle product. The taking for scientific purposes is allowed if a permit has been granted. The same restrictions are listed in Art. 215 of the RMI [Fisheries Act \(1997\)](#), as amended in 2017.

The National Environmental Protection Act (1984), as [amended in 2004](#), created the Environmental Protection Authority, which shall recommend to the President the basic policy on the management and conservation of the country's natural resources (Art. 129), as well as a system of rational exploitation of fisheries and of the aquatic resources within the territorial waters of the Republic, including the harvesting and marketing of threatened species of fish or other aquatic life (Art. 130). However, none of the sections specifically address marine turtles and their management and protection.

The RMI [Endangered Species Act \(1975\)](#), as amended in 1980, provides for the protection of endangered species of fish, shellfish and game in the country. Specific turtle species covered by the Act are the hawksbill and leatherback turtles only (McCoy, 2004). Section 306 of the Endangered Species Act 1975 prohibits the taking, engaging in commercial activity with, holding possession of, or exporting any threatened or endangered species, and Section 309 prohibits the import of endangered species (UNEP et al., 2022). However, Section 307/4 stipulates that the taking of endangered species by way of traditional rights does not constitute a breach of prohibited activities (UNEP et al., 2022).

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in the RMI, and in 2010, a [Marine Turtle Legislation Review](#), which lists the laws above and states, among others, that these laws are complemented by local customary/traditional practices.

PARTIALLY PROTECTED

Egg collection and the take of green and hawksbill turtles are prohibited, while they are onshore at all times, and the harvest of these species for subsistence fishing is allowed, if minimum size limits are observed: min. 27 inches CCL for hawksbill turtles and min. 34 inches CCL for green turtles. Apart from subsistence hunting, no person shall buy, sell, display for sale, offer for sale or otherwise market any turtle or turtle product.

Exceptions: Scientific purposes

Opportunities and Challenges

There is still a data gap concerning marine mammals and turtles in the country (RMI, 2020), and a lack in marine turtle protection and enforcement may become apparent whenever national legislation and traditions overlap and/or contradict each other.

International and Regional Instruments

The RMI is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- Ramsar Convention
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.8. Nauru

Marine Turtle History and Status

As one of the smallest countries of the world, Nauru has a land area of about 22 km² and a coast line that is 30 km long (FAO, 2019). It is surrounded by a fringing coral reef, which ranges from 120m to 300m wide. In one of the more recent studies on the state of Nauru's biological resources in 2013, under a project funded by United Nations Environment Programme (UNEP)-GEF and executed by the Secretariat of the Pacific Regional Environment Programme, it was found that the reefs in the country have coral cover that is among the highest on the planet, indicating they are exceptionally healthy and showing no sign of bleaching, even though there was evidence of an emerging trend of pollution and overfishing on the narrow reef flats (FAO, 2019). The reefs were home to globally significant species, including white-tip sharks and marine turtles (FAO, 2019). However, there is no MPA in Nauru (World Bank, 2022). So far, there has been no comprehensive research on marine turtles in the country.

Nauru is also a marine turtle migration destination, as was observed when a turtle migrating 14,000km from Tahiti to American Samoa also stopped in Nauru, before continuing to the Marshall Islands (SWOT, 2018).

Presence and Nesting of Marine Turtle Species in the Country

Two species of marine turtles are known to occur in Nauru's waters: the green turtle and the leatherback turtle. No marine turtle species is known to nest on Palau's beaches.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Nauru. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X	X?			X?		

National Laws

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Nauru. The review found that the country's environmental does not create an overarching regime for environmental protection, but rather focuses on particular environmental topics separately. There is also no law that sets up one or more environmental management bodies, and provides for environmental offences or requires environmental plans to be prepared.

Nauru's [Fisheries Act \(1997\)](#), as [amended in 2017](#), has the objective to make provision for the management, protection, development, and conservation of Nauru's living marine resources and fisheries. The Act recognizes the need to preserve the biodiversity, avoid adverse impact on the marine environment, and maintain the integrity of marine ecosystems. The Nauru Fisheries and Marine Resources Authority Act 1997 calls for the protection and conservation of fisheries within Nauru. Both Acts broadly include turtles under "living aquatic animals" and their eggs (UNEP et al., 2022), however, there have been no acts/regulations to address marine turtle conservation or other species aspects more specifically.

The [Coastal Fisheries and Aquaculture Regulations Act of 2020](#) lists offences with regard to fishing, such as prohibited gear, methods, and practices; tampering with evidence; etc., however, "fish" is not clearly defined and there are no special provisions for marine turtles. The same is the case for the [Environmental Management and Climate Change Act 2020](#),

which, in addition to the above Acts, may be suited to make regulations relating to the conservation of threatened species (UNEP et al., 2022).

Consequently, there is no legislation that has provisions on threatened species. The legal consumptive use of marine turtles is allowed in Nauru, due to the absence of a legal framework that protects these species (Barrios-Garrido, 2018). However, the government's intention is to impose a complete prohibition on the catching of turtles in Nauru.

NOT PROTECTED

The legal consumptive use of marine turtles is allowed in Nauru, due to the absence of a legal framework that protects these species. It is the government's intention to impose a complete prohibition on the catching of turtles in Nauru.

Opportunities and Challenges

The loss of Traditional Environmental Knowledge is mentioned as a major threat to the island's natural resources (FAO, 2019; Jacob, 2003). These used to be governed by customary law and a traditional marine tenure system, but continue to erode. Protecting the environment without an overarching framework in place, as found by the Secretariat of the Pacific Regional Environment Programme is quite challenging, however, the it appears that the government is interested to develop such an instrument.

International and Regional Instruments

Nauru is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- RFMOs (WCPFC)
- SPREP
- UNCLOS

Note: No Matrix results will be provided for Nauru since there is currently no legislation in place protecting marine turtles.

4.5.9. New Zealand

Marine Turtle History and Status

Leatherback turtles are widespread around New Zealand, with waters around the eastern coast of Northland and North Cape as favoured foraging grounds. Green turtles are found all around the upper North Island, but are most frequently seen along Northland's east coast, particularly in the larger harbours. Hawksbill and olive ridley turtles are seen in similar numbers (40 and 49 records respectively), and have been spotted in the upper North Island and as far south as Cook Strait. The rarest marine turtle species in New Zealand waters are loggerhead turtles (< 20 records), also around the upper North Island. Two size classes of loggerhead turtles are found in New Zealand's waters: very small (<100 mm CCL) post-hatchlings which probably arrive in New Zealand from nesting beaches in eastern Australia, and larger juveniles (c. 240-800 mm CCL), which likely originate from more distant nesting areas (possibly in the Indian Ocean). Hawksbill, green, and leatherback turtles have also been found in the Kermadec Islands, which are New Zealand territory, between New Zealand and Tonga (NZ Department of Conservation, n.d.).

Data from live sightings and stranded turtles, most commonly olive ridley and green turtles, are recorded in the New Zealand Amphibian and Reptile Distribution Scheme. Turtles that are alive but weak or injured when found are generally sent to Auckland Zoo for treatment and then to SEALIFE Kelly Tarlton's Aquarium for rehabilitation (NZ Department of Conservation, n.d.). This is the country's only rehabilitation programme for marine turtles. Whereas green turtles have a good chance of survival, olive ridleys often do not survive rehabilitation (NZ Department of Conservation, n.d.).















Fishing poses a significant threat to turtles: The New Zealand government collects and monitors data on turtle bycatch from fisher catch reporting and fisheries observer reports, and the Conservation Services Programme provides research and analysis of bycatch of protected species in commercial fisheries (NZ Department of Conservation, n.d.). A 2022 analysis found that hundreds of marine turtles have been caught in New Zealand's commercial fisheries since 2007 (Dunn et al., 2022). The majority of fisheries interactions is with leatherback turtles most likely to be from the western Pacific subpopulation (Dunn et al., 2023). The captures mostly occur between January and April in the surface longline fishery off the east coast of the North Island (Hall and O'Sullivan, 2022). The government has a [protected species liaison programme](#) that provides [handling guidance](#) to surface long-line fishers, and has regulated the mandatory use of circle hooks in New Zealand's surface longline fishery.

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles in New Zealand's waters: the green turtle, hawksbill turtle, loggerhead, olive ridley, and leatherback turtle. Green and leatherback turtles are the most common ones, other turtles are rare. No marine turtles nest in the country. Leatherback turtles are seasonal migrants to New Zealand, and the northeast North Island is considered a post-pelagic nursery for green turtles. All the other species are considered vagrants.

Leatherback turtles visiting New Zealand waters most likely originate from West Papua, Indonesia, and the Solomon Islands. Green turtles foraging in New Zealand originate from both Western and Eastern Pacific countries.

[more on connectivity to be added]

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence							
Nesting							

National Laws

All native reptiles, including marine turtles, are protected under the Wildlife Act 1953, which stipulates that it is illegal to harass or kill any species of turtle within New Zealand's Territorial Sea or EEZ (NZ Department of Conservation, n.d.). If no permit has been issued under the Wildlife Act, or evidence exists that a specimen and/or product was legally imported into New Zealand or was in your possession prior to commencement of the Wildlife Act (1 April 1954), it is illegal to possess a marine turtle, or any part of a marine turtle (NZ Department of Conservation, n.d.).

The Fisheries Act 1996, as amended in 2022, is the primary legislative framework governing New Zealand's fisheries management system. The Act enables the Minister for Ocean and Fisheries to take such measures he or she considers necessary to avoid, remedy, or mitigate the effects of fishing on any protected species, such as turtles. This includes setting a limit on fishing-related mortality ([under section 15](#)).

Fisheries (Commercial Fishing) Regulations (2001), as amended in 2023, regulate the taking, possession, and release of marine turtles, the treatment procedures for injured turtles, and the issuance, amendment, or revocation of Circulars relating to marine turtles. Of particular importance are [Section 45](#) - Taking and possession of marine turtles prohibited, [Section 46](#) - Uninjured turtles must be immediately returned to waters from which taken, and [Section 47](#) - Injured turtles. As of 2023, the regulations also contain provisions on the use of circular or oval hooks required when surface longlining in [Section 80B](#), which are known to reduce the hooking rates of marine turtles, and thus to cause less marine turtle bycatch (Andraka et al., 2013; Sales et al., 2010).

Fisheries impacts can also be regulated under the Wildlife Act 1953 through a Population Management Plan ([under Section 14F](#)). Population Management Plans allow the setting of maximum allowable levels of fishing-related mortality for threatened species in New Zealand fisheries waters, to enable their recovery to non-threatened status.

It should be noted, however, that marine reptiles are excluded from the definition of marine life in the Marine Reserves Act 1971 by virtue of their protection under the Wildlife Act 1953 (see Interpretation in the Marine Reserves Act). The result being that protection of marine turtle habitat cannot be used as the primary justification for the establishment of a marine reserve. The protection of turtle habitat can only be considered as a factor contributing to the "public interest" in a proposed reserve (i.e. as an indirect benefit of the proposal).

Marine reserves also only prohibit commercial fishing, mining and other forms of development (the latter can be allowed by permit, e.g. motorway widening through Motu Manawa Pollen Island Marine Reserve). They can prohibit all forms of recreational fishing and restrict public access to all or part of a reserve for management purposes. Invasive/extractive scientific activities can also be regulated in marine reserves. Commercial tourism, however, can operate within marine reserves without the need for a permit.

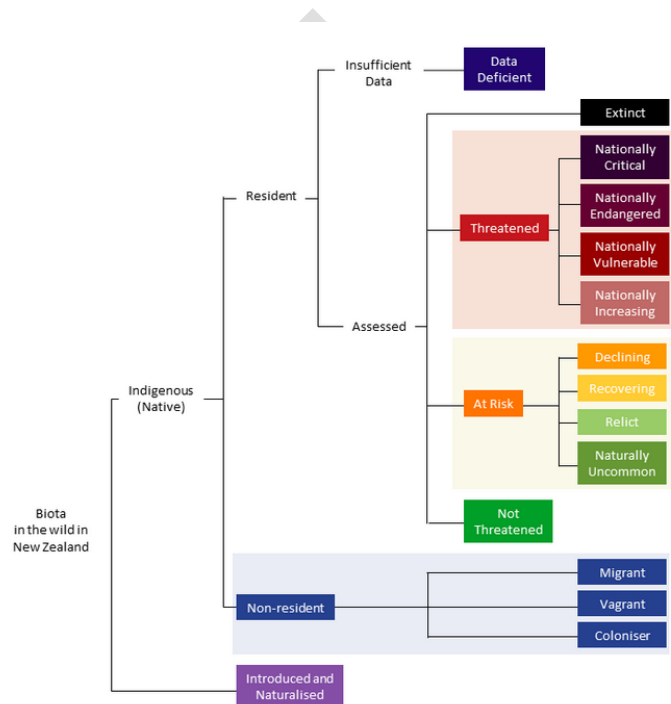
Anyone (recreational or commercial) catching a protected species must report the interaction, including details of the interaction and fate of the animal, to the Department of Conservation and/or Fisheries New Zealand as soon as practical. Fishery observers also report captures of protected species, including turtles to Fisheries New Zealand. In the case of commercial bycatch these reports are followed up by Liaison Officers to find out more about the capture and provide advice to the fishermen on best practice mitigation measures.

It is not illegal to accidentally catch any protected species in the course of legal fishing activity (commercial or recreational), and reporting the interaction provides a defence against prosecution. However, it is an offence under both the Wildlife and Fisheries Acts not to report captures of or interactions with protected species.

To assess the threat status of New Zealand's taxa, the country uses the [New Zealand Threat Classification System](#), a database assessing the conservation status of groups of plants, animals and fungi. The database was updated in 2021 (Michel, 2021), and the country's turtle species are classified as follows:

- Green turtle: Non-resident Native – Migrant
- Hawksbill turtle: Non-resident Native – Vagrant
- Olive ridley turtle: Non-resident Native – Vagrant
- Loggerhead turtle: Non-resident Native – Vagrant
- Leatherback turtle: Non-resident Native – Migrant

Since none of the turtle species nest in New Zealand, all are considered non-resident natives.



New Zealand Threat Classification System categories. Updated in 2021, from the Amendment to the NZTCS manual 2008: Revised categories 2021 (Michel 2021)

FULLY PROTECTED (through general wildlife legislation)

It is illegal to harass or kill any species of turtle within New Zealand's Territorial Sea or EEZ. Taking and possession of marine turtles, their eggs, or other derivatives, is prohibited, uninjured turtles must be immediately returned to waters from which taken, and injured turtles XXX. As of 2023, the regulations also contain provisions on the use of circular or oval hooks required when surface longlining, which are known to reduce the hooking rates of marine turtles, and thus to cause less marine turtle bycatch.

Exceptions: XXX

Opportunities and Challenges

The New Zealand Government has recently amended the commercial fishing regulations to mandate the use of circle hooks in the surface longline fishery and approved the development of a turtle bycatch reduction plan for this fishery. As a next step, the government plans to roll out the mandatory use of cameras on Small Vessel Surface Longline vessels. Currently, the

government does not know the mortality rate following capture, however, around 95% of the captures are recorded to be "alive" on release. To verify these reports, and to better inform fisheries risk assessments for turtles in New Zealand, a higher observer coverage in the fishery sector is required.

International and Regional Instruments

New Zealand is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- CMS
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (CCAMLR, CCSBT, SPRFMO, WCPFC)
- SPREP
- UNCLOS

DRAFT

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	Taking for research/educational purposes where a permit IS required
<p>Wildlife Act 1953, as amended in 2022</p> <p>All reptiles, including marine turtles, are protected under the Wildlife Act 1953. This means it is illegal to kill or harass any species of sea turtle within New Zealand's Territorial Sea or EEZ. It is also illegal to possess a sea turtle, or any part of a sea turtle, without a permit issued under the Wildlife Act, or evidence that it was legally imported into New Zealand or was in your possession prior to commencement of the Wildlife Act (1 April 1954).</p> <p>https://www.legislation.govt.nz/act/public/1953/0031/latest/whole.html</p>	X	X
<p>Fisheries (Commercial Fishing) Regulations 2001, as amended in 2023, provide legal protection by prohibiting people taking or being in possession of marine turtles</p> <p>https://www.legislation.govt.nz/regulation/public/2001/0253/latest/whole.html</p>	X	

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line (circle hooks ect.)	Trawl Nets	Gill nets	Purse seine	Draft nets
<p>Fisheries Act 1996, as amended in 2022, regulates all aspects of commercial, recreational and customary fishing within New Zealand fisheries waters and by New Zealand vessels fishing on the High Seas, however as yet there are no specific controls on any method taking marine turtles as incidental bycatch.</p> <p>https://www.legislation.govt.nz/act/public/1996/0088/latest/DLM394192.html</p>	X*	X	X	X	X	X

Fisheries (Commercial Fishing) Regulations 2001, as amended in 2023; Section 80B - requires the use of circle hooks by surface longliners. Section 80C allows circulars to be issued that specify the requirements relating to circle hooks, (Fisheries (Commercial Fishing) Amendment Regulations 2023 (SL 2023/171) Contents – New Zealand Legislation). The changes came into force on 3rd August 2023. Fisheries (Commercial Fishing) Regulations 2001 (SR 2001/253) (as at 03 August 2023) – New Zealand Legislation		X				
Fisheries (Commercial Fishing) Regulations 2001, as amended in 2023; Section 45 - Taking and possession of marine turtles prohibited - Commercial fishers must not take marine turtles from New Zealand fisheries waters or possess marine turtles taken from those waters. https://www.legislation.govt.nz/regulation/public/2001/0253/latest/DLM77087.html?search=sw_096be8ed81d97837_taking_25_se&p=1&sr=11	X*	X	X	X	X	X

*All gears selected since marine turtle take by any method is prohibited, even though gears not mentioned separately: “Commercial fishers must not take marine turtles from New Zealand fisheries waters or possess marine turtles taken from those waters.”

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practice	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	External observers required on (some) fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
The Fisheries Act 1996 regulates all aspects of commercial, recreational and customary fishing within New Zealand fisheries waters and by New Zealand vessels fishing on the High Seas. Fishers may not retain any part of a protected species, so they must release alive or discard any dead protected species taken as accidental bycatch. https://www.legislation.govt.nz/act/public/1996/0088/latest/DLM394192.html .	X	X	X		X	X	X	
Fisheries (Commercial Fishing) Regulations 2001, prohibits the taking and possession of marine turtles,	X		X					

requires the immediate release of uninjured marine turtles, provides the Deputy Director-General of Fisheries New Zealand with the power to specify how injured turtles must be handled. Commercial fishers are required to use circle hooks when surface longlining in New Zealand fisheries waters, which came into effect on 3rd August 2023. https://www.legislation.govt.nz/regulation/public/2001/02/53/latest/whole.html								
Fisheries (Commercial Fishing) Amendment Regulations 2023 require the use of circle hooks in the surface longline fishery. The changes came into force on 3rd August 2023 https://www.legislation.govt.nz/regulation/public/2023/01/71/latest/LMS860842.html?search=ts_act%40bill%40regulation%40deemedreg_Fisheries+(Commercial+Fishing)+Amendment+Regulations+2023_resel_25_a&p=1#LMS860853			X					
Fisheries (Reporting) Regulations 2017 require permit holders to electronically report incidental captures of non-fish species or protected species (NFPS), including turtles. This must be reported on the same day. The report must record the species and quantities caught, fishing method that resulted in catch, date, time and location of the fishing and additional information specified in a circular. https://legislation.govt.nz/regulation/public/2017/0154/latest/whole.html#DLM7324148		X			X			
The Fisheries (E-logbook Users Instructions and Codes) Circular 2021 provides the specific requirements for electronic reporting under the Fisheries (Reporting) Regulations 2017. This circular provides fishing permit holders with detailed instructions for how to complete electronic event reports and set out codes that must be used when completing turtle capture reports. Refer to "Part 3: Non-fish or protected species (NFPS) catch reports" for details to be included in a fisher's NFPS report (Fisheries (E-logbook Users Instructions and Codes) Circular 2021 (mpi.govt.nz)).		X			X			
The Fisheries (Geospatial Reporting) Regulations 2017 require commercial fishers to use a Geospatial Position		X			X		X	

Reporting device (GPR) to provide information about their position while fishing. This regulation enables vessels positions to be compared with non-fish protected species (NFPS) catch information. These reporting regulations are substantiated by existing legislation (NZ Fisheries Act 1996, Fisheries (Geospatial Position Reporting) Regulations 2017 (LI 2017/155) (as at 10 January 2019) Contents – New Zealand Legislation).							
The Fisheries (Geospatial Position Reporting Devices) Circular 2019, sets out the specific technical details relating to geospatial position reporting devices, including the minimum legal requirements for the devices and systems used to provide position reports and the content of position reports. This circular is issued pursuant to regulation 6 of the Fisheries (Geospatial Reporting) Regulations 2017. https://www.mpi.govt.nz/dmsdocument/37985/direct		X			X		X
The Fisheries (Electronic monitoring on Vessels) Regulations 2017 sets out the requirements for on-board cameras on commercial vessels. These regulations are substantiated by existing legislation (NZ Fisheries Act 1996). There are opportunities to improve information on the nature and extent of turtle interactions with commercial fisheries in New Zealand waters with the planned rollout of cameras on Small Vessel Surface Longline vessels. (Fisheries (Electronic Monitoring on Vessels) Regulations 2017 (LI 2017/156) (as at 30 November 2022) Contents – New Zealand Legislation).					X		X
The Fisheries Act 1996, as amended in 2022, Section 15 and the Wildlife Act (1953), as amended in 2022, Section 14F, enable setting fishing related mortality limits on protected species Fisheries Act: https://www.legislation.govt.nz/act/public/1996/0088/latest/DLM395524.html?search=sw_096be8ed81cc21cb_mortality+limits_25_se&p=1 Wildlife Act:					X		

https://www.legislation.govt.nz/act/public/1953/0031/latest/DLM277280.html?search=sw_096be8ed81c18cc8_Population+management+plan_25_se&p=1							
Voluntary guidance document: Fisheries Inshore New Zealand operational procedures - industry developed operational procedures covering compulsory and voluntary management measures for protected species bycatch https://www.inshore.co.nz/operational-procedures/	X		X				X
Voluntary turtle handling guide: Fisheries New Zealand and the Department of Conservation's turtle handling guide, which provides best practice methods for handling and release of marine turtles hooked/entangled in surface longline gear. In process to be updated to include the circle hook mandate. https://www.mpi.govt.nz/dmsdocument/54925/direct	X		X				X
Wildlife Act (1953), as amended in 2022		X			X		

Captivity, excl. Tourism

<p>In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>Keeping marine turtles in captivity strictly not allowed, except for wildlife rescue centres</p>	<p>Keeping marine turtles in captivity strictly not allowed, except for zoos and aquaria</p>	<p>Turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required</p>
<p>Wildlife Act 1953, as amended in 2022 A permit is required to keep any protected species in captivity for any purpose</p>	<p>X</p>	<p>X</p>	<p>X</p>

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS NOT required
Wildlife Act 1953, as amended 2022 Permits may be issued to hold turtles in captivity for education, research and rehabilitation, but not for other purposes; there is no ability to regulate non-extractive ecotourism operations (e.g. watching) under the Act, however there are no turtle-based ecotourism activities in New Zealand.	X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
Wildlife Act 1953, as amended in 2022*	X	X	X	X	X	X

*No marine turtle products can be carried or shipped out of New Zealand without a CITES export permit – this includes personal items such as specimens and curios that may have been in a person's possession prior to protection under the Wildlife Act (1 April 1954).

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/ statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	Harming marine turtles is punishable by fines only	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	After confiscation, Wildlife Rescue Centers are available and adequately equipped to house marine turtles temporarily or long-term*
--	--	---	---	--	--	---

Wildlife Act 1953, as amended in 2022 https://www.legislation.govt.nz/act/public/1953/0031/latest/DLM276814.html?search=ts_act%40bill%40regulation%40deemedreg_Wildlife+Act+1953_resel_25_a&p=1	X	X	2		NZ\$ 100,000 (= USD 61,432.10) for an individual; NZ\$ 200,000 (= USD 122,864) ⁵² for a corporate body	X
Fisheries Act 1996, as amended in 2022 https://www.legislation.govt.nz/act/public/1996/0088/latest/DLM394192.html	X					
Fisheries (Commercial Fishing) Regulations 2001, as amended in 2023 https://www.legislation.govt.nz/regulation/public/2001/0253/latest/whole.html	X				NZ\$ 100,000*	

* Although technically charges could be laid under both Acts, the Crown would normally only charge someone with an offence under the Act that carries the greatest penalty.

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
Resource Management Act (1991), as amended in 2023, which provides for protection of indigenous flora and fauna from development https://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html		X	X
Marine Reserve Act (1971), as amended in 2021, which can establish protected areas that usually stringently prohibit any commercial activities https://www.legislation.govt.nz/act/public/1971/0015/latest/whole.html	X		

Note: There are no nesting grounds and therefore no identified areas for protection in NZ.

⁵² Currency exchange rate: 06 Dec 2023

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:	Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	
Wildlife Act 1953, as amended in 2022 Prohibits the killing, taking or harassment of protected species, including the possession of any part or parts of those found dead, without a permit https://www.legislation.govt.nz/act/public/1953/0031/latest/DLM276814.html?search=ts_act%40bill%40regulation%40deemedreg_Wildlife+Act+1953_resel_25_a&p=1	X	X	X

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4.5.10. Niue

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Niue is an island country in free association with New Zealand. Its marine territory is 1,200 times larger than its land mass (Conservation International, 2023).

A 2017 study found that fish biomass around Niue was some of the lowest that the team had observed in the Pacific (Friedlander et al., 2017). Because of the isolation and low productivity of the region, Niue's marine ecosystems are considered to be highly vulnerable to both natural and human impacts, including storm events, fishing activity, and storm events, which means that local marine resources require effective enforcement and careful management to provide food security for the people of Niue (Friedlander et al., 2017).

Ocean conservation is a priority on Niue's political agenda, as the declaration of Marine Protected Areas and the introduction of innovative sustainable funding initiatives has shown (see Opportunities and Challenges below).

Marine turtles were considered sacred fish in Niue, and rescuers of mythical figures (Hina) (Woodrom Luna, 2013). They were also the forbidden food of the gods, and the most *tapu* (sacred) of all native animals, eaten only by *tapu* males (Woodrom Luna, 2013).

Presence and Nesting of Marine Turtle Species in the Country

Green, hawksbill, and loggerhead turtles occur in Niue's waters (Friedlander et al., 2017), but only green turtles are nesting on the island.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Niue. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*?)	X (rare)		X (rare)			

*nesting

National Laws

The [Domestic Fishing Regulations \(1996\)](#), as [amended in 2015](#), prohibit the export or facilitating the export (Art. 3), to interfere with, take, kill or bring ashore (Art. 7) of all turtle species unless approval is received from the cabinet. "Protected fish species", which turtles fall under, comprise "live species, or a dead species, cooked in part or whole, its bones, meat, teeth or skin".

The [Environment Act 2015](#) regulates activities affecting marine areas (Art. 17), animals (Art. 18) and plants (Art. 19), and prohibits taking and killing in Protected Areas (Art. 23). Marine turtles are not explicitly mentioned. Complementing the Act, the [Environment \(Development Consent & Environmental Impact Assessment\) Regulations](#) were introduced in 2017.

Niue has a [National Biodiversity Strategy and Action Plan 2015](#), which, under Objective 5: Conservation of Threatened Species, includes two actions to protect sea turtles: 5.10 Ensure that all long-line vessels carry line cutters, de-hookers and dip nets and use them to assist in the safe release of any captured sea turtles; and 5.11 Ensure that a copy of educational

material to assist in the use of these is available for each vessel on request, to minimize the impacts of fishing on marine turtles.

The [Niue National Strategic Plan 2016-2026](#) also strives for sustainable and responsible investments in marine and fisheries resources, as well as the conservation, protection, and management of natural habitats and ecosystems.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Niue (see Opportunities and Challenges below).

FULLY PROTECTED (through general wildlife legislation)

The export or facilitating the export, to interfere with, take, kill or bring ashore of all turtle species is prohibited, comprising live species, dead species, cooked in part or whole, bones, meat, teeth or skin. The country further requires that all long-line vessels carry line cutters, de-hookers and dip nets and use them to assist in the safe release of any captured sea turtles; and require that a copy of educational material to assist in the use of these is available for each vessel on request, to minimize the impacts of fishing on marine turtles.

Exceptions: XXX

Opportunities and Challenges

The 2018 SPREP report observed that the country does not have an integrated legislation and no responsible authority that comprehensively manage all the issues related to the protection and conservation of species and resources. The report also states that this leads to a general lack of regulations to support the implementation of the National Biodiversity Strategy and Action Plan priority actions.

In 2023, the country announced the launch of a first-of-its-kind sustainable funding initiative to ensure long-term conservation of its sovereign waters: Ocean Conservation Commitments (OCCs) (Conservation International, 2023). Donors may sponsor one or more OCCs, each representing the costs to manage and protect one km² of Niue's ocean territory for up to 20 years (Conservation International, 2023). One OCC costs the sponsor USD 148, with 127,000 OCCs available, which is based on the size of the country's Moana Mahu Marine Protected Area, spanning 127,000 km²) (Conservation International, 2023). The government announced that itself sponsored 1,700 OCCS, one for every resident of Niue.

In 2022, Niue established the Nukutuluea Multiple-Use Marine Park, investing in ocean conservation, and it plans to strengthen coastal management plans for the island's 14 villages, as well as to fund ocean conservation education programmes and scholarships, and to promote traditional knowledge and practices in park management.

International and Regional Instruments

Niue is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- Ramsar Convention
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.11. Palau

Marine Turtle History and Status

Highly dependent on the vast ocean resources around the island, Palau's people have long forged a special relationship with marine turtles. Attributed a special significance, this has led to the development of distinct traditional industries, social practices, and revered indigenous customs that have become intertwined with the very fabric of the coastal cultures (Palau Conservation Society, 2001). Efforts have been underway to reach a balance between use and conservation of marine turtle populations, such as the Marine Turtle Conservation and Monitoring Project launched in the early 2000s (Klain et al., 2007) and successful decentralised community-based turtle protection programmes implemented until 2009 (Risien and Tilt, 2008).

Palau has one of Micronesia's largest nesting populations of hawksbill turtles, nesting primarily in the Rock Islands Southern Lagoon area of Koror State, an area particularly important for tourist and recreational activities (Klain et al., 2007). Green turtles are the most abundant species. The most frequently harvested turtle species are hawksbill turtles and green turtles (Klain et al., 2007), where harvest by indigenous peoples is still common (Risien and Tilt, 2008). Moreover, the heavy use of nesting beaches by tourists and locals and coastal development have degraded marine turtle habitat, further leading to the decline of marine turtle populations in the island state (Risien and Tilt, 2008).

Presence and Nesting of Marine Turtle Species in the Country

Five species of marine turtles are known to live in the Palauan waters: the green turtle, hawksbill turtle, olive ridley turtle, loggerhead, and leatherback. Only the green turtle and the hawksbill turtle are known to nest on Palau's beaches.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Palau. Two green turtles tagged in Palau migrated to foraging areas off Aru Islands in Indonesia. Flipper tagging studies further revealed that turtles migrated to Goulburn Island, Northern Territory, Australia; and Yomitami, Okinawa, Japan (Palau BMR, 2008, in Maison et al., 2010). Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence	●	●	●	●	●	✗	✗
Nesting	●	●	✗	✗	✗	✗	✗

National Laws

Palau enacted a ten-year moratorium on the killing and harvest of hawksbill turtles or their products in 2018, in response to concerns that populations were declining (Island Times Staff, 2018; UNEP et al., 2022).

The moratorium, which amends [Title 24 – Environmental Protection](#), includes harvesting turtles for sale, trade, consumption, import or export, with the only exception being the traditional “toluk” or women’s money already in circulation as of the date of enactment (Island Times Staff, 2018). In addition, the moratorium (RPPL 10-24) allows the harvest of marine

turtles during open season (>34”), except for hawksbills. Before, the harvest of hawksbill turtles was permitted in Palau under domestic fishing laws (24 PNCA 1201), with provisions for closed seasons from June 1 to August 31 and December 1 to January 31 and minimum size limits (27 inches Curved Carapace Length (CCL)) (UNEP et al., 2022).

Therefore, 1) the Moratorium’s no taking/harvesting all year round applies to hawksbills only, eggs are not allowed to be harvested for any turtle species, 2) turtle harvest (except for hawksbills) is allowed during open seasons with size restrictions (≥ 34 ”), and 3) protected areas have additional management measures on top of the marine turtle legislation and may differ by state and/or at the national level. Nesting females, eggs, and habitats are thus protected within certain protected areas by state and national laws (see Title 24 PNC, Preserves and Protected Areas (Chapter 30) for further details of protected areas).

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Palau. The review mentions the Marine Protection Act (Title 27, Division 2, Chapter 12 PNC), which has the purpose to promote and protect the sustainable use of all species of marine animals and plants other than marine birds. Placing restrictions on fishing.

The Endangered Species Act (Title 24, Division 2, Chapter 10 PNC) aims to prevent the extinction of any species or subspecies from Palau’s islands or the water surrounding them. This includes the issuance of a list of endangered and threatened animals and plants by the Minister of Natural Resources, Environment and Tourism.

The Protected Sea Life Chapter of the Environmental Protection Title (Title 24, Division 2, Chapter 12 PNC) specifically protects particular sea life species, including sponges, mother-of-pearl, dugongs, trochous, and turtles.

The Republic of Palau has not yet adopted an official Endangered Species List, but protected marine species and domestic fishing laws are listed [here](#), and a currently implemented GEF-6 project (see below) bases its interventions on [this list](#) of threatened species, and on [this list](#) of legally protected species in Palau.

Moreover, the country published a [Revised National Biodiversity Strategy and Action Plan \(2015-2025\)](#) in 2016, whose Strategic Area 2 concerns species protection. The key objectives are to develop a comprehensive inventory of species to identify and prioritize their importance and status (2.1), assess conservation needs of high priority species (i.e. corals, fish, edible macro-invertebrates, bats, birds, plant species) (2.2), and to develop appropriate and specific management strategies for high priority species (2.3).

PARTIALLY PROTECTED

Palau enacted a ten-year moratorium on the killing and harvest of hawksbill turtles or their products in 2018, which includes prohibiting the harvesting of turtles for sale, trade, consumption, import or export, with the only exception being the traditional “toluk” or women’s money already in circulation as of the date of enactment. The moratorium allows the harvest of marine turtles during open season (>34”), except for hawksbills.

Therefore, 1) the Moratorium’s no taking/harvesting all year round applies to hawksbills only, eggs are not allowed to be harvested for any turtle species, 2) turtle harvest (except for hawksbills) is allowed during open seasons with size restrictions (≥ 34 ”), and 3) protected areas have additional management measures on top of the marine turtle legislation and may differ by state and/or at the national level. Nesting females, eggs, and habitats are thus protected within certain protected areas by state and national laws.

Exceptions: XXX

Opportunities and Challenges

The moratorium introduced in 2018 is a great opportunity for marine turtle conservation and to monitor and evaluate the effectiveness of conservation activities. Even though the tradition of the “toluk” is continued during this time, it is restricted to the “money” already in circulation as of the date of enactment and it will equally be re-evaluated in 2028 (Island Times Staff, 2018). Traditions form a significant part of people’s identity, however, if wildlife or other natural resources that are involved in rituals become threatened, it may be necessary to review these.

Together with the United Nations Development Programme Pacific Office, Palau is implementing the GEF-6 [“Integrating biodiversity safeguards and conservation into development”](#) project, which aims to protect biodiversity and sustainably develop key sectors through 1) Landscape/Seascape Planning, 2) Reduction of Threats to Biodiversity, 3) Implementation of State Plans in an equitable and socially inclusive Way, and 4) Partnerships and Communication, with Learning and Knowledge Capture.

International and Regional Instruments

Palau is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- CMS
- PSMA
- Ramsar Convention
- RFMOs (WCPFC, IOTC)
- SPREP
- UNCLOS

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking for research/educational purposes where a permit IS required	Taking of marine turtles according to a minimum/maximum size limit, e.g. >XX< cm where a permit IS NOT required	Legislation incorporates relevant traditional knowledge, customary marine tenure and practices*
PNCA 24: Environmental Protection, § 1281 Limitations on taking of turtles, as amended by RPPL 10-24		X (all marine turtle species)	X (only for hawksbill)	X	X	X*		X		X
RPPL 10-24: Moratorium on taking of any hawksbill turtle (closed all year round)	X	X	X	X	X	X	X	X		X
Sea turtles, except hawksbill turtles (Closed Season May-August & December-January); 34" min size		X			X	X*		X	X	
PNCA 27- Fishing and PNMS (longline and purse seine commercial fishing)			X			X	X			

*Taking of marine turtle species only prohibited in some protected areas, since protected areas (state or national) have different laws.

Permitted Fishing Gear

In relation to fishing gear for catching turtles in countries, where captures are allowed, please list below any legislation/rule/statute (name, section and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Turtle Rodeo/ Hand caught	Other relevant fishing gear/ types of nets
27 PNCA 1204: No underwater breathing apparatus other than snorkel when fishing	X	X	X	X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Hook & Line	Purse seine	Other relevant fishing gear
27 PNC §181 and PNMS Act RPPL 9-49	X	X	
27 PNCA § 1204 (m-o) (kesokes/gill net/surround net)			X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, but no guidelines in place
27 PNCA Fishing and PNMS (no retention of turtle-longline & purse seine)	X

Note: Existing national fisheries regulations reference sub-regional and regional conservation measures (e.g. WCPFC, FFA, PNA)

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed
Endangered Species Act of 1976: "It is prohibited for any person to take, engage in commercial activity with, hold possession of, or export any threatened or endangered species of plant or animal or parts thereof, so listed in this chapter or in any regulation issued in accordance with this chapter, except in accordance with the exceptions listed in section 1008 of this title."	X

Note: Koror State Government conservation officers relocate turtle eggs if they are in high-risk areas (e.g. too close to high tide mark)

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles allowed, where a permit IS NOT required	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles allowed, where a permit IS NOT required	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
PNC 24 (Hawksbill-CLOSED, as amended by Moratorium); scientific research is allowed, where permit is obtained		X	X		X	X	X	X
PNC 24 (Marine turtles, except hawksbills-during open season (≥34"); scientific research is allowed, where permit is required)	X		X	X (except for eggs)		X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support
RPPL 10-24 (hawksbill Moratorium)	X	X	1 year	\$20,000.00	X
RPPL 10-24 (during closed season for all turtle species, and if carapace is smaller than 34" CCL for all turtle species all year round)	X	X	1 year	\$20,000.00	X
Protected Areas Network Act					X

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Light pollution near nesting beaches	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
PNC 30 (3001-3002-Ngerukewid Island Wildlife Preserve)	X	X	X		
Protected Areas Network Act, State Protected Areas	X	X			
Environmental Quality Protection Act				X	X

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Lethal sampling of marine turtles for research allowed, where a permit IS required	Collection of genetic samples from marine turtles conducted, where a permit IS required
PNC 24: 1302-1323 Fishing with Explosives, Poisons or Chemicals	X	X

4.5.12. Papua New Guinea

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Papua New Guinea (PNG) is home to the world's largest populations of green, hawksbill, and leatherback turtles (Global Green Grants Fund, 2011). Maison (2010) states that very little information is available on the trends of nesting and abundance of green turtles in PNG and that much of the information available is inconsistent. The author further states that, even though comprehensive surveys on abundance have not been done, previous studies indicated a decline of green, hawksbill, and leatherback turtles throughout the country. Further information on distribution and migration, genetic structure, and population trends can be found in the report [*Status of Sea Turtles in the Arafura and Timor Seas*](#).

One driver of the decline is marine turtle harvesting and consumption of turtles by local people, which is part of long-term sustained exploitation of natural resources, originating from a long-term association with the resource that regulates how the resource is valued and used (Berzunza-Sanchez et al., 2013). Different clans in the country seem to value marine turtles differently, e.g. Kinch et al. (2009) report that leatherback turtle was claimed as a totem animal only by one clan in the northwest of Bougainville, which prohibited clan members from consuming leatherback turtle eggs and meat. Another group of inland people at Duse claimed that their clan, originating from the Solomon Islands, arrived in PNG by using the upturned carapaces of leatherbacks as canoes (Kinch et al., 2009). Especially leatherback turtles and their eggs were part of the subsistence diet in some areas, they were traded, or used for other purposes, e.g. their oil was used in lamps in Manus (Pritchard, 1979, in Kinch et al., 2009), or to oil their wooden canoes (Kinch et al., 2009).

Subsistence harvest of hawksbill turtles for meat, eggs, carapace and other products is still widespread throughout the country (Humber et al., 2014, in WWF, 2022). When mitochondrial DNA was extracted from tortoiseshell products for sale at local markets in Papua New Guinea and in the Solomon Islands, most of the tortoiseshell products were assigned to turtles found primarily in the Solomon Islands management unit, but no genetic assessments have been made with regard to Papua New Guinea populations as of yet (LaCasella et al., 2021, in WWF, 2022). Other drivers for a decreasing number of marine turtles are overfishing/bycatch, and pollution.

Some marine turtle conservation projects have been launched, including the private sector, with resorts protecting turtle eggs from poaching (Dickson-Smith, 2020). Conservation Deeds in PNG are the result of a community-driven process that creates a locally managed conservation area, which acts as a long-term community stake in the protection of natural resources, equally meeting the social and economic needs of the community (TIRNADMIN, 2009).

Presence and Nesting of Marine Turtle Species in the Country

Six marine turtle species are found in the waters surrounding PNG: Green, hawksbill, olive ridley, loggerhead, leatherback, and flatback turtles. Of these, the green, hawksbill and the leatherback also nest in the country.

Nesting hawksbill turtles are known to forage in Australia (Madden Hof et al., 2023). Foraging hawksbills in PNG are known to nest in Australia and the Solomon Islands (Commonwealth of Australia, 2017; Hamilton et al., 2021). Nesting leatherback turtles are known to forage across the Southwest Pacific, including Solomon Islands, Australia, New Caledonia, New Zealand (Benson et al., 2007; 2020).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X (n?)	X	X (n)	X	

*nesting

National Laws

In PNG, marine lands and resources are owned by a large number of clan and sub-clan groups whose tenure rights are recognized in the national Constitution (Maison et al., 2010).

The [Fisheries Management Act \(1998\)](#), as [amended in 2015](#), provides for the management and conservation of fish resources in all waters surrounding PNG. Marine turtles are included in the term “fish”. The objective of this Act is to promote long-term management, conservation, optimum utilisation, and long-term sustainable development of marine living resources for the people of PNG. Guiding principles include the precautionary and ecosystem approach (Art. 25). The rights of the customary owners of fisheries resources and fishing rights shall be fully recognised and respected in all transactions affecting the resource or the area in which the right operates. Fishing activities are regulated and offences and penalties listed.

The [Fauna \(Protection and Control\) Act \(1966\)](#), as [amended in 2014](#), prohibits the taking and killing of protected wildlife (Art. 8) and considers a person who knowingly buys, sells, offers or consigns for sale, or has in his possession or control, a protected animal is guilty of an offence, unless the person has a permit to do so (Art. 9). The Act also addresses the establishment of localized protective regimes on land and waters under customary tenure and gives the Minister the power to declare fauna to be protected and thus to become the property of the State.

As for marine turtles, only the leatherback turtle has been declared protected under the Act and therefore must not be killed or their eggs harvested. Any person who buys or sells or offers for sale, or has in possession leatherback turtle eggs or meat can also be fined (Maison et al., 2010). The Act does not formally protect other species and makes provisions for persons with customary rights to take or kill turtles, but it states that turtles cannot be killed, taken, or sold during the months of May through July (Maison et al., 2010). In addition, the Act stipulates payments for turtles: (a) K20.00 for a turtle less than 60 cm in length; and (b) K30.00 for a turtle of 60 cm or more in length (Maison et al., 2010).

The [International Trade \(Fauna and Flora\) Act \(1979\)](#), as [amended in 2014](#), restricts the export of CITES listed species, with all marine turtle species listed in Schedule I/Appendix I of the Act. It aims to “further the conservation of the natural environment in Papua New Guinea and its native animals and plants by promoting their sustainable use, and to implement the State’s obligations as a party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora by controlling and regulating the trade, possession, transport, exportation and importation of certain species of fauna and flora.”

Moreover, the Torres Strait Treaty between PNG and Australia outlines not only the boundaries between the two countries but also how the oceanic area may be used, including provisions for traditional fisheries in the area, such as turtle harvest which is included under the term “traditional fishing”. The Treaty is implemented by the [Fisheries \(Torres Strait Protected Zone\) Act \(1984\)](#) and the subsequent [Fisheries \(Torres Strait Protected Zone\) Regulation \(1987\)](#).

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in PNG. In addition to the laws above, it lists the Conservation Areas Act (1978), the Conservation and Environment Protection Authority Act (2014), and the Crocodile Trade (Protection) Act (1974), and the subsidiary legislation under the Fauna (Protection and Control) Act (1966).

PARTIALLY PROTECTED

Only the leatherback turtle has been declared protected and therefore must not be killed or their eggs harvested. Any person who buys or sells or offers for sale, or has in possession leatherback turtle eggs or meat can also be fined. Other marine turtle species are therefore not formally protected, and provisions were made for persons with customary rights to take or kill turtles, but it states that turtles cannot be killed, taken, or sold during the months of May through July (Maison et al., 2010). In addition, the Act stipulates payments for turtles: (a) K20.00 for a turtle less than 60 cm in length; and (b) K30.00 for a turtle of 60 cm or more in length (Maison et al., 2010).

Exceptions: XXX

Opportunities and Challenges

The people of Karkum Village and the Turtle Island Restoration Network's Sea Turtle Restoration Project launched the Karkum Conservation Area in the Madang Province, which is considered a common turtle nesting site of leatherback turtles (TIRNADMIN, 2009). Trainings and community development activities for sea turtle and marine resource protection were held for a total of six villages, representing approximately 3,500 people. They identified conservation measures to which they will commit in exchange for support of community needs, such as health centers and library books, and to fight the threat of deep-sea mining (TIRNADMIN, 2009).

One of the leading marine turtle conservationists in the country stated that the current legislation needs supporting policies, laws, and a management plan to be effective, with the maritime provincial governments taking a lead (Bauai, 2022). A lack of awareness in the communities, of enforcement, and of long-term funding were cited as major challenges to marine turtle protection, and leatherback beach monitoring and tagging activities recommended (Bauai, 2022).

International and Regional Instruments

PNG is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- CTI-CFF
- IOSEA Marine Turtle MOU
- Ramsar Convention
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.13. Samoa

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

In Samoa, marine turtles were believed to have the power to save fishermen, who were lost at sea, and to bring them safely to shore, which is why the Samoan word for marine turtle, *la sa*, translates literally to "scared fish" (Craig, 1993). Still, marine turtles are traditionally harvested for food in Samoa, and the shell was often made into combs, bracelets, fishing hooks, and headpieces. Turtles were also often included in Samoan legends, art, folklores and songs of the past (Bell et al., 2010b; Craig, 1993). In certain villages, fishing for turtles had also been a special tradition for events such as dedications, title bestowment, funerals and weddings.

Based on historic levels, however, the abundance of turtles in Samoa has declined significantly from historic levels, and turtle egg poaching still seems to be a problem, as well as coastal development impacting on turtle nesting sites (Bell et al., 2010b). It was reported that, in the 1980s to 1990s, it was common to see marine turtles of all sizes being sold either dead or live, as well as their eggs, in the fish market (Maiava, 2019). Increased coastal development, such as seawalls and beach hotels also deter marine turtles from nesting. However, conservation efforts have been launched, such as a tagging programme initiated by SPREP, and awareness raising activities have been conducted.

Presence and Nesting of Marine Turtle Species in the Country

Green, hawksbill, olive ridley, and leatherback turtles are known to occur in the country's waters, but only hawksbill turtles also nest in Samoa (Bell et al., 2010b; Maison et al., 2010).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Samoa. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X	X (n*)	X (rare)?	X?	X (rare)		

*nesting

National Laws

The [Fisheries Act \(1988\)](#), as [amended in 2016](#), gave way to the Local Fisheries Regulations (1996), which state under Regulation 7 that 1) no person shall undertake fishing for, or possess, or sell any turtle known as *laumei* (*Eretmochelys imbricata*, *Chelonia mydas*) whether alive or dead the shell of which is less than 700 mm (27.6 inches) in length at its longest part of the carapace measured along the curve of the carapace from that part of the carapace nearest the head to that part nearest the tail; and 2) No person shall at any time disturb the nest of any turtle, or take, use or sell or destroy the egg of any turtle. Regulation 4 (Schedule II) states that the Director may declare a period or periods when fishing for marine turtles is prohibited. Stipulated in a by-law under the Fisheries Act, the harvesting of any turtles and/or turtle eggs is also prohibited in any area within the Safata and Aleipata Marine Protected Areas.

Additionally, the [Marine Wildlife Protection Regulations Act \(2009\)](#) dedicate an entire part, Part III, to marine turtles, and regulate Reporting incidents involving turtles (Art. 7), Offences against turtles (Art. 8), Turtle watching and eco-tourism activities (Art. 9), and Planning requirements applying to turtle nesting areas (Art. 10). The Act prohibits the commercial

capture and sale of turtles, but makes exemptions for subsistence take under observance of the Act's provisions, prohibits the captivity of turtles (unless permitted), protects female turtles during the nesting season (November to February), prohibits the purchase, sale, and possession of eggs, and requires that any turtle caught during fishing activities be released and reported. Turtle tourism activities must be licensed by the Division of Environment.

There are no specific traditions that protect marine turtles, but villages can make their own rules concerning the harvesting of any marine animals.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Samoa, and in 2010, a [Review of Marine Turtle Legislation](#). Apart from the legislation above, the former review lists the following relevant Acts: the [Agriculture and Fisheries Ordinance \(1959\)](#), the [Marine Pollution Prevention Act \(2008\)](#), and the [Maritime Zones Act \(1999\)](#), as [amended in 2015](#). The legislation listed in the latter review is covered above.

PARTIALLY PROTECTED

No person shall undertake fishing for, or possess, or sell any turtle known as [laumei](#) (*Eretmochelys imbricata*, *Chelonia mydas*) whether alive or dead the shell of which is less than 700 mm (27.6 inches) in length at its longest part of the carapace measured along the curve of the carapace from that part of the carapace nearest the head to that part nearest the tail; and 2) No person shall at any time disturb the nest of any turtle, or take, use or sell or destroy the egg of any turtle. Regulation 4 (Schedule II) states that the Director may declare a period or periods when fishing for marine turtles is prohibited. Stipulated in a by-law under the Fisheries Act, the harvesting of any turtles and/or turtle eggs is also prohibited in any area within the Safata and Aleipata Marine Protected Areas.

Additionally, the commercial capture and sale of turtles is prohibited, but exemptions were made for subsistence take. The captivity of turtles is prohibited (unless permitted), female turtles are protected during the nesting season (November to February), the purchase, sale, and possession of eggs is prohibited, and any turtle caught during fishing activities must be released and reported. Turtle tourism activities must be licensed by the Division of Environment.

Exceptions: XXX

Opportunities and Challenges

In 2002, the Samoa Cabinet approved the establishment of a national marine sanctuary in its EEZ for marine animals such as marine turtles and sharks. However, a management plan for its implementation has not been completed yet.

XXX

International and Regional Instruments

Samoa is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- CMS
- Ramsar Convention
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.14. Solomon Islands

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

The Solomon Islands consist of nearly one thousand islands, many hosting marine turtle nesting beaches. The country's waterways are also known to serve as migratory routes for turtles, e.g. long distance migrations between foraging and breeding grounds have been documented and indicated that there is reciprocal movement between the Solomon Islands and Australia (Broderick, 1998, unpublished in Maison et al., 2010; Vuto et al., 2019).

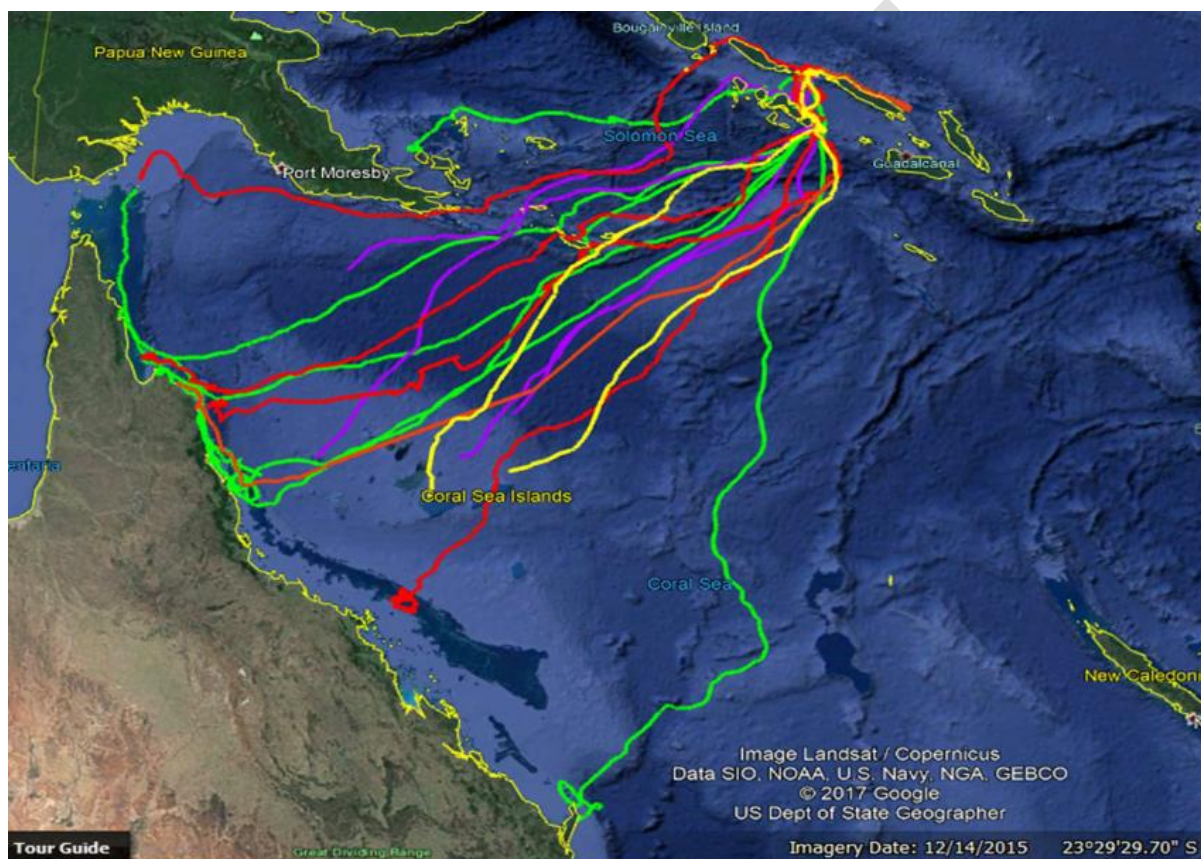


Figure 5. Post nesting migrations of 18 female hawksbill turtles that were tagged with satellite tags after nesting in the Arnavons Community Marine Park in April 2016 and May 2017. Source: (Vuto et al., 2019)

Marine turtles are a culturally important resource in the Solomon Islands and have been harvested for centuries, with turtle meat even referred to as “Solomon beef” and five hundred years old turtle bones and fish hooks carved from hawksbill shell discovered through archaeological excavations (Walter and Green, 2011, in Vuto et al., 2019). In the 1980s, thousands of hawksbill turtles were killed each year to supply the [bekko](#) trade in Japan.

The Solomon Island government banned the trade of all turtle products in 1993, and only allows marine turtles to be harvested for subsistence purposes. Still, the sale of turtle products continues, which most probably resulted in the observed decline of turtle populations, as reports from freediving spearfishers having captured turtles for their entire life indicated that their average catch per trip had declined up to 95.7% (Vuto et al., 2019). Hawksbill turtle products are the most common ones illegally sold, either to local buyers, who then on sold to Asian buyers in Honiara, or to local carvers, with hawksbill jewellery sold domestically in the country (Vuto et al., 2019). Fishers indicated the presence of two markets for hawksbill shell

in the Solomon Islands: an international market, with hawksbill scutes purchased by Asian buyers before being exported, and a local market that supplies shell money makers and carvers (Nahill et al., 2020, in WWF, 2022).

At the same time, conservation measures were taken by the government, such as the establishment of the Arnavons Community Marine Park (ACMP) in 2017, the country's first national park, or the publishing of the Solomon Islands Turtle Strategic Action Plan 2008-2012 (Vuto et al., 2019). In addition, several NGOs and community groups have initiated projects to monitor and protect nesting populations of turtles in country (Vuto et al., 2019). The ACMP is patrolled and monitored by community rangers to deter poachers, which provides new income opportunities for local people, such as revenue from ecotourism and employment as park rangers (TNC, n.d.).

Presence and Nesting of Marine Turtle Species in the Country

Green, hawksbill, olive ridley, loggerhead and leatherback turtles occur in the country's waters, with the all species also nesting in the Solomon Islands, except for the loggerhead (Vuto et al., 2019).

Recent satellite telemetry studies show that hawksbill turtles nesting in the Solomon Islands (Arnavon Islands) migrate long distances to foraging areas in New Caledonia, Papua New Guinea, the Torres Strait, and the Great Barrier Reef (Hamilton et al., 2021, in WWF, 2022). Likewise, genetic studies show strong connectivity between hawksbills foraging on the Great Barrier Reef and nesting sites in the Solomon Islands (Bell & Jensen 2016).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X (n – rare)	X?	X (n)		

*nesting

National Laws

The Solomon Islands [Fisheries \(Amendment\) Regulations \(1993\)](#), amending the Fisheries Act (1972), were the first regulations addressing marine turtle take. They consider an offender any person, who sells or exposes for sale or buys or exports any turtle or part of any turtle or the product thereof, as well as any person, who takes nesting turtles or eggs or destroys turtle nests or eggs during breeding seasons from June to August and November to January.

The current policy framework for turtle conservation in the Solomon Islands, however, is determined by the [2015 Fisheries Management Act](#) and its [Fisheries Management Regulations \(2017\)](#) and [Fisheries Management \(Prohibited Activities\) Regulations \(2018\)](#). The 2017 regulations obligate fishing vessels to minimise the bycatch of turtles and record all incidents (Art. 7), require purse seine vessels to respond to, release and resuscitate, if necessary, caught marine turtles (Art. 8), and prohibit the use of all trace wires or J-hooks (Art. 9). The latter regulations consider it an offence to 1) fish for and retain, be in possession of, sell, buy or export any nesting turtle or any leatherback turtle, 2) to sell, buy or export any turtle; and 3) to destroy a turtle nest or eggs, a turtle with a tag attached, a tag attached to a turtle (Art. 5 – Prohibited Activities).

This effectively means that only the leatherback turtle is fully protected, other marine turtle species can be harvested for subsistence purposes. However, the sale of any turtle product is banned, as well as the harvesting of turtle eggs, a nesting turtle, or a tagged turtle.

The [Wildlife Protection and Management Act \(1998\)](#), as [amended in 2017](#), prohibits the export (Schedule I) of five turtle species or their derivative products (green, hawksbill, loggerhead,

olive ridley, and leatherback turtles). The Act thus prohibits the export of all marine turtle species found in the country except for scientific purposes (Section 11 (1)).

The [Solomon Islands Turtle Strategic Action Plan 2008-2012](#), published in 2009, lists numerous objectives and actions under eight themes: 1) Legislation & Enforcement; 2) Education & Awareness; 3) Research & Monitoring; 4) Capacity Building; 5) Threats; 6) National Turtle Database; 7) Sustainable Financing; and 8) Collaboration & Partnership.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in the Solomon Islands, and in 2010, a [Review of Marine Turtle Legislation](#). The former review lists the [Protected Areas Act \(2010\)](#) and the National Parks Act (1954), [as amended in 1996](#), in addition to the Acts above. The latter review lists the [Environment Act \(1998\)](#) and its [2008 Regulations](#), however, they do not have any marine turtle-specific provisions. The review further lists provincial Ordinances for the conservation, protection, and management of all resources in the respective province. Under such an Ordinance, the Provincial Executive is authorized to declare an area that is used by a “protected species” to be a protected place in the Province. In addition, land owners can declare any areas under their control protected or [tambu](#) (taboo) under the customary marine tenure system. Certain coastal tribes also have specific traditions that prohibit them from eating and killing marine turtles (e.g. in the Are’Are lagoon).

PARTIALLY PROTECTED

Only the leatherback turtle is fully protected, other marine turtle species can be harvested for subsistence purposes. However, the sale of any turtle product is banned, as well as the harvesting of turtle eggs, a nesting turtle, or a tagged turtle. Fishing vessels are required to minimise the bycatch of turtles and record all incidents, and purse seine vessels are prohibited to use J-hooks.

Exceptions: XXX

Opportunities and Challenges

Since the establishment of the ACMP, the number of hawksbill turtle nests laid per year has doubled (TNC, n.d.). A women’s group, known as KAWAKI, participates in the management and decisions made for the Arnavons: women from three communities work to improve access to Arnavons for local people and children, as well as to improve education about natural resource management (TNC, n.d.). In the Haevo Khulano Integrated Conservation area in Isabel Province, former poachers from the local community have turned into turtle protectors, monitoring the leatherback nestings along the beaches (SIBC News, 2021). Other communities self-initiated the construction of a leatherback hatchery, and developed a satellite telemetry and nest monitoring programme (Jino et al., 2018).

The SPREP legislative review mentions that the Solomon Islands currently has a weak system for the regulation of trade in wildlife and for the conservation of biodiversity. Marine turtle catch and trade seems to be on-going, and only one species is fully protected. The vast ocean territory and more than 1,000 islands render monitoring and enforcement activities difficult.

International and Regional Instruments

The Solomon Islands are part of the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- CTI-CFF
- RFMOs (WCPFC)

- SPREP
- UNCLOS

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.15. Timor-Leste

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Timor-Leste is part of the Coral Triangle region – the region with the most diverse and biologically complex marine ecosystems on the planet. Marine turtles are known to forage and nest in the country, which also serves as a migration passage to rookeries in Australia, Indonesia, and beyond.

Pig predation on nests has been identified as a threat in Timor-Leste (Eisemberg et al. (2014), in Pilcher, 2021b) and it is likely that varanid lizards and feral dogs are similarly a problem. One major issue in the country, especially in the recently declared Nino Konis Santana National Park, is illegal turtle harvesting, with one reported slaughter of turtles on Jaco Islands (Edyvane et al. (2009), in Pilcher, 2021b). A brisk trade in turtle meat and tortoiseshell ornaments was reported in and around Dili, with turtle shell parts coming from Liquica, Manatuto, Same, Viqueque, Lospalos, and Suai/Zumalai (Sealife Trust (2018), in Pilcher, 2021b). The sale of turtle eggs seems to be common, as well, with reported locations west of Dili, in the Nino Konis Santana National Park, and in the Aru Islands (Edyvane et al. (2009), Eisemberg et al. (2014), and Sealife Trust (2018) in Pilcher, 2021b). Pantai Kelapa and Bebonuk Beach were also listed as turtle egg sale locations (WWF, 2022). Hawksbill turtle products were reported to be priced the highest and there are anecdotal reports that an international company incentivises community members to provide turtle shells directly (WWF, 2022). Since products are also traded at the individual level, much of the trade is unquantified and goes unreported.

In Timor-Leste's National Biodiversity Strategic Action Plan (2011-2020), one objective listed is to lobby the national government to conduct a nationwide marine turtle conservation campaign, directed at communities that harvest, hunt, and consume marine turtles (Democratic Republic of Timor-Leste, 2015). The campaign should include alternative sources of income, education, and coordination with local elders, for the conservation agenda to be included in the traditional [Tara Bandu](#)⁵³. The Action Plan's "List of endangered plant and animal species in Timor-Leste" includes five species of marine turtles: green, hawksbill, olive ridley, loggerhead, and leatherback turtle. The flatback turtle is not listed.

Presence and Nesting of Marine Turtle Species in the Country

Six marine turtle species are found in the waters surrounding PNG: Green, hawksbill, olive ridley, loggerhead, leatherback, and flatback turtles. Tutuala beach and Jaco Island have been identified as hawksbill and green turtle nesting sites, and more green turtles breeding sites may also exist in Tibar bay, west of Dili, and Ulmera (Nunes (2001) and Eisemberg et al. (2014), in Pilcher, 2021b). Loggerheads do not nest in the country, flatbacks are assumed to forage in Timor-Leste's waters, and olive ridley nestings are rare (Pilcher, 2021b). One olive ridley nesting was tracked with satellite transmitters to the Nino Konis Santana National Park in the country (CI, unpublished data, in Pilcher, 2021b).

Some hawksbills, while nesting in Timor-Leste, were reported to move from Timor-Leste south into the Timor Sea and Western Australia to forage (Fossette et al. (2021), in WWF, 2022), however, there is likely substantial movement northeast and northwest into Indonesian locations (see Figure 6).

[more on connectivity to be added]

⁵³ A traditional coastal and marine resource management mechanism, enforcing peace and reconciliation through the power of public agreement to define social norms and practices in a given community.

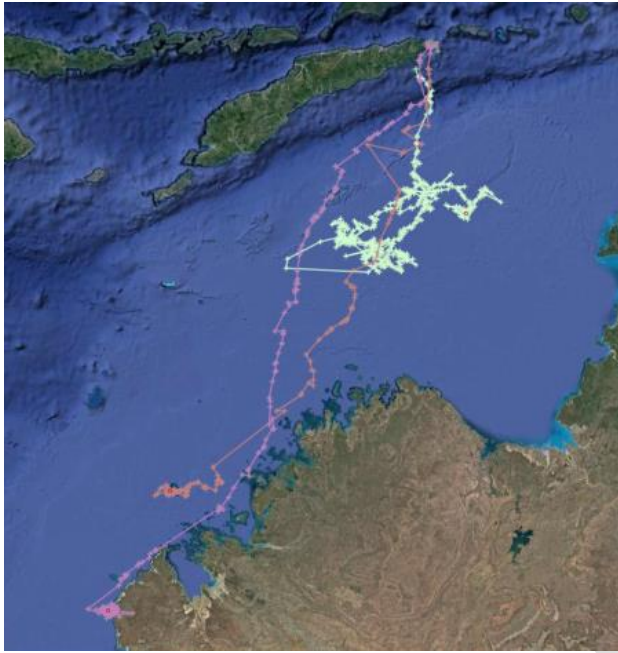


Figure 6. Migration routes of hawksbill turtles (purple, orange) tagged in Timor-Leste (CI, unpublished data, in Pilcher, 2021b)⁵⁴

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)	X (n- rare)	X	X (n?)	X (rare)	

*nesting

National Laws

The [Joint Ministerial Order No: 18/MAP/MCIA/II/2017](#) established the List of Protected Aquatic Species in the country, and lists all marine turtles in Annex I as protected species at all times.

The [Penal Code \(2009\)](#), as [amended in 2017](#), further prohibits the hunting, fishing, trading or trafficking, in whole or in part, of endangered species or species at risk of extinction, as well as carrying out any activity that impedes their development or renders their reproduction or migration difficult, or violating laws or general provisions protecting species of wild fauna (Article 218).

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species are protected at all times.

Exceptions: XXX

Opportunities and Challenges

Community marine turtle conservation programs are on the rise, one example being the “Grupus Konservativu” in Com village, which is part of the Nino Konis Santana National Park, with turtle protection efforts on-going since 2009 (ATSEA, n.d.). Also, community-based tourism initiatives are developed, and the traditional Timorese land management laws, [Tara Bandu](#), have been revived (Collett, 2021). The main challenge that remains, is that the illegal turtle and turtle egg trade is largely unmonitored and difficult to quantify, which in turn does not allow for any population trend assessments.

⁵⁴ <https://zoatrack.org/projects/560/analysis>

International and Regional Instruments

Timor-Leste is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CTI-CFF
- UNCLOS

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.16. Tokelau

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

In Tokelau, marine turtles are considered “sacred fish” (*ika hā*), and the local council of elders established certain village rules that stated that, when a turtle is caught, it must be shared among the entire village using a traditional equitable system called *Inati* (Balazs, 1983; Ono and Addison, 2009). Once a nest was laid, the elders then calculated when the turtle would come back to lay another nest and sent men to wait at the beach on these dates for its capture.

From the early 1900s to the 1980s, marine turtle capture rates declined, even though more sophisticated hunting methods were used, indicating a likely population decline (Balazs, 1983, in Maison et al., 2010).

Updated information regarding abundance and nesting trends of marine turtles in Tokelau are not available at the time of writing. One of the most detailed accounts of marine turtles in Tokelau can be found in [Sea Turtles and Their Traditional Usage in Tokelau \(1983\)](#) and in [Echoes at fishermen's rock: traditional Tokelau fishing \(2012\)](#).

Presence and Nesting of Marine Turtle Species in the Country

The most common turtles found in Tokelau’s waters and nesting on the islands are green turtles, followed – to a much lesser extent – by hawksbill turtles (Balazs, 1983). Very rarely, accounts of loggerhead nestings have been relayed (Balazs, 1983).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Tokelau. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (rare) (n – rare)		X (rare) (n – rare)			

*nesting

National Laws

The [Tokelau \(Exclusive Economic Zone\) Fishing Regulations \(1988\)](#), as [amended in 2012](#) and in [2019](#), states in Art. 10 in the 2012 amended version that one condition for a foreign vessel to obtain a fishing license is that “the craft must not be used to target, harm, or interfere with cetaceans, sharks, seabirds, or turtles within the exclusive economic zone”. This does not seem to concern domestic fishing vessels. The term “aquatic life” includes turtles by definition, but there are no other mentions of protected species in general. The regulations implement the [Tokelau \(Territorial Sea and Exclusive Economic Zone\) Act \(1977\)](#), wherein turtles are clearly defined to be included under the term “fish”, but other than that, there is equally no further mention of marine turtles or protected species.

The [Tokelau Animals Regulations \(1991\)](#) regulate the import and treatment of animals, focusing on disease prevention. They prohibit or restrict the importation into Tokelau of all animals and animal products, with exceptions.

There are no provisions concerning the catch, trade, sale, consumption, etc. of marine turtles and marine turtle eggs. Rules and regulations are determined separately for each village and atoll of Tokelau (UNEP et al., 2022).

All legislation of Tokelau is listed [here](#).

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Tokelau.

NOT PROTECTED

There are no provisions concerning the catch, trade, sale, consumption, etc. of marine turtles and marine turtle eggs. Rules and regulations are determined separately for each village and atoll of Tokelau.

Opportunities and Challenges

The lack of legislation addressing the use and protection of marine turtles complicates driving a sustainable management and conservation approach. Since the interaction with marine turtles is not regulated, communities and leaders do not have a blueprint or framework they can consult and act on. XXX

International and Regional Instruments

Tokelau is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- Ramsar Convention
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.17. Tonga

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles have long been part of the diet of local islanders in Tonga. In the proceedings a MTSG meeting in 1971, it is stated that eggs were eaten by locals, who lived near the nesting beaches, but that no eggs were found in the markets (IUCN, 1971). The demand for carapaces of adult green and hawksbill turtles was assessed as small, even though some were offered for sale (IUCN, 1971). Turtle meat was not found as a regular item on menus in hotels, but hawksbill jewellery was said to have been made locally and exported to Fiji or sold to tourists, with a small, but growing, demand (IUCN, 1971).

A direct take of marine turtles for sale and consumption still occurs in Tonga today, and laws are generally not enforced or adhered to (Maison et al., 2010). The harvesting is managed under the local fisheries legislation (see below), which calls for a closed season between August and February, which is the peak turtle-nesting season (Bell et al., 2008). When harvest is allowed, live turtles are often seen being transported from the outer islands to the main island on inter-island ferries for commercial sale and family use (Bell et al., 2008). There is only limited data available on nesting, but it suggests there may be a decline in green turtle nests (Havea and MacKay, 2009, in Maison et al., 2010), which may also be the case for hawksbill turtles. Moreover, coastal erosion in Tonga and Tuvalu has been reported as a major problem for turtle nesting.

SPREP, together with the Department of Environment and Department of Fisheries, launched the Marine Turtle Monitoring Programme in Tonga, to address the issue of limited data/information, particularly nesting turtle populations (Bell et al., 2008). Other monitoring programs are in place, like the Vava'u Turtle Monitoring Program, which uses proven community led models from PNG and Vanuatu to develop the capacity of the communal environmental leaders, with a focus on turtle education and conservation (Walker, 2014). The program identified the following challenges:

- Illegal harvesting of nests and turtles during closed season
- Lack of enforcement of legislation during the closed and open seasons on size limits, sex, etc.
- Lack of outreach to communities for protecting nesting and foraging grounds
- Placement of static nets for fishing leading to turtle by-catch (Walker, 2014).

Presence and Nesting of Marine Turtle Species in the Country

Four species of marine turtles have been reported to occur in Tonga: green, hawksbill, loggerhead, and leatherback turtle. Of these, green and hawksbill turtles nest in the country, with hawksbill turtles being the most common nesting species (Bell et al., 2008).

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Tonga. Satellite tagging in French Polynesia showed that a turtles was found travelling towards Fiji, entering the waters of Tonga and heading toward the south of Fiji from Ono I Lau (WWF, 2011a). Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n)		X	X		

*nesting

National Laws

The [Fisheries Management \(Conservation\) Regulations \(2008\)](#), as [amended in 2014](#), which implement the [Fisheries Management Act \(2002\)](#), as [amended in 2009](#), stipulate in Art.24 – Turtles, that no person shall

- (a) disturb, take, have in his possession, sell or purchase any turtle eggs;
- (b) interfere with, destroy, or disturb in any way any turtle nest;
- (c) use a spear or spear gun for the purpose of capturing, killing or taking any species of turtle;
- (d) at any time fish, capture or destroy any male turtle the shell length of which is less than 45 centimetres as illustrated in Schedule 9;
- (e) fish for, capture, possess, sale or purchase, or destroy any turtle during the closed season specified in Schedule 12; or
- (f) fish, capture or destroy any Leatherback turtle of the species *Dermochelys coriacea* as specified in Schedule 12;
- (g) possess or sell turtle meat out of the shell, unless it has been certified by an authorised officer that it came from a turtle of legal size;
- (h) at any time, fish, possess, capture or destroy any female turtle as specified in Schedule 12.

Local Name	English Name	Scientific Name	Closed season
<i>Hingoa faka-Tonga</i>	<i>Hingoa faka- Pilitania</i>	<i>Hingoa faka- Saienisi</i>	<i>Vaha'a taimi tapui</i>
Fonu tangata	Male Turtle (all species except Leatherback turtle)		August, September, October, November, December, January, February
Fonu fefine	Female Turtle	-	All year
Fonu-leta	Leatherback	<i>Dermochelys coriacea</i>	All year

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Tonga, which lists as relevant Acts the National Spatial Planning and Management Act (2012), the Tourism Authority Act (2012), and the Parks and Reserves Act (1976).

PARTIALLY PROTECTED

Marine turtle eggs and nests, all female turtles, all male turtles with a CCL <45cm, and male and female leatherback turtles are protected year-round. In addition, all turtles are protected during the closed season. Turtle meat requires an authorisation, and the use of a spear gun is prohibited for turtle capture. According to these guidelines, the only legal turtle take allowed is of male turtles, which are not leatherbacks and have a CCL ≥45cm, from March to July.

Exceptions: XXX

Opportunities and Challenges

Numerous turtle monitoring programmes in the last decade hold the promise to establish solid baselines of marine turtle abundance, migratory routes and threats that can be used for the development of a national marine turtle conservation action plan. Whereas the legislation is clear, enforcement and awareness seem to be low, and the protection does not cover the most abundant turtle in Tonga – the hawksbill.

International and Regional Instruments

Tonga is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- PSMA
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.18. Tuvalu

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Tuvalu's marine environment is rich in diversity and coral cover, and it has a higher ratio of sea to land area than any other country (Morris and Mackay, 2008, in Rudrud, 2010). The main marine turtle nesting area is in the Funafuti Conservation Area on the western side of Tuvalu (Bowen, 2020, in Pilcher, 2021a).

Historically, turtles were consumed only by men and were taboo for everyone except for kings and priests (Geermans, 1993). They later became an important part of family events (Geermans, 1993). Some traditional Tuvaluan songs exist that commemorate the abundance of turtles on some of the islands, such as Nukufetau (Anon, 2008, in Aylesworth, 2009), but it was reported that the number of turtles sighted and harvested has declined rapidly (Alefaio et al., 2006, in Maison et al., 2010).

Tuvalu is a low-lying island nation threatened by climate change and rising sea levels. These also threaten turtle nesting beaches, which run the risk to become inundated, destroying turtle nests, and eventually disappear (Fainu, 2023). Coastal erosion in Tonga and Tuvalu has been reported as a major problem for turtle nesting.

In 2007, SPREP began to develop a marine turtle conservation-monitoring program in Tuvalu to increase awareness on the threats marine turtles are facing. Most turtle activity takes place in the outer islands, which are most difficult to reach (Aylesworth, 2009). The programme hopes to address research and monitoring of marine turtle populations, data on interaction and harvesting, inadequate practices and marine turtle management regimes and lack of information exchange (Matagi Tonga, 2007, in Aylesworth, 2009). Currently there is no national programme to assess trends of nesting populations and turtle catches in Tuvalu (Aylesworth, 2009).

Presence and Nesting of Marine Turtle Species in the Country

There are three marine turtle species found in Tuvalu's waters: the green, hawksbill, and leatherback turtle (Aylesworth, 2009). Only the green turtle also nests in the country.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from Tuvalu. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X		X?	X		

*nesting

National Laws

In Tuvalu, the [Wildlife Conservation Act \(1975\)](#), as [amended in 2008](#), prohibits any person to hunt, kill or capture any wild turtle on land, except under and in accordance with the terms of a valid written licence granted to that person by the Minister under this Section (Art.7). Further, it is prohibited to take or wilfully destroy, break or damage the eggs or nest of a fully protected bird or other animal (Art.6).

The [Fisheries Act \(2008\)](#), as [amended in 2017](#), prohibits any person to engage in fishing for, land, display for sale, deal in, transport, receive, possess or buy or sell a fish proclaimed as

protected (Art.11), or any fish product therefrom, with “turtles and their eggs” specifically included under the term “fish”. The Act further prohibits the trade in illegal fish, fish products, or other marine resources (Art.64).

An additional relevant piece of legislation is the [Conservation Areas Act \(1999\)](#), which lists under Art.14 – Offences that no person shall hunt, kill or capture any turtle, bird or fish in conservation areas designated under this Act.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Tuvalu, and, in 2010, a [Review of Marine Turtle Legislation](#). In addition to the legislation mentioned above, the latter review includes the [Environment Protection Act \(2008\)](#), as amended by the [Climate Change Resilience Act \(2019\)](#).

It also adds information regarding the local customary practices: each island may develop its own rules and procedures concerning marine turtle harvesting. The island of [Nukulaelae](#) passed a traditional rule that no one is allowed to take any egg from no-take zone beaches, nor harvest any nester on these nesting sites. The no-take zone beaches usually rotate throughout the year. It is further encouraged that juvenile turtles (*keakea*) of < 70cm CLL must not be harvested. On [Nui](#) Island, the Meang Islet (biggest islet) was declared as a no-take zone for turtles and turtle eggs, and the harvesting of juvenile turtles was discouraged. [Nanumea](#) Island also declared their biggest islet (Lakena) as a no-take zone for turtles and turtle eggs, and discouraged harvesting juvenile turtles and mature turtles within their conservation boundaries. [Funafuti](#) Island declared their Conservation Area as no take zone and discouraged harvesting within the conservation area.

PARTIALLY PROTECTED

Any person is prohibited to hunt, kill or capture any wild turtle on land, or to take or wilfully destroy, break or damage the eggs or nest of a fully protected bird or other animal (Art.6).

The Fisheries Act (2008), as amended in 2017, prohibits any person to engage in fishing for, land, display for sale, deal in, transport, receive, possess or buy or sell a fish proclaimed as protected (Art.11), or any fish product therefrom, with “turtles and their eggs” specifically included under the term “fish”. The Act further prohibits the trade in illegal fish, fish products, or other marine resources (Art.64).

Each island may develop its own rules and procedures concerning marine turtle harvesting:

- [Nukulaelae](#): passed a traditional rule that no one is allowed to take any egg from no-take zone beaches, nor harvest any nester on these nesting sites. The no-take zone beaches usually rotate throughout the year. It is further encouraged that juvenile turtles (*keakea*) of < 70cm CLL must not be harvested.
- [Nui](#) Island: Meang Islet (biggest islet) was declared as a no-take zone for turtles and turtle eggs, and the harvesting of juvenile turtles was discouraged.
- [Nanumea](#) Island also declared their biggest islet (Lakena) as a no-take zone for turtles and turtle eggs, and discouraged harvesting juvenile turtles and mature turtles within their conservation boundaries.
- [Funafuti](#) Island: declared their Conservation Area as no take zone and discouraged harvesting within the conservation area.

Exceptions: XXX

Opportunities and Challenges

The SPREP review found that legislation that covers biodiversity conservation is quite heterogeneous, with some laws being outdated. Monitoring programmes that were initiated can help establish robust baselines for marine turtle conservation. XXX

International and Regional Instruments

Tuvalu is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- RFMOs (WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.19. United Kingdom – British Overseas Territories

Pitcairn Islands

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Pitcairn’s waters are considered some of the clearest in the world, with visibility reaching up to 75m (Pitcairn Environment Group, n.d.). After stunning underwater expeditions to the Pitcairn Islands in 2012, the British Government established the largest marine reserve worldwide around the Pitcairn Islands in 2015, which covers an area of over 800,000km² (Pitcairn Islands Tourism, n.d.).

The ocean surrounding the islands supports 38 globally threatened species, which includes green and hawksbill turtles (Pitcairn Environment Group, n.d.). A small number of green turtles have been known to nest on Henderson Island’s East Beach, with the breeding season mostly from January-March (Pitcairn Environment Group, n.d.; stamps.gov.pn, n.d.). In 1988, Henderson Island was designated a World Heritage Site by UNESCO.

Presence and Nesting of Marine Turtle Species in the Country

There are two species of marine turtles found in the Pitcairn Islands, the green and the hawksbill turtle, with rare nesting of green turtles on Henderson Island.

Currently, there is limited or no available data on the migratory connectivity of marine turtles from the Pitcairn Islands. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp’s Ridley turtle
X (n*)	X					

*nesting

National Laws

The protection of threatened species was already integrated into local management plans early on: the [Henderson Island Management Plan 2004-2009](#) stated as one of its objectives “[t]o protect the intact status of the island’s geology, ecology and of its component flora and fauna - in particular threatened and endemic species, thus conserving the genetic differences between island populations, and the unique genetic contribution of Henderson Island to global diversity” (stamps.gov.pn, n.d.).

In October 2021, the [Pitcairn Islands Marine Protected Area Management Plan 2021 to 2026](#) was published, which, amongst others, lists the local legislation that offers protection to species and habitats.

The Pitcairn Islands [Marine Protected Area Ordinance 2016](#), as amended in 2017, established the Coastal Conservation Areas, defines the boundary of the MPA, sets out the regulated and prohibited activities within the MPA, and the relevant penalties, offences and enforcement. The Ordinance provides a framework for granting permits for regulated activities, and prohibits the following activities within the MPA via the Marine Conservation Regulations, among others the “killing, taking, hunting capturing or harassing [of] any protected migratory species listed in Annex I and II of the Convention on Conservation of Migratory Species or any other wild seabird, including its eggs, without written authority of the Marine Environment Committee”.

In 2022, the Marine Conservation Ordinance was issued, which regulates...

The Endangered Species Protection Ordinance (2004) provides for the protection of endemic, endangered, and indigenous fauna and flora and makes provision for the control in trade of threatened species in accordance with CITES. The Ordinance also enables the Governor to prohibit the taking, damaging or killing of any specific plant or animal.

PARTIALLY PROTECTED?

?

Exceptions: XXX

Opportunities and Challenges

International and Regional Instruments

The United Kingdom of Great Britain and Northern Ireland is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (CCAMLR, CCSBT (EU), CECAF (EU), GFCM (EU), ICCAT, IATTC (EU), IOTC, NAFO, NASCO, NEAFC, NPFC (EU), SIOFA (EU), SPRFMO (EU), WCPFC (EU), WECAFC)
- UNCLOS

CITES, CMS and the Ramsar Convention [have been extended to the Pitcairn Islands.](#)

Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking/using for traditional purposes where a permit IS NOT required	Taking/using for traditional purposes where a permit IS required	Taking for research/educational purposes where a permit IS NOT required	Taking for research/educational purposes where a permit IS required	A National Conservation Action Plan for Marine Turtles is in place*
Pitcairn Marine Conservation Regulations 2022	X	X	X	X	X	X	X	X	X	X	X	
Pitcairn Endangered Species Ordinance 2004	X	X	X	X	X	X	X	X	X	X	X	
Pitcairn Island Marine Protected Area Ordinance 2016	X	X	X	X	X	X	X	X				
Marine Protected Area Management Plan 2022												X

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Spearing	Hook & Line	Trawl Nets	Gill nets	Purse seine	Draft nets	Other relevant fishing gear

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, but no guidelines in place	Release when accidentally caught and is alive, according to published handling practices	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Report to relevant authorities only if turtle is tagged	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	External observers required on (some) fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published*
All taking of turtles is banned - only artisanal fishing allowed in MPA	X										
										X	

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed	Turtle eggs can be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required
Pitcairn Endangered Species Protection Ordinance (2004)	X	
Pitcairn Marine Conservation Ordinance (2022)	X	X
Pitcairn Marine Protected Area Ordinance (2016)	X	

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required	Guidelines for tourism best practices were developed and published*
Pitcairn Endangered Species Protection Ordinance (2022)	X	
Pitcairn Marine Protected Area Ordinance (2016)	X	
XXX		X

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles allowed, where a permit IS required	Export of turtles strictly prohibited	Export of turtle eggs allowed, where a permit IS required	Export of turtle eggs strictly prohibited	Export of any products derived from turtles allowed, where a permit IS required	Export of any products derived from turtles strictly prohibited
Pitcairn Endangered Species Protection Ordinance (2004)	X	X	X		X		X		X
Pitcairn Marine Conservation Ordinance (2022)	X	X	X	X	X	X	X	X	X

Pitcairn Marine Protected Area Ordinance (2016)	X	X	X						
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Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?
Pitcairn Endangered Species Ordinance (2004)	X	X	5	\$1,000,000 (= USD 614,321)
Pitcairn Marine Conservation Ordinance (2022)	X			
Pitcairn Marine Protected Area Ordinance (2016)	X		3	\$150,000 (= USD 92,148.10) ⁵⁵

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats
Pitcairn Marine Protected Area Ordinance (2016)	X	X	X

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:	Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	

⁵⁵ Currency exchange rate: 06 Dec 2023

DRAFT

British Indian Ocean Territory

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

The British Indian Ocean Territory (BIOT) is an archipelago of 58 islands that cover approximately 640,000 km² of ocean. Travel is restricted and requires a permit. The outer islands of the Chagos Archipelago, which is coterminous with the BIOT, are isolated and uninhabited and are an oasis for marine and island species. The BIOT comprises several strict nature reserves, and hosts one of the world's largest contiguous "no take" marine reserve, the Chagos Marine Protected Area, declared in 2010 (UK Government, n.d.). All extractive and commercial fishing activities are prohibited therein. The declaration of the "no take" area provided protection to about 1.5% of the total global area of near-surface coral reefs, and remains one of the largest marine protected areas in the world (Chagos Trust, n.d.).

Since the BIOT represents a nearly untouched pristine marine environment, researchers find a place like no other for scientific research, with several programmes ongoing. In addition, new environmental management techniques with significance to other protected areas around the world are being tested.

Presence and Nesting of Marine Turtle Species in the Country

In the archipelago, 800 different types of fish can be found, and more than 300 species of coral. There are two species of marine turtles found in the BIOT, the green turtle and the hawksbill turtle. Both species were heavily exploited over the past two centuries, but have been recovering in the Chagos Marine Reserve in recent years. Both species also nest on the islands: hawksbills are abundant on Diego Garcia and Peros Banhos, while green turtles nest in the Chagos Bank, Egmont Islands, and Diego Garcia (Chagos Trust, n.d.).

Satellite telemetry of post-nesting green turtles show that females nesting in Chagos migrate to distant foraging areas the Southwest Indian Ocean such as Kenya, Madagascar, Maldives, Mozambique, Seychelles, Somalia, and Tanzania (Hays et al., 2020).

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence							
Nesting							

National Laws

In 1970, the [Protection and Preservation of Wild Life Ordinance was issued, and most recently amended in 2020](#). It states that any island or part of an island can be declared a "Strict Nature Reserve" or "Special Reserve" by the Commissioner governing the archipelago. The Ordinance was further complemented by subsequent regulations: 1) the [Green Turtles Protection Regulations 1968, as amended most recently in 2020](#), 2) the [Strict Nature Reserve Regulations 1998, as amended in 2020](#), and 3) the [Wild Life Protection Regulations 2003, as amended in 2020](#), which make it an offence to kill, take or injure, or to attempt the same, a live animal (including marine animals), as well as to damage, destroy, or take the eggs of marine turtles or birds.

Other laws impacting the BIOT's natural resources are the Diego Garcia Conservation (Restricted Area) Ordinance (1994), which designated a large part of Diego Garcia as a restricted area, with part of the island also encompassing a large Ramsar site (FIELD and RSPB, 2013), the Prevention of Oil Pollution Ordinance (1994), the BIOT Waters (Regulation of Activities) Ordinance (1997), the Visitors and Visiting Vessels Ordinance (2006), and the Fisheries (Conservation and Management) Ordinance (2007) and its Fishing Regulations (1993).

A Biodiversity Action Plan for Hawksbill and Green Turtles was produced.

Another resource to consult, even though partially outdated, may be the 2013 [“An assessment of environmental protection frameworks in the UK Overseas Territories”](#), published by the , the Foundation for International Environmental Law and Development and the Royal Society for the Protection of Birds.

The BIOT Administration identified eleven conservation and environmental priorities, which will ensure the protection of this unique environment for the future:

- 1) Combating Illegal, Unregulated and Unreported fishing in BIOT
- 2) Managing the impact of Fish Aggregating Devices and Lost and Abandoned Fishing Gear
- 3) Ensuring that visiting vessels do not harm BIOT's unique environment
- 4) Eradicating invasive rats which threaten native seabird populations, and impact the delicate balance of BIOT's ecosystem
- 5) Sustainably managing the recreational fishing allowed in the Territory
- 6) Protecting BIOT from invasive flora and fauna
- 7) Ensuring the highest possible level of environmental protocols within the Territory
- 8) Developing new methods for managing waste and combating plastic pollution
- 9) Understanding and mitigating against the effects of global climate change where possible
- 10) Understanding more about BIOT's unique terrestrial environment
- 11) Studying our key species and habitats to ensure we are providing the best protection and stewardship (UK Government, n.d.)

A [guidance for visitors](#) has also been published, which lists offences and penalties, including for the “Collection of shells etc. killing or taking of wildlife etc.”.

FULLY PROTECTED (through marine turtle-specific legislation and Marine Turtle Recovery Plan)

It is an offence to kill, take or injure, or to attempt the same, a live animal (including marine animals), as well as to damage, destroy, or take the eggs of marine turtles or birds.

Exceptions: Scientific research (non-lethal), such as collection of genetic samples

Opportunities and Challenges

As per the 2013 study, the framework for species and habitats should be strengthened and a legal underpinning provided for the Marine Protected Area. The scientific projects taking place in the BIOT can offer some of the needed information and serves as external monitoring mechanisms to the species and habitats. Information from research expeditions is ensured to be shared, since £450 are held per person per expedition, which will only be refunded once the scientific report is shared. The undisturbed environment allows for species populations to recover and is a safe haven for marine species.

International and Regional Instruments

The United Kingdom of Great Britain and Northern Ireland is part to the following international legally and non-legally binding instruments and relevant bodies:

- CBD
- CITES
- CMS
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (CCAMLR, CCSBT (EU), CECAF (EU), GFCM (EU), ICCAT, IATTC (EU), IOTC, NAFO, NASCO, NEAFC, NPFC (EU), SIOFA (EU), SPRFMO (EU), WCPFC (EU), WECAFC)
- UNCLOS

CITES, CMS, IOSEA Marine Turtle MOU and the Ramsar Convention [have been extended to the BIOT.](#)

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Matrix Results

Harvest/Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970m CHAPTER E.13. (1) The Commissioner may make regulations for the protection or preservation of wild life. (2) Without prejudice to the generality of subsection (1), the Commissioner may make regulations to – (b) <i>prohibit or control the destruction or injury or taking possession or removal of any wild life;</i>	X		X	X	X	X	X
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.13. (1) The Commissioner may make regulations for the protection or preservation of wild life. (2) Without prejudice to the generality of subsection (1), the Commissioner may make regulations to – (d) <i>prohibit or control the taking, or destruction of or the tampering with any of the eggs, nest or habitat of any wild bird or any other wild animal, or any change or alteration in its environment;</i>	X	X				X	
THE GREEN TURTLES PROTECTION REGULATIONS 1968 CHAPTER E.1 3. <i>Save as otherwise provided in section 4 of the Ordinance, no person shall harpoon, kill, destroy or take possession of any turtle for any reason whatsoever.</i>	X		X	X	X	X	
THE WILDLIFE PROTECTION REGULATIONS 2003 CHAPTER E.5. 3. (1) Subject to section 4 of the Ordinance, it is an offence for any person to do any of the following – (b) <i>to take or be in possession of any live animal;</i>	X		X	X	X	X	

THE WILDLIFE PROTECTION REGULATIONS 2003 CHAPTER E.5. 3. (1) Subject to section 4 of the Ordinance, it is an offence for any person to do any of the following – (c) to take or be in possession of any dead animal:	X					X	
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Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.1. (1) The Commissioner may make regulations for the protection or preservation of wild life. (2) Without prejudice to the generality of subsection (1), the Commissioner may make regulations to – (c) prohibit or control the purchase, sale, exhibition, export or possession of any wild life either alive or dead or any part thereof either processed or not or of any product thereof;	X		X	X		X
THE PROHIBITED IMPORTS AND EXPORTS CONTROL ORDER 2022. S.I. No. 2 of 2022. Schedule 1, Prohibited Goods - Import '1. Any ballast, rock or other fill material which contains debris, roots, wood, scrap material, refuse, plant or animal material not originating in the Territory.'	X	X	X			
THE PROHIBITED IMPORTS AND EXPORTS CONTROL ORDER 2022. S.I. No. 2 of 2022. Schedule 1, Prohibited Goods - Import '2. Any goods or material of any description containing or consisting of any species of living plant, animal or insect not indigenous to the Territory.'	X	X	X			
THE PROHIBITED IMPORTS AND EXPORTS CONTROL ORDER 2022. S.I. No. 2 of 2022. Schedule 3, Prohibited Goods - Exports '1. Wild animals, whether alive or dead.'				X		
THE PROHIBITED IMPORTS AND EXPORTS CONTROL ORDER 2022. S.I. No. 2 of 2022. Schedule 3, Prohibited Goods - Exports '6. Turtles' eggs.'					X	
THE GREEN TURTLES PROTECTION REGULATIONS 1968 CHAPTER E.1 3. 4. Save as otherwise provided in section 4 of the Ordinance, no person shall purchase, sell, exhibit for sale, export or be in possession of any turtle, either alive or dead, or of turtle meat, of calipee and of other products of turtles.	X	X	X	X	X	X

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?	Use of community members as turtle rangers/guardians/monitors and governmental programs to support
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.1. (1) The Commissioner may make regulations for the protection or preservation of wild life. (2) Without prejudice to the generality of subsection (1), the Commissioner may make regulations to – (f) designate or appoint wardens or provide for their designation or appointment and prescribe the powers of such wardens;					X
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.1. (1) The Commissioner may make regulations for the protection or preservation of wild life. (2) Without prejudice to the generality of subsection (1), the Commissioner may make regulations to – (g) create offences and provide that contravention of and failure to comply with the regulations made under this section shall be an offence and provide for penalties for such offences, not exceeding a fine of £5,000 and imprisonment for one year and forfeiture of any wild life in connection with which any person has been convicted of an offence under the regulations.	X	X	1	£5,000 (= USD 6,308.25)	
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.1. (4) Any authorised officer may stop, search and detain any vehicle or vessel in or on which he has reason to suspect that there may be any thing in respect of which an offence under regulations made under this section has been or is being committed.	X				X
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.1. (5) Any authorised officer may stop, search and detain any person whom he has reason to suspect of having in his possession any thing in respect of which an offence under regulations made under this section has been or is being committed	X				X
THE PROTECTION AND PRESERVATION OF WILD LIFE ORDINANCE 1970 CHAPTER E.1. (8) When any person is convicted of an offence under regulations made under this section, the court by which he is convicted may, subject to subsection (10), order that any vessel, together with any equipment or goods on board it (or such of them as the order may specify) that is then being detained under subsection (6) shall	X	X			X

<i>continue to be detained until any fine that has been imposed on that person under this section has been satisfied or until a court orders it to be earlier released</i>					
THE WILDLIFE PROTECTION REGULATIONS 2003 CHAPTER E.5. 3. (1) Subject to section 4 of the Ordinance, it is an offence for any person to do any of the following – Provided that it shall be a defence to a prosecution for being in possession of any dead coral that has been taken alive for the accused person to prove that it was not taken alive by him or with his consent or connivance or otherwise in circumstances arising from or involving his own unlawful act <i>(f) intentionally to destroy, damage or take any wild bird's egg or turtle's egg;</i>	X				X
THE WILDLIFE PROTECTION REGULATIONS 2003 CHAPTER E.5. (6) Any person who is convicted of an offence under this regulation is liable to imprisonment for not more than 6 months or to a fine not exceeding £5,000 or to both such imprisonment and such fine.	X	X	6 Months	£5,000 (= USD 6,308.25)	
THE WILDLIFE PROTECTION REGULATIONS 2003 CHAPTER E.5. (7) Without prejudice to any other powers vested in him in that behalf, a Police Officer may seize any thing that is or that might be protected by this regulation, that is to say – <i>(d) any wild bird's egg or turtle's egg;</i>	X				X
THE GREEN TURTLES PROTECTION REGULATIONS 1968 CHAPTER E.1 3. 5. Any person contravening the provisions of regulation 3 or regulation 4 of these regulations is guilty of an offence and is liable to a fine of £5,000 and to imprisonment for one year	X	X	1 Year	£5,000 (= USD 6,308.25)	
THE STRICT NATURE RESERVE REGULATIONS 1998 CHAPTER E.4. '(2) Any person who contravenes paragraph (1) commits an offence and is liable, on conviction, to a term of imprisonment not exceeding 6 months or to a fine not exceeding £5,000.'	X	X	6 Months	£5,000 (= USD 6,308.25) ⁵⁶	
THE TRADE IN ENDANGERED SPECIES (CONTROL) ORDINANCE 2007 CHAPTER E.6. 5. (2) For the purposes of this Ordinance, any Customs Officer and any Police Officer may – <i>(a) stop, board and search any ship, aircraft or vehicle if he has reason to suspect that there is therein anything liable to seizure;</i>	X				X
THE TRADE IN ENDANGERED SPECIES (CONTROL) ORDINANCE 2007 CHAPTER E.6. 5. (2) For the purposes of this Ordinance, any Customs Officer and any Police Officer may – <i>(b) stop and search any person and search the property of any person if he has reason to suspect that that person has in his possession anything liable to seizure; and</i>	X				X
THE TRADE IN ENDANGERED SPECIES (CONTROL) ORDINANCE 2007 CHAPTER E.6. 5. (2) For the purposes of this Ordinance, any Customs Officer and any Police Officer may – <i>(c) enter and search any premises, being premises on which he has reason to suspect that an imported living specimen is being held, for the purpose of ascertaining whether any condition to which the relevant importation licence is subject and which relates to the housing or care of that specimen is being complied with.</i>	X				X

⁵⁶ Currency exchange rate: 06 Dec 2023

<p>THE TRADE IN ENDANGERED SPECIES (CONTROL) ORDINANCE 2007 CHAPTER E.6. 5. 7. Where an offence under this Ordinance which has been committed by a body corporate is proved to have been committed with the consent or connivance of, or to be attributable to any neglect on the part of, a director, manager, secretary or other similar officer of the body corporate, or any person who was purporting to act in such capacity, he, as well as the body corporate, shall be guilty of that offence and shall be liable to be proceeded against and punished accordingly.</p>	X				
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Habitat Protection

<p>In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>Protection of nesting beaches</p>	<p>Protection of foraging grounds (seagrass beds, coral reefs, etc.)</p>	<p>Establishment of sanctuary encompassing marine turtle migratory routes and/or developmental habitats</p>
<p>THE STRICT NATURE RESERVE REGULATIONS 1998 CHAPTER E.4. '3. (1) Save under the authority of a written permission granted in accordance with section 4(1) of the Ordinance, no person shall – (a) enter, traverse, camp in or reside in a Strict Nature Reserve;'</p>	X	X	X
<p>THE STRICT NATURE RESERVE REGULATIONS 1998 CHAPTER E.4. '3. (1) Save under the authority of a written permission granted in accordance with section 4(1) of the Ordinance, no person shall – (c) engage in a Strict Nature Reserve in any of the following activities or undertakings, that is to say, any form of hunting or fishing; any undertaking connected with forestry; agriculture; any excavations, levelling of the ground or construction; any work involving the alteration of the configuration of the soil or the character of the vegetation; any act, of whatever kind, which pollutes any source of water or watercourse or sea area within the Reserve; or any act, of whatever kind, likely to harm or disturb the fauna or flora of the Reserve; or'</p>	X	X	X

Research

<p>In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:</p>	<p>Only non-lethal sampling of turtles for research allowed, where a permit IS required</p>	<p>Collection of genetic samples from marine turtles conducted, where a permit IS required</p>
<p>THE BRITISH INDIAN OCEAN TERRITORY WATERS (REGULATION OF ACTIVITIES) ORDINANCE 1997 CHAPTER E.5 Revised Edition. '(3) For the avoidance of doubt and despite anything in subsection (2) (other than paragraph (b) thereof, which excepts activities authorised under the Fisheries (Conservation and Management) Ordinance 2007), regulated activities includes any form of exploration or survey of, or research into, any aspect of the waters of the Territory or the seabed or subsoil beneath those waters or the living or non-living resources of those waters or of that seabed or subsoil, whether such exploration or survey or research is conducted for reward or in pursuit of scientific knowledge or for pleasure or for any other purpose whatever.'</p>	<p>X</p>	<p>X</p>

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4.5.20. United States of America – Territories in the Pacific

American Samoa

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

In the early 1990s, Craig (1993) still reported a widespread harvest of marine turtles for their meat and of turtle eggs for consumption, and warned of the decreasing population numbers. In 2003, American Samoa declared all its territorial seas to be turtle and whale sanctuaries, which implemented federal and local regulations, including the Endangered Species Act, that prohibit any harassment or take of marine turtles and marine mammals (NOAA, n.d.).

Threats to marine turtles include: sea level rise and coastal erosion, increased air and sea temperatures impacting nesting preference and next sex composition, coastal development, including light pollution and coastal armouring, incidental fisheries catch, and predation and poaching of eggs (EcoAdapt et al., 2016; NMFS and USFWS, 1998 in Pilcher, 2021a).















Since 2004, the Wildlife Division of the Department of Marine and Wildlife Resources in American Samoa has been implementing a [Marine Turtle Conservation Program](#) in cooperation with the NOAA Agency, including beach monitoring efforts at identified hawksbill nesting beaches at Ofu and Olosenga Islands, night time monitoring to identify post-nesting females for satellite tagging; expanding the geographic coverage of a population genetic studies, and providing educational outreach to the public to enhance support for and public awareness on turtle conservation in the Territory.

The primary green turtle nesting site is at Rose Atoll. Starting in 2012, NOAA and the US Fish and Wildlife Service, with assistance from Department of Marine and Wildlife Resources and National Park Service, have been performing nesting surveys at Rose Atoll (no surveys were performed in 2020 and 2021 due to the pandemic). The surveys encompass 4-6 days with a range of 2-80 females identified each year (Murakawa et al., n.d., unpublished data).

Presence and Nesting of Marine Turtle Species in the Country

There are five species of marine turtles in American Samoa's waters: whereas green and hawksbill turtles are quite common and nest on the islands, on Rose Atoll and the Tutuila and the Manu Island group, respectively, leatherbacks, loggerheads, and olive ridley turtles live further offshore (CMS, 2014b; Work et al., 2020, in SPREP, 2022a).

Likewise, genetic studies indicate that foraging green turtles in Fiji originate from nesting sites in American Samoa (Piovano et al. 2019). Satellite tracking show green turtles tagged in American Samoa migrating to French Polynesia and Fiji (Craig et al., 2004).

	Green turtle	Hawksbill turtle	Olive ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's ridley turtle
Presence							
Nesting							

National Laws

All marine turtle species are considered threatened, and are protected under the [Endangered Species Act of 1973](#). The Federal Listing Status of marine turtle species, as per the US Fish and Wildlife [Environmental Conservation Online System](#) is as follows:

- Green turtle: Endangered (Central South Pacific Ocean and Central West Pacific Ocean)
- Hawksbill turtle: Endangered (wherever found)
- Olive ridley turtle: Threatened (except populations on Pacific coast of Mexico)
- Loggerhead turtle: Endangered (North Pacific Ocean)
- Leatherback turtle: Endangered (wherever found)
- Kemp's ridley turtle: Endangered (wherever found)

The Department of Marine and Wildlife Resources is the agency with vested authority and responsibility for the enforcement of protected species regulations and for the conservation of protected species in American Samoa (Maison et al., 2010).

American Samoa published a [Marine Conservation Plan](#) in 2015, whose Objective 6 states: to manage and co-manage protected species, protected habitats, and protected areas. Another objective promoting an ecosystem approach in fisheries management also lists the project "Research on biology of marine turtles" and another calls for "Enforcement and surveillance capabilities especially for marine protected areas".

In addition, marine turtles in American Samoa are protected by the Fishing and Hunting Regulations for American Samoa (Department of Marine and Wildlife Resources, 1995), prohibiting the import, export, possession, transport, sale or trade of turtles or their parts and take, and carrying additional penalties for violations at the local government level. The Department of Marine and Wildlife Resources (Maison et al., 2010).

FULLY PROTECTED (through general wildlife legislation)

All marine turtle species are considered threatened, and are protected. The import, export, possession, transport, sale or trade of turtles or their parts and take are prohibited.

Exceptions: XXX

Opportunities and Challenges

XXX

International and Regional Instruments

American Samoa is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CITES
- IAC
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs
- SPREP
- UNCLOS

Matrix Results

Harvest, Direct Take

In relation to harvest/direct take of marine turtles and their derivatives, please list below any legislation/rule/statute (name, section, and summary) that regulates the following, and indicate with an 'X' each area of relevance:	Strictly no take of turtles, eggs, parts or derivatives of any kind (i.e. moratorium)	No egg taking	No direct take/purposeful capture and removal of turtles from the sea	No taking of turtles during nesting season	No taking of turtles during another closed season	No taking from within management area/protected area	No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.	Taking for research/educational purposes where a permit IS required
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles	X	X	X	X	X	X	X	
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program	X	X	X	X	X	X	X	
Endangered Species Act	X	X	X	X	X	X	X	
81 FR 20057 - ESA Listing	X	X	X	X	X	X	X	
50 CFR 17	X	X	X	X	X	X	X	X
50 CFR 223 - Sea Turtles	X	X	X	X	X	X	X	X
50 CFR 224 - Sea Turtles								

Bycatch I – Fishing Gear

In relation to marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the use of the following fishing gear with regard to bycatch, and indicate with an 'X' each area of relevance:	Trawl Nets	Gill nets	Purse seine	Other relevant fishing gear
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles				
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program				
Endangered Species Act 1973				
81 FR 20057 - ESA Listing				

50 CFR 17				
50 CFR 223 - Sea Turtles	X	X		
50 CFR 224 - Sea Turtles				
50 CFR 300- Incidental catch and tuna retention requirements.	X	X	X	
dip net				X

Bycatch II – Prevention

In relation to preventing marine turtle bycatch, please list below any legislation/rule/statute (name, section and summary) that regulates the following practices, and indicate with an 'X' each area of relevance:	Release when accidentally caught and is alive, according to published handling practices	Release when accidentally caught and is alive, with assessment of turtle status conducted and recorded before release	Report to relevant authorities	Use of turtle-friendly gear (turtle excluder devices (TEDs), circle hooks, etc.)	De-hooking gear on long-line fishing vessels	Recording and reporting of by-catch on fishing vessels	External observers required on (some) fishing vessels	Vessel tracking systems (VMS and/or AIS) required for fishing vessels	A turtle handling guide/ standard operating procedure is published *
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles			X						
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program			X						
Endangered Species Act 1973			X						
81 FR 20057 - ESA Listing									X
50 CFR 17 - Endangered and Threatened Wildlife and Plants									
50 CFR 223 - Sea Turtles	X		X	X					
50 CFR 224 - Sea Turtles			X						
50 CFR 300 - Incidental catch and tuna retention requirements.	X	X	X		X	X	X		X
50 CFR 665 - Sea Turtle Mitigation Measures	X				X	X	X	X	X
50 CFR 635 - Gear Operations and Deployment Restrictions	X			X	X				X

Captivity, excl. Tourism

In relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Keeping marine turtles in captivity strictly not allowed
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles	
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program	
Endangered Species Act 1973	X
81 FR 20057 - ESA Listing	
50 CFR 17 - Endangered and Threatened Wildlife and Plants	X
50 CFR 223 - Sea Turtles	
50 CFR 224 - Sea Turtles	

Tourism

In relation to keeping marine turtles for tourism purposes, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Turtle related tourism activities strictly not allowed
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles	X
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program	X
Endangered Species Act 1973	X
81 FR 20057 - ESA Listing	
50 CFR 17	X
50 CFR 223 - Sea Turtles	X
50 CFR 224 - Sea Turtles	

Trade

In relation to marine turtle trade, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices (e.g. legislation implementing CITES at the national level), and indicate with an 'X' each area of relevance:	Local sale of turtles strictly prohibited	Local sale of turtle eggs strictly prohibited	Local sale of any products derived from turtles strictly prohibited	Export of turtles strictly prohibited	Export of turtle eggs strictly prohibited	Export of any products derived from turtles strictly prohibited
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles	X	X	X	X	X	X
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program	X	X	X	X	X	X
Endangered Species Act 1973	X	X	X	X	X	X
81 FR 20057 - ESA Listing						
50 CFR 17						
50 CFR 223 - Sea Turtles						
50 CFR 224 - Sea Turtles						

Enforcement

In relation to enforcement of marine turtle protection, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	A national red list assessment of marine turtles has been done and is published, which follows IUCN Red List Criteria	Legislation prohibits harming marine turtles, which is enforced by law	Harming marine turtles is punishable by incarceration	What is the max. no. of years in prison for harming (e.g. killing) a marine turtle?	What is the max. fine to be paid for harming (e.g. killing) a marine turtle?
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles		X			
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program		X			
Endangered Species Act 1973	X Green turtle: 2016 Hawksbill turtle: 1970 Olive ridley turtle: 1978 Loggerhead turtle: 1978 Leatherback turtle: 1970	X	X	2 yrs	100,000

	Kemp's ridley turtle: 1970				
81 FR 20057 - ESA Listing				2 yrs	100,000
50 CFR 17 - Endangered and Threatened Wildlife and Plants		X	X	2yrs	100,000
50 CFR 223 - Sea Turtles		X	X	2 yrs	
50 CFR 224 - Sea Turtles		X	X	2 yrs	
50 CFR 300 - Incidental catch and tuna retention requirements.		X	X	2yrs	100,000
50 CFR 665 - Sea Turtle Mitigation Measures		X	X	2 yrs	100,000

Habitat Protection

In relation to habitat protection of marine turtles, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Protection of nesting beaches	Protection of foraging grounds (seagrass beds, coral reefs, etc.)	Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*	Nesting beaches and foraging grounds considered in coastal development plans and EIAs*
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles				
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program				
Endangered Species Act 1973	X	X	X	X
81 FR 20057 - ESA Listing				
50 CFR 17 - Endangered and Threatened Wildlife and Plants				
50 CFR 223 - Sea Turtles				
50 CFR 224 - Sea Turtles				
50 CFR 300.27 - Incidental catch and tuna retention requirements.				
50 CFR 665 - Sea Turtle Mitigation Measures				
50 CFR 300 - Observers				

Research

In relation to marine turtle research, please list below any legislation/rule/statute (name, section and summary) that regulate the following practices, and indicate with an 'X' each area of relevance:	Only non-lethal sampling of turtles for research allowed, where a permit IS required	Exceptions for when lethal sampling is allowed:	Collection of genetic samples from marine turtles conducted, where a permit IS required
		Parts and samples from turtles legally harvested or stranded dead can be used for research	
ASCA 2020, Title 24, Section 24.0959 - Sea Turtles	X		X
ASCA 2020, Title 24, Section 24.1027 - Community Based Fisheries Management Program	X		X
Endangered Species Act 1973	X	X	X
81 FR 20057 - ESA Listing			
50 CFR 17 - Endangered and Threatened Wildlife and Plants	X	X	X
50 CFR 223 - Sea Turtles			
50 CFR 224 - Sea Turtles			
50 CFR 300 - Incidental catch and tuna retention requirements.			
50 CFR 665 - Sea Turtle Mitigation Measures			

Commonwealth of the Northern Mariana Islands

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles have played an important historic role in the Chamorro culture and diet. Turtles were eaten at feasts, such as weddings, funerals and others, where eggs and meat were served as delicacies (Wusstig and Cayanan, 2021). Chamorro people also crafted tools out of turtle bones, and jewelry out of turtle shell, such as bracelets, pendants, and necklaces (Wusstig and Cayanan, 2021), and seem to have used shell money (McCoy, 1997).

In 1981, the Fish, Game and Endangered Species Act (PL 2-51) of the CNMI was passed and green and hawksbill turtles were given full legal protection at the local and Federal levels. Still, NOAA Fisheries (2018) report that least one third of the female turtles nesting in the CNMI has been taken in the last decade, which decreased the population growth rate. Other turtle predators include crabs, rodents, monitor lizards, stray cats, and dogs, among others. Additional threats are habitat loss and beach erosion, the use of vehicles on the beach, compacting the sand and leaving unsurmountable tire tracks, and litter on the shore, which may get worked into the nest by the nesting turtle (Wusstig and Cayanan, 2021).

The CNMI Division of Fish and Wildlife has monitored nesting activity on the island of Saipan since 1999 and has documented four to eighteen nests laid per year (DFW, unpublished annual reports to PIRO, in Maison et al., 2010). In 2009, several of these nests and of the turtles seem to have been harvested, however, which is of major concern, seeing the low number of marine turtle nests (DFW, 2009, in Maison et al., 2010).

Since 2004, the Department of Land and Natural Resources implements a [Marine Turtle Project](#), which consists of nearshore marine capture-mark-recapture and nesting beach monitoring activities on the islands of Saipan, Tinian and Rota. Its objectives are to 1) build local capacity to implement and manage and standardized monitoring and research activities; 2) establish long-term monitoring at index sites to advance demographic information for population assessments; and 3) promote conservation and management efforts (NOAA Fisheries, 2022). The project's objective is further to facilitate and encourage the CNMI territory government and local partners to draft a locally-relevant marine turtle conservation and management plan, which may receive full programmatic support for the protected species program if applied for Endangered Species Act Section 6 funding (NOAA Fisheries, 2022).

These activities are complemented by [satellite-tagging](#) of turtles (WWF, 2011b), awareness raising through a [Facebook Sea Turtle Program](#) page,

Presence and Nesting of Marine Turtle Species in the Country

The CNMI is home to two species of marine turtles: the green and the hawksbill turtle. Only green turtles nest on the islands.

Satellite telemetry of post-nesting green turtles show that they migrate to the Philippines and Japan. Genetic studies suggest that a small portion of green turtles foraging in Japan originate from CNMI (Hamabata et al. 2018, Hamabata et al. 2023, Nishizawa et al. 2013).

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X					

*nesting

National Laws

Marine turtles in CNMI are protected by the [Fish, Game and Endangered Species Act \(PL 2-51\) \(1981\)](#), which establishes the Fish and Wildlife Division of the Department of Natural Resources, whose Director shall determine whether any species shall be designated as threatened or endangered (Maison et al., 2010). Moreover, green and hawksbill turtles are listed as protected species in § 85-30.1-101 of [Title 85: Department of Lands and Natural Resources](#), and may not be harvested, captured, harassed or propagated except under the terms of a special permit issued by the Director for scientific purposes, or for propagation in captivity for the purpose of preservation.

In addition to the Fish, Game and Endangered Species Act of CNMI, marine turtles are protected under the [Federal Endangered Species Act \(ESA\) \(1973\)](#). Threatened species are listed in the US Fish and Wildlife's [Environmental Conservation Online System](#), which includes all marine turtle species, except the flatback turtle. This therefore also includes a ban on the buying, selling, or transporting of marine turtles or any part of the turtles including eggs, shell, shell jewellery, and meat (Wusstig and Cayanan, 2021). The ESA also authorizes the designation of critical habitat within the U.S. territory and waters and permits non-federal activities and scientific research (UNEP et al., 2022). Regulations specify mitigation resuscitation, and prohibitions for all commercial fishermen for incidentally caught marine turtles (UNEP et al., 2022). In addition, specific regulations were put in place to increase survivorship in longline, gillnets, and purse seine fisheries, and to reduce sea turtle interactions throughout the country (UNEP et al., 2022).

Another relevant law is the [Fair Fishing Act \(2000\)](#), which prohibits the use of non-traditional fishing methods in the CNMI, such as explosives or breathing assistance devices.

The CNMI published a [Wildlife Action Plan for the Commonwealth of the Northern Mariana Islands \(2015-2025\)](#) in 2015, in which both the green and the hawksbill turtle were identified among marine species of greatest conservation need. The threat level was assessed as high for nesting green turtles, medium for foraging green turtles and low for hawksbill turtles. Specific actions are identified per island, including for marine turtle protection, such as to map and quantify the extent of marine turtle foraging habitat in Rota, Tinian, and Saipan. The 10-year objective for green turtles is to maintain the sustainability of all nesting beaches, reduce poaching incidents by 50%, and to maintain extent and quality of foraging habitats. For the hawksbill turtle, that objective is to maintain extent and quality of foraging habitats.

FULLY PROTECTED (through general wildlife legislation)

Green and hawksbill turtles are listed as protected species and may not be harvested, captured, harassed or propagated. There is also a ban on the buying, selling, or transporting of marine turtles or any part of the turtles including eggs, shell, shell jewellery, and meat.

Exceptions: Scientific purposes, for propagation in captivity for the purpose of preservation.

Opportunities and Challenges

The legislative framework in the CNMI seems strong and the Wildlife Action Plan sets clear objectives and priority actions for marine turtle conservation. Turtle monitoring activities have been ongoing for almost two decades, which produces a stable baseline for conservation management decisions. Awareness raising is another important cornerstone for effective marine turtle protection, which was achieved through the award-winning short film [“My Haggan Dream”](#), recounting the story of a girl learning about marine turtles in the CNMI. In 2023, the Federal government [proposed 180 acres in the CNMI as green turtle habitat](#), with consultations on-going (Pacific Daily News, 2023).

XXX

International and Regional Instruments

The CNMI is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CITES
- IAC
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- SPREP

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

Guam

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

Marine turtles have played an important historic role in the Chamorro culture and diet. Turtles were eaten at feasts, such as weddings, funerals and others, where eggs and meat were served as delicacies (Wusstig and Cayanan, 2021). Chamorro people also crafted tools out of turtle bones, and jewellery out of turtle shell, such as bracelets, pendants, and necklaces (Wusstig and Cayanan, 2021). After a decline in marine turtle population numbers, an eight-fold increase in marine turtles observed on Guam's reefs in the last five decades was reported (Martin et al., 2016).

In 1979, the Endangered Species Act of Guam was passed and green turtles were given full legal protection at the local and Federal levels. Today's turtle predators include crabs, rodents, monitor lizards, stray cats, and dogs, among others. Additional threats are habitat loss and beach erosion, the use of vehicles on the beach, compacting the sand and leaving unsurmountable tire tracks, and litter on the shore, which may get worked into the nest by the nesting turtle (Wusstig and Cayanan, 2021). In 1999, the Guam Department of Agriculture Division of Aquatic and Wildlife Resources (DAWR) initiated a marine turtle program, with the primary objectives to collect population data and monitor nesting activity (Maison et al., 2010). One aspect of DAWR's Guam Sea Turtle Recovery Program occurs in collaboration with the National Oceanic Atmospheric Administration and the United States Navy, which includes [tracking marine turtles via satellite tags](#) (Kaur, 2019; Wusstig and Cayanan, 2021). One turtle was tracked swimming to the Sulu Archipelago, Philippines, to an area called the Turtle Islands, which are important feeding areas for green turtles. Another aspect of the program is the volunteer Haggan Watch program, which was created in 2005 to enhance successful nesting events and to minimize the threats to marine turtles by having volunteers sit on the beach and thus protect the turtles as they nest, and patrol different beaches around the island looking for signs of sea turtle nesting (Wusstig and Cayanan, 2021).

Presence and Nesting of Marine Turtle Species in the Country

Guam is home to the green turtle, which is the most common species, and the hawksbill turtle. Both species were reported to nest in Guam.

Limited information is available on connectivity between turtles in Guam but likely to be very similar to CNMI, with connectivity to the Philippines. Further research and data collection are essential to understand the migratory patterns and genetic origins of these populations.

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp's Ridley turtle
X (n*)	X (n?)			X?		

*nesting

National Laws

The [Endangered Species Act of Guam \(1979\)](#) gave turtles full legal protection at the local and Federal levels. It states that it is illegal to import or export threatened or endangered species, take a species, which means to cut, collect, uproot, destroy, injure or possess, threatened or endangered species of plants, or attempt to engage in any such conduct or to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, snare or collect threatened or endangered species of wildlife. It is further prohibited to process, sell or offer for sale, deliver, carry, transport or ship, by any means whatsoever, any such species. The Act adopts the same definitions and status designations as the federal ESA (see below) and carries additional penalties for violations at the local government level (Wusstig and Cayanan, 2021).

In addition to the ESA of Guam, marine turtles are protected under the [Federal Endangered Species Act \(1973\)](#). Threatened species are listed in the US Fish and Wildlife's [Environmental Conservation Online System](#), which includes all marine turtle species, except the flatback turtle. This therefore also includes a ban on the buying, selling, or transporting of sea turtles or any part of the turtles including eggs, shell, shell jewelry, and meat (Wusstig and Cayanan, 2021). The ESA also authorizes the designation of critical habitat within the U.S. territory and waters and permits non-federal activities and scientific research (UNEP et al., 2022). Regulations specify mitigation resuscitation, and prohibitions for all commercial fishermen for incidentally caught marine turtles(UNEP et al., 2022). In addition, specific regulations were put in place to increase survivorship in longline, gillnets, and purse seine fisheries, and to reduce sea turtle interactions throughout the country (UNEP et al., 2022).

Other relevant legislation are the [Guam Coastal Management Plan](#), implemented through the Coastal Zone Management Act (1972), as [amended in 2005](#), which guides the protection, use, and development of ocean and land resources within Guam's coastal zone, which includes all non-Federal property and all submerged lands and waters out to 3 nm (5.6 km) from the shoreline (Wusstig and Cayanan, 2021).

FULLY PROTECTED (through general wildlife legislation)

Marine turtles have full legal protection at the local and Federal levels. It is illegal to import or export threatened or endangered species, which marine turtles belong to, take a species, which means to cut, collect, uproot, destroy, injure or possess, threatened or endangered species of plants, or attempt to engage in any such conduct or to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, snare or collect threatened or endangered species of wildlife. It is further prohibited to process, sell or offer for sale, deliver, carry, transport or ship, by any means whatsoever, any such species. There is also a ban on the buying, selling, or transporting of marine turtles or any part of the turtles including eggs, shell, shell jewelry, and meat.

Exceptions: XXX

Opportunities and Challenges

The legislative framework in Guam seems strong and several programs and volunteer initiatives for marine turtle protection are on-going. This could be further strengthened by a Marine Turtle Conservation Action Plan for Guam, laying out the objectives and activities to safeguard marine turtles for the next 10 years. In 2023, the Federal government [proposed 125 acres on Guam as green turtle habitat](#), with consultations on-going (Pacific Daily News, 2023).
XXX

International and Regional Instruments

Guam is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CITES
- IAC
- IOSEA Marine Turtle MOU
- London Declaration (IWT)
- PSMA
- Ramsar Convention
- RFMOs (XXX)
- SPREP
- UNCLOS

[add results from Matrix]

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

4.5.21. Vanuatu

Country Profile and Matrix not approved, yet

Marine Turtle History and Status

For most of Vanuatu’s cultural groups, marine turtles have a high cultural value, and feature prominently in many traditional stories. Turtles have also been part of the indigenous diet for over 3,000 years, which was confirmed by archaeological records (SPREP, 2022b). However, hunting was done using traditional management strategies, minimizing the impact on turtles and their eggs: One example tells of the ban to work in one’s yam garden after having eaten turtles or their eggs, with yam being a high-status crop grown during turtle nesting season, which therefore reduced the hunting of nesting turtles (SPREP, 2022b).

Since green turtles and their eggs are commonly harvested in Vanuatu, but these management systems have become obsolete, there was a momentum in the early 2000s to revive these traditional management systems to regulate community-based harvest of turtles (Hickey, 2007, in Maison et al., 2010). In addition to direct harvest, other major threats to marine turtles in Vanuatu as identified by Maison et al. (2010) include wave inundation, beach erosion, and nest predation by dogs. Hatchlings were also reported to be sold to tourism programmes in a recently published report (Hickey et al., 2023).

Recently, a national review was launched in Vanuatu, to determine the current state of marine turtle conservation and management (SPREP, 2022b). This is a key activity of the By-catch and Integrated Ecosystem Management Initiative that is implemented by SPREP via the Pacific-European Union Marine Partnership programme, in collaboration with Vanuatu government agencies and community partners (SPREP, 2022b). This includes the monitoring of marine turtle nesting activities by community members (Daily Post, 2022). In addition, the Vanuatu Fisheries Department has recently begun training community members to monitor fisheries violations at the village level, including for turtle related offenses (UNEP et al., 2022).

The [Vanua-tai Resource Monitors Network](#), which is a program of local NGO that consists of hundreds of environmental stewards active in their communities across the archipelago, also supports a turtle tagging programme to assist in tracking turtle nesting, migrations, and to study regional connectivity.

Presence and Nesting of Marine Turtle Species in the Country

Vanuatu is home to five species of marine turtles: the green, hawksbill and leatherback turtles are the three most common species found in Vanuatu and also nest in the country (SPREP, 2022b). Olive ridley and loggerhead turtles are found in foraging areas in the waters surrounding the island nation, but there are no records of nesting for these species.

Satellite telemetry work and tagging have shown that many hawksbills nesting in Vanuatu use distant foraging areas, such as New South Wales, Australia, Great Barrier Reef, Australia, New Caledonia distant islands within Vanuatu Rice (Hickey, 2021, and Rice et al., 2021, in WWF, 2022). [more on connectivity to be added for other species]

Green turtle	Hawksbill turtle	Olive Ridley turtle	Loggerhead turtle	Leatherback turtle	Flatback turtle	Kemp’s Ridley turtle
X (n*)	X (n)	X	X (n?)	X (n)		

*nesting

National Laws

The [Fisheries Regulations \(2009\)](#) under the [Vanuatu Fisheries Act \(2005\)](#), as [amended in 2014](#) and [in 2019](#), contain conservation measures for certain fisheries, including for marine turtles (Art.59): a person must not take, kill, have in his or her possession, export, sell or purchase any or all of the following turtle species or shells of these species: leatherback turtles, hawksbill turtles, and green turtles. It is equally prohibited to disturb or interfere with a turtle nest or a nesting turtle, harm or kill a turtle with a weapon (hatchlings, juveniles, adults), consume, sell, possess, among others, turtle eggs, and it is prohibited to hold a marine turtle in captivity. Exemptions may be granted for customary practices or educational or research purposes.

The Fisheries Act (2014 amendment) includes a provision to establish the Vanuatu Observer Programme on vessels, to collect, record, and report, i.a. the species, quantity, size, age, and condition of fish taken including by-catch, with special reference to protected or vulnerable species including sharks, turtles, seabirds and marine mammals. It also enables the Minister to make regulations prescribing measures for the protection of, among others, turtles.

Vanuatu's obligations under CITES are implemented by the [International Trade \(Fauna and Flora\) Act \(1989\)](#) and the [International Trade \(Flora and Fauna\) Regulations \(1991\)](#).

In 2015, Vanuatu published a "[National Plan of Action on Sea Turtles \(NPOA Turtles\) 2016–2022](#)", which includes seven Policy Goals: 1) Strengthen monitoring and data collection by large offshore commercial vessels; 2) Decrease mortality and incidental catches from large offshore commercial vessels; 3) Strengthen monitoring and data collection within coastal waters; 4) Exemption on turtle consumption for cultural practices, education, research and tourism; 5) Cooperation in sea turtle conservation; 6) Improve awareness, education, and outreach on sea turtles; and 7) Research and training.

In 2018, the SPREP conducted a [Review of Natural Resource and Environment Related Legislation](#) in Vanuatu, which also lists the [Environmental Protection and Conservation Act \(2002\)](#), and the [National Parks Act \(1993\)](#).

PARTIALLY PROTECTED

a person must not take, kill, have in his or her possession, export, sell or purchase any or all of the following turtle species or shells of these species: leatherback turtles, hawksbill turtles, and green turtles. It is equally prohibited to disturb or interfere with a turtle nest or a nesting turtle, harm or kill a turtle with a weapon (hatchlings, juveniles, adults), consume, sell, possess, among others, turtle eggs, and it is prohibited to hold a marine turtle in captivity.

Exceptions: Customary practices; educational or research purposes

Opportunities and Challenges

In mid-2023, the report [Review of the Management and Conservation of Sea Turtles in Vanuatu](#) was published. It provides key recommendations to help strengthen Vanuatu's efforts in managing and conserving the five species of sea turtle that feed and nest in the country's coastal and marine environments (SPREP, 2023). The findings summarize the status of marine turtles in Vanuatu, and highlight the impacts of offshore fisheries by-catch, traditional harvesting, inappropriate tourism activities, and others on marine turtles in Vanuatu (SPREP, 2023).

The report also provides seven high-level priority recommendations, proposed together with suggested actions, to improve the sustainable conservation and management of marine turtles in Vanuatu, among others to strengthen existing and developing new policy and legislative frameworks to prohibit the harvesting of Critically Endangered marine turtle species

(leatherback and hawksbill) (SPREP, 2023). Other activities the report suggests to overcome current challenges are to build community awareness of best-practice guidelines for wildlife tourism encounters; and extend marine turtle by-catch mitigation in fisheries to include nearshore fisheries.

International and Regional Instruments

Vanuatu is part to the following international legally and non-legally binding instruments and relevant bodies (UNEP et al., 2022):

- CBD
- CITES
- PSMA
- Ramsar Convention
- RFMOs (IATTC, NPFC, SPRFMO, WCPFC)
- SPREP
- UNCLOS

[add results from Matrix]

DRAFT

Matrix Results

Harvest, Direct Take

Permitted Fishing Gear

Bycatch I – Fishing Gear

Bycatch II – Prevention

Captivity, excl. Tourism

Tourism

Trade

Enforcement

Habitat Protection

Research

DRAFT

5. Analysis

The analysis of marine turtle protection legislation is based on 1) the results obtained through country responses in the distributed Matrix, and 2) the desk research conducted, which includes also those countries that did not provide a response and/or only a review of the Country Profile.

5.1. Matrix Results

The Matrix was divided into 11 sheets, asking questions in different relevant categories to better understand the legislation in place and which aspects it regulates. As stated in the Methodology chapter above, it is imperative that the results of the Matrix are not understood as responses to the question “what conservation measure is in place”, but rather “what conservation measure is regulated by any legislation, rule, or statute”. These can differ, as informal customs or habits may e.g. regulate the release of turtles, but, if done in the wrong manner, there may be no legal provision under which this method could be disputed in court.

The results for each category are first given by geographic region, based on the UN Statistics Division’s geographic division, which are then followed by a brief summary encompassing the results for the entire category. In total, Matrix responses from 16 countries and five territories were received, which are all used for this analysis, however, are in different stages of approval (see Methodology chapter). In total, 4/10 (40%) countries responded in Southeast Asia, 2/4 (50%) countries responded in East Asia, 3/5 (60%) countries responded in South Asia, 4/8 (50%) countries responded in Western Asia, and 8/26 (31%) countries (18) and territories (8) responded in the Pacific/Oceania. Some of the graphs contain an orange-shaded background, which encompasses those selected statements/activities that may be a challenge for sustained marine turtle conservation. The results of this preliminary assessment are presented in the following.

5.1.1. Harvest/Direct Take

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to the harvest/direct take of marine turtles and their derivatives, listing 23 statements to choose from and to match the corresponding legislation (name, section, and summary).

The *strictly no take* column encompasses the following six columns, as “sub-categories” of a strict no-take policy: No egg taking; No direct take/ purposeful capture and removal of turtles from the sea; No taking of turtles during nesting season; No taking of turtles during another closed season; No taking from within management area/protected area; and No taking allowed in certain zones outside protected areas e.g. local sanctuaries, territorial seas, EEZs, etc.

Southeast Asia (n=4)

One country, Singapore, selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. Malaysia and Myanmar also selected *strictly no take*, but only selected some of the following statements, mostly *no egg taking* and *no direct take/purposeful capture and removal of turtles from the sea*.

Taking/using for traditional purposes where a permit IS NOT required is only allowed in Sabah, Malaysia, but only for own consumption, not for sale. The same, *for where a permit IS required*, was also only indicated by Sabah. *Taking for research/educational purposes where a permit IS NOT required* was indicated by Singapore, however, the Director General’s approval is

needed. All countries that responded stated that a *permit IS required for taking for research/educational purposes*.

Only in Malaysia, a Conservation Action Plan for Marine Turtles (in Sarawak) is in place.

East Asia (n=2)

One country, Japan, selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. The Republic of Korea also selected *strictly no take*, but only selected *no egg taking* and *no direct take/purposeful capture and removal of turtles from the sea* in addition.

Taking/using for traditional purposes where a permit IS required was indicated by both countries, whereas *taking for research/educational purposes where a permit IS required* was only selected by Japan. The country further indicated that *taking of marine turtles according to a minimum/maximum size limit*, *taking of marine turtles according to a maximum quota* (HB: 28, LH: 6, GT: 205), and *taking of marine turtles according to a certain sex preference* (both male and female) is allowed (prohibited only in some prefectures. The maximum size limit of taking HB is 25cm in accordance with Fishery Adjustment Commission, and the minimum/maximum size limit of taking HB, LH, GT are 30-60cm in accordance with Prefectural Fishery Adjustment Rule. Japanese *legislation also incorporates relevant traditional knowledge, customary marine tenure and practices*.

It seems that no *indigenous or community-based conservation or protection plans were developed and published that regulate marine turtle use*, and that no *Marine Turtle Action Plans are in place*.

South Asia (n=3)

Two countries, India and Iran, selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. Sri Lanka selected only *strictly no take*, which can be read the same way.

All responding countries indicated that a *National Conservation Action Plan for Marine Turtles is in place*.

Western Asia (n=4)

All responding countries, Kuwait, Saudi Arabia, UAE, and Yemen, selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. Three countries indicated that a *permit IS required for taking for research/educational purposes*.

In Saudi Arabia, *taking of marine turtles according to a minimum/maximum size limit*, *taking of marine turtles according to a maximum quota*, and *taking of marine turtles according to a certain sex preference* is allowed. The two latter options were also selected by Kuwait, but the country specified, that this is only granted for scientific research purposes. Kuwait's legislation also *incorporates relevant traditional knowledge, customary marine tenure and practices*, and *indigenous or community-based conservation or protection plans were developed and published that regulate marine turtle use*.

Both Saudi Arabia and UAE indicated that a *National Conservation Action Plan for Marine Turtles is in place*.

Pacific/Oceania (n=8)

One country (Palau) and four territories (American Samoa, BIOT, Pitcairn Islands, and Wallis and Futuna) selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. New Zealand selected only *strictly no take*, which can be read the same way. New Caledonia (North), France also selected *strictly no take*, but only selected

some of the following statements, mostly *no direct take/purposeful capture and removal of turtles from the sea*. The Cook Islands indicated four “sub-categories”, but did not choose *strictly no take*.

Cook Islands and New Caledonia selected *taking/using for traditional purposes where a permit IS required*, and five countries/territories indicated that a *permit IS required for taking for research/educational purposes*: Cook Islands, New Caledonia, New Zealand, Palau, and American Samoa. Palau indicated that no permit is required for the *taking of marine turtles according to a minimum/ maximum size limit*. New Caledonia stated that *taking of marine turtles according to a minimum/ maximum size limit, and taking of marine turtles according to a maximum quota are both allowed if a permit is granted*. *All taking of eggs and marine turtles allowed without restrictions is allowed* on Palmerston Island, Cook Islands.

The legislation of both New Caledonia and Palau *incorporates relevant traditional knowledge, customary marine tenure and practices*. New Caledonia also *developed and published indigenous or community-based conservation or protection plans that regulate marine turtle use*, and has a National Conservation Action Plan for Marine Turtles in place.

Summary

In total, nine countries and four territories selected *strictly no take* AND all six following categories, which are read as part of the *strictly no take* statement. Six more countries/territories also indicated *strictly no take*, totalling 19 territories and countries selecting that option. The “sub-category” focus was on *no egg taking, no direct take/purposeful capture and removal of turtles from the sea, and no taking from within management area/protected area*.

Taking for research/educational purposes where a permit IS required was selected by most countries/territories (13), followed by *taking/using for traditional purposes where a permit IS required* (5). Three countries/territories allowed *taking of marine turtles according to a minimum/maximum size limit* (New Caledonia; Japan; Saudi Arabia) and *according to a certain sex preference* (Okinawa, Japan (some prefectures only); Kuwait (only for scientific research), and Saudi Arabia), and four countries/territories allowed *taking according to a maximum quota* (New Caledonia; Okinawa, Japan; Kuwait (only for scientific research), and Saudi Arabia).

The legislation of Japan, Kuwait, New Caledonia (South), and Palau was reported to *incorporate relevant traditional knowledge, customary marine tenure and practices*, and Kuwait and New Caledonia (South) stated to have *developed and published indigenous or community-based conservation or protection plans that regulate marine turtle use*. Seven countries/territories indicated to have a *National Conservation Action Plan for Marine Turtles in place*: India; Iran; New Caledonia; Sarawak, Malaysia; Saudi Arabia; Sri Lanka; and UAE.

Least selected were options, where either no permit was required for certain activities or harvest was allowed in an unrestricted manner. Only one country/territory each selected *taking/using for traditional purposes where a permit IS NOT required* (Sabah, Malaysia, however, only for own consumption, not for sale), *taking of marine turtles according to a minimum/ maximum size limit, where a permit IS NOT required* (Palau), and *all taking of eggs and marine turtles allowed without restrictions* (Cook Islands, only on Palmerston Island).

It should be noted that the number of countries/territories to which the *taking without restrictions* statement applies is most probably higher, if the exceptions are counted that many countries have with regard to the harvest of marine turtles by specific tribes, communities, or other selected groups, which may or may not be part of the country’s legislation. Of the countries known to have these exceptions, none other were indicated in the Matrix.

The key results are presented in Figure 7.

Matrix Responses - Harvest/Direct Take

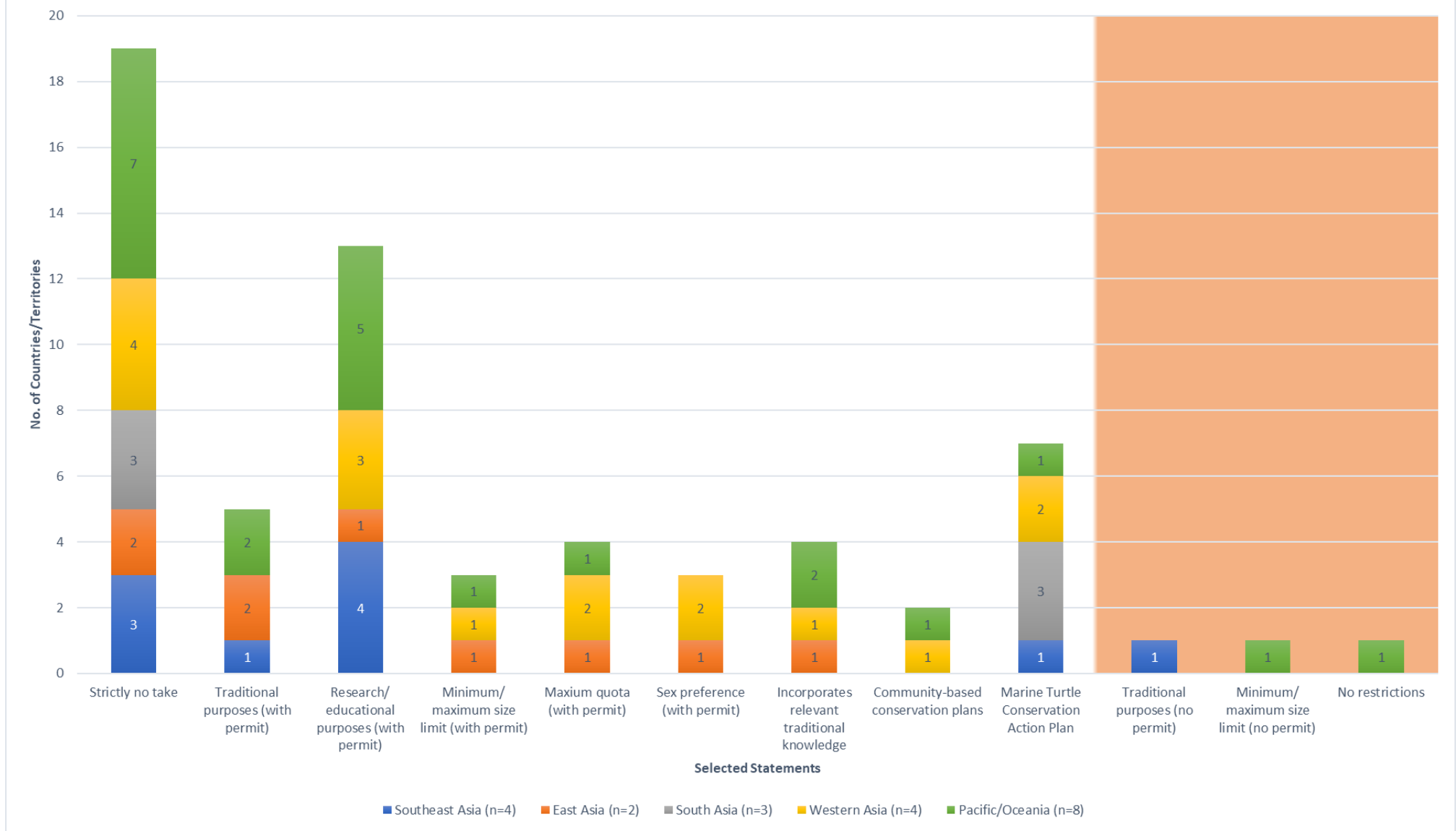


Figure 7. Key results of Matrix responses in relation to Harvest/Direct Take

5.1.2. Permitted Fishing Gear

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to fishing gear used for catching marine turtles, listing five statements to choose from and to match the corresponding legislation (name, section, and summary). It was specifically stated that this Sheet should only be filled in by those countries, where captures are legally allowed.

Summary

Only Saudi Arabia selected all four options (Spearing; Hook and Line; Turtle Rodeo/hand-caught; Other relevant fishing gear/types of nets), but indicated that this is only allowed for scientific research. No other country/territory filled in this Sheet, even though several were identified, where at least some of the harvest is legal for certain local tribes and/or communities. It is assumed, however, that the fishing gear used for these purposes falls into the three main categories above, as turtles are caught on a small scale, mostly for own consumption/subsistence purposes by these island tribes.

5.1.3. Bycatch I – Fishing Gear

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to marine turtle bycatch, listing seven statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=2, since two countries that filled in the Matrix did not respond)

The two countries that responded indicated that their legislation regulates *trawl nets* (Myanmar) and *other relevant fishing gear* (Myanmar: giant set bag net; Federal level, Malaysia: not indicated) in relation to marine turtle bycatch.

East Asia (n=2)

For East Asia, Japan and Korea responded, with Japan regulating *hook and line*, *purse seine*, and *other gear* (set net), and Korea regulating all indicated fishing gear (*spearing*, *hook & line*, *trawl nets*, *gill nets*, *purse seine*, *draft nets*), *except other*.

South Asia (n=3)

India reported a regulation of *trawl nets*, Iran of *all types of gear* listed, *including other*, and Sri Lanka only indicated *other gear*, and listed: push net, harpooning for marine mammals, *moxi* net fishing operations, and trammel net.

Western Asia (n=4)

Both Kuwait and Saudi Arabia selected *all gear options*, *including other*, where Saudi Arabia specified that these include electric shock, explosives, chemicals and toxic substances, or methods that are harmful in any other way to living aquatic resources. UAE and Yemen both selected *all gear options*, *except other relevant gear*.

Pacific/Oceania (n=4, since four countries that filled in the Matrix did not respond)

New Caledonia's legislation was reported to regulate *spearing*, *hook and line*, *gill nets*, and *other relevant fishing gear* (not indicated) in relation to marine turtle bycatch. New Zealand selected *all gear options*, *except other*. Palau indicated *hook and line*, *purse seine*, and *other relevant fishing gear* (*kesokes/gill net/surround net*) to be regulated. American Samoa selected *trawl nets*, *gill nets*, *purse seine*, and *other relevant fishing gear* (dip nets).

Summary

Trawl nets, gill nets, purse seine, and other relevant fishing gear were the gear types selected most often to be regulated by national legislation. Other relevant fishing gear mentioned were: giant set bag net, set net, push net, harpooning for marine mammals, *moxi* net fishing operations, trammel net, electric shock, explosives, chemicals and toxic substances, or methods that are harmful in any other way to living aquatic resources, *kesokes*/gill net/surround net, and dip nets. It should be noted that, where marine turtle take by any method is prohibited in the legislation, countries selected all listed gears, even though these may not be mentioned specifically by name in the legislation. The results are presented in Figure 8.

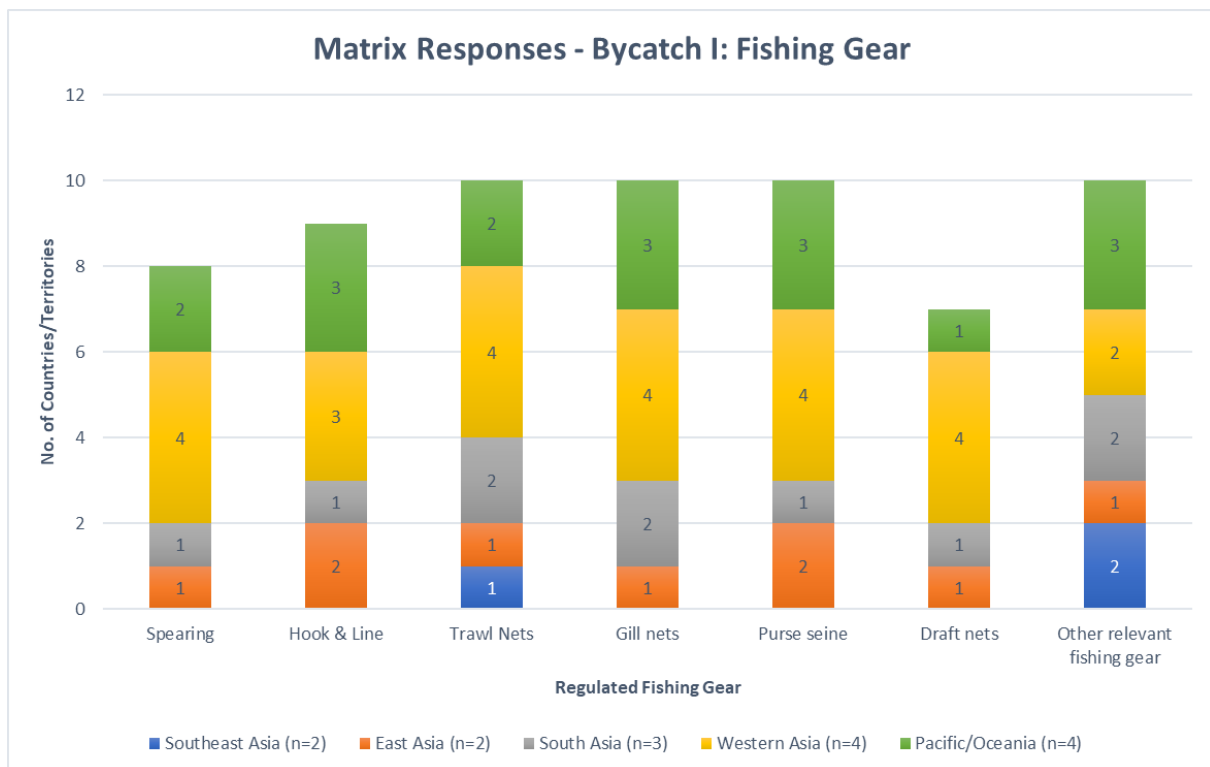


Figure 8. Matrix responses concerning legislation-regulated fishing gear

5.1.4. Bycatch II – Prevention

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to marine turtle bycatch, listing seven statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=3, since one country that filled in the Matrix did not respond)

Malaysia (Federal and Sarawak) indicated that turtles are released when accidentally caught and alive, but that there are no guidelines in place. Myanmar and the Philippines (PCSD) reported to have published handling practices in place to be used for release. All three countries (Federal level, Malaysia; Myanmar; Philippines (PCSD)) have legislation that requires them to assess and record the turtle status before the turtle is released. Myanmar and the Philippines (PCSD) report these incidents to relevant authorities, and Malaysia (Federal level) and Myanmar indicated to have legislation regulating turtle-friendly gear. All three countries (Federal level for Malaysia) reported to have published a turtle handling guide/standard operating procedure.⁵⁷

⁵⁷ For some countries, like Malaysia, results may seem contradictory, e.g. when it is reported that turtles are released, but no handling guidelines are in place, and later it is indicated that there are indeed guidelines. This may

East Asia (n=2)

Both Japan and Korea have legislation that requires them to *assess and record the turtle status before the turtle is released, and report these incidents to relevant authorities*. Japan also *reports to release turtles when accidentally caught and alive according to published handling practices, has legislation regulating turtle-friendly gear and de-hooking gear on long-line fishing vessels, to record and report by-catch on fishing vessels, require external observers on (some) fishing vessels, requires vessel tracking systems for fishing vessels, and published a turtle handling guide/standard operating procedure*.

South Asia (n=2, since one country that filled in the Matrix did not respond)

Both India and Iran *release turtles when accidentally caught and is alive, according to published handling practices, have legislation regulating turtle-friendly gear, require vessel tracking systems for fishing vessels, and published a turtle handling guide/standard operating procedure*. India has legislation that requires it to *reports bycatch of marine turtles to relevant authorities*. Iran *assesses and records the turtle status before the turtle is released, uses de-hooking gear on long-line fishing vessels, and records and report by-catch on fishing vessels*.

Western Asia (n=4)

Kuwait, Saudi Arabia, and UAE *release marine turtles when they are accidentally caught and alive, but have no guidelines in place*. These countries also have legislation that requires them to *report bycatch of marine turtles to relevant authorities, and have legislation regulating turtle-friendly gear, with the drafting of TED-legislation on-going in Kuwait*. Saudi Arabia and UAE also have legislation that regulates the *assessment and recording of the turtle status before the turtle is released, and requires vessel tracking systems for fishing vessels*. In addition, UAE reported the *use of de-hooking gear on long-line fishing vessels, to record and report by-catch on fishing vessels, and stated that a turtle handling guide/ standard operating procedure is published*. Yemen indicated to have legislation that require it to report bycatch of marine turtles to relevant authorities only if the turtle is tagged.

Pacific/Oceania (n=6, since two countries that filled in the Matrix did not respond)

Most countries (4) indicated to *report bycatch of marine turtles to relevant authorities, and to require vessel tracking systems for fishing vessels*. American Samoa, US; the Cook Islands; and New Zealand also reported to *release marine turtles when accidentally caught and alive, according to published handling practices, to have legislation regulating turtle-friendly gear, to record and report by-catch on fishing vessels, and to require external observers on (some) fishing vessels*. No *guidelines for release* are available in Palau and in Pitcairn, UK. American Samoa *assesses and records the turtle status before release*. New Caledonia (South) *only reports a turtle to authorities if it is tagged*. And both American Samoa and New Zealand have legislation regulating the *use of de-hooking gear on long-line fishing vessels, and published a turtle handling guide/standard operating procedure*.

Summary

In total, most (12) countries/territories have legislation that *requires them to report marine turtle bycatch of all turtles to relevant authorities*. Eleven countries/territories have legislation that *regulates use turtle-friendly fishing gear, such as TEDs and circle hooks, and 10 published a turtle handling guide*. Nine have legislation *requiring vessel tracking systems for fishing vessels, and stipulating to assess and record the turtle status when accidentally caught*. Six countries/territories have *no guidelines in place for marine turtle release if caught accidentally, and two only report marine turtle bycatch to the authorities if the turtle is tagged*. The results are presented in Figure 9.

be the case if these guidelines are only in place for one State, in this case Johor, but no handling guidelines are published at the federal level.

Matrix Responses - Bycatch II: Prevention

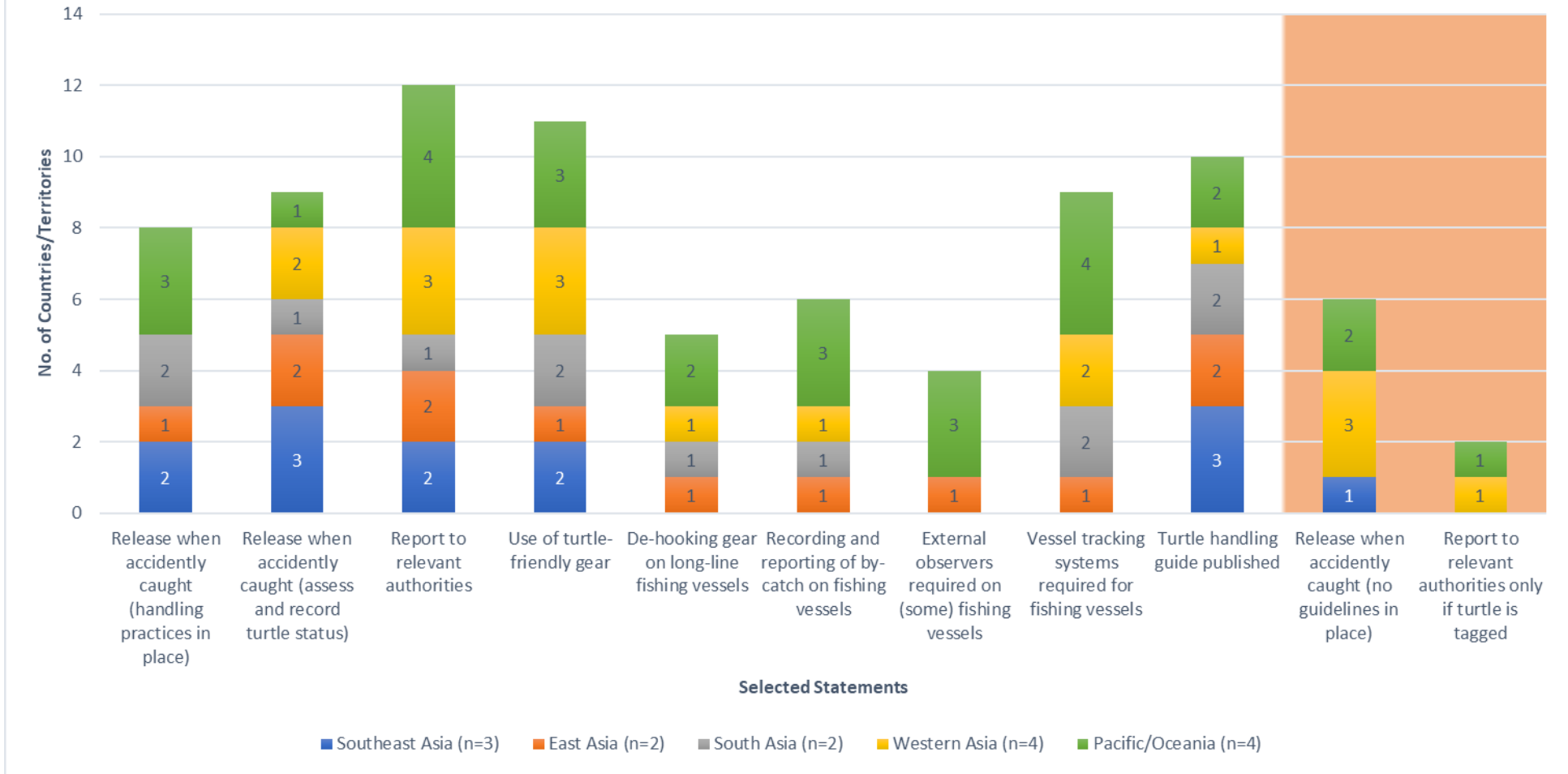


Figure 9. Matrix responses related to legislation preventing marine turtle bycatch

5.1.5. Captivity, excl. Tourism

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to keeping marine turtles in captivity (except for tourism purposes) and translocating turtles, listing 13 statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=3, since one country that filled in the Matrix did not respond)

Legislation for Myanmar and Singapore provides that *keeping marine turtles in captivity is strictly not allowed*. Malaysia makes an *exception for wildlife rescue centres*, with the Federal level commenting that this must be acknowledged by the government/a license is needed. Sabah's legislation also grants *exceptions for zoos and aquaria*. Malaysia (Federal level) and Singapore *rear turtle eggs in hatcheries and in which hatchlings are immediately released, where a permit IS required*, and *turtle hatchlings are retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required* (for Malaysia, Federal level and Sabah). Malaysia and Singapore also *allow the translocation of turtles to suitable areas, e.g. for rehabilitation and if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required*. Only Malaysia (Terengganu) reported that *no permit is required to translocate the nest to a suitable area if the nest is in a high-risk area*.

East Asia (n=2)

Japan and Korea both have legislation that provides for *turtles to be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required*. Korea indicated that *keeping marine turtles in captivity is strictly not allowed*. Japan makes an *exception for wildlife rescue centres*. Japan further has legislation that *allows for turtle eggs to be reared in hatcheries and in which hatchlings are immediately released, where a permit IS required, for turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required, and for turtle eggs to be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required*.

South Asia (n=3)

Sri Lanka indicated that *keeping marine turtles in captivity is strictly not allowed*. India makes an *exception for wildlife rescue centres*, and reports that *turtle eggs are reared in hatcheries in which hatchlings are immediately released, where a permit IS required*. India and Sri Lanka have legislation that *allows for turtles to be translocated to suitable areas, e.g. for rehabilitation or if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required*. All respondents, India, Iran, and Singapore, *retain turtle hatchlings in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required*.

Western Asia (n=4)

Saudi Arabia, UAE, and Yemen indicated that *keeping marine turtles in captivity is strictly not allowed*. Kuwait makes an *exception for wildlife rescue centres*. Legislation in Saudi Arabia further *allows for turtle eggs to be reared in hatcheries in which hatchlings are immediately released, where a permit IS required; for turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required; and for turtle eggs to be translocated to suitable areas, e.g. if the nest is in a high-risk area, by suitably qualified biologist or trained personnel, where a permit IS required*. Kuwait and Saudi Arabia both also allow that turtles can be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required.

Pacific/Oceania (n=5, since three countries that filled in the Matrix did not respond)

Keeping marine turtles in captivity strictly not allowed in Palau; the Pitcairn Islands, UK; and American Samoa, US. New Caledonia (South) and New Zealand make an *exception for*

wildlife rescue centres and for zoos and aquaria. New Caledonia (South) has legislation that provides for turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required. New Caledonia (South) and New Zealand allow for turtles to be translocated to suitable areas, e.g. for rehabilitation, by suitably qualified biologist or trained personnel, where a permit IS required; and New Caledonia (South) and Pitcairn Islands allow the same if the nest is in a high-risk area.

Summary

For most countries/territories (11), *keeping marine turtles in captivity strictly not allowed. Ten countries/territories indicated that turtles can be translocated for rehabilitation purposes, where a permit IS required. Eight countries also have a legislation that allows this, if the nest is in a high-risk area. Another eight countries' legislation provides for turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, where a permit IS required.*

Only three countries/territories have legislation that allows *turtles to be kept in captivity in zoos and aquaria, and only the legislation of one part of a country allows for turtle eggs to be translocated if the nest is in a high-risk area, without a permit.*

All countries/territories required a *permit for hatchlings to be released, for turtle hatchlings to be retained in hatcheries for conservation, rehabilitation or research purposes, and for turtles to be translocated for rehabilitation. The size of a turtle was no decisive criteria for the turtle to be kept in any country/territory. All countries/territories had certain restrictions on captivity in relation to marine turtles.*

Key results are presented in Figure 10.

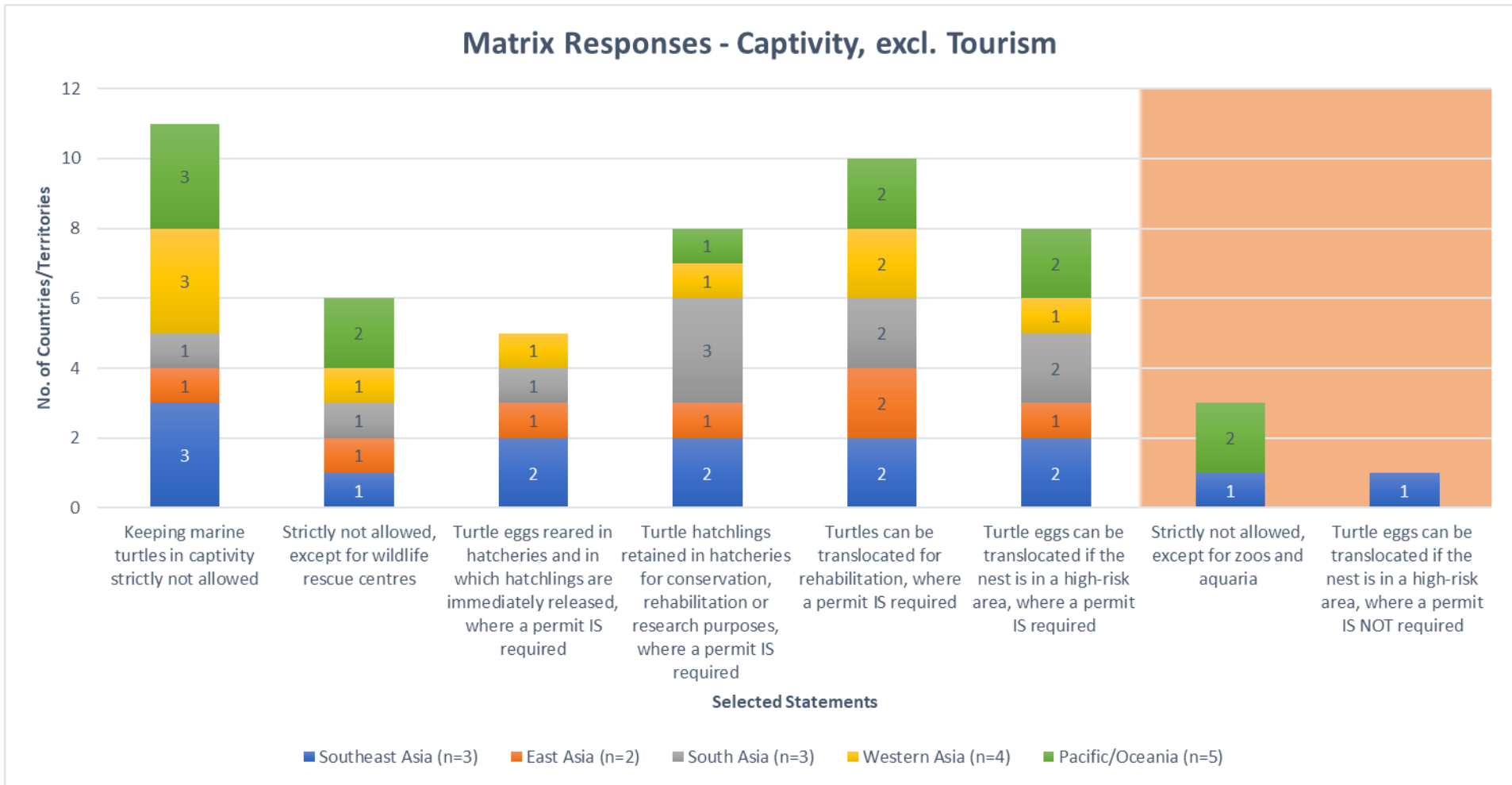


Figure 10. Matrix responses related to legislation on captivity, excluding tourism

5.1.6. Tourism

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to keeping marine turtles for tourism purposes, listing 10 statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=2, since two countries that filled in the Matrix did not respond)

Turtle related *tourism activities are strictly not allowed* in Sarawak, Malaysia, whereas at the Federal level and in Sabah, legislation allows for both turtles to be *kept in captivity for tourism/income-generating/hobby purposes, where a permit IS required*, and for *tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required*. The Philippines (PCSD) also allows for *tourism-related activities in the wild*, and legislation *prohibits the head-starting of hatchlings*. At the Federal level in Malaysia, *guidelines for tourism best practices were developed and published*.

East Asia (n=2)

Japan reported legislation that allows *tourism-related activities in the wild, where a permit IS required*, whereas in Korea, *turtle-related tourism activities are strictly not allowed*. Korea *prohibits head-starting of hatchlings, which is allowed without permit in Japan*. *Guidelines for tourism best practices were developed and published* in Japan.

South Asia (n=1, since one country that filled in the Matrix did not respond and the other submitted contradictory responses only)

Legislation in Sri Lanka allows *tourism-related activities in the wild, where a permit IS required*, and the country *developed and published guidelines for tourism best practices*.

Western Asia (n=4)

Turtle-related tourism activities are strictly not allowed in Kuwait and in Yemen. Legislation in Saudi Arabia and the UAE allows for both turtles to be *kept in captivity for tourism/income-generating/hobby purposes, where a permit IS required*, and for *tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required*. The legislation of both countries also *allows the head-starting of hatchlings, where a permit IS required*.

Pacific/Oceania (n=4, since four countries that filled in the Matrix did not respond)

Turtle-related tourism activities are strictly not allowed in American Samoa, US. In New Caledonia (South) and Pitcairn Islands, legislation *allows for tourism-related activities in the wild (e.g. watching turtles nest and/or forage), where a permit IS required*. A permit is not required for these activities in New Zealand. In New Caledonia (South), *head-starting of hatchlings is allowed, where a permit IS required*. *Guidelines for tourism best practices were developed and published* in the Pitcairn Islands, UK.

Summary

Most (8) countries and territories allow *marine turtle tourism-related activities in the wild, where a permit IS required*, except in New Zealand, whereas in five countries/territories, *turtle-related tourism activities are strictly not allowed*. Whereas two countries, Korea and the Philippines (PCSD), *prohibit the head-starting of hatchlings*, the legislation of four countries, Japan, New Caledonia (South), Saudi Arabia, and UAE, *allows it*. Malaysia (Federal level and Sabah), Saudi Arabia, and UAE allow for turtles to be *kept in captivity for tourism/income-generating/hobby purposes, where a permit IS required*. *Guidelines for tourism best practices were developed and published* in four countries: Japan; Malaysia (Federal level); Pitcairn Islands, UK; and Sri Lanka.

Key results are presented in Figure 11.

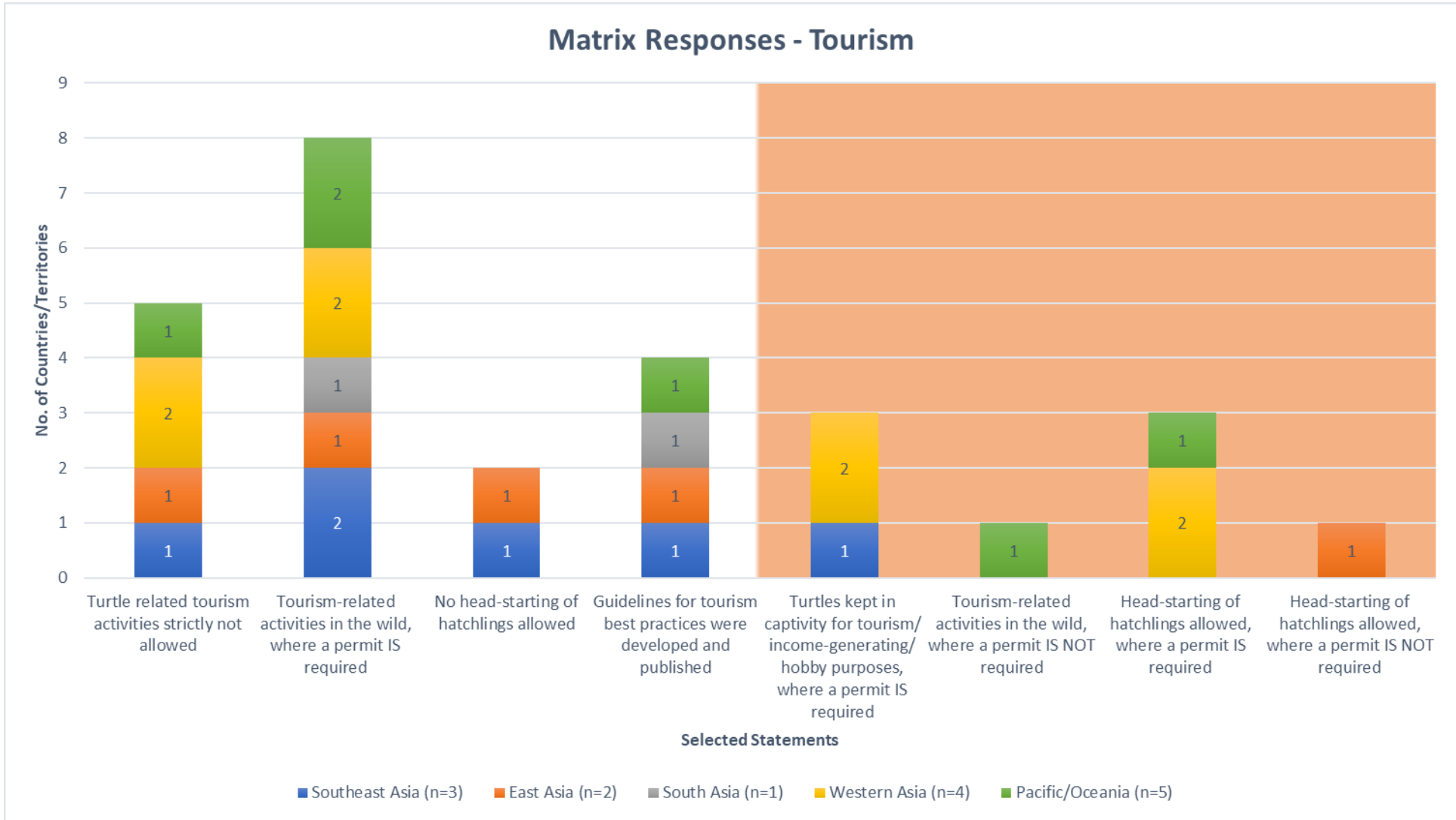


Figure 11. Matrix responses related to legislation on marine turtle tourism

5.1.7. Trade

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to marine turtle trade (e.g. legislation implementing CITES at the national level), listing 18 statements to choose from and to match the corresponding legislation (name, section, and summary).

It should be noted that the export of turtles, turtle eggs, and other derivatives/products, if selected “allowed, with permit”, is legal under CITES, as a permit can also be obtained for the trade of Appendix I species (with severe limitations and assessments required). Practically, this should have been selected by every country that is a Party to CITES. Where selected that export is prohibited, national legislation may be stronger than what is required by CITES.

Southeast Asia (n=4)

The results of trade in Malaysia differ widely. Legislation *allows the local sale of turtles* in Johor (Federal level), *where a permit IS required*, but the eggs can only be sold to the Department of Fisheries, not commercially to other buyers. In Melaka and Terengganu (Federal level), as well as in Sarawak, the *local sale of turtles is strictly prohibited*. The *local sale of eggs is strictly prohibited* in Perak, Melaka and Terengganu at the Federal level, in Sabah, and in Sarawak. Legislation *strictly prohibits the local sale of any products derived from turtles* in Melaka and Terengganu (Federal level) and Sabah. The *export of turtles and turtle eggs is prohibited* in the entire country.

In Myanmar and Singapore, the *local sale of turtles and turtle eggs is strictly prohibited*, and in Singapore also the *local sale of any products derived from turtles*. In Myanmar, the Philippines (PCSD), and Singapore, the *export of turtles and turtle eggs is prohibited* as per the legislation, and in the Philippines and Singapore *also the export of any products derived from turtles*.

East Asia (n=2)

In both Japan and Korea, legislation *strictly prohibits the local sale of turtles*. In Korea, the *local sale of eggs, and of any products derived from turtles is also strictly prohibited*. The same is the case for the *export of turtles, turtle eggs, or products derived from turtles*. In Japan, the *local sale of turtle eggs is allowed without permit, the sale of any products derived from turtles is also allowed, but requires a permit*. Japanese legislation also *required to procure a permit for the export of turtles, turtle eggs, and products derived from turtles*.

South Asia (n=3)

The legislation in India, Iran, and Sri Lanka is the same with regard to the trade category. All three countries indicated that the *local sale of turtles, turtle eggs, and of any products derived from turtles is strictly prohibited*. They all further reported that also the *export of turtles, turtle eggs, and of any products derived from turtles is strictly prohibited*.

Western Asia (n=4)

In all responding countries, Kuwait, Saudi Arabia, UAE, and Yemen, the *local sale of turtles, turtle eggs, and of any products derived from turtles is strictly prohibited*. The *export of turtles and turtle eggs is also strictly prohibited* for all four countries. *The export of any products derived from turtles is strictly prohibited* in the legislation of Kuwait, UAE, and Yemen. Saudi Arabia indicated that it is *allowed, where a permit is required*, mentioning CITES.

Pacific/Oceania (n=8)

The *local sale of turtles is allowed without a permit* in the North Province of New Caledonia, France, and in Palau for all species, except hawksbills. The *local sale of turtles is strictly prohibited* in New Caledonia (South); Wallis and Futuna, France; New Zealand; Palau

(prohibited for hawksbills only); Pitcairn Islands and BIOT, UK; and American Samoa, US. The same countries and territories also have *legislation prohibiting the local sale of turtle eggs* (in Palau for all species), and *prohibiting the sale of any products derived from turtles* (in Palau only for hawksbill turtles). The North Province of New Caledonia *allows the local sale of turtle eggs and of any products derived from turtles without permit*, the latter also being the case in Palau for all species except for hawksbills and except for any eggs. The *export of turtles, turtle eggs, and of any products derived from turtles is strictly prohibited* in all responding countries and territories from the region, except for the Pitcairn Islands⁵⁸.

Summary

The large majority of responding countries/territories has *legislation that strictly prohibits the local sale of turtles (19), strictly prohibits the sale of turtle eggs (18), and strictly prohibits the local sale of any products derived from turtles (17)*. The large majority of responding countries/territories also *strictly prohibits the export of turtles (18), strictly prohibits the export of turtle eggs (18), and strictly prohibits the export of any products derived from turtles (15)*.

When Japan and Saudi Arabia indicated that the *export of turtles, turtle eggs, and other derivatives/products is allowed with a permit*, they most probably referred to CITES (like Saudi Arabia explicitly stated). Since the trade of CITES Appendix I species is very tightly regulated, the protection of marine turtles with regard to export can be considered as equally high as if export was strictly prohibited for this analysis.

No permit is required for the local sale of turtles in New Caledonia (North Province) and in Palau (except hawksbills), for the local sale of turtle eggs in Japan and New Caledonia (North Province), and for any products derived from turtles in New Caledonia (North Province) and in Palau (except from hawksbills and eggs of any species). A permit is required for the local sale of turtles in Malaysia (Federal level/Johor: eggs can only be sold to the Department of Fisheries) and for the local sale of any products derived from turtles in Japan.

Key results are presented in Figure 12.

⁵⁸ Contradictory responses for the Pitcairn Islands, need to be resolved.

Matrix Results - Trade

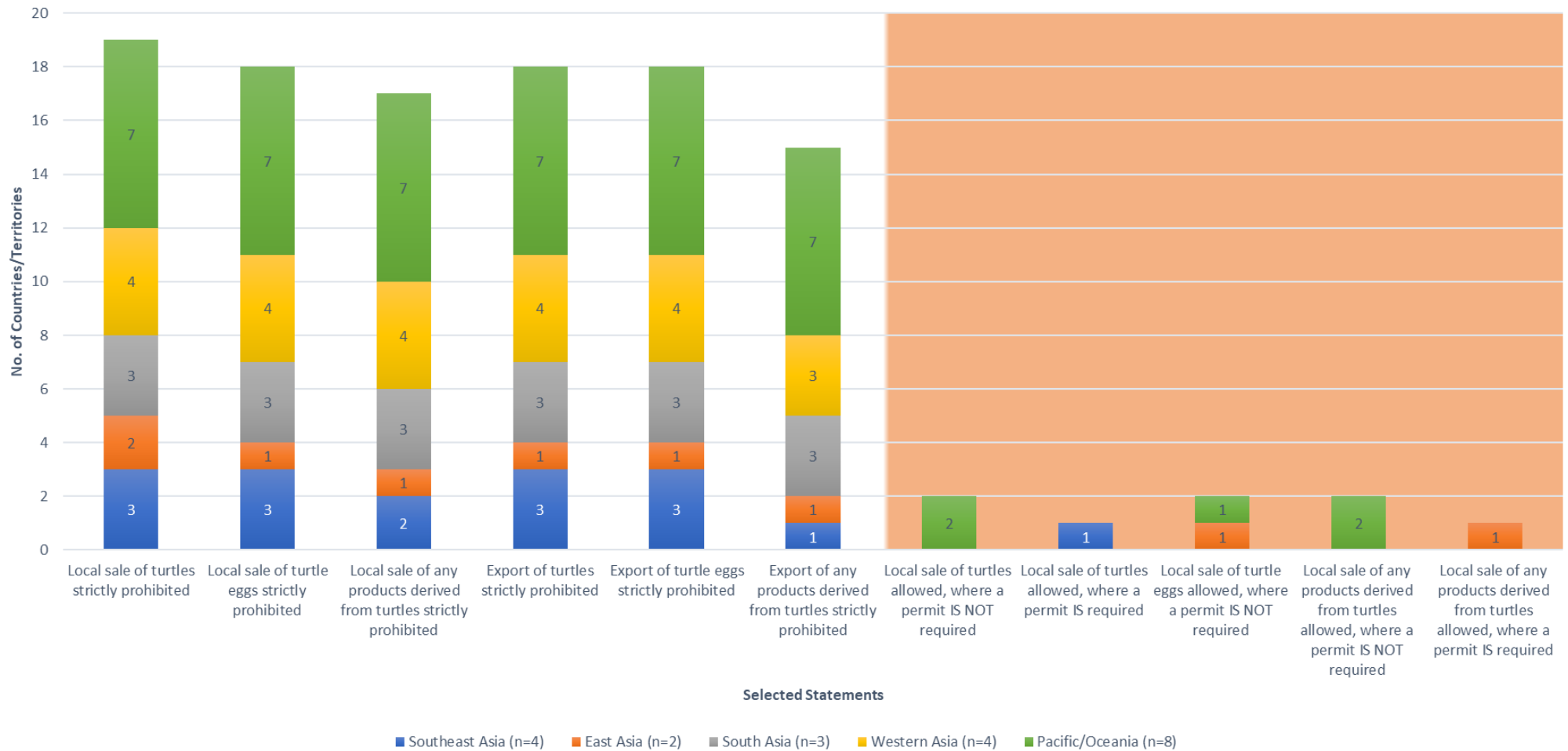


Figure 12. Matrix responses related to marine turtle trade

5.1.8. Enforcement

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to enforcement of marine turtle protection, listing 10 statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=4)

In all responding countries, legislation prohibits harming marine turtles, which is enforced by law, and is punishable by incarceration. The max. no. of years in prison for harming a marine turtle, ranges from 1-12 years, and the max. fine for harming a marine turtle, ranges from USD 4.72-107,110 across all responding countries. All max. years of incarceration and max. fines are presented in Table 4, Figure 13, and Figure 14.

Community members are used as turtle rangers/guardians/monitors and governmental programs are used to support these efforts in Malaysia (Federal level and Sarawak) and in the Philippines (PCSD). Only Sabah, Malaysia, indicated that Wildlife Rescue Centers (WRCs) are available and adequately equipped to house marine turtles temporarily or long-term after confiscation. A national red list assessment of marine turtles, following IUCN Red List Criteria, was done and has been published in Malaysia (Federal level), Myanmar, and the Philippines (PCSD).

East Asia (n=2)

Legislation prohibits harming marine turtles, which is enforced by law, and is punishable by incarceration in both Japan and Korea. The max. no. of years in prison for harming a marine turtle, ranges from 0.5-5 years, and the max. fine for harming a marine turtle, ranges from USD 3399-22,820 in both countries. All max. years of incarceration and max. fines are presented in Table 4, Figure 13, and Figure 14.

Japan uses community members as turtle rangers/guardians/monitors and governmental programs are used to support these efforts. Both Japan and Korea reported that WRCs are available and adequately equipped to house marine turtles temporarily or long-term after confiscation. Korea also developed and published WRC manuals. A national red list assessment of marine turtles, following IUCN Red List Criteria, was done and has been published in Japan and Korea (here for green turtles and loggerhead turtles only).

South Asia (n=3)

Legislation prohibits harming marine turtles, which is enforced by law, and is punishable by incarceration in India, Iran and Sri Lanka. The max. no. of years in prison for harming a marine turtle, ranges from 1-7 years, and the max. fine for harming a marine turtle, ranges from USD 60.61-305 in these countries. All max. years of incarceration and max. fines are presented in Table 4, Figure 13, and Figure 14.

All three countries also use community members as turtle rangers/guardians/monitors and governmental programs are used to support these efforts. India and Sri Lanka indicated that WRCs are available and adequately equipped to house marine turtles temporarily or long-term after confiscation. Iran reported to have developed and published WRC manuals. A national red list assessment of marine turtles, following IUCN Red List Criteria, was done and has been published in all three responding countries.

Western Asia

Legislation prohibits harming marine turtles, which is enforced by law in Kuwait, Saudi Arabia and UAE. Harming marine turtles is punishable by incarceration in Kuwait, UAE, and Yemen. The max. no. of years in prison for harming a marine turtle, ranges from 1 month-3 years. In Saudi Arabia, harming a marine turtle is punishable by fines only. The max. fine for harming a marine turtle, ranges from USD 1,000-266,381 across all four countries. All max. years of incarceration and max. fines are presented in Table 4, Figure 13, and Figure 14.

Kuwait and Saudi Arabia both *use community members as turtle rangers/guardians/monitors and governmental programs are used to support these efforts*, and indicated that *WRCs are available and adequately equipped to house marine turtles temporarily or long-term after confiscation*. A national red list assessment of marine turtles, following IUCN Red List Criteria, was done and has been published in Saudi Arabia (for green and hawksbill turtles) and UAE.

Pacific/Oceania (n=8)

Legislation prohibits harming marine turtles, which is enforced by law in all eight responding countries and territories. Harming marine turtles is punishable by incarceration in all countries/territories, except in the Cook Islands and Wallis and Futuna, France⁵⁹. The max. no. of years in prison for harming a marine turtle, ranges from 0.5-5 years. Harming a marine turtle is punishable by fines only in the Cook Islands, and in Wallis and Futuna, France. The max. fine for harming a marine turtle, ranges from USD 125-614,321 across all countries/territories.⁶⁰ All max. years of incarceration and max. fines are presented in Table 4, Figure 13, and Figure 14.

Palau and BIOT, UK *use community members as turtle rangers/guardians/monitors and governmental programs are used to support these efforts*. New Zealand reported that *WRCs are available and adequately equipped to house marine turtles temporarily or long-term after confiscation*. A national red list assessment of marine turtles, following IUCN Red List Criteria, was done and has been published in American Samoa, US and in New Caledonia.

Summary

The legislation of most countries and territories prohibits harming marine turtles, which is enforced by law (20). In 17 of these, *harming marine turtles is punishable by incarceration*. In three⁶¹ countries/territories, these actions are *punished by imposing a fine only*: Cook Islands, Saudi Arabia, and Wallis and Futuna. The max. no. of years in prison for harming a marine turtle, ranges from 1 month to 12 years, and the max. fine for harming a marine turtle, ranges from USD 4.72-614,321 across all countries/territories.

Ten countries/territories indicated to *use community members as turtle rangers/guardians/monitors and governmental programs are used to support these efforts*, and eight reported that that *WRCs are available and adequately equipped to house marine turtles temporarily or long-term after confiscation*.

A national red list assessment of marine turtles, which follows IUCN Red List Criteria, was done and has been published by 12 countries/territories, and WRC manuals were developed and published by Iran and Korea.

All maximum years of incarceration and maximum fines are presented in Table 4, Figure 13, and Figure 14.

⁵⁹ Possibly also no incarceration in the Northern Province of New Caledonia, France. Contradictory statements, needs to be resolved.

⁶⁰ No max. fine provided by Wallis and Futuna.

⁶¹ Results for New Caledonia require confirmation.

Table 4. Max. no. of years in prison and max. fine for harming a marine turtle

	Max. no. of years in prison for harming a marine turtle	Max. fine to be paid for harming a marine turtle (local currency)	Fine in USD
Southeast Asia			
Malaysia	2-5 years	RM 1,000-500,000	214.22-107,110
Malaysia I - Federal	2 years (Federal jurisdiction)	RM 1,000-250,000 (Federal jurisdiction)	1,071.10-53,554.8
Malaysia II - Sabah	5 years	RM 250,000-500,000	53,554.8-107,110
Malaysia III - Sarawak	2 years	RM 25,000	5,355.47
Myanmar	1-10 years	MMK 10,000*	4.72
Philippines	12 years	PHP 1 million	18,060.2
Philippines - BMB			
Philippines - PCSD	12 years	PHP 1 million	18,060.2
Singapore	2 years	SGD 50,000	37,324.30
East Asia			
Japan	0.5-5 years	JPY 500,000-1 million	3,398.93-6,797.85
Korea	3 years	KRW 30 million	22,819.5
South Asia			
India	3-7 years	INR 25,000	305
Iran	1 year	IRR 10 million	235
Sri Lanka	2-5 years	LKR 20,000-100,000	60.61-303.06
Western Asia			
Kuwait	1-3 years	KWD 5,000-50,000	16,221-162,213
Saudi Arabia		SAR 100,000-1 million	26,638.10-266,381
UAE	0.5 years	AED 50,000*	13,613.30
Yemen	1-6 months		1,000-100,000
Pacific/Oceania			
Cook Islands		NZD 200	125
French Overseas Departments and Territories			
B./C. New Caledonia	1 year	CFP 1,073,000-1,780,000	9,645-16,000
B. New Caledonia North		CFP 1,073,000	9,645
C. New Caledonia South	1 year	CFP 1,780,000	16,000
D. Wallis and Futuna			
New Zealand	2 years	NZD 100,000 (individual)-200,000 (corporate body)	61,432.10-122,864
Palau	1 year		USD 20,000
United Kingdom – British Overseas Territories			
A. Pitcairn Islands	3-5 years	NZD 150,000-1 million	92,148.10-614,321

B. BIOT	0.5-1 year	GBP 5,000	6,308.25
United States of America – Territories in the Pacific			
A. American Samoa (US)	2 years		100,000

*in one legislation no max. limit given

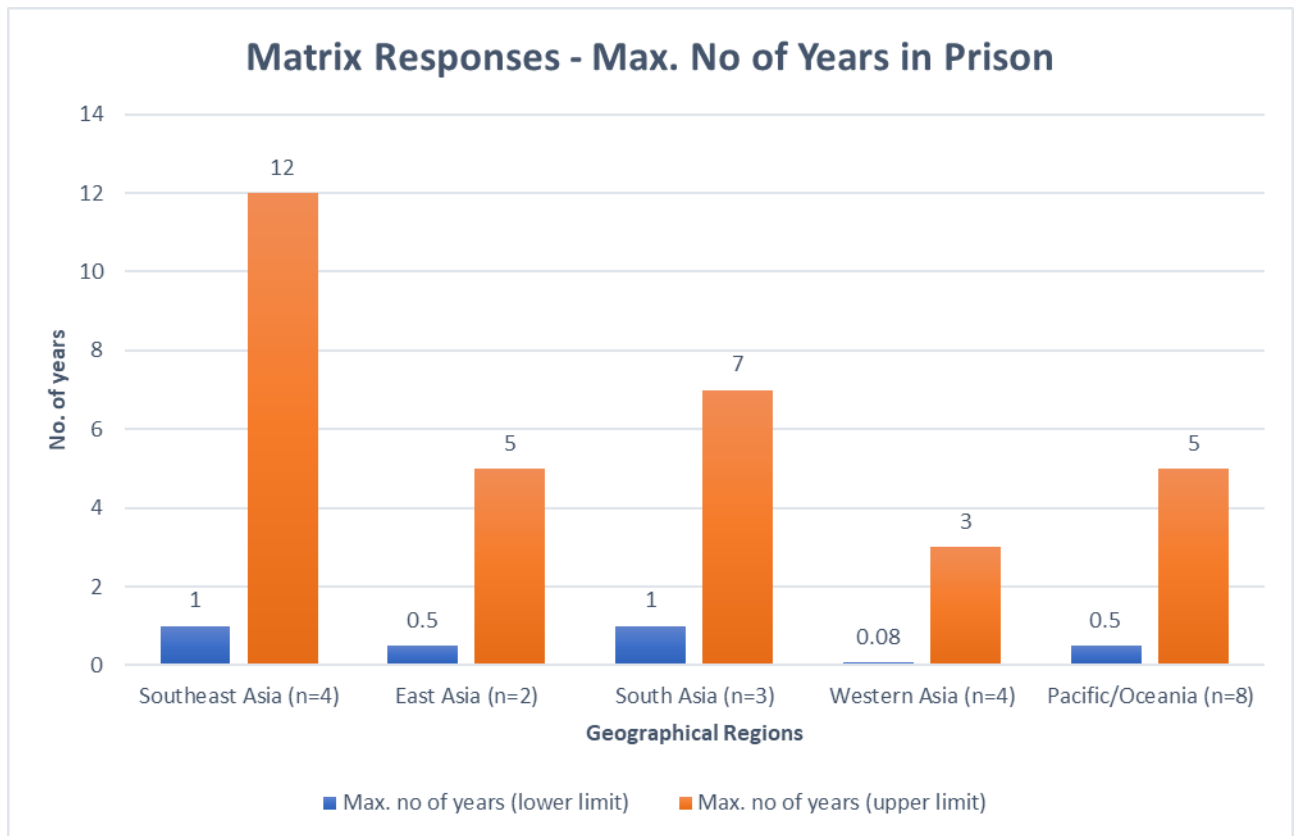


Figure 13. Matrix responses in relation to max. no of years in prison when harming a marine turtle

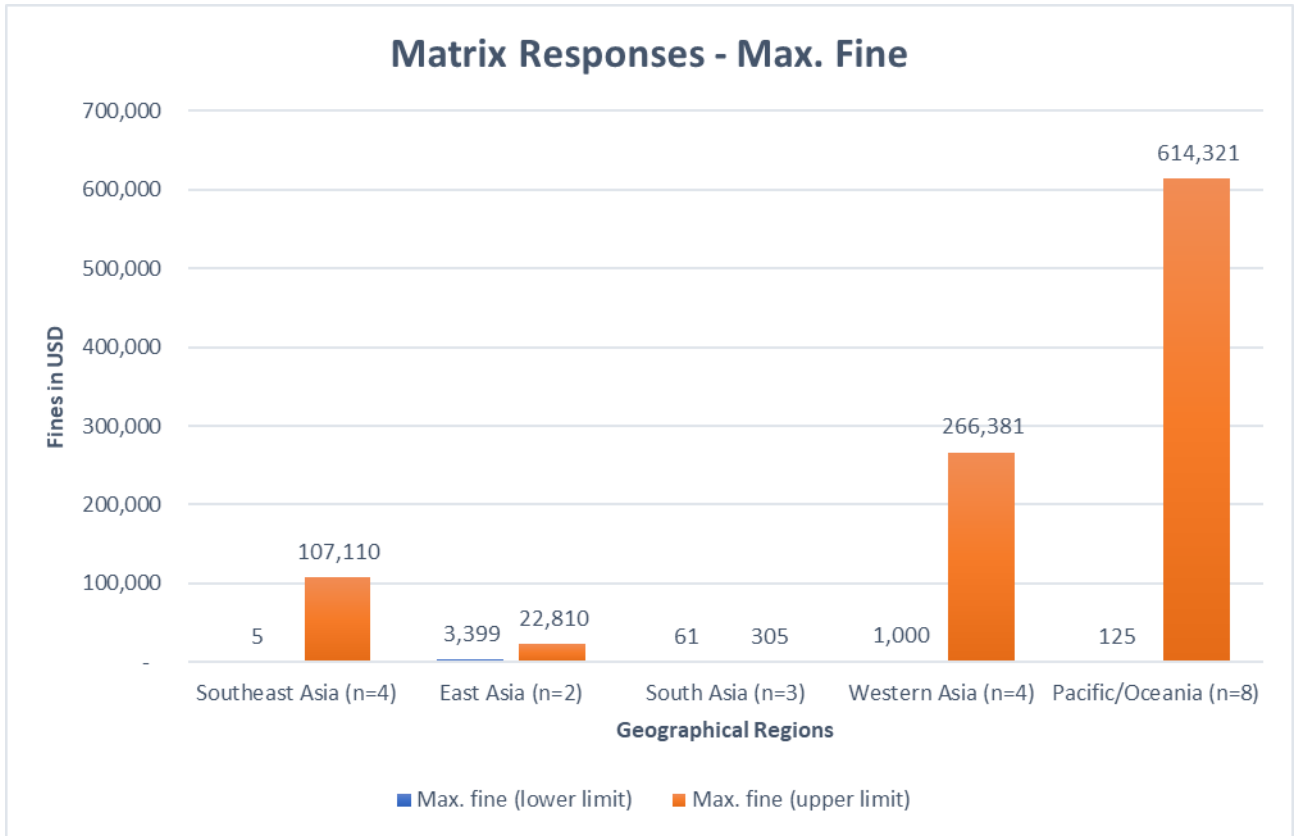


Figure 14. Matrix responses in relation to max. fine to be paid when harming a marine turtle

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Matrix Responses - Enforcement

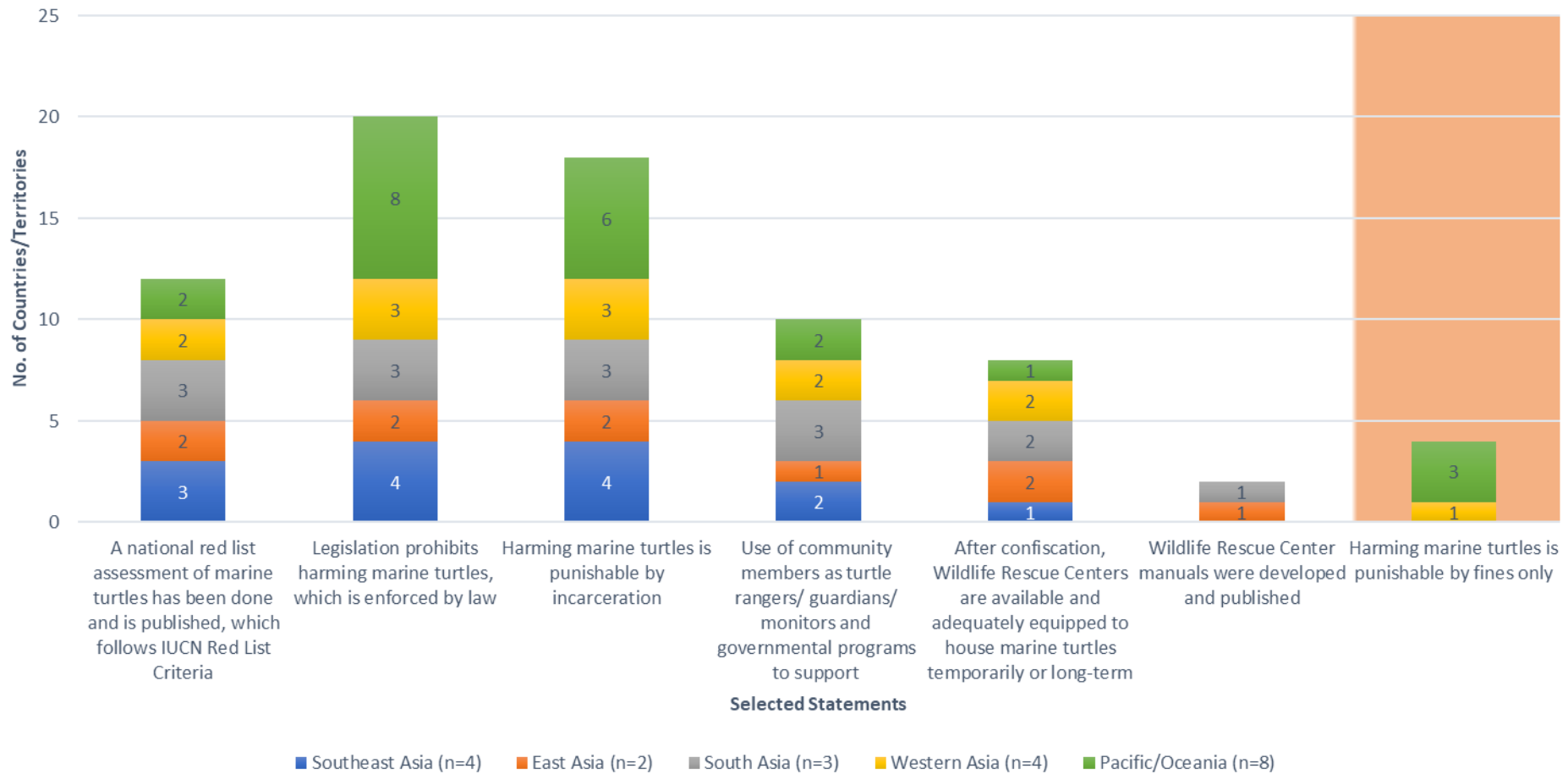


Figure 15. Matrix responses in relation to enforcement

5.1.9. Habitat Protection

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to marine turtle habitat protection, listing seven statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=3, since one country that filled in the Matrix did not respond)

Malaysia (Sabah and Sarawak), the Philippines (PCSD), and Singapore have *legislation that regulates the protection of foraging grounds (seagrass beds, coral reefs, etc.)*. Malaysia and the Philippines (PCSD) indicated to also *have legislation that protects their nesting beaches, and that addresses the establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats (Sarawak, Malaysia)*. Whereas legislation in the Philippines (PCSD) also regulates *light pollution near nesting beaches*, Malaysia's legislation (Sarawak) regulates *Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*. In both Sarawak, Malaysia, and Singapore, *nesting beaches and foraging grounds are considered in coastal development plans and EIAs*.

East Asia (n=1, since one country that filled in the Matrix did not respond)

Japan reported to have legislation that regulates the *protection of nesting beaches, protection of foraging grounds, and establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats*.

South Asia (n=3)

Sri Lanka indicated to have legislation that covers all the available statements, and therefore regulates the *protection of nesting beaches, protection of foraging grounds, establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats, light pollution near nesting beaches, minimum distance from high-tide mark to buildings, Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards, and that nesting beaches and foraging grounds are considered in coastal development plans and EIAs*. Iran is equally well-placed: its legislation encompasses all options *except for the establishment of sanctuaries*. India's regulation does *not address light pollution, and risk assessments and other standards*.

Western Asia (n=4)

Saudi Arabia reported to have legislation that covers all the available statements (see South Asia above). Yemen takes exceptions on *risk assessments and other standards, and nesting beaches/foraging grounds considered in EIAs*. UAE legislation *exempts light pollution, and the minimum distance from high-tide mark to buildings*. Kuwait also takes exceptions on *and the minimum distance from high-tide mark to buildings, and on risk assessments and other standards*.

Pacific/Oceania (n=7, since one country that filled in the Matrix did not respond)

All responding countries and territories *have legislation that protects turtle nesting beaches, protects their foraging grounds, except in the Cook Islands; New Zealand; North Province, New Caledonia, and addresses risk assessments and other standards, except in BIOT, UK; Cook Islands, and North Province, New Caledonia*. The BIOT; New Zealand; and Pitcairn Islands; UK, cover the *establishment of sanctuaries, North Province; New Caledonia, and Palau light pollution, and American Samoa, US; New Zealand; and Palau that nesting beaches and foraging grounds are considered in coastal development plans and EIAs*.

Summary

Most countries and territories protect both their nesting beaches and foraging grounds (16). This is followed by the establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats (12). The lowest number of countries/territories have

legislation that regulates light pollution near nesting beaches (8) and the minimum distance from high-tide mark to buildings (5). The results are presented in Figure 16.

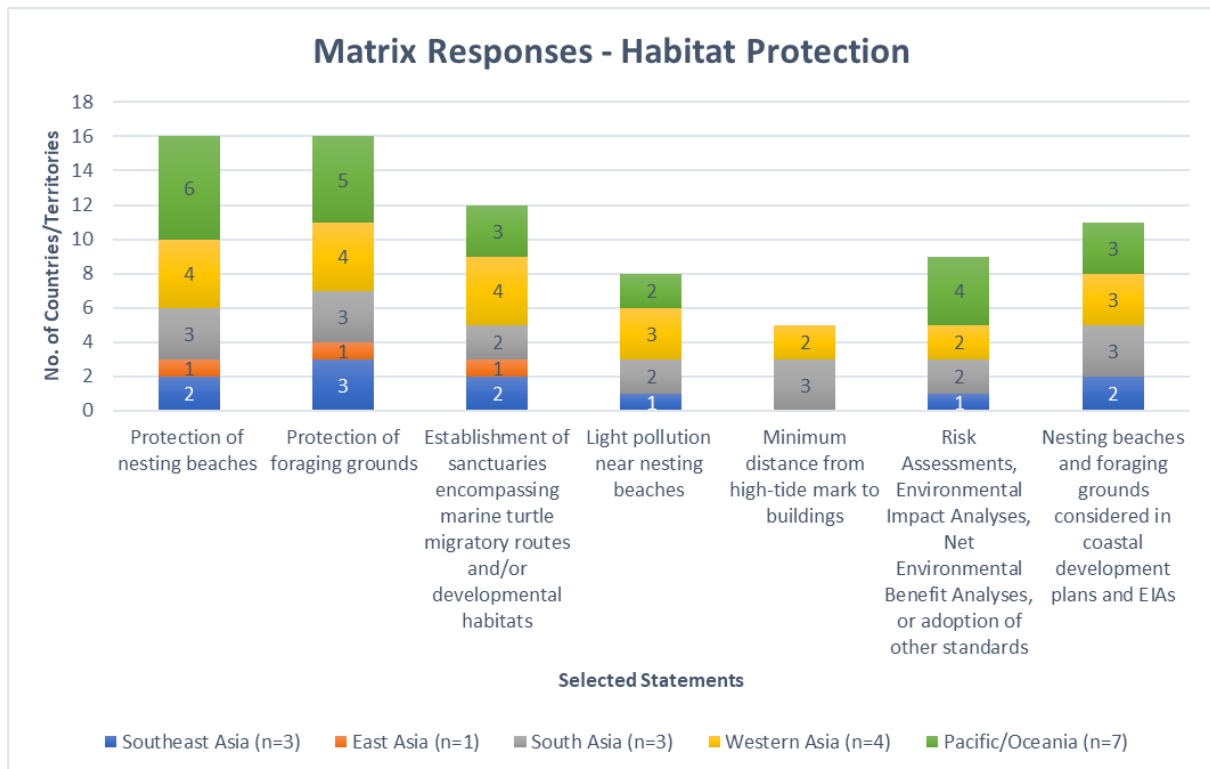


Figure 16. Matrix responses in relation to habitat protection

5.1.10. Research

This section of the Matrix enquired whether there are any legislations/rules/statutes in place in relation to marine turtle research, listing seven statements to choose from and to match the corresponding legislation (name, section, and summary).

Southeast Asia (n=4)

In Sabah, Malaysia, *lethal sampling of marine turtles for research allowed, where a permit IS required*. Lethal sampling is allowed for all the given activities:

- 1) *Parts and samples from turtles legally harvested or stranded dead can be used for research*
- 2) *Hatchlings resulting from incubation under controlled conditions can be sacrificed for gonad histology etc. under an approved project or research*
- 3) *Hatchlings trapped in nests that would otherwise die may be sacrificed for research into sex ratio etc.*
- 4) *Turtles that have a low probability of surviving (e.g. extremely emaciated turtles or turtles with severe health issues)*

In Sarawak, Malaysia, Myanmar, and Singapore *only non-lethal sampling of turtles for research allowed, where a permit IS required*. Singapore has an exception for 1) in its legislation. In the Philippines, *lethal sampling of marine turtles for research allowed, where a permit IS required* (PCSD). All responding countries *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*.

East Asia (n=2)

In Japan, *lethal sampling of marine turtles for research is generally allowed, where a permit IS required*, but there are certain areas, where *only non-lethal sampling of turtles for research allowed, where a permit IS required*. Activities allowed are 1) and 3) (see above). In Korea, *only non-lethal sampling of turtles for research allowed, where a permit IS required*.

Both countries *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*.

South Asia (n=3)

In India, Iran, and Sri Lanka, *lethal sampling of marine turtles for research allowed, where a permit IS required*. Activities allowed in Iran are 1) and 3), and in Sri Lanka 1)-4) (see above). India and Sri Lanka *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*.

Western Asia (n=3, since one country that filled in the Matrix did not respond)

In Kuwait, Saudi Arabia, and UAE, *only non-lethal sampling of turtles for research is allowed, where a permit IS required*. There are *exceptions, however, for lethal sampling, which is activity 1) for Kuwait and 1)-4) for Saudi Arabia*. All three countries *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*.

Pacific/Oceania (n=7, since one country that filled in the Matrix did not respond)

In New Caledonia (North); France; New Zealand; and Palau, *lethal sampling of marine turtles for research allowed, where a permit IS required*. Activities allowed for New Caledonia (North) and New Zealand is 1).

In American Samoa, US; BIOT, UK; New Caledonia (South); and Pitcairn Islands, UK, *only non-lethal sampling of turtles for research is allowed, where a permit IS required*. Activities allowed for American Samoa and the Pitcairn Islands is 1).

In the Cook Islands, this is decided on a *case-by-case basis*.⁶²

All responding countries in the region *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*.

Summary

No country or territory allows research on marine turtles or the collection of genetic samples without a permit. Most countries (18) *allow the collection of genetic samples from marine turtles conducted, where a permit IS required*. For 12 countries, *only non-lethal sampling of turtles for research is allowed, where a permit IS required*, however, several countries selected exceptions where lethal sampling is indeed allowed, at most, activity 1) (selected by 11 countries/territories, including the ones allowing lethal sampling). In 10 countries/territories, *lethal sampling of marine turtles for research allowed, where a permit IS required*. No country developed and published euthanasia guidelines.

Key results are presented in Figure 17.

⁶² For the analysis, only the lethal sampling of marine turtles for research allowed, where a permit IS required, since there may be cases where this is permitted. This avoids duplicate counting.

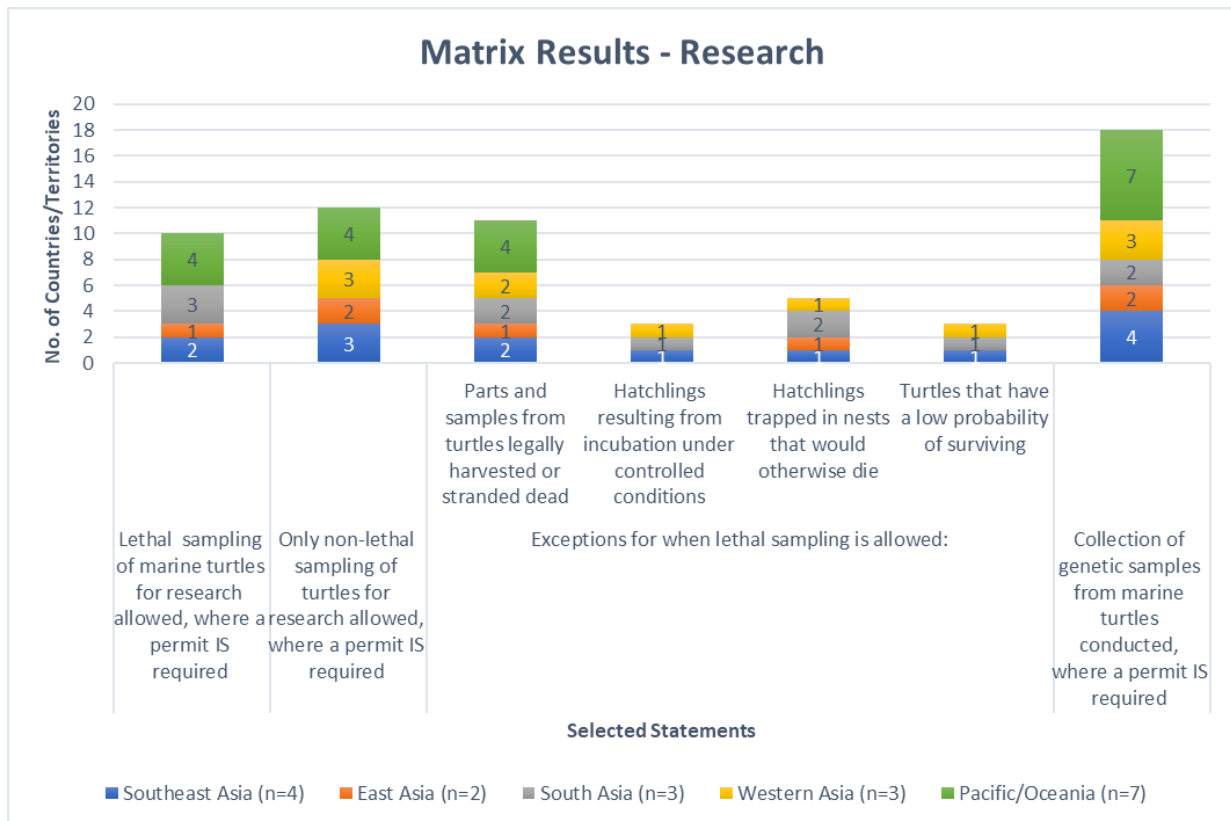


Figure 17. Matrix responses in relation to research

5.1.11. International/Regional Treaties and Agreements

This section of the Matrix enquired which international or regional treaties/conventions/agreements countries are a member of/Party to, which is presented in Table 5 and Figure 18.

With 45 members, here counting countries and territories, UNCLOS is the convention most ratified, closely followed by the CBD, with 44 ratifications. CITES (41), Ramsar (40), and RFMOs (39) follow suit. Least ratified are the PSMA (21), the CMS (22), and the IOSEA Marine Turtle MOU (26). Some agreements are very regional in nature, such as the ASEAN Marine Turtle MOU, CTI-CFF, SSME Regional Action Plan, or SPREP, which explains their lower numbers.

It should be noted that not all international conventions are automatically extended by a State to its overseas/independent territories.

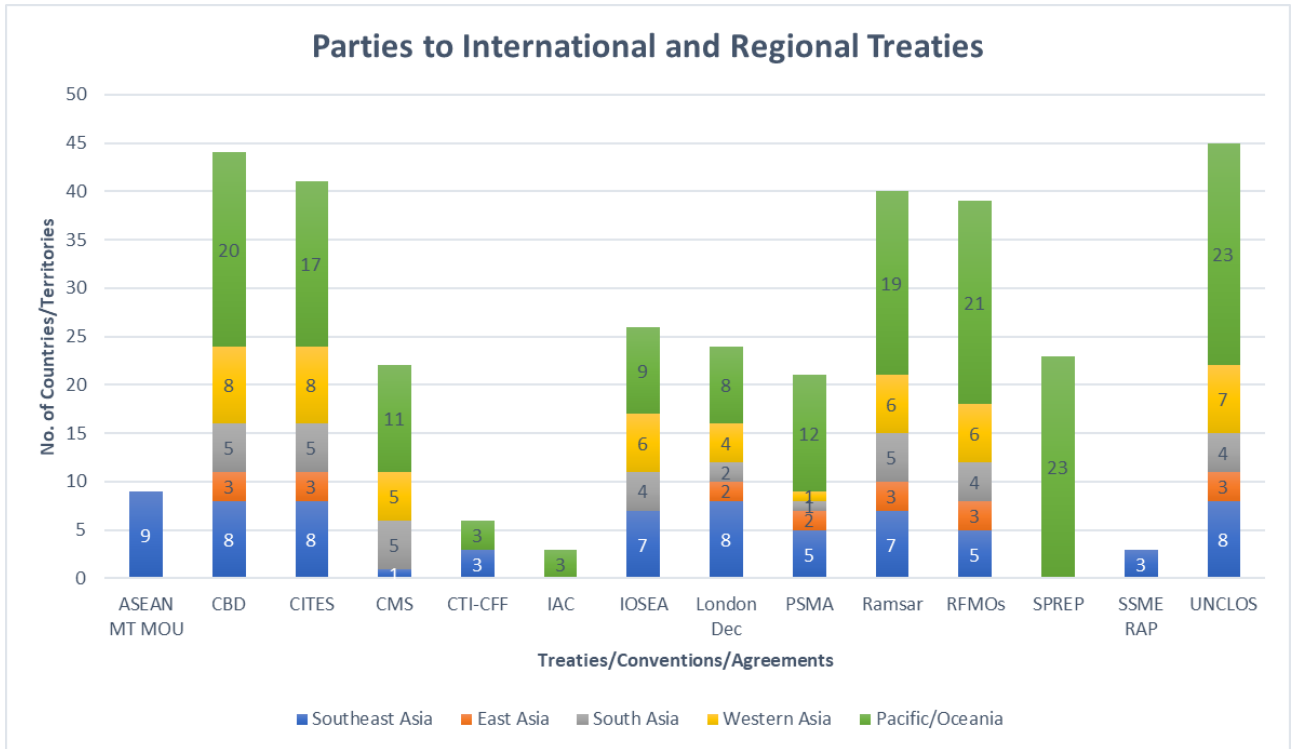


Figure 18. Parties to International and Regional Treaties I

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Table 5. Parties to International and Regional Treaties II

	ASEAN MT MOU	CBD	CITES	CMS	CTI-CFF	IAC	IOSEA	London Dec	PSMA	Ramsar	RFMOs	SPREP	SSME RAP	UNCLOS
Southeast Asia (4)														
Brunei Darussalam	X		X											X
Cambodia	X	X	X				X	X	X	X				
Indonesia	X	X			X		X	X		X	X		X	X
Malaysia	X	X	X		X		X	X		X	X		X	X
Myanmar	X	X	X				X	X	X	X				X
Philippines	X	X	X	X	X		X	X	X	X	X		X	X
Singapore	X	X	X					X						X
Thailand	X	X	X				X	X	X	X	X			X
Vietnam	X	X	X				X	X	X	X	X			X
TOTAL	9	8	8	1	3		7	8	5	7	5	0	3	8
East Asia (2)														
China		X	X					X		X	X			X
Hong-Kong														
Taiwan														
Japan		X	X					X	X	X	X			X
Korea		X	X						X	X	X			X
TOTAL	0	3	3	0	0		0	2	2	3	3	0	0	3
South Asia (3)														
Bangladesh		X	X	X			X		X	X	X			X
India		X	X	X			X	X		X	X			X
Iran		X	X	X						X	X			
Pakistan		X	X	X			X			X	X			X
Sri Lanka		X	X	X			X	X		X				X
TOTAL	0	5	5	5	0		4	2	1	5	4	0	0	4
Western Asia (4)														

Bahrain		X	X	X			X	X		X	X			X
Jordan		X	X	X			X			X	X			X
Kuwait		X	X							X				X
Oman		X	X				X		X	X	X			X
Qatar		X	X					X			X			X
Saudi Arabia		X	X	X			X	X			X			X
UAE		X	X	X			X	X		X				
Yemen		X	X	X			X			X	X			X
TOTAL	0	8	8	5	0		6	4	1	6	6	0	0	7
Pacific/Oceania (10)														
Australia		X	X	X			X	X	X	X	X	X		X
Cook Islands		X		X							X	X		X
Federated States of Micronesia		X									X	X		X
Fiji		X	X	X					X	X	X	X		X
French Overseas Departments and Territories														
A. French Polynesia		X	X	X			X	X (France)	X	X	X (France)	X		X (France)
B./C. New Caledonia		X	X	X			X	X (France)	X	X	X (France)	X		X (France)
B. New Caledonia North														
C. New Caledonia South														
D. Wallis and Futuna		X	X	X			X	X (France)	X	X	X (France)	X		X (France)
Kiribati		X								X	X	X		X
Marshall Islands		X								X	X	X		X
Nauru		X									X	X		X
New Zealand		X	X	X				X	X	X	X	X		X
Niue		X								X	X	X		X
Palau		X	X	X						X	X	X		X

Papua New Guinea		X	X		X		X			X	X	X		X
Samoa		X	X	X						X	X	X		X
Solomon Islands		X	X		X						X	X		X
Timor-Leste		X			X									X
Tokelau										X		X		X
Tonga		X	X					X			X	X		X
Tuvalu		X									X	X		X
United Kingdom – British Overseas Territories														
A. Pitcairn Islands			X	X						X				
B. BIOT			X	X			X			X				
United States of America – Territories in the Pacific														
A. American Samoa (US)			X			X	X	X	X	X	X	X		X
B. Commonwealth of Northern Mariana Islands			X			X	X	X	X	X		X		
C. Guam			X			X	X	X	X	X	X	X		X
Vanuatu		X	X						X	X	X	X		X
TOTAL	0	20	17	11	3	3	9	8	12	19	21	23	0	23
TOTAL ALL	9	44	41	22	6	3	26	24	21	40	39	23	3	45

5.2. Marine Turtle Protection Status

Based on the Matrix responses and/or desk research, the marine turtle protection status was assessed, which is presented in Table 6 below.

Most countries/territories in the Asia-Pacific have legislation in place that fully protects marine turtles, either explicitly, through legislation specifically protecting marine turtles and/or National Marine Turtle Action Plan present (14) or implicitly, through legislation protecting wildlife in general, or turtles listed as protected species, or mentioned in the Act (17). In 18 countries/territories, turtles are partially protected, which often is due to exceptions made for local tribes and communities, e.g. for subsistence hunting, or a geographical limitation and/or different levels of protection throughout the country, with certain States or Islands exempted. According to the review, there are only two countries/territories, where turtles are not yet protected.

Table 6. Marine Turtle Protection Status

Country	Fully protected (legislation specifically protecting marine turtles and/or National Marine Turtle Action Plan present)	Fully protected (legislation protecting wildlife in general/listed as protected species/mentioned in Act)	Partially protected	Not protected
Southeast Asia (4)				
Brunei Darussalam		X		
Cambodia	X (AP)			
Indonesia		X		
Malaysia			X	
Malaysia I - Federal			X	
Malaysia II - Sabah		X		
Malaysia III - Sarawak	X			
Myanmar	X			
Philippines		X		
Philippines - BMB		X		
Philippines - PCSD		X		
Singapore		X		
Thailand		X		
Vietnam	X			
TOTAL	3	5	1	0
East Asia (2)				
China			X	
Mainland China		X		
Hong-Kong				
Taiwan			X	
Japan			X	

Country	Fully protected (legislation specifically protecting marine turtles and/or National Marine Turtle Action Plan present)	Fully protected (legislation protecting wildlife in general/listed as protected species/ mentioned in Act)	Partially protected	Not protected
Korea		X		
TOTAL	0	1	2	0
South Asia (3)				
Bangladesh		X		
India			X	
Iran	X (AP)			
Pakistan		X		
Sri Lanka	X (AP)			
TOTAL	2	2	1	0
Western Asia (4)				
Bahrain	X			
Jordan	X (AP)			
Kuwait	X			
Oman			X	
Qatar		X		
Saudi Arabia	X (AP)			
UAE	X (AP)			
Yemen		X		
TOTAL	5	2	1	0
Pacific/Oceania (9)				
Australia			X	
Cook Islands			X	
Federated States of Micronesia			X	
Fiji	X			
French Overseas Departments and Territories				
A. French Polynesia	X			
B./C. New Caledonia	X			
B. New Caledonia North	X			
C. New Caledonia South	X			
D. Wallis and Futuna		X		
Kiribati			X	
Marshall Islands			X	

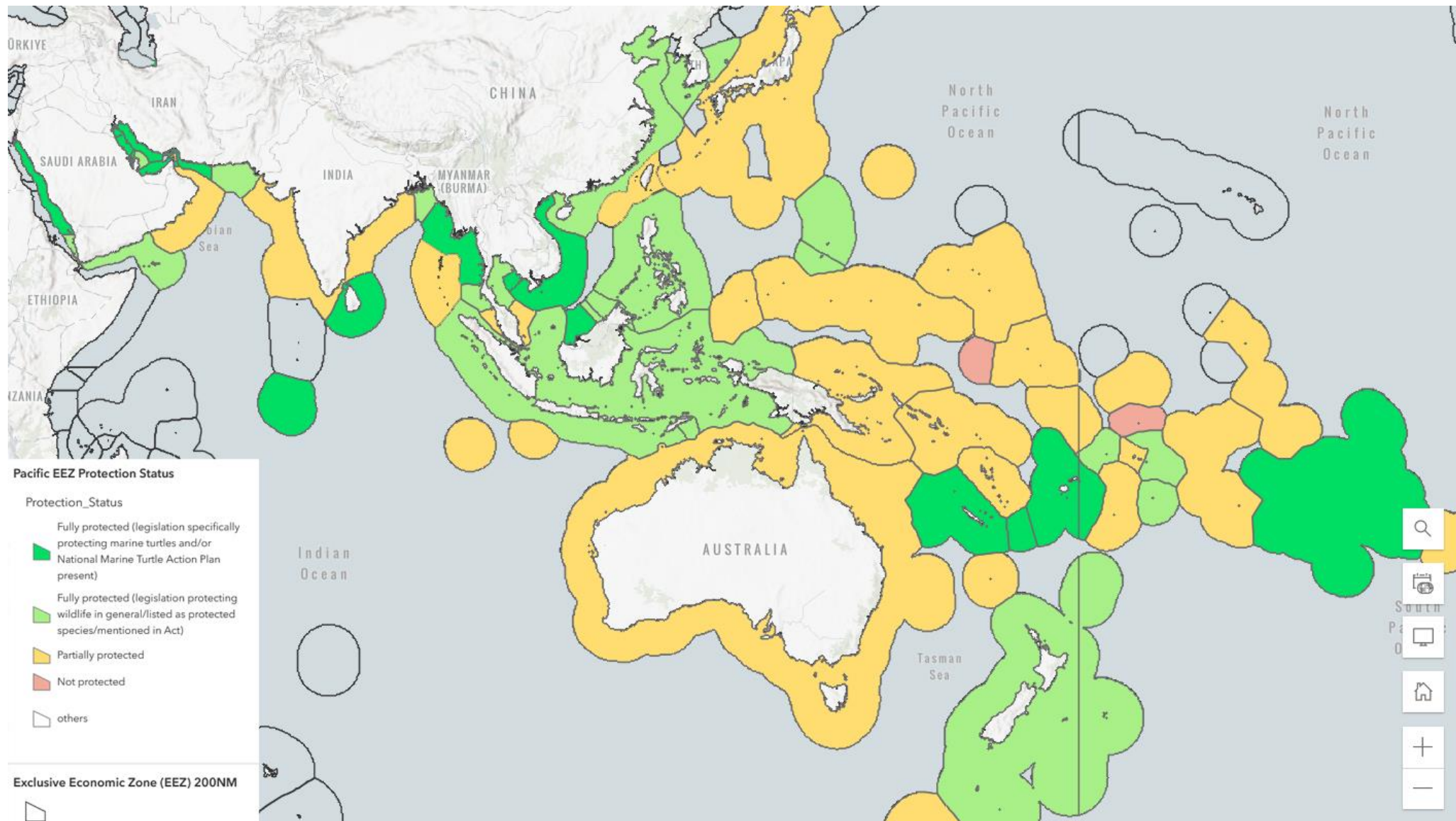
Country	Fully protected (legislation specifically protecting marine turtles and/or National Marine Turtle Action Plan present)	Fully protected (legislation protecting wildlife in general/listed as protected species/ mentioned in Act)	Partially protected	Not protected
Nauru				X
New Zealand		X		
Niue		X		
Palau			X	
Papua New Guinea			X	
Samoa			X	
Solomon Islands			X	
Timor-Leste		X		
Tokelau				X
Tonga			X	
Tuvalu			X	
United Kingdom – British Overseas Territories				
A. Pitcairn Islands			X	
B. BIOT	X			
United States of America – Territories in the Pacific				
A. American Samoa (US)		X		
B. Commonwealth of Northern Mariana Islands		X		
C. Guam		X		
Vanuatu			X	
TOTAL	4	7	13	2
TOTAL ALL	14	17	18	2

With the objective to harmonise legislation across the region, and for countries to better understand the status of protection in neighbouring states, the above table was turned into a map of the region, with countries' EEZs coloured according to the categorisation above: dark green for full protection and separate law/action plan, light green for full protection and general wildlife law, orange for partially protected, and red for not protected. This allows the reader to see the variations in legislation at one glance, and identify stark differences in neighbouring states, which may negatively affect population numbers and render conservation measures in a country ineffective, if not the same level of protection is granted in another. This is particularly important seeing the vast distances turtles migrate (see Chapter 2.2 on connectivity).

Neighbouring countries often provide one or more developmental habitats, even if there is no turtle nesting beach present.

The map shows that marine turtle protection legislation is quite advanced in Southeast Asia, and legislation wherein turtles are only partially protected, dominates in Pacific countries, even though there are some fully protected bubbles in the Pacific ocean. The not protected EEZ of Palau is in contrast to the fully protected American Samoa, Niue, and Wallis and Futuna EEZ next/close to it. The not protected EEZ of Nauru sits in the centre of a largely partially protected legislation landscape (see Map 1).

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Map 1. Marine Turtle Legislation Protection Status visualized by coloured Exclusive Economic Zones of the countries and territories included in this review (dark green = full protection and separate law/action plan, light green = full protection and general wildlife law, light orange = partially protected, and light red = not protected)

6. Discussion and Recommendations

The results in the previous chapter paint an overall bright picture when it comes to marine turtle conservation legislation in the Asia-Pacific. Most countries do have some form of legislation that protects marine turtles, either explicitly through a separate regulation or action plan, or implicitly, by mentioning marine turtles in designated sections their wildlife acts, designating turtles as protected species, or by including these species under the definition of wildlife or fish, depending on the act and its jurisdiction.

Where turtles are only partially protected, the use of turtles by certain indigenous peoples, tribes or communities is often still allowed, mostly for subsistence purposes. This poses the question of sustainable use, how well turtle harvest can be regulated, and the importance of safeguarding indigenous traditions and rights, that may sometimes contrast with developing an effective conservation agenda. This was a matter also contemplated when assigning the fully/partially protected status to each country: should the legality of natural resources use for traditional purposes/y indigenous tribes be the criteria to classify a country only as partially protected, even if, otherwise, legislation is in place to fully protect turtles? The issue is one of enforcement: whereas in some countries, based on the desk research conducted, the narrative seemed to be sustainable use, no enforcement mechanisms were in place. This is especially difficult to implement in small island states, with vast oceanic areas, and would concern any form of legislation, whether a blanket ban or a legal exception.

Traditional conservation methods used to ensure the sustainability of natural resources, but with increasing human population numbers and a change of values and traditions, overexploitation has become a scenario that is regularly observed. Still, the results showed that only two countries/territories *developed and published indigenous or community-based conservation or protection plans that regulate marine turtle use*, even though this topic is relevant to a much higher number of States, especially in the Pacific region. Equally, only four countries/territories incorporated *relevant traditional knowledge, customary marine tenure and practices* into their legislation. Ten countries indicated to use community members as turtle rangers, guardians, or monitors and to support these via governmental programmes. In addition, only one country indicated that fishing gear used to catch marine turtles is regulated by its legislation. Other countries either do not have legislation related to this item, or they have informal rules and regulations, which often can be interpreted in different ways.

Recommendation #1: Use this review to determine why countries were classified as partially protected and, if in case of traditional use/use by indigenous communities, 1) assess how often (frequency) and how many (volume) marine turtles are still caught, e.g. for ceremonial purposes, 2) compare this to the entire local marine turtle population number (if not available, initiate an annual baselining of population numbers) to determine whether the take is sustainable (population remains stable) or unsustainable (population declines), which may require an observation over 3-5 years to establish a trend, 3) ensure that even remote communities have access to national wildlife protection legislation (e.g. via an app or printed hard copied), and 4) establish community-based conservation plans, which can furthermore be used as a basis to integrate traditional knowledge into national legislation.

Assess implementation/compliance barriers within a country and across multiple countries, to help to identify priority actions for each country, including regulatory, institutional, administrative, awareness raising and capacity building interventions, in consultation with relevant stakeholders, experts and policy makers.

Within a country, legislation is needed to draw a clear distinction between what is right and wrong. This may include activities, such as turtle harvesting, but also the collection of samples

without permit: to ensure that actions can be either criminalised or supported, this requires understanding the intricacies of national regulations. Guidelines, SOPs, and National Conservation Action Plans are no legislation as such, but can be equally important. In general, only a very small number of countries/territories indicated to have guidelines in place, be it handling guidelines for release, euthanasia, WRCs, etc. It has been found, however, that these SOPs, which should be developed at the national level together with all agencies concerned, can be extremely useful tools, especially for law enforcement officers or others, who have not yet received extensive trainings, or where a strong hierarchy hinders quick decision making and guidelines can be consulted instead, if they previously have been approved.

Recommendation #2: Develop Standard Operating Procedures, Rapid Reference Guides, Species ID Guides, National Conservation Action Plans, or similar for law enforcement officers, prosecutors, judges, customs officer, and other relevant stakeholders, to ensure that national flows of reporting and processes are understood, and to facilitate inter-agency cooperation at the national and international level.

Beyond national borders, legislation is the cornerstone of international cooperation, e.g. in the case of wildlife confiscations. This requires understanding each other's national regulations to identify possible loopholes and to harmonise legislation among the countries in a region. Twelve countries have regulations on the establishment of sanctuaries encompassing marine turtle migratory routes and/or developmental habitats. This recognizes the connectivity between different habitats in several countries and provides stepping stones allowing turtles a safe passage through the waters. However, if the turtle nests in a country where it is protected and then migrates through/forages in countries where it is only partially or not protected, and the harvest of the species is legal and/or acceptable, this will be to the detriment of previous conservation efforts. This can be the case within a region, or across continents, if a species is illegally exported. One example of the latter, is the criminalisation of trade of a species in country A, where the species may be native to, and the non-criminalisation in country B. Once the species is smuggled out of country A, it can be freely traded to (assumed it is not CITES-listed) and within country B, without the sellers having to face any repercussions.⁶³ An example of this case scenario is the [removal of some species' protection in the EU](#). The difference in legislation in this case makes it difficult to protect the species and to stop the trade, due to a particularly low risk-high reward scenario. Another aspect to consider is the domestic trade, where legal: if e.g. the sale of turtles, turtle eggs, or other derivatives/ products is allowed, it needs to be ensured that these items do not originate from other places where trade is illegal. Learning more about these loopholes and working on closing them in a transboundary manner are therefore appropriate solutions.

Recommendation #3: Identify areas where legislation in marine turtle protection differs (see Map 1) and assess which aspects of protection are included/excluded in the respective countries' legislation. Evaluate whether a harmonization of legislation is feasible, to obtain the same protection status in a region, and to close existing loopholes, shifting marine turtle harvest towards States where turtles are not/partially legally protected.

Create a list of the top-10 threatened species in the Asia-Pacific region and identify whether these are listed as protected species in all the countries' legislation in the region, as well as in the EU and in the US, in order to be able to harmonize protection. Advocate for marine turtles to become focal species in existing national and regional cooperation platforms, e.g. for law enforcement, in terms of recording of incidences and sharing of information in the case of strandings/dead tagged turtles/confiscations.

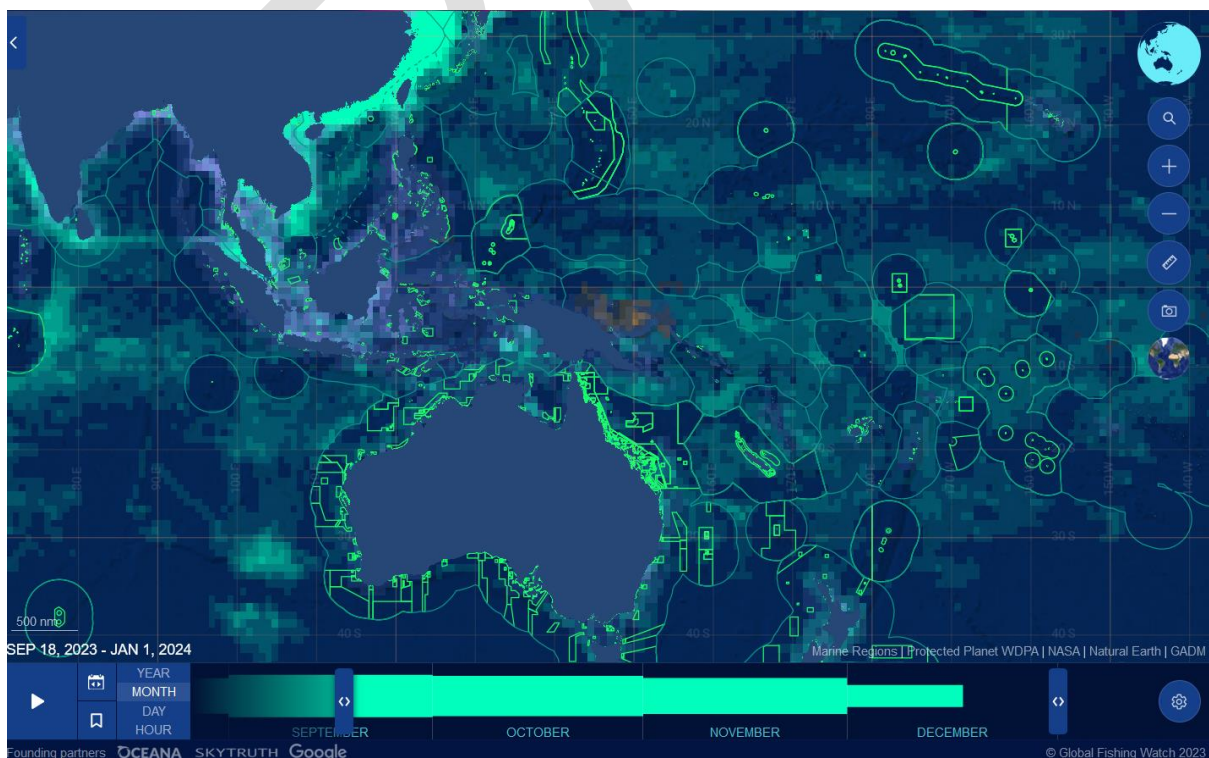
Use the 2003 UNEP [Guidelines to design Legislation and Regulations relative to the Conservation and Management of Marine Turtle Populations and their Habitats](#) for

⁶³ With the exception if traded within the US – see Lacey Act.

guidance, to help countries wishing to proceed and draft marine turtle protection legislation, if they do not have any, yet, or if they would like to draft a specific regulation for marine turtles complementing their general wildlife protection act. It may also be advisable to follow the linked country legislations in this review, most of which were linked in the official or unofficial English translation, and may equally serve as templates for a new Act.

Bycatch remains a major issue causing marine turtle mortalities. Eleven countries reported to have legislation that regulates the use turtle-friendly gear, five indicated de-hooking gear on long-line fishing vessels, six the recording and reporting of by-catch on fishing vessels, four the requirement of external observers on fishing vessels, and nine that VMS are required on fishing vessels. These are all more or less innovative solutions to reduce the rate of marine turtle bycatch and to conduct baseline assessments on how many turtles are accidentally caught and where, which is imperative to design and implement mitigation measures. Unfortunately, conditions for observers on fishing vessels remain tough, and corruption and intimidation may lead to unrealistic figures reported, as investigated in [two recent reports by the shark guardian](#).

Recommendation #4: Advocate for including the mandatory usage of VMS and AIS on commercial fishing vessels in country's legislation, and for the sharing of this data (VMS) with other concerned States. Use available online platforms, such as the [Global Fishing Watch](#), to determine fishing pressure and thus heightened risks for marine turtle bycatch (see Map 2). Determine the impacts of marine turtle strandings, i.e. through professional necropsy, to identify anthropogenic mortality causes. Amend legislation to require and protect on-board vessel observers, and strengthen their role and conditions on-board, e.g. through increased number of observers on any one vessel, whistleblower protection by law, law enforcement officer on board, etc. Record marine turtle, and other marine species, bycatch in a national database to determine bycatch hotspots and devise according tailored protection measures. Continue to invest in innovative fishing gear reducing bycatch and require these gears on commercial fishing vessels, e.g. supported by subsidies.



Map 2. Map showing Asia-Pacific Region and EEZs (green = AIS, orange = VMS, purple = radar detection, light green = MPAs), Source: (GFW, 2023)

Light pollution near nesting beaches was addressed in the legislation of eight countries, which is essential to prevent hatchlings from ending up in beach bars and hotel restaurants, where they crawl to, instead of towards the ocean, attracted by the brightest lights. This topic has received a lot of attention in the last years and [good guidelines](#) exist on where to place lights, how they should be built, and which colours and watts to use for them to be turtle-friendly. This goes hand in hand with regulations focusing on the minimum distance from high-tide marks to buildings, to ensure that buildings are not too close to the shore. Nine countries conduct *Risk Assessments, Environmental Impact Analyses, Net Environmental Benefit Analyses, or adoption of other standards*, and in 11 countries, *nesting beaches and foraging grounds are considered in coastal development plans and EIAs*.

Recommendation #5: Use existing guidelines and reports as templates to draft national legislation addressing the impacts of light pollution on wildlife, such as marine turtle hatchlings. Make EIAs mandatory in countries' legislation, and consider nesting beaches and foraging grounds are considered in coastal development plans and EIAs.

Marine turtles in captivity are kept in an unnatural state that should only be retained if the turtle is sick or injured and needs to be treated, or if the turtle is in such a state that it cannot be released back into the wild. All too often, marine turtle hatchlings are either released too late in order for tourists to watch (hatchlings should be released the latest 2h after hatching for their initial frenzy to be able to propel them out into the ocean far enough to reach the currents that carry them further), or are kept in a hatchery for several days or weeks to increase their chances of survival, which, however, has been assessed as counter-productive since the species lose the first part of their life cycle completely, and are not able to imprint etc. Sometimes even adult turtles are kept in small basins as tourist attraction, others are brought, donated, or sold to zoos and aquaria, which was reported to be an allowed practice by three countries. These institutions have been linked in several cases to the laundering of illegally-caught animals into the legal possession and trade, as monitoring mechanisms are not independent or not present at all. Legislation that allows to keep turtles for tourism, income generating, or hobby purposes may fuel the demand for these species, also in countries, where this is prohibited, as images or videos of pet turtles are shared on social media.

Recommendation #6: Develop marine turtle handling guidelines that specify to release hatchlings the latest 2h after having emerged at the surface. Draft tourism interaction guidelines that include distance to be held and other behaviours to exhibit when encountering a nesting turtle, turtle hatchlings or turtles in the water. Make an inventory of Wildlife Rescue Centres, private rescue facilities, turtle centres/sanctuaries, zoos and aquaria, and require these institutions as per legislation to regularly report their fauna and flora inventories, and monitor these regularly via in-person visits, to avoid the laundering of protected wild animals into the legal possession and trade. Ensure that injured/confiscated turtles are only kept in Wildlife Rescue Centres the minimum required time. Assess whether to include in the legislation a provision that photographs and videos of confiscated species are allowed as evidence in court instead of the actual animal, seeing that court proceedings may take years in some countries.

The export of marine turtles under CITES is only allowed in exceptional circumstances, still, the export is legal if the requirements are met. Amongst others, these contain non-detrimental findings to be issued, which in turn require a good knowledge of population trends of marine turtles over time. Countries exporting/planning to export these species under CITES, will therefore have to adhere to stringent guidelines to do so. CITES, however, only regulates the trade between countries, and does not touch the domestic trade, which is still allowed in a few countries, with and without permit as per the results. Differences are made between the activity itself, e.g. the trade/sale vs. subsistence/consumption, between locations as legislation may differ in different provinces or states within a country, between the species sold and traded,

with e.g. hawksbills protected and olive ridley turtles not protected, and between different times of the year, when harvest may be legal, e.g. outside of the nesting season.

Recommendation #7: Ensure to conduct baseline assessments of marine turtle population numbers, foraging grounds, nesting beaches, migratory routes, hotspots etc. early on, in order to produce well-researched non-detriment findings in the case of marine turtle export or import (for Appendix I species). Translate the provisions under CITES into national law, and use this as a basis to also regulate domestic trade of species.

For countries, where legal take is allowed, but very complex, create factsheets/brochures/posters consolidating the key provisions in the legislation in a simple manner to be distributed to concerned communities.

Penalties are equally important to serve as deterrents for offenders to-be. The United Nations Convention Against Transnational Organized Crime defines a serious crime as one that has a maximum penalty of at least four years of incarceration. Maximum prison terms range from 1 month to 12 years in the responses, and four countries indicated that legislation only requires the payment of a fine, which may not be sufficient to halt these illegal activities, especially if these activities are conducted on a large scale.

Recommendation #8: Regularly update legislation to reflect penalties proportional to the crime committed and acting as deterrents for potential perpetrators/repeat criminals. Adjust the penalties regularly, taking into account inflation and other economic factors. Assess whether poaching should be classified as a serious crime in the country in question, with a maximum prison term of at least four years of incarceration, e.g. in instances, where organized crime has been detected. Ensure that fines and prison terms are nevertheless proportional to the circumstances of the crime committed, e.g. less severe penalties for marine turtles caught for subsistence purposes, where illegal.

It is concerning that only eight countries reported that, after the confiscation of marine turtles, WRCs are available and adequately equipped to house marine turtles temporarily or long-term. This may be due to marine animals having different requirements for safe-keeping than terrestrial ones, and often it may not be feasible to transport animals confiscated in the provinces/regions to WRCs at the national level. This may, however, lead to overcrowding in existing facilities, which in turn may lead to disease transmission between animals and to humans. This may also result in the wrong handling of animals, lead to significant delays in treatments, or to the safe-keeping in private institutions, such as aquaria, which may want to keep the animals once they have recovered. WRC manuals, which were only reported to have been developed and published in two countries, help to assist caretakers and managers with regard to the conditions under which specific animals need to be held in captivity, how to handle them, how to construct the cages/basins, what protective gear to wear, etc.

Recommendation #9: Issue regulations that require WRCs to be able to house marine animals, as well as terrestrial ones, and train staff on handling of these animals accordingly. Establish at least one WRC with these capacities for marine animals, such as marine turtles, in each province/region of a country to avoid long transport durations and thus to decrease the risk of animal mortality. Develop WRC manuals to instruct and guide caretakers.

Both lethal and non-lethal sampling may be required to arrive at the results that are needed for a better conservation management. It is essential, however, that research is only conducted by well-trained persons, who were granted a permit.

Recommendation #10: Permits should be required for all activities, to ensure that suitably trained personnel is familiar with marine turtle handling.

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ShellBank

Global Marine Turtle Traceability Toolkit

BACKGROUND

Six of seven marine turtle species assessed for their risk of extinction are listed as Vulnerable to Critically Endangered. Many factors contribute to this decline, but a significant concern is the ongoing legal and illegal unsustainable take, catch and trade. Over the last 30 years more than 1.1 million marine turtles have been illegally exploited (Senko et al., 2022). However, it remains unclear where this exploitation is occurring, where it is most prevalent today, and which populations are being targeted.

SHELLBANK IS A GAMECHANGER

Launched in late 2022, ShellBank is the world's first traceability toolkit & global database of marine turtle DNA. At its core, ShellBank is a marine turtle genetics traceability tool that aids effective conservation research, management and protection. Initially conceived in 2018 to help fight against the illegal turtle trade, ShellBank has evolved to serve as an invaluable tool for addressing other threats, such as by-catch.



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The toolkit and database enable *tracking* and *tracing* of turtle populations globally. Specifically, it identifies genetically distinct turtle populations (or “genetic stocks”), how they are interconnected, and which populations are most at-risk, such as those being poached or incidentally caught in fisheries.

ShellBank uses DNA. Its ‘banks’ of data are a rapidly evolving global repository for marine turtle DNA. Comprising three main databases (Rookery, In-Water and Confiscation), ShellBank stores and uses data from many international partnerships to enable effective traceability. Bolstering accessibility to users around the world, it is constantly being updated and contributed to by many collaborators. Data is primarily mined from published material, is verified by the ShellBank team and stored in the database. It is open source for the reference database (Rookery and In-Water), and privacy-protected for the confiscation database. ShellBank's intent and purpose has been refined over time, and it has a clear vision for growth.



ShellBank

Global Marine Turtle Traceability Toolkit

ShellBank consists of a raft of tools. It offers:

- An open-source global database of marine turtle DNA
- In-country capacity building and training, technical advice and support
- Provision of material and resources such as collection and laboratory guidelines, and genetic kits
- Continued scientific development to expand novel techniques and technologies

How does ShellBank work?



Confiscation database

DNA is extracted from seized or surrendered turtle parts or products.



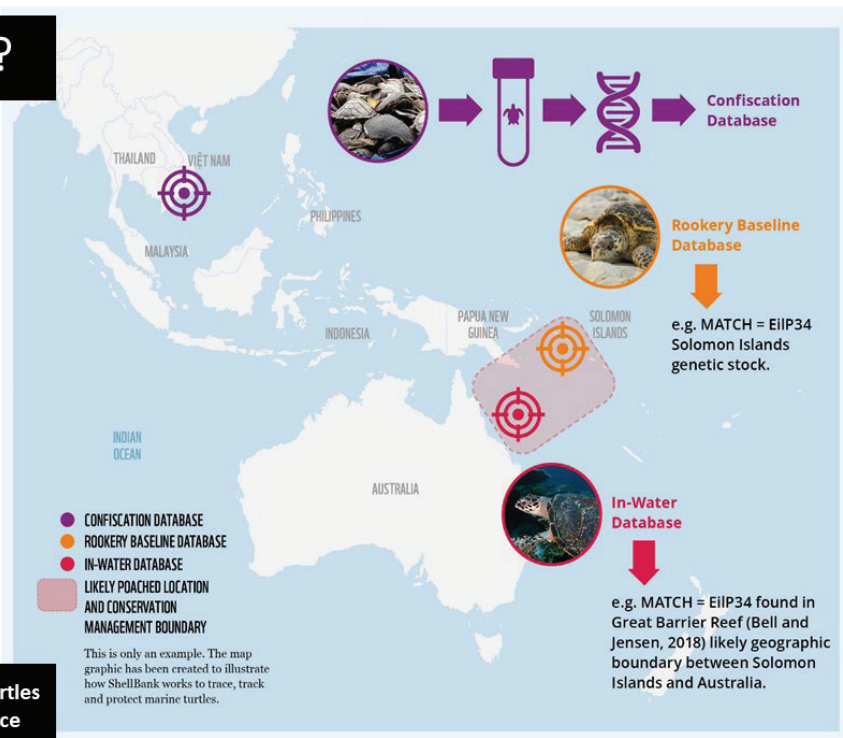
Rookery database

From samples collected from wild nesting turtles, hatchlings or embryos/eggs used to assign genetic stock (nesting) origin.



In-water database

From samples collected in-water from wild turtles, including all size classes.



Use of all three databases allows tracking of marine turtles for conservation, research, investigation & intelligence

TRACKING TURTLES FOR CONSERVATION

ShellBank provides a vital resource for effective conservation and management of these threatened species by equipping researchers and conservationists with the data and knowledge to safeguard at-risk marine turtle populations and their habitats.

It can be used by researchers and conservation managers to identify and *track* a turtle's population origin, its connectivity and geographic (transmigratory) boundary.





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Global Marine Turtle Traceability Toolkit

TRACING TURTLES TO AID LAW ENFORCEMENT AND DECISION MAKERS

ShellBank was built to help *trace* confiscated turtles, parts and products and to aid law enforcers in illegal turtle use and trade investigations. ShellBank can be used for robust species identification for prosecution purposes, however, its value also lies in building robust intelligence to help pinpoint where targeted efforts are needed. Decision makers

can also use ShellBank to help *trace* and identify illegally harvested or bycaught turtles. Providing these agencies with up-to-date population origin references allows for the detection and mapping of overexploited populations, poaching hotspots and to pinpoint critical areas for better monitoring, surveillance and protection (e.g. marine protected or local marine managed areas).



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COLLABORATORS AND PARTNERSHIPS

ShellBank is a collaborative effort that thrives on the collective expertise and support of a diverse array of stakeholders. Our partnerships include government agencies, conservation organizations, research institutions, universities, and local communities.



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ShellBank is being led by the World WideFund for Nature (WWF) in partnership with the Australian Museum - Australian Centre for Wildlife Genomics, NOAA - Southwest Fisheries Science Center, and TRACE Wildlife Forensics Network.





ShellBank

Global Marine Turtle Traceability Toolkit

SCALING SHELLBANK

ShellBank can address critical population declines, aid in **understanding transboundary migration** and **identify what populations and areas require protection** while tackling the overexploitation of marine turtles. With an initial focus on hawksbill turtles, one of the most **Critically Endangered marine turtle**



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species on the planet, ShellBank has already expanded to other marine turtle species (e.g. green turtles) and is set to help law enforcement and conservation managers reverse the trajectory of many marine turtle populations struggling to recover.

To achieve this major goal we need to work closely together. Strengthening the reference databases and ensuring effective project roll-out are critical steps that hinge on our ShellBank team supporting local researchers and governments through hands-on sample collection training and analysis. By bolstering local research and government capabilities, we not only fill existing data gaps but also lay the foundation for sustainable, local leadership in marine turtle conservation and action.

We are **URGENTLY** seeking \$1.5M USD by 2024 to support ShellBank's crucial leap from pilot into practice over the next 2 years. From 2026 we aim to secure \$15M USD.

Help us to **Build ShellBank. Save Turtles.**



ShellBank is hosted externally and can be accessed at: www.shellbankproject.org

You can find out more by emailing: shellbank@wwfint.org