

Range State Meeting on the Single Species Action Plan for the Hawksbill Turtle in South-East Asia and the Western Pacific

Online, 31 May to 2 June 2022

CMS/IOSEA/Hawksbill-SSAP/Doc.7/Rev.1

DRAFT SINGLE SPECIES ACTION PLAN FOR THE HAWKSBILL TURTLE (*Eretmochelys imbricata*) IN SOUTH-EAST ASIA AND THE WESTERN PACIFIC OCEAN REGION

(Prepared by the Secretariat)

Summary:

This document contains the final draft of the Single Species Action Plan for final amendment and adoption.

This revised draft includes:

- changes requested during the written commenting period from 13 April to 3 May 2022,
- changes discussed and agreed during the sub-regional workshops that took place on 10, 11 and 12 May 2022,
- some minor further edits for clarity and responding to queries received in writing or made during the workshops, as well as
- the legislation summary that was still missing in the previous version of the document.

It is also proposed that Annex 1 be moved to a separate document (linked to in the SSAP) in order to enable updates as and when needed.

Revision 1 contains a minor factual correction in chapter 1.5. Also, a missing reference was added in chapter 2.3.

**DRAFT SINGLE SPECIES ACTION PLAN
FOR THE HAWKSBILL TURTLE (*Eretmochelys imbricata*)
IN SOUTH-EAST ASIA AND THE WESTERN PACIFIC OCEAN REGION**

**Convention on the Conservation of Migratory Species of Wild Animals
and
Memorandum of Understanding on the Conservation and Management of Marine
Turtles and their Habitats of the Indian Ocean and South-East Asia**

(version: 20 May 2022)



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BACKGROUND

CMS Parties first discussed the need for a Single Species Action Plan (SSAP) for hawksbill turtles in South-East Asia and the adjacent western Pacific at COP12 in 2017. Classified as critically endangered globally according to the IUCN Red List, growing concern specifically about the status of hawksbill turtle populations in these regions communicated by experts and substantiated by findings of relevant reviews (e.g. IOSEA 2014) and other investigations (e.g. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 2016) led to the adoption of Decision 12.17 b), in which this plan was envisaged to cover trade, use and other threats. The CMS mandate was presented to Signatory States of the IOSEA Marine Turtle MOU in 2019, and a corresponding activity to cooperate with CMS in the joint development of a draft SSAP was agreed, bearing in mind that the SSAP would cover part of the MOU range, and extend much further eastward.

CMS Parties expressed the clear guidance that the SSAP should focus only on actions specifically needed for hawksbill turtles, rather than try to cover recommendations that would address the needs of marine turtle species more broadly (and covered by Decision 13.70 a) and b)). Accordingly, further analysis of existing and new publications (for example, refer CITES Secretariat 2019; Gomez and Krishnasamy 2019; Ingram et al. 2021; Kitade et al. 2021; Miller et al. 2019) and consideration of expert opinion led to the more restricted focus for the SSAP on just trade and use, as foreseen in [Decision 13.70 c\)](#) (2020).

This SSAP seeks to integrate the actions necessary to address trade and use at both the domestic and the international level. To achieve this, existing policies and mandates were reviewed and collated (see [CMS/IOSEA/Hawksbill-SSAP/Inf.5](#)) and the most urgent high priority actions identified and included in this SSAP, to assist governments in implementing their commitments in a cohesive way. Accordingly, both the Secretariat for the Pacific Regional Environment Programme (SPREP) and the CITES Secretariat were consulted and engaged in the development of this SSAP.

This integration of mandates and actions addressing both the domestic and international level is especially important given the migratory nature of hawksbill turtles which in many cases exist in multiple stocks and at multiple life-history stages within countries. This creates complex linkages between community and commercial use, something that can best be addressed through consolidation and prioritisation of actions addressing use and trade at all levels.

1. BIOLOGICAL ASSESSMENT

1.1. Taxonomy

Common names:

English – Hawksbill

French – Tortue imbriquée

Spanish – Tortuga de carey

CLASS: REPTILIA

ORDER: TESTUDINES

FAMILY: CHELONIIDAE

SPECIES: *Eretmochelys imbricata* (Linnaeus, 1766)

There is one extant species for the genus and there are no valid subspecies currently recognized.

1.2. Global Distribution

Hawksbill turtles have a circumglobal distribution in the world's tropical oceans, and to a lesser degree in subtropical waters in of the Atlantic, Indian, and Pacific Oceans (Mortimer and Donnelly 2008). They are believed to inhabit coastal waters of at least 100 countries (Groombridge and Luxmoore 1989). In the Atlantic Ocean, there are breeding aggregations in Mexico, Puerto Rico, US Virgin Islands, Jamaica, Guadeloupe, Barbados, Antigua and Barbuda, Nicaragua, Costa Rica, and Panama (SWOT Report 2008). In the Indian Ocean and Southeast Asia region (IOSEA), there are breeding aggregations in Iran, Saudi Arabia, United Arab Emirates, Qatar, Seychelles, Chagos, Thailand, Indonesia, Malaysia, Philippines, Viet Nam, Singapore, and Australia (summarized in Hamann et al. 2022). In the Western Pacific Ocean, there are breeding aggregations in Australia, Papua New Guinea (PNG), Solomon Islands, Palau, Republic of the Marshall Islands, Samoa, American Samoa, Vanuatu, Fiji, French Polynesia, and Tonga (Madden Hof et al. 2022). For more information, please refer to the Hawksbill Assessments for IOSEA (Hamann et al. 2022) and Western Pacific Ocean region (Madden Hof et al. 2022).

1.3. Distribution in South-East Asia (SEA) and the Western Pacific

There are currently six regional management units (RMUs) for hawksbill turtles in the region covered by this Action Plan (Wallace et al. 2010a). These are, 1. Northeast Indian, 2. *West Pacific/Southeast Asia, 3. West Central Pacific, 4. Southeast Indian, 5. Southwest Pacific and 6. *South Central Pacific (Figure 1). Those marked by with an asterisk (*) were scored as putative (i.e., were based on nesting records but lacking other biological or genetic evidence) and may require modification as data become available.

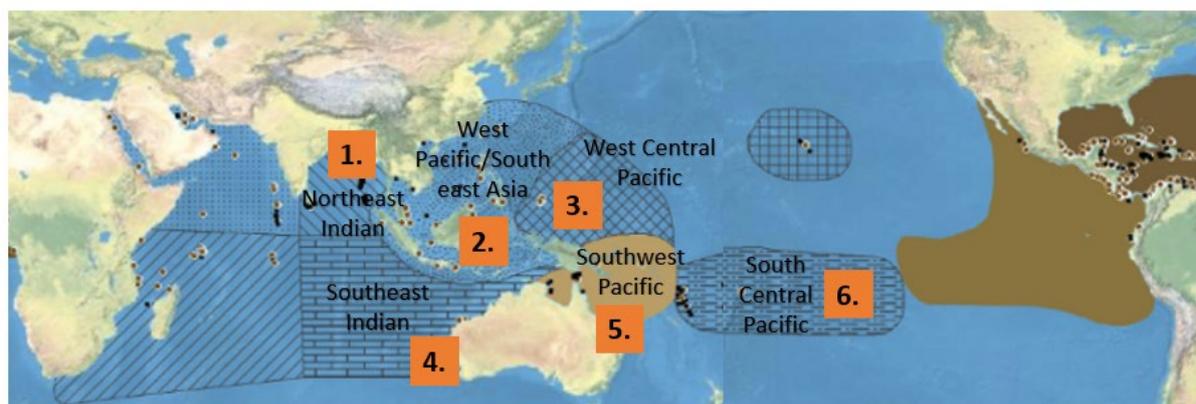


Figure 1. RMUs in the SEA region. (Adapted from Wallace et al 2010a).

These RMUs are currently under review at a global scale. Within these RMUs, there are at least seven currently identified distinct populations/management units (MU, or genetic stocks) of hawksbill turtles that nest within the Action Plan region. In the West Pacific/Southeast Asia RMU there are three: Sulu Sea (Malaysia), western Peninsula (Malaysia), Gulf of Thailand (Kho Kram) (postulated MU), where in the Southeast Indian RMU, only the East Indian Ocean MU has been identified (FitzSimmons and Limpus 2014; Vargus et al. 2016). The majority of hawksbill RMUs in the western Pacific have not yet been assessed for genetic population structure, except for the Southwest Pacific RMU of which it has three: North Queensland, Northeast Arnhem Land, and the Solomon Islands genetic stocks (Vargus et al. 2016). Efforts to collect and analyze genetic samples are underway in a number of countries (see Madden Hof et al. 2022; refer World-Wide Fund for Nature ShellBank program and the Asia-Pacific Marine Turtle Genetic Working Group).

1.4. Migration Patterns

Hawksbill turtles are highly migratory and have been observed to travel vast distances between foraging and nesting sites, although nesting females can also migrate short distances and may often be more sedentary than other sea turtle species (Parker et al. 2009; Gaos et al. 2012a). In the western Pacific, migratory connectivity for hawksbill turtles is poorly understood overall. Nevertheless, satellite telemetry and tag recoveries have revealed the Coral Sea as a key foraging area for hawksbill turtles in the western Pacific (Limpus 2008; Pilcher 2021; Madden Hof et al. In Prep A). Hawksbills have been reported foraging throughout the Coral Sea after post-nesting migrations from the Conflict Islands in PNG (CICI 2018; Madden Hof et al. In Prep B), the Arnavons in Solomon Islands (Hamilton et al. 2015), Vanuatu (Miller et al. 1998), and various sites in the Great Barrier Reef (Miller et al. 1998). Linkages of similar distances are demonstrated between American Samoa and the Cook Islands (Tagarino et al. 2008), as well as Guam and Pohnpei in the Federated States of Micronesia (Gaos et al. 2020). Conversely in the SEA region, while there have been numerous tracking and foraging area studies undertaken on populations in Australia, hawksbill migration elsewhere in SEA have not been extensively studied. Fifteen hawksbill turtles from Malaysia's Melaka nesting beaches (one island and two mainland sites) were satellite tracked between 2006-2013. Nearly all of these tracked turtles migrated southwards along the Malaysian coastline towards Singapore or the Riau Islands (Pilcher et al. 2019). Flipper tag recoveries and satellite studies in the Turtle Islands, Malaysia revealed hawksbill migration into the southern Philippines, along the east coast of Kalimantan in Indonesia and retention in Sabah's waters (Joseph 2017; Pilcher et al. 2019). There have also been tracking studies of a few individuals undertaken in Singapore and Timor Leste, but data remains unpublished. Further research on the spatial

distribution, habitat utilization, and genetic relationships of hawksbill populations across the SEA and Western Pacific region is needed.

1.5. Population Productivity and Trend

The only index nesting sites for hawksbills in the western Pacific Ocean are the Arnavon Islands (Solomon Islands) and Namena Lala Island (Fiji), while the SEA region has index nesting beaches in Australia, Indonesia, Malaysia (Peninsular and Sabah), Singapore, and Thailand (for a full list of index beaches in the SEA region, see Hamann et al. (2022)). Given the lack of long-term mark-recapture studies, there are few recent peer-reviewed publications assessing annual trends in hawksbill nesting abundance available for most of the region covered by the Action Plan, except for the western Pacific countries of the Solomon Islands (increasing), northeast Australia (decreasing), and for Southeast Asia countries, the Turtle Islands Heritage Protected area (Sulu Sea; probably decreasing).

The most recent region-wide assessment of trends (2008) estimates Pacific Ocean hawksbill populations to be at least 75% lower than historical levels (with an estimated 4,800 nesting females remaining in 2008) and in the Indian Ocean, estimates to be at least 92% lower than historical levels (with an estimated 2,100 nesting females remaining) in 2008 (Mortimer and Donnelly 2008). This assessment reported hawksbill populations in many countries were depleted and/or declining in both the western Pacific Ocean (e.g., most of Micronesia, American Samoa, Palau among others) and Southeast Asia (e.g., India, Chagos Islands, Maldives, Myanmar, Viet Nam, Philippines, Malaysia among others).

Only two populations have more recently been reported to be likely stable, one in Thailand (although it is increasing of a highly depleted baseline) and the other in Sabah Malaysia's minor rookery of Pulau Lankayan, with one other major rookery stable or increasing in Western Australia (Hamann et al. 2022).

Within its remit, SPREP is currently (2022) undertaking an extinction risk assessment which may further inform decision makes of trends in annual nesting patterns for hawksbill population in the western Pacific Ocean region. In the absence of recent quantified nesting census figures, and a lack of data on the stability of foraging area populations, the reported estimated trends and likely trajectory for hawksbill populations across the entire Action Plan region is of significant concern. Yet, addressing priority and other threats alongside habitat protection, can result in recovery as seen in some hawksbill populations in the western Indian Ocean (e.g., Seychelles and Chagos Archipelago; refer Mortimer 2011; 2017; 2020).

2. THREATS FROM ANTHROPOGENIC SOURCES

Current knowledge on threats to hawksbills in the SEA and western Pacific Ocean regions has been recently synthesized by Hamann et al. (2022) and Madden Hof et al. (2022), respectively. While hawksbill populations are affected by an array of additional threats (e.g., marine debris, climate change), the issues most relevant to use and trade are extracted from those reviews and presented here. These are categorized and described as: tortoiseshell trade; human use of turtles and eggs; and fisheries bycatch, targeted catch and illegal, unreported and unregulated (IUU) fisheries – acknowledging the overlap and interlinking of these threats.

The need to address these use and trade-related threats for hawksbills in the region is supported by Wallace et al. (2011), who found that hawksbill turtles had the largest number of RMUs (4 out of 11) assigned to the High Risk-High Threats category compared to other marine turtle species and are therefore most in danger of extinction. When grouping those four most

endangered RMUs by ocean basin, two occur in areas encompassed by this SSAP, e.g., North East Indian and West Pacific Oceans (Wallace et al. 2011). Both bycatch and take (e.g., utilization of eggs, meat, or other turtle products) were considered the most pervasive threats to marine turtles in the Indian Ocean, particularly in the northern areas, and for hawksbills specifically, take was recorded in the highest number of RMUs globally. Relevant to the SSAP, the North East Indian Ocean, South East Asia, and South and West Central Pacific RMUs were categorized as High Risk-High Threats. These findings and the need to address use and trade threats to hawksbill turtles were supported by IOSEA (2014) and CITES Secretariat (2019) assessments, alongside other more recent publications of Kitade et al. (2021) and Ingram et al. (2021), to name a few.

Under IUCN's Marine Turtle Specialist Group conservation assessment region categorization, Australasia, South Asia, and West Indian regions were also considered High Risk-High Threats (Work et al. 2021).

2.1. Tortoiseshell Trade

Large-scale commercial trade in tortoiseshell products occurred across the Indian Ocean for around 2,000 years, with considerable expansion since the 18th century and far into the 20th century (Mortimer and Donnelly 2008). From 1950 to 1986, for example, Japan imported around 1.3 million large-sized hawksbill turtles and 310,598 kg (8,394 per year) of raw hawksbill shell (bekko) from countries in the IOSEA region (Groombridge and Luxmoore 1989).

Despite a global ban by CITES on the international commercial trade in bekko trade since 1977 (and a reservation lifted by Japan in 1992), an active illegal trade network (concentrated in Southeast Asia) has created a renewed demand for turtles and turtle products (Gomez and Krishnasamy 2019). Miller et al. (2019) observed that trade in hawksbill shell was underestimated (originally 1.4 million to 9 million over a 150-year period) and that the current trade likely overlaps with the observed extent of modern-day IUU fishing activities, which may involve participation by small-scale fisheries (see Riskas et al. 2018; Vuto et al. 2019). Indeed, vessels from China and Viet Nam have been apprehended in the Philippines, Malaysia, Indonesia, and Australia for illegally taking, trading, or storing hawksbill turtles (IOSEA 2014; Miller et al. 2019). Another study found that marine turtles (including hawksbill turtles) were illegally trafficked internationally from Indonesia, Malaysia, and the Philippines (Gomez and Krishnasamy 2019). Further, from January 2015 to July 2019, at least 2,354 whole turtles, both alive and dead, were seized in 163 law enforcement incidents, and over 91,000 eggs were seized (of which over 75,000 were seized just in Malaysia), together with close to 3,000 shells and 1.7 tonnes of turtle meat (Gomez and Krishnasamy 2019) (species unknown). Viet Nam was also implicated in this study for its role in international trafficking as source, transit, and destination country. The most recent hawksbill turtle trade assessment in Japan revealed that there are still significant attempts to add illegally sourced hawksbill raw scutes (and tortoiseshell) into the domestic supply chain (Kitade et al. 2021). Between 2000 and 2019, Japanese customs reported 564 kg of hawksbill tortoiseshell seized in 71 incidents, representing some 530 hawksbill turtles (with over half seized between 2015 and 2019 alone) (Kitade et al. 2021).

The continuing trade in hawksbill turtle shell and tortoiseshell products poses a serious threat to the recovery of hawksbill populations in the SEA and western Pacific Ocean (Hamman et al. 2022; IOSEA 2014; Madden Hof et al. 2022). Recently in the Solomon Islands, Vuto et al. (2019) reported the local sale of hawksbill shell in 3 of the 10 communities surveyed, with evidence of sales to overseas buyers in Honiara. In the past, the export of tortoiseshell from the Solomon Islands was among the ten highest globally (Groombridge and Luxmoore 1989). In Papua New Guinea, Kinch and Burgess (2009) noted that the trade in hawksbill turtles was

ongoing in coastal towns, mainly in the form of tortoiseshell items for domestic buyers, and potentially targeting international tourists even though export is illegal. Also in Papua New Guinea, Opu (2018) found that turtle harvest was concentrated in Manus, Milne Bay, and Western Provinces. Media reports and anecdotal reports from government stakeholders suggest the tortoiseshell trade is still active in Palau despite a 2018 ban (Reklani 2021). While attempts are made to estimate trade and the resultant mortalities of hawksbills, the reports of illegal trade in hawksbill shells occurring in multiple western Pacific Ocean countries warrant further study.

2.2. Human Use of Turtles and Eggs

Hawksbill turtles have a high degree of cultural significance in many countries across the SEA and western Pacific Ocean regions and are a traditional food with eggs and meat consumed, and shells used in customary practice and in trade (Frazier 1980; Groombridge and Luxmoore 1989; Pilcher 2021; Ingram et al. 2022). Papua New Guinea, Australia, and the Solomon Islands remain ranked in the top five for legal marine turtle take (all species) globally (Humber et al. 2014). Despite their global critically endangered status (and varied conservation status between countries), hawksbill turtles in many countries are treated as an untapped (unregulated) fishery resource and are entangled in the transition from a subsistence to cash (trade) economy (Opu 2018). But as natural assets, it is the loss of hawksbill turtles and the habitats on which they depend that will result in the loss of basic goods and services underpinning many communities in the region (refer Hoegh-Guldberg et al. 2016; Brander et al. 2021). A loss of hawksbill turtles also means a loss of cultural and customary practices.

The use and trade of hawksbill turtles and eggs continues in the SEA region (IOSEA 2014; Gomez and Krishnasamy 2019). While the take and trade of hawksbill turtles, eggs, and various products are prohibited throughout much of the SEA region, depleted hawksbill populations are nonetheless threatened by the ongoing illegal trade that involves several nations (Hamann et al. 2022; Ingram et al. 2022). To investigate this issue, the CITES Secretariat with support from the CMS Secretariat commissioned a study on the legal and illegal international marine turtle trade, with case studies in Madagascar, Mozambique, Malaysia, and Viet Nam (CITES 2019). Other studies have examined the illegal capture and commercial use of turtles in varying locations within the IOSEA region (see IOSEA 2014; Riskas et al. 2018; Gomez and Krishnasamy 2019; Miller et al. 2019; Williams et al. 2019). A synthesis of the complementary findings of these studies are reported in Hamann et al. (2022), with the following highlighting its key points:

- 1) There are major knowledge gaps regarding the species used (meat and eggs), the sociocultural and economic drivers underpinning illegal use and trade, and the types of use and motivations occurring in each country and/or SEA sub-region.
- 2) IUU fishing is likely to have significant impacts on hawksbill turtle populations in the SEA region due to its involvement in illegal turtle fisheries and links to wildlife trafficking operations.
- 3) CITES seizure records show that trade occurs between SEA countries.
- 4) The trade is more likely to be deliberate than opportunistic, with organized trade networks supplying domestic and international markets (e.g., Malaysia, Viet Nam, Indonesia, China). Amid increased scrutiny of the turtle trade (largely driven underground), online platforms are being used to sell turtle products, including hawksbill shell (e.g., Indonesia, Malaysia).
- 5) There is a lack of enforcement of existing legislation, as well as weak monitoring, control and surveillance of coastal fisheries that are abetting the illegal capture and trade of hawksbills.

In the western Pacific, hawksbill turtles and their eggs are harvested in every RMU, despite laws banning these practices in many countries (Wallace et al. 2010). Data is generally sparse on legal and illegal turtle and egg harvests, as documentation of these is inconsistent or unrecorded. Further, monitoring turtle harvest over vast distances between atolls and islands is logistically challenging. There are nevertheless a small but growing number of studies documenting use and trade of hawksbill turtles, eggs, and products, including several recent studies that estimate quantities taken.

Maison et al. (2010) indicate that there have been uncontrolled, long-term harvests of eggs and females in the Federated States of Micronesia that are likely to have had an impact on current population numbers. In the Republic of the Marshall Islands, turtles have historically been a food source and played an important cultural role. Egg collecting and harvest of turtles while they are onshore is prohibited at all times, but current levels of illegal exploitation are unknown (Maison et al. 2010). In Palau, hawksbill turtles are taken to support a tradition of gift exchanges of *toluk* (Pilcher, pers. obs.), despite traditional closures and a current moratorium banning the take of turtles or eggs while onshore (Maison et al. 2010). In the Cook Islands, turtles are occasionally killed and eaten at Tongareva, Rakahanga, Manihiki, and Palmerston, and probably at other atolls, but the true level of direct take remains unclear for the Cook Islands (White 2012). There are no estimates or reports of adult or egg harvests for Kiribati, Nauru, Niue, the Pitcairn Islands, Tokelau, Tuvalu, or Wallis and Futuna.

In Papua New Guinea, Opu (2018) found that the highest catches of turtles (all species) occurred in Manus, Milne Bay, and Western Provinces. These numbers were likely to underestimate the true degree of turtle harvest in Papua New Guinea, given the limitations of the survey method and that many landed turtles were likely used for personal consumption or in the barter trade.

Vuto et al. (2019) provide a recent update on turtle harvests in the Solomon Islands. They estimated that 9,473 turtles were harvested each year by spear fishers (95% CI: 5,063 to 22,423), with hawksbill turtles accounting for 25.7% of the total harvest. Juvenile turtles comprised 76.4% of hawksbill captures. Hawksbill turtles were most commonly used for subsistence purposes (81.6%) and were most likely to be consumed by the family of the fisher that captured the turtles. However, (yet the shells of 87.5% of hawksbill turtles harvested were sold to local buyers, who then on-sold to Asian buyers in Honiara). Hawksbill turtle products were far more likely to be illegally sold (32.3%) than green turtle products (12.1%).

In Vanuatu, there is a strong programme of local turtle monitors that aid in protecting turtles and convincing local communities to participate in turtle conservation efforts (Hickey and Petro 2005). It is estimated that turtle harvest in the past may have been in the region of 1,500 turtles per year, although they suggest that much of this harvest has since ceased (Hickey and Petro 2005). However, a recent survey found that people still catch turtles intentionally to eat and sell (Shaw, unpublished data). While this survey sample is not representative of the island chain as a whole, it does indicate that turtle captures continue to this day, and that updated estimates of take and trade are needed.

A recent study found that the use of marine turtles for aquatic wild meat is likely to be far more widespread in terms of frequency and species than reported, especially amongst Indigenous People and Local Communities (IPLCs) (Ingram et al. 2022). The full extent of any legal or illegal harvest in the SEA and western Pacific Ocean region is difficult to estimate because many uses by IPLC are not reported. Estimating levels of domestic take and trade is urgently needed to understand how take and trade are having an effect on the population (Gomez and Krishnasamy 2019; Hamann et al. 2022; Ingram et al. 2022; Madden Hof et al. 2022).

Collaborative efforts to understand the socio-cultural drivers and annual levels of hawksbill turtle harvest and trade are underway. In collaboration with relevant governments, the World

Wide Fund for Nature (WWF) and SPREP are supporting the delivery of a sociocultural survey in Papua New Guinea, Fiji, and Tonga. The project is part of WWF's broader Marine Turtle Use and Trade Initiative (MTUTI), which will collect and synthesize data on turtle use, trade, and genetics to advocate for targeted policy action to recover Asia-Pacific hawksbill turtle populations.

Whilst marine turtles provide many economic benefits, these values are not well documented. In 2004, Troëng and Drews undertook a global assessment of the direct consumptive use (food and materials), non-consumptive use (ecotourism), and non-use (existence and bequest) values of marine turtles. Since then, there have been a number of studies on the economic value of the ecosystem services provided by marine turtles (refer literature review by Brander et al. 2021), but these mainly focussed on cultural, recreation, tourism or use for food. Very few studies have used economic methods to estimate the value of ecosystem services (provisioning, regulating, cultural) provided by marine turtles in monetary terms. Brander et al. (2021) estimated the value of provisioning (harvest) services to be US\$800 per year and non-use (existence and bequest) values of over US\$45 billion per year in the Asia-Pacific region. The report concluded that there are significant opportunities to deliver massive economic benefit by capturing the public's support for investment in turtle conservation and management, whereby governments could work with other stakeholders to develop innovative financing mechanisms that can tap into this willingness to pay. The report also suggested governments could work collaboratively to develop initiatives to ensure that coastal communities earn more from conserving marine turtles than from harvesting them.

2.3. Bycatch and IUU Fishing

Incidental capture (bycatch) in commercial and small-scale fisheries is globally recognised as a major threat to marine turtle populations (Alverson et al. 1994; Lewison et al. 2004; Bourjea et al. 2008). In the IOSEA region, legal fisheries are considered to be a key threat to marine turtles despite the absence of quantitative data (Bourjea et al. 2008; Williams et al. 2019). Many governments of Signatory States of the IOSEA Marine Turtle MOU and regional fisheries management organisations (RFMOs) have implemented bycatch reduction and/or observer programmes to address the issue and understand impacts. However, the effectiveness of these mitigation measures is rarely evaluated, and bycatch records are typically examined at the level of individual fisheries, making cumulative impacts hard to discern (Riskas et al. 2016). In their review of bycatch literature in the IOSEA region, Hamann et al. (2022) indicate that bycatch of hawksbill turtles from longline and purse seine fisheries (both pelagic fisheries) is very low, while bycatch from gillnets and coastal artisanal fisheries are likely to have the highest impact on turtle populations due to their nearshore habitat preferences.

In the western Pacific Ocean region, commercial fisheries are dominated by longline and purse seine fisheries for tuna and tuna-like species. Monitoring of these fisheries in high seas areas is the responsibility of the Western and Central Pacific Fisheries Commission (WCPFC), an RFMO. Peatman et al. (2018a) estimated that hawksbill turtles accounted for 16% of turtle bycatch in purse seine fisheries in the WCPFC area from 2003 to 2017, with a mean of 36 hawksbills per year (range 15-75). Hawksbill bycatch is recorded in longline fisheries, with a mean of 1,126 individuals (range 534-1,598) caught per year in WCPFC longline fleets (Peatman et al. 2018b). Yet because not all bycatch incidences result in mortalities, and observer coverage is not sufficiently uniform nor normally distributed across the fishery (Peatman et al. 2018b), these figures should be used as indicative of the magnitude of the threat, not the precise quantities. Also, given the predominantly nearshore habitats of hawksbill turtles (Gaos et al. 2012b), and the deep-water operations of longline fleets, interaction rates with hawksbills are not high compared to other marine turtle species. This is supported by data in Peatman et al. (2018a), where hawksbills account for only 4.9% of all interactions.

Small scale fisheries are responsible for substantial levels of sea turtle bycatch and targeted catch in a number of regions (refer Sabah, Malaysia study site in Moore et al. 2010). They largely operate and overlap more acutely with hawksbill habitat in nearshore or coastal waters using a variety of gears, including gill, set and drift nets, trawls, seines, longlines, traps, and others (Lewison 2013). Research has shown that small-scale fisheries can have high levels of turtle bycatch that directly cause population declines (Lewison and Crowder 2007; Peckham et al. 2007; Alfaro-Shigueto et al. 2011). In the SEA region, small-scale fisheries are ubiquitous and likely constitute the majority of the fisheries workforce (Teh and Sumaila 2013). However, robust data for hawksbill turtle bycatch in these fisheries is largely unavailable. There is only one published example of a small-scale fisheries bycatch assessment in Malaysia (Pilcher et al. 2009), in which an estimated 988 hawksbill turtles were taken in small-scale fisheries in a single year (extracted from data in Pilcher et al 2009).

In the western Pacific Ocean region, small-scale fisheries are widespread, often operating in remote areas and at levels that have not been quantified. Although a study commissioned by the CITES Secretariat (2022) surmised that bycatch and active targeting of marine turtles in small-scale fisheries is unlikely to contribute to the international trade of hawksbills, Vuto et al. (2019) provided evidence to the contrary from the Solomon Islands. Vuto et al. (2019) reported that hawksbill turtle products are far more likely to be sold illegally than green turtle products, and that the shells of 87.5% of hawksbill turtles harvested were sold to local buyers, who then on-sold to Asian buyers in Honiara. Because hawksbill turtles inhabit coral reef habitats and shallow coastal waters, they are highly vulnerable to bycatch, targeted catch, and mortality in the small-scale fisheries occurring in almost every country in the western Pacific Ocean region. As poachers have been documented encroaching on the national waters of the Coral Triangle and western Pacific countries (Lam et al. 2011), and growing evidence of the role of small-scale fisheries in facilitating the turtle trade (IOSEA 2014), a better understanding of hawksbill interactions with small-scale fisheries (bycatch and targeted catch) across the broader western Pacific region and beyond is urgently needed.

IUU fishing is a pervasive issue for fisheries management in every ocean basin (Agnew et al. 2009). Vessels engaged in IUU fishing are far less likely to comply with conservation mandates intended to reduce bycatch and mortality of non-target, vulnerable species, including marine turtles (MRAG 2005). In countries where intentional turtle take (or retention of turtle bycatch) by fishers is prohibited, if it occurs it would be considered illegal and could be categorised as IUU fishing. Illegal take of hawksbill turtles by coastal fisheries has been recorded throughout SEA (i.e., Indonesia, Malaysia, Philippines, and Viet Nam) (IOSEA 2014) and the western Pacific Ocean (i.e., CNMI, Fiji, Guam, Palau, Solomon Islands, and Vanuatu) (see country summaries in Work et al. 2020). However, more information regarding take levels and size classes is needed to inform risk assessments and mitigation measures.

The connection between IUU fishing and marine turtle use and trade is only recently being investigated. A new report recently commissioned by the CITES Secretariat indicates that IUU fisheries are likely the main source of hawksbill turtles for international trade (CITES Secretariat 2022). Similarly, Riskas et al. (2018) found that IUU fishing poses a threat to marine turtle populations in the SEA region, and that in certain regions IUU fishing is associated with poor fisheries management and wildlife trafficking. Lam et al. (2011) and IOSEA (2014) note the involvement of small-scale fishing vessels in the trafficking of hawksbill turtles and products in East and South-East Asia, while Miller et al. (2019) note that current patterns of IUU fishing may mirror historical illegal trade routes of hawksbill turtles. However, since IUU fisheries are by definition cryptic and difficult to study directly (Christensen 2016), their role in the contemporary scale of trade in hawksbill turtles remains unclear.

There is little documented information on hawksbill turtle interactions with illegal commercial fisheries in the western Pacific Ocean. IUU fishing incidence is estimated to be lower in the western Pacific than in many other seafood-sourcing regions globally and has decreased in the Pacific Islands region relative to a 2016 assessment of data from 2010-2015 (MRAG Asia Pacific 2021). This is attributable to the concerted and ongoing cooperative efforts by Pacific countries and partner organisations (e.g., the Pacific Islands Forum Fisheries Agency, the Pacific Community, or the Western and Central Pacific Fisheries Commission) to increase the monitoring, control and surveillance of fleets operating in the region.

2.4. Threat Prioritization

A threat prioritization process was not undertaken to determine the relative impact of threats on hawksbill turtles given the already refined scope of this SSAP of use and trade. At a population (rather than individual) level, these threats are considered high risk and must be addressed to ensure the long-term sustainability and recovery of hawksbill turtles.

In doing so, we recognize that threat levels of bycatch and take will differ as a result of the geographical range and specific life history traits of each hawksbill population including those that are shared (connected) among countries in the Indian, South-East Asian, and western Pacific Ocean regions. As a result, range states are encouraged to consider the impact of use and trade in the context of not only their local situation (nationally) but also regionally and internationally. As such, the prioritized activities listed below in section 4 are considered appropriate at national, regional, and international scales.

For more information on other threats to hawksbill turtle populations in the area covered by this SSAP, please refer to the Hawksbill Assessments for IOSEA (Hamann et al. 2022) and Western Pacific Ocean region (Madden Hof et al. 2022).

3. POLICIES AND LEGISLATION RELEVANT FOR MANAGEMENT

3.1. International Conservation and Legal Status of the Species

IUCN Status (Red List)	CMS	CITES
<p>Critically Endangered A2bd:</p> <p>A) Population reduction in the following:</p> <p>2. An observed, estimated, inferred or suspected population size reduction of 80% over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying):</p> <p>b) an index of abundance appropriate for the taxon</p> <p>d) actual or potential levels of exploitation</p>	<p>Appendix I and II</p> <p>App. I lists migratory species that have been assessed as being in danger of extinction throughout all or a significant portion of their range. Parties that are a Range State to these species shall endeavour to strictly protect them by:</p> <ul style="list-style-type: none"> - prohibiting the taking of such species, with very restricted scope for exceptions; - conserving and where appropriate restoring their habitats; - preventing, removing or mitigating obstacles to their migration and controlling other factors that might endanger them. 	<p>Appendix I</p> <p>Lists species currently threatened with extinction from international trade. CITES prohibits international trade in wild-taken specimens of these species except when the importing country certifies that the import is for primarily non-commercial purposes.</p>

3.2. Regional and International Legally and Non-legally Binding Instruments and Relevant Bodies

Tick mark (✓) indicates adoption, ratification, or membership. For more detail, please refer to [CMS/IOSEA/Hawksbill-SSAP/Inf.5](#).

Asia-Pacific Signatories and Parties	CITES	CBD	CMS	UNCLOS	RFMOs	PSMA	Ramsar Convention	IOSEA Marine Turtle MOU	MOU ASEAN Sea Turtle Conservation and Protection	CTI-CFF	London Declaration (IWT)	SSME Regional Action Plan	SPREP
American Samoa (USA)	✓			✓	✓	✓	✓	✓			✓		✓
Australia	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓
Brunei Darussalam	✓			✓					✓				
Cambodia	✓	✓				✓	✓	✓			✓		
China	✓	✓		✓	✓		✓				✓		✓
Cook Islands		✓	✓	✓	✓	✓	✓						✓
Federated States of Micronesia		✓		✓	✓								✓
Fiji	✓	✓	✓	✓	✓	✓	✓						✓
French Polynesia (France)	✓	✓	✓	✓	✓	✓	✓				✓		✓
Guam (USA)	✓				✓	✓	✓	✓			✓		✓
Hawaii (USA)	✓				✓	✓	✓	✓			✓		
Hong Kong (China)	✓	✓	✓	✓			✓						
Indonesia	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	
Japan	✓	✓		✓	✓	✓	✓				✓		
Kiribati		✓		✓	✓		✓						✓

Asia-Pacific Signatories and Parties	CITES	CBD	CMS	UNCLOS	RFMOs	PSMA	Ramsar Convention	IOSEA Marine Turtle MOU	MOU ASEAN Sea Turtle Conservation and Protection	CTI-CFF	London Declaration (IWT)	SSME Regional Action Plan	SPREP
Lao People's Democratic Republic	✓	✓		✓			✓		✓		✓		
Malaysia	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	
Marshall Islands		✓		✓	✓		✓						✓
Myanmar	✓	✓		✓		✓	✓	✓	✓		✓		
Nauru		✓		✓	✓								✓
New Caledonia (France)	✓	✓	✓	✓	✓	✓	✓				✓		✓
New Zealand	✓	✓	✓	✓	✓	✓	✓				✓		✓
Niue		✓		✓	✓		✓						✓
Northern Marianas (USA)	✓					✓	✓	✓			✓		✓
Palau	✓	✓	✓	✓	✓	✓	✓						✓
Papua New Guinea	✓	✓		✓	✓		✓	✓		✓			✓
Philippines	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Republic of Korea	✓	✓			✓	✓	✓						
Samoa	✓	✓	✓	✓	✓		✓						✓
Singapore	✓	✓		✓					✓		✓		
Solomon Islands	✓	✓		✓	✓					✓			✓

Asia-Pacific Signatories and Parties	CITES	CBD	CMS	UNCLOS	RFMOs	PSMA	Ramsar Convention	IOSEA Marine Turtle MOU	MOU ASEAN Sea Turtle Conservation and Protection	CTI-CFF	London Declaration (IWT)	SSME Regional Action Plan	SPREP
Taiwan (China)				✓	✓								
Thailand	✓	✓		✓		✓	✓	✓	✓		✓		
Timor-Leste		✓		✓						✓			
Tokelau				✓			✓						✓
Tonga	✓	✓		✓	✓	✓							✓
Tuvalu		✓		✓	✓								✓
United States of America	✓				✓	✓	✓	✓			✓		✓
Vanuatu	✓	✓		✓	✓	✓	✓						✓
Viet Nam	✓	✓		✓		✓	✓	✓	✓		✓		
Wallis and Futuna (France)	✓	✓	✓	✓	✓	✓	✓						✓

3.3. National Legislation Relevant to the Species

There are varying levels of national and state laws, legislative frameworks, and policies afforded to hawksbill turtles throughout the SEA and Western Pacific region. Conservation and corresponding protection status varies from none to the highest level afforded to critically endangered species. Inconsistencies and overlap of federal and state legislation within and between countries is very evident.

Upon reviewing the relevant national legislation of 38 States within the scope of this Action Plan, the following issues were identified:

First, the majority of national legislation reviewed does not have conservation and protection provisions designated for the hawksbill turtle. Rather, the species is included in broader conservation and protection regimes intended for “marine resources”, “living aquatic species” or “fish” which may narrow down to “reptiles” and, on occasion, “turtles”. As a result, legal provisions are not tailored to the specific circumstances of the hawksbill turtle.

Second, there is a prevalent lack of designation of the hawksbill turtle as a “protected” species or further conservation status designation (e.g., “endangered”) in national legislation. In some cases, this is because legislation does not provide provisions for protection or conservation status designation, or because hawksbill populations assessments have not yet been undertaken to allow such designation. To that end, the national legislation of many States does not reflect the International Union for the Conservation of Nature (IUCN) “critically endangered” Red List status of the hawksbill turtle, potentially undermining the urgency with which the hawksbill turtle needs to be protected.

Third, there are instances where national laws on the protection of the hawksbill turtle bifurcate. Where there are such official designations for the “protected” or “endangered” status of the hawksbill turtle which give the species enhanced protection, a number of States also recognize the customary rights of the local communities, including take and subsistence. There are a few nations with total bans on all forms of take, use and trade in place. In other cases, there are laws that specify size or catch limits (i.e., domestic quotas), use traditional use permit systems or rely on management plan to manage harvest levels. As such, national legislation protecting both the hawksbill turtle and the customary rights of local communities is an important issue that requires a delicate balance.

Fourth, the wide range of penalties prescribed across the reviewed States’ national laws helps highlight a difference in deterrence. The variety of penalties based on, among others, the offender being a natural or a legal person, the fine being a maximum fixed amount or the market value of the species or any part thereof, or the violation being a recurring offence gives rise to differing levels of deterrence, making certain States’ national legislation inconducive to achieving the long-term protection of the hawksbill turtle.

Lastly, different types of legislation across different jurisdictions (e.g., from national to state/provincial to local laws) are used by States to protect and/or manage hawksbill turtles. For example, wildlife laws to designate “protected” status and govern use and trade; fisheries laws to regulate fishing and hunting activities/quotas; protected area laws to conserve and manage habitat. Combined, these laws offer strengthened conservation, management and protection to the hawksbill turtle. Yet there are many States that only use one form of legislation. In some cases, different laws are used across jurisdictions which are conflicting, and laws most differ

between countries which becomes important when managing a highly migratory species that travels between countries and is afforded different levels of protection.

Details are provided in Annex 1 **[TO BE MOVED TO SEPARATE 'LIVING' DOCUMENT; LINK TO BE PROVIDED HERE]**.

4. FRAMEWORK FOR ACTION

4.1. Goal

[To fully understand and where needed reverse the impacts of use and trade and build resiliency of hawksbill populations in the South-East Asia and Western Pacific Ocean region]

[To [fully understand and] address [unsustainable] use and trade of hawksbill populations turtles in the South-East Asia and Western Pacific Ocean region and build resiliency in the populations]

4.2. Objectives, Actions and Results

The objectives, results and corresponding actions to address the threats associated with take, use and trade of hawksbill turtles are set out in the tables below.

There are **23 actions in this SSAP**. These were consolidated based on CMS/IOSEA/Hawksbill-SSAP/Inf.5 [Policy Review as Background to the Development of a Single Species Action Plan for Hawksbill Turtles in South-east Asia and the Adjacent Western Pacific](#) and all of which are already embedded within at least one existing policy frameworks and/or mandate for delivery amongst various countries or range states. The links between the SSAP actions and these policies or mandates are listed in the table. A description of 'Ways of potential delivery' has also been added to each action to assist with implementation.

Actions are prioritized as essential (**red**), high (**orange**), medium (**yellow**). No low priority was assigned given the urgency of addressing these threats. **Timescales** are also attached to each Action based on its prioritization and urgency of delivery, using the following scale:

- Immediate: to be completed with the next year
- Short: to be completed within 3 years
- Medium: to be completed within the next 5 years
- Ongoing: currently being implemented and should continue

A top seven action list has been prioritized as immediate or urgently required to be delivered within the next year. These are actions that have associated funding or resources already committed.

Thirteen actions are prioritized for delivery within the next three years and three within the next five years. Given concern over the gaps in our knowledge of hawksbill turtles in these regions, the known declines and in many cases the unknown trajectory of many populations, utmost urgency is required. As such, potential partners have also been indicated to guide collaborations and support for delivery.

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
Objective 1: Review and where necessary improve legislation, policy, compliance and enforcement of hawksbill turtle take, use and trade in at least half of SSAP countries in South-East Asia and the Adjacent Western Pacific by 2025.						
1.1 Legislative reviews and, if necessary, reforms are made in each country that result in greater protection from unsustainable use and trade of hawksbill turtles.	1.1.1 Conduct a thorough review of protective legislation and inconsistencies between countries	<ul style="list-style-type: none"> Contribute and participate in WWF's marine turtle legislative and baseline status review Undertake as part of National and Regional Plans of Action for marine turtles 	I/R	Immediate	CMS, IOSEA MOU, SPREP	IOSEA CMP 2009 CITES CoP18 Turtle Decisions 2019 (18.212a) Sulu Sulawesi Marine Turtles Action Plan 2011 Pacific Islands Regional Marine Species Programme 2022-2026 (6.1)
	1.1.2 Enact new laws on marine turtle conservation related to use and trade, remove any inconsistencies (including between countries) within national legislation, and alter legislation where necessary to fully implement international commitments,	<ul style="list-style-type: none"> Prioritise as a result of 1.1.1 CMS Parties can ask for support from the CMS Secretariat 	R/N	Short	National Governments	IOSEA CMP 2009 CITES CoP18 Turtle Decisions 2019 (18.211b) ASEAN MoU 2012 (IV)

¹ Level: (R) Regional; (N) National; (I) International

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	including CITES Decisions and Resolutions related to hawksbills					Pacific Islands Regional Marine Species Programme 2022-2026 (4.1, 6.1)
	1.1.3 Relevant authorities commit to building capacity and undertake training to improve the implementation and enforcement of national regulations and regional/international treaties, instruments or initiatives that apply to the unsustainable take and use of hawksbill turtles	<ul style="list-style-type: none"> Identify and articulate actual resource needs and raise funds to increase human and material resources, build field-level capacity at national and regional levels, including for enforcement Seek to participate in existing training sessions and programs provided by IGOs, NGOs and others (e.g., CITES local enforcement training, CTOC training) 	R/N	Short	NGOs, IGOs, Financial Institutions, National Governments SPREP, CTI-CFF, CITES	IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (27, 48, 91) CITES CoP18 Turtle Decisions 2019 (18.211i, 18.213a) ICCWC tools Pacific Islands Regional Marine Species Programme 2022-2026 (1.1, 8.1, 8.2) (also supported by: IOSEA Hawksbill Assessment 2022)

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	<p>1.1.4 Where required, both where hawksbill turtles are exploited in coastal areas and at transaction points, improve law enforcement activities, surveillance, compliance and response (detection, confiscation, monitoring and reporting) both where take is legal and where illegal activities continue.</p>	<ul style="list-style-type: none"> • <i>Prioritise as a result of 1.1.1</i> • <i>Participate in WWF's ShellBank</i> • <i>Implement findings and outputs of National Assessments, Rapid Reference Guides and/or undertake self-assessment (e.g., ICCWC) for other countries</i> • <i>Seek to participate in existing training sessions and programs provided by NGOs and others (e.g., CTOC training), or seek/provide funding for new</i> 	N/R	Immediate - Short	National Governments, CTI-CFF, INTERPOL, ASEANAPOL, local community groups	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (27, 29, 91) CITES CoP18 Turtle Decisions 2019 (18.211f; 18.212a) Pacific Islands Regional Marine Species Programme 2022-2026 (6.1, 8.1) (also supported by: IOSEA Hawksbill Assessment 2022)</p>
	<p>1.1.5 Where required, address weaknesses in the judicial process, both where take is legal and where illegal activities continue.</p>	<ul style="list-style-type: none"> • <i>Build awareness in prosecution services of the seriousness of wildlife crime as an organized crime and improve capacity, including through the preparation of manuals to guide the prosecution of wildlife crimes (e.g.,</i> 	N/R	Immediate - Short	National Governments, UNODC	<p>IOSEA Work Programme 2020-2024 (27)</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
		<i>Rapid Reference Guides), and guidelines on evidential handling and forensic analysis</i>				
<p>1.2 Conservation actions and targeted management plans are developed that address unsustainable use and trade of hawksbill turtles, where necessary embedded in newly-enacted legislation, and are enforced</p>	<p>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 CITES CoP18/Inf.18 and related Decisions 18.211-18.213 (and any relevant new Decisions or Resolutions), and:</p> <ul style="list-style-type: none"> • Surveillance and enforcement of trade in hawksbill meat and parts; • Legislative reform for incidental bycatch in all fisheries (including small-scale community fisheries) and practical modifications of fishing gear; 	<ul style="list-style-type: none"> • <i>Make an assessment of gaps and seek support from CITES Secretariat to deliver CITES Turtle Decisions (as per Turtle Decision 18.210 - 18.217)</i> • <i>Engage relevant researchers and NGOs to assist, and where needed, seek funding support to develop and/or finalise CTI-CFF NPOA or other national management plan/strategy</i> • <i>Participate WWF's Turtle Use Project</i> • <i>Contribute to existing SPREP processes to finalise and endorse work plan</i> • <i>Commit to working with CTI-CFF to develop RPOA</i> 	R/N	Immediate	CTI-CFF, SPREP, CMS, IOSEA MOU, IAC, National Governments, local community groups	<p>CMS Decision 13.70 IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (9, 12, 15, 43, 63, 87) CITES CoP18 Turtle Decisions (18.211 a, b, c) CTI-CFF Regional Plan of Action 2012 Pacific Islands Regional Marine Species Programme 2022-2026 (1.2, 1.4, 4.1, 4.5, 5.1, C.6, 8.2)</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	<ul style="list-style-type: none"> Traditional management and regulation of domestic quotas, if any, and critical habitat user rights Identification, based on satellite tracking, tag recovery and genetic data, of a network of hawksbill habitat and migratory protection sites (to allow greater safety for marine turtles during their life cycle and movements) and of habitats requiring greater protection. 					Ramsar Convention Resolution XIII.24 (19) Sulu Sulawesi Marine Turtles Action Plan 2011 (2) (also supported by: IOSEA Hawksbill Assessment 2022)
	1.2.2 Where domestic harvest of specimens of hawksbill turtles, including eggs, is legal, ensure any domestic harvest quotas are established based on robust science-based methods and the principles of sustainability, including accounting for existing quotas or no-take quotas in other States that share hawksbill turtle stock(s)	<ul style="list-style-type: none"> <i>Prioritise as part of 1.2.1 and 1.1.1</i> <i>Participate in WWF's Turtle Use Project</i> 	N/R	Short	National Governments, local community groups	IOSEA Work Programme 2020-2024 (29) CITES CoP18 Turtle Decisions 2019 (18.212b)

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
Objective 2: Increase action and improve accountability to further monitor and report on hawksbill take, use and trade nationally and cooperate regionally to exchange data, share intelligence and strengthen collaborations						
2.1 Accountability and action in detecting and monitoring is enhanced which in turn improves the control and reporting of illegal trade and fishery/vessel activity	2.1.1 In a standardized manner, collect illegal wildlife trade data and using all available technologies ascertain key trade routes, methods, volumes, and trade 'hot-spots' that can be used for monitoring trade in hawksbill turtles; and submit comprehensive and accurate information on illegal trade in marine turtles in national annual illegal trade reports to the CITES Secretariat and other relevant bodies (e.g., CTI-CFF, TRAFFIC WiTis database).	<ul style="list-style-type: none"> • <i>Prioritise as part of 1.1.1</i> • <i>Participate in WWF's ShellBank</i> • <i>Respond to CITES Turtle Decision notifications and submit annual illegal trade reports.</i> 	N	Ongoing - Short	CITES, CTI-CFF, National Governments, NGOs, Universities and Research Institutes	IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (21, 59) CITES CoP18 Turtle Decisions 2019 (18.211e/i) Pacific Islands Regional Marine Species Programme 2022-2026 (1.1) (also supported by: IOSEA Hawksbill Assessment 2022)
	2.1.2 Increase action to tackle the illicit financial flows associated with wildlife trafficking and related corruption, including the increase of use of financial	<ul style="list-style-type: none"> • <i>Approach UNODC, Wildlife Justice Commission or similar to assist with in-country or regional assessment</i> • <i>Partner with ACAMS</i> 	N	Immediate - Short	National Governments, UNODC	London Declaration 2018 (10)

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	investigation techniques and public/private collaboration to identify criminals and their networks	<ul style="list-style-type: none"> • <i>Work with the private sector to seek support and delivery</i> 				
	2.1.3 Improve accountability for the practices (e.g., handling, release, record keeping) undertaken by all vessels and improve the monitoring and control related to hawksbill turtles at landing sites	<ul style="list-style-type: none"> • <i>Submit comprehensive and accurate national annual illegal trade reports to the CITES Secretariat and other relevant bodies (e.g., CTI-CFF, TRAFFIC's WiTis database etc.)</i> • <i>Ratify the Agreement on Port State Measures (PSMA or Port State Measures Agreement) to prevent, deter and eliminate illegal, unreported and unregulated fishing.</i> 	N	Short	National Governments, FAO (via Port State Measures Agreement), RFMOs	CITES CoP18 Turtle Decisions 2019 (18.211j) Pacific Islands Regional Marine Species Programme 2022-2026 (4.1)
	2.1.4 Continue and/or establish national and regional bycatch mitigation programmes for industrial and artisanal fisheries (also community/small-scale fisheries), particularly where additional management is required, to enhance their use (including gear modifications, TEDs) and reduce bycatch.	<ul style="list-style-type: none"> • <i>Prioritise as part of 1.2.1 and 1.1.1</i> 	N/R	Short	National Governments	IOSEA Work Programme 2020-2024 (7, 22-25) Sulu Sulawesi Marine Turtles Action Plan 2011 (4.1)

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	2.1.5 Continue and/or establish national and regional observer programmes to assess and quantify fishery impact/overlap to hawksbill turtle populations, stocks and distribution, and prioritize areas, stocks, fisheries for additional management.	<ul style="list-style-type: none"> Work with the private sector to seek support and delivery 	N/R	Medium	National Governments	IOSEA Work Programme 2020-2024 (7, 22-25) Sulu Sulawesi Marine Turtles Action Plan 2011 (4.1)
2.2 Improved collaboration, cooperation and intelligence sharing to all relevant policy fora (local, national, regional and international) and between all SEA and Western Pacific Ocean countries results in better coordinated efforts	2.2.1 Increase intra- and interregional collaboration and exchange of actionable intelligence between source, transit, and destination countries to address the illegal take and trade of hawksbill turtles, and coordinate efforts to identify and address fishing interactions with hawksbill turtles in the high seas.	<ul style="list-style-type: none"> Submit comprehensive and accurate national annual illegal trade reports to the CITES Secretariat and other relevant bodies (e.g., CMS National Reports, IOSEA Marine Turtle MOU National Reports, CTI-CFF, TRAFFIC's WiTis database etc.) Ratify the Agreement on Port State Measures (PSMA or Port State Measures Agreement) to prevent, deter and eliminate illegal, unreported and unregulated fishing. 	N/R	Short	National Governments, CITES, ICCWC, INTERPOL, ASEANAPOL, UNODC, RFMOs and other Regional Fishery Bodies, CTI-CFF	IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (51, 52, 58, 91) CITES CoP18 Turtle Decisions 2019 (18.211h/l) UNTOC (13) UN Convention Against Corruption (43) PSMA (12-19) London Declaration 2018 (18) Pacific Islands

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
						<p>Regional Marine Species Programme 2022-2026 (4.5) UNCLOS (197) (also supported by: IOSEA Hawksbill Assessment 2022)</p>
	<p>2.2.2 Strengthen internal, bilateral, and international cooperation in enforcement by collaborating with IGOs and NGOs to ensure the issue of marine turtle trade is maintained on the agenda of CITES fora, including the Animals Committee and Standing Committee, CMS, the IOSEA MOU, RFMO meetings, and meetings of other relevant organizations</p>	<ul style="list-style-type: none"> <i>Increase cooperation between fisheries and environment ministries</i> 	R	Ongoing - Immediate	National Governments, IGOs, NGOs, INTERPOL, UNTOC, RFMOs	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (58, 59, 60) CITES CoP18 Turtle Decisions (18.210 e, 18.211 d) Pacific Islands Regional Marine Species Programme 2022-2026 (4.5, 8.2)</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
						(also supported by: IOSEA Hawksbill Assessment 2022)
<p>2.3 Research and evaluation undertaken enables baselines and scale of impact of take, use and trade to be determined</p>	<p>2.3.1 Research the scale and impact that national and international artisanal, semi-industrial and industrial fisheries, including illegal, unreported, and unregulated fishing, have on hawksbill turtle populations and their linkage to illegal trade including using on-board observer data, fishing community surveys</p>	<ul style="list-style-type: none"> <i>Prioritise as part of 1.2.1 and in review of 1.1.1</i> 	<p>N</p>	<p>Immediate - Ongoing</p>	<p>NGOs, National Governments, World Bank, Universities and Research Institutes</p>	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (1, 6, 7, 24, 85, 87, 88) CITES CoP18 Turtle Decisions 2019 (18.213e) Pacific Islands Regional Marine Species Programme 2022-2026(4.4) (also supported by: IOSEA Hawksbill Assessment 2022)</p>
	<p>2.3.2 Evaluate social and cultural values, as well as economic values, of hawksbill turtles,</p>	<ul style="list-style-type: none"> <i>Prioritise as part of 1.2.1 and in review of 1.1.1</i> 	<p>N/R/I</p>	<p>Short</p>	<p>NGOs, National Governments, Universities and</p>	<p>IOSEA CMP 2009</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	<p>both intrinsically and in terms of their use and trade, and investigate human dimensions that underpin the use and trade of hawksbill turtles and products</p>	<ul style="list-style-type: none"> Participate in WWF's Turtle Use Project 			<p>Research Institutes</p>	<p>IOSEA Work Programme 2020-2024 (7,20,21,29) Pacific Islands Regional Marine Species Programme 2022-2026 (4.5) (also supported by: IOSEA Hawksbill Assessment 2022)</p>
	<p>2.3.3 Collect genetic samples of hawksbill turtles using standardized methods and reliable analysis to determine the population of origin, geographic boundaries of stocks and the genetic diversity between and within stocks. Compile and map data to support, for example, research, investigations and prosecutions, and policy decisions nationally and internationally.</p>	<ul style="list-style-type: none"> Prioritise as part of 1.2.1 and 1.1.1 Participate in WWF's ShellBank Participate in the Asia Pacific Marine Turtle Genetic Working Group 	<p>N</p>	<p>Ongoing - Immediate</p>	<p>National Governments, Universities and Research Institutes</p>	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (1,44) CITES CoP18 Turtle Decisions 2019 (18.211g) Pacific Islands Regional Marine Species Programme</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
						2022-2026 (1.3) (also supported by: IOSEA Hawksbill Assessment 2022)
	2.3.4 Research and establish a baseline for the conservation status and distribution of hawksbill turtles in the different countries/regions and where gaps exist, further study hawksbill genetic identity, population trends, habitat needs, migration routes, and other biological and ecological aspects of marine turtles (life history), as necessary	<ul style="list-style-type: none"> • Seek support, financial and technical assistance from Universities, Research Institutes, IOSEA Marine Turtle MOU Advisory Committee, IGOs, NGOs or local community groups • Prioritise as part of 1.2.1 and in review of 1.1.1 • Contribute to the Coral Triangle Atlas, SPREPs TREDs database, CMS TurtleNet, and other databases as appropriate • Participate in WWF's Turtle Use Project and ShellBank • Participate in the Asia-Pacific Marine Turtle Genetic Working Group • Contribute and participate in WWF's marine turtle legislative and baseline status review 	N/R	Ongoing - Immediate	National Governments, Universities and Research Institutes, IGOs, NGOs, local community groups	IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (12, 42, 43, 47, 63, 85, 115) CITES CoP18 Turtle Decisions 2019 (18.213d) Pacific Islands Regional Marine Species Programme 2022-2026 (1) (also supported by: IOSEA Hawksbill Assessment 2022)

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
<p>2.4 Established best practice standards and protocols are used to guide and deliver on-ground monitoring and management of hawksbill turtles</p>	<p>2.4.1 Review existing research methods and monitoring protocols and develop standard best practice monitoring guidelines and monitoring systems for hawksbill turtles, publish and provide training where required, and apply to existing or newly established index nesting and foraging sites to ensure populations are monitored as precisely as possible and information can be shared amongst range states to improve knowledge of the status, distribution, numbers (trend) and state of health (refer Activity 3.1.4 above).</p>	<ul style="list-style-type: none"> • <i>Seek support, financial and technical assistance from Universities, Research Institutes, IOSEA Marine Turtle MOU, IGOs, NGOs or local community groups</i> • <i>Contribute to the IUCN Marine Turtle Specialist Group (SSC) and SPREP's sea turtle monitoring guideline updates</i> • <i>Prioritise as part of 1.2.1 and 1.1.1</i> 	<p>I/N</p>	<p>Short - Medium</p>	<p>National Governments, CMS, IOSEA MOU, Universities and Research Institutes, IGOs, NGOs, local community groups</p>	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (1, 5, 9, 15-19, 55, 56) CTI-CFF Regional Plan of Action 2012 Sulu Sulawesi Marine Turtles Action Plan 2011 (5.1, 7) Pacific Islands Regional Marine Species Programme 2022-2026 (1.2, 1.4, 3.1) Ramsar Convention Resolution XIII.24 (16) (also supported by: IOSEA Hawksbill Assessment 2022)</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	2.4.2 Define and identify habitat critical for hawksbill turtle stocks at different life history stages with a particular focus on the trans-boundary nature of life-cycle stage requirements, migratory patterns, and related protection strategies and adequately protect critical areas including through marine protected areas (Refer Activity 3.1.3 above).	<ul style="list-style-type: none"> Seek support, financial and technical assistance from Universities, Research Institutes, IGO, NGOs or local community groups Prioritise as part of 1.1.1 and deliver as part of 1.2.1 	R/N	Short	National Governments, IGOs, CTI-CFF, NGOs, Universities and Research Institutes	IOSEA Work Programme 2020-2024 (30-33) CTI-CFF Regional Plan of Action 2012 (also supported by: IOSEA Hawksbill Assessment 2022)
Objective 3: Further research and evaluate the level of impact trade and fishery activity have on hawksbill populations and deliver on-ground implementation projects by 2027						
3.1 Awareness, education and sustainable alternatives reduce poaching, overexploitation and trade in hawksbill turtles	3.1.1 Work with local communities, turtle consumers, religious leaders as appropriate, youth and women in taking further steps to understand use and trade, including with a view to reducing unsustainable practices, and to raise community and political awareness, information sharing and education on such matters as: <ul style="list-style-type: none"> the conservation status of hawksbill turtles, possible health issues involved in consumption, 	<ul style="list-style-type: none"> Seek support, financial and technical assistance from Universities, Research Institutes, IGO, NGOs or local community groups Prioritise as part of 1.2.1 and 1.1.1 Seek economist expertise on how to capture the public's willingness to pay for marine turtle conservation (Refer WWF's Asia-Pacific Marine Turtle Economic valuations (and in-country reports)) 	N	Short	NGOs, National Governments, local community groups, health sector, economists	IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (51, 52, 58, 59, 61) CITES CoP18 Turtle Decisions 2019 (18.213b) Sulu Sulawesi Marine Turtles Action Plan 2011

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	<ul style="list-style-type: none"> the illegal trade including online, existing regulations and the importance of promoting the conservation of the species through compliance with policy, and formulation of effective economic incentives (supported by financial or technical assistance) to reduce poaching (Refer Activity 3.1.3 below) 	<ul style="list-style-type: none"> <i>Participate in WWF's Turtle Use Project</i> 				Pacific Islands Regional Marine Species Programme 2022-2026 (3.1, 4.5, 8.2, 9.1)
	<p>3.1.2 Examine motivations for both legal and illegal harvest and use of hawksbill turtles and their eggs, and where such use exceeds sustainable limits, assess the sustainability of alternative livelihood options for communities which depend on marine turtles, include subsistence users in decision making, and seek financial and technical support to address this item (also Refer Activity 1.2.2 on domestic trade)</p>	<ul style="list-style-type: none"> <i>Seek support, financial and technical assistance and advice from Universities, Research Institutes, IGO, NGOs or local community groups</i> <i>Prioritise as part of 1.2.1 and 1.1.1</i> <i>Participate in WWF's Turtle Use Project</i> 	N	Short	National Governments, NGOs, local community groups	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (20, 28, 29, 87) CITES CoP18 Turtle Decisions 2019 (18.213c) (also supported by: IOSEA Hawksbill Assessment 2022)</p>

Result	Actions	Ways of Potential Delivery	Level ¹	Priority and Timescale	Suggested Partners	Source [for information – to be removed in final SSAP]
	<p>3.1.3 To reduce poaching and the exploitation of hawksbill turtle products, establish effective direct incentive (i.e., economic) schemes (e.g., employment/payment) to deter illegal poaching, or establish effective indirect incentives (developing and fostering alternative sustainable livelihoods such as eco-tourism, use religious edicts to curb turtle consumption) for turtle users (also Refer Activity 3.1.1 above)</p>	<ul style="list-style-type: none"> • <i>Seek support, financial and technical assistance from Universities, Research Institutes, IGO, NGOs or local community groups</i> • <i>Prioritise as part of 1.2.1 and 1.1.1</i> • <i>Seek economist expertise on how to capture the publics willingness to pay for marine turtle conservation (Refer WWF's Asia-Pacific Marine Turtle Economic valuations (and in-country reports))</i> • <i>Participate in WWF's Turtle Use Project</i> 	N/R	Medium	National Governments, CMS, IOSEA MOU, NGOs, local community groups, donor organizations	<p>IOSEA CMP 2009 IOSEA Work Programme 2020-2024 (50-54) London Declaration 2018 (13) Pacific Islands Regional Marine Species Programme 2022-2026 (7.1, 9.1) (also supported by: IOSEA Hawksbill Assessment 2022)</p>

Abbreviations

[TO BE ADDED]

References

- Agnew, D.J., Pearce, J., Pramod, G., Peatman, T., Watson, R., Beddington, J.R. and Pitcher, T.J., 2009. Estimating the worldwide extent of illegal fishing. *PloS one*, 4(2), p.e4570.
- Alfaro-Shigueto J., Mangel J.C., Bernedo F., Dutton P.H., Seminoff J.A and Godley B.J. 2011. Small-scale fisheries of Peru: a major sink for marine turtles in the Pacific. *Journal of Applied Ecology*, 48: 1432-1440.
- Alverson, D.L., Freeberg, M.H., Murawski, S.A. and Pope, J.G., 1994. *A global assessment of fisheries bycatch and discards* (Vol. 339). Food & Agriculture Org.
- Balazs, G.H. 1983. Sea turtles and their traditional usage in Tokelau. *Atoll Research Bulletin* 279. The Smithsonian Institution, Washington, DC. 38 p.
- Bourjea, J., Nel, R., Jiddawi, N.S., Koonjul, M.S. and Bianchi, G., 2008. Sea turtle bycatch in the West Indian Ocean: review, recommendations and research priorities. *Western Indian Ocean Journal of Marine Science*, 7(2), pp.137-150.
- Brander, L., Madden Hof, C., Bishop, J., and Riskas, K.A. (2021). Money talks: the value of conserving marine turtles in Asia-Pacific. Vrije Universiteit Amsterdam and Brander Environmental Economics report to WWF-Australia and WWF-Coral Triangle Programme.
- Christensen, J., 2016. Illegal, unreported and unregulated fishing in historical perspective. In *Perspectives on oceans past* (pp. 133-153). Springer, Dordrecht.
- Conflict Island Conservation Initiative. 2018. PNG Field Research: Conflict Island nesting season 2018-2019. 8pp. Report prepared for the Conflict Island Conservation Initiative, Panasesa Island, Milne Bay Province, Papua New Guinea.
- CITES Secretariat. 2019. Status, scope and trends of the legal and illegal international trade in marine turtles, its conservation impacts, management options and mitigation priorities. Eighteenth (18th) meeting of the CITES Conference of the Parties (Geneva, August 2019), Document CoP18 Inf. 18.
- CITES Secretariat. 2022. The scale and importance of marine turtle bycatch relating to trade. Secretariate of the Convention on International Trade in Endangered Species of Wild Fauna
- Frazier, J. 1980. Exploitation of marine turtles in the Indian Ocean. *Hum Ecol* 8, 329–370. <https://doi.org/10.1007/BF01560999>
- Gaspar, P. 2020. French Polynesia: A Review of Sea Turtle Distributions, Threats and Conservation Status. In: Work, T.M., Parker, D., Balazs, G.H. (Eds.). 2020. *Sea Turtles in Oceania: MTSG Annual Regional Report 2020*. Report of the IUCN-SSC Marine Turtle Specialist Group, 2020.
- Gomez, L. and Krishnasamy, K. 2019. A Rapid Assessment on the Trade in Marine Turtles in Indonesia, Malaysia and Viet Nam. TRAFFIC. Petaling Jaya, Malaysia.
- Groombridge, B., and Luxmoore, R. A. 1989. The green turtle and hawksbill (Reptilia: Cheloniidae): world status, exploitation and trade. Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.
- Guilbeaux, M. 2002. New directions for sea turtle conservation in the Republic of Palau, Micronesia. Mosier, A., A. Foley, B. Brost, Compilers, *Proceedings of the Twentieth Annual Symposium on Sea Turtle Biology and Conservation*. NOAA Technical Memorandum NMFS-SEFSC-477. 369 pp.; 2002, p. 19
- Hamann, M., Flavell, F., Frazier, J., Limpus, C.j.C., Miller, J.D., Mortimer, J.A. 2022. Assessment of the conservation status of the hawksbill turtle in the Indian Ocean and South-East Asia region. Report to the IOSEA Marine Turtle MOU Secretariat.
- Hamilton RJ, Bird T, Gereniu C, Pita J, Ramohia PC, Walter R, et al. (2015) Solomon Islands largest hawksbill turtle rookery shows signs of recovery after 150 years of excessive exploitation. *PLOS One* 10(4): e0121435. doi:10.1371/journal.pone.0121435
- Hickey, F., 2020. Vanuatu: A Review of Sea Turtle Distributions, Threats and Conservation Status. In: Work, T.M., Parker, D., Balazs, G.H. (Eds.). 2020. *Sea Turtles in Oceania: MTSG Annual Regional Report 2020*. Report of the IUCN-SSC Marine Turtle Specialist Group, 2020.
- Hickey, F.R. and Petro, G., 2005. Documentation of Wan Smolbag's Vanua-tai Resource Monitors Program in Vanuatu. *Unpublished report*.
- Hoegh-Guldberg, O. et al. 2016. Reviving Melanesia's Ocean Economy: The Case for Action – 2016. WWF International, Gland, Switzerland, 64 pp.
- Humber et al. 2014. So excellent a fishe: a global overview of legal marine turtle fisheries. *Diversity and Distributions*. 20, 579–590

- Ingram DJ, Prideaux M, Hodgins NK, Frisch-Nwakanma H, Avila IC, Collins T, Cosentino M, Keith-Diagne LW, Marsh H, Shirley MH, Van Waerebeek K, Djondo MK, Fukuda Y, Glaus KBJ, Jabado RW, Lang JW, Lüber S, Manolis C, Webb GJW and Porter L. 2022. Widespread Use of Migratory Megafauna for Aquatic Wild Meat in the Tropics and Subtropics. *Front. Mar. Sci.* 9:837447. doi: 10.3389/fmars.2022.837447
- IOSEA Marine Turtle MOU. 2014. Illegal take and trade of marine turtles in the IOSEA region. In: Doc. 10.1, Seventh meeting of the Signatory States. Bonn Germany, 57 pp.
- Kabua, E.N. & F. Edwards. 2010. Republic of the Marshall Islands (RMI) sea turtle legislation review. SPREP/CMS Report. 9 p. Downloadable at <https://rmi-data.sprep.org/dataset/rmi-marine-turtle-legislation-review-2010>
- Kinch J. and Burgess E. 2009. Assessment of the trade in Hawksbill Turtles in Papua New Guinea. *TRAFFIC Bulletin.* 22 (2): 62-72.
- Kitade, T., M. Sakamoto and C.A. Madden Hof. (2021). Shell Shocked: Japan's Role in the Illegal Tortoiseshell Trade. WWF Japan. Tokyo, Japan.
- Lam, T., Lingxu, Takahashi, S. and Burgess, E.A., 2012. *Market forces: an examination of marine turtle trade in China and Japan.* TRAFFIC East Asia.
- Lewison, R.L., Crowder, L.B., Read, A.J. and Freeman, S.A., 2004. Understanding impacts of fisheries bycatch on marine megafauna. *Trends in ecology & evolution*, 19(11), pp.598-604.
- Lewison R. 2013. Fisheries bycatch of marine turtles. In: *Biology of Sea Turtles – Volume III* (Musick J., Lohmann K. and Wyneken J., eds). CRC Press Boca Raton. pp. 329-251.
- Lewison R.L. and Crowder L.B. 2007. Putting Longline Bycatch of Sea Turtles into Perspective. *Conservation Biology*, 21(1): 79-86. doi: 10.1111/j.1523-1739.2006.00592.x
- Limpus, C. J., Miller, J. D., Bell, I. P., and Limpus, D. J. 2008. *Eretmochelys imbricata* foraging populations in eastern Australia. Limpus, C. J. and Miller, J. D. Australian hawksbill turtle population dynamics project. 107-115. Queensland Environment Protection Agency: Brisbane.
- Madden Hof et al. In Prep. A. From Source to Sink: Satellite tracking reveals greater protection needed for the shared but critically endangered hawksbill turtle across western Pacific.
- Madden Hof et al. In Prep, B. First satellite tracking and genetic assignment of critically endangered nesting hawksbill turtles (*Eretmochelys imbricata*) in Papua New Guinea reveal strong links to Western Pacific.
- Madden Hof, C., Riskas, K.A., Jensen, M., Pilcher, N., Gaos, A., Hamann, M. 2022. Assessment of the conservation status of the hawksbill turtle in the western Pacific Ocean region. Report to the CMS Secretariat.
- Maison K.A., Kelly I.K. and Frutchey K.P. 2010. Green turtle nesting sites and sea turtle legislation throughout Oceania. NOAA Technical Memorandum NMFS-F/SPO-110. 52pp.
- Marshall, C.D., Cullen, J.A., Al-Ansi, M., Hamza, S. and Abdel-Moati, M.A., 2020. Environmental Drivers of Habitat Use by Hawksbill Turtles (*Eretmochelys imbricata*) in the Arabian Gulf (Qatar). *Frontiers in Marine Science*, p.961.
- Miller, J.; Dobbs, K.; Limpus, C.; Mattocks, N. and Landry, A. 1998. Long-distance migrations by the hawksbill turtle, *Eretmochelys imbricata*, from north-eastern Australia. *Wildlife Research.* 25 (1): 89-95.
- Miller E.A., McClenachan L., Uni Y., Phocas G., Hagemann M.E. and Van Houtan K.S. 2019. The historical development of complex global trafficking networks for marine wildlife. *Science Advances* 5(3) eaav5948
- Moore, J.E., Cox, T.M., Lewison, R.L., Read, A.J., Bjorkland, R., McDonald, S.L., Crowder, L.B., Aruna, E., Ayissi, I., Espeut, P. and Joynson-Hicks, C., 2010. An interview-based approach to assess marine mammal and sea turtle captures in artisanal fisheries. *Biological Conservation*, 143(3), pp.795-805.
- Mortimer J.A. and Donnelly M. 2008. *Eretmochelys imbricata*. In: IUCN red list of threatened species, V.2010.1. IUCN, Gland. Available at: www.iucnredlist.org (accessed 27 February 2022)
- Mortimer, J. A., Camille, J. C., and Boniface, N. (2011). Seasonality and status of nesting hawksbill (*Eretmochelys imbricata*) and green turtles (*Chelonia mydas*) at D'Arros Island, Amirantes Group, Seychelles. *Chelonian Conservation and Biology*, 10(1), 26-33.
- Mortimer J. A, Luc M, Roseline C, Songwar E, Omath T. (2017). Project Number SOSF 256: Community Monitoring of Nesting Sea Turtles at D'Arros and St. Joseph. Part 1. Turtle Track Count Analysis for 13 Seasons (2004-05 to 2016-17). Unpublished annual report to Save Our Seas Foundation, May 2017. 36 pp.

- Mortimer, J. A., Esteban, N., Guzman, A. N., and Hays, G. C. (2020). Estimates of marine turtle nesting populations in the south-west Indian Ocean indicate the importance of the Chagos Archipelago. *Oryx*, 54(3), 332-343.
- MRAG. 2005. Review of Impacts of Illegal, Unreported and Unregulated Fishing on Developing Countries. July 2005. 17 pp.
- MRAG Asia Pacific. 2021. The Quantification of Illegal, Unreported and Unregulated (IUU) Fishing in the Pacific Islands Region – a 2020 Update. 125 p.
- Okemwa, G.M., Nzuki, S. and Mueni, E.M., 2004. The status and conservation of sea turtles in Kenya.
- Opu J., 2018. An Assessment of Marine Turtle Exploitation in Papua New Guinea. Secretariat of the Pacific Regional Environment Programme, Apia Samoa. Final Report. 52 pp.
- Peatman T., Allain V., Caillot S., Park T., Williams P., Tuiloma I., Panizza A., Fukofuka S. and Smith N. 2018a. Summary of purse seine fishery bycatch at a regional scale, 2003-2017. Report to the Scientific Committee Fourteenth Regular Session, 2018. WCPFC-SC14-2018/ST-IP-04 Rev 1. 13pp.
- Peatman T., Bell L., Allain V., Caillot S., Williams P., Tuiloma I., Panizza A., Tremblay-Boyer L., Fukofuka S. and Smith N. 2018b. Summary of longline fishery bycatch at a regional scale, 2003-2017. Report to the Scientific Committee Fourteenth Regular Session, 2018. WCPFC-SC14-2018/ST-WP-02.
- Peckham S.H., Diaz D.M., Walli A., Ruiz G., Crowder L.B. and Nichols W.J. 2007. Small-Scale Fisheries Bycatch Jeopardizes Endangered Pacific Loggerhead Turtles. *PLoS ONE* 2(10): e1041. doi:10.1371/journal.pone.0001041
- Pierce, R., M. Gruber, J. Atherton, A. Burne, M. Valu and A. Whistler. 2012. A Conservation survey of Tokelau. Eco Oceania Pty Ltd Plan for Tokelau Administration and Critical Ecosystem Partnership Fund. 90 p. Downloaded July 16, 2019. <https://www.tokelau.org.nz/site/tokelau/CONSERVATION%20SURVEY%20OF%20TOKELAU.pdf>
- Pilcher, N.J., T. Ramachandran, T.C. Dah, L.S Ee, J. Beliku, K. Palaniveloo, L.K. Hin, L.S. Ling, L.C. Hui, R. Lewison, J. Moore, 2009. Rapid gillnet bycatch assessment: Sabah, Malaysia 2007. Project GloBAL. 2009. *In* Workshop Proceedings: Tackling Fisheries Bycatch: Managing and reducing sea turtle bycatch in gillnets. Project GloBAL Technical Memorandum No. 1. pp. 38-41.
- Pilcher, N.J., Antonopoulou, M., Perry, L., Abdel-Moati, M.A., Al Abdessalaam, T.Z., Albeldawi, M., Al Ansi, M., Al-Mohannadi, S.F., Al Zahlawi, N., Baldwin, R. and Chikhi, A., 2014. Identification of important sea turtle areas (ITAs) for hawksbill turtles in the Arabian region. *Journal of Experimental Marine Biology and Ecology*, 460, pp.89-99.
- Pilcher N.J. 2021. Review of the status of sea turtles in the Pacific Ocean 2021. Secretariat of the Pacific Regional Environment Programme, Apia, Samoa. 136 pp.
- Pulea, M., 1992. Legislative Review of environmental Law, Cook Islands. SPREP Regional Tech Assistance Project II Title III (Series).
- Rees, A.F., Papatanasopoulou, N. and Godley, B.J., 2019. Tracking hawksbills in Kuwait: contributions to regional behavioral insights. *Chelonian Conservation and Biology*, 18(1), pp.86-90.
- Reklani, L. 2021. Turtle shell jewellery still sold despite ban, can't tell if real or fake. Island Times Palau. Online January 2021. Available from islandtimes.org [accessed 9 Mar 2022].
- Rice M.R., Jim L.M.R., Hickey F.R. and Balazs G.H. 2018. Post Nesting Migrations of Hawksbill Turtles (*Eretmochelys imbricata*) Nesting at Moso Island, Republic of Vanuatu. Reports to the Fisheries Department, Government of the Republic of Vanuatu. 14pp
- Riskas, K.A., Fuentes, M.M. and Hamann, M., 2016. Justifying the need for collaborative management of fisheries bycatch: a lesson from marine turtles in Australia. *Biological Conservation*, 196, pp.40-47.
- Riskas, K.A., Tobin, R.C., Fuentes, M.M. and Hamann, M., 2018. Evaluating the threat of IUU fishing to sea turtles in the Indian Ocean and Southeast Asia using expert elicitation. *Biological Conservation*, 217, pp.232-239.
- State of the World's Sea Turtles (SWOT) Report. 2008. Available at <http://seaturtlestatus.org> Accessed 16 March 2022.
- Stelfox, M., Hudgins, J., Sweet, M. 2016. A review of ghost gear entanglement amongst marine mammals, reptiles and elasmobranchs. *Marine Pollution Bulletin* 111(1-2), 6-17.
- Tagarino, A., K.S. Saili, and R. Utzurrum. 2008. Investigations into the status of marine turtles in American Samoa, with remediation of identified threats and impediments to conservation and recovery of species. Final Report: Department of Marine and Wildlife Resources, American Samoa Government to NOAA/NKFS Unallied Management Grant: Award No. NA04NMF4540126.

- Teh, L.C. and Sumaila, U.R., 2013. Contribution of marine fisheries to worldwide employment. *Fish and Fisheries*, 14(1), pp.77-88.
- Troëng, S. and Drews, C., 2004. Money talks: economic aspects of marine turtle use and conservation.
- Vargas, S. M., Jensen, M. P., Ho, S. Y., Mobaraki, A., Broderick, D., Mortimer, J. A., ... & Hoenner, X. (2015). Phylogeography, genetic diversity, and management units of hawksbill turtles in the Indo-Pacific. *Journal of Heredity*, 107(3), 199-213.
- Vuto, S., Hamilton, R., Brown, C., Waldie, P., Pita, J., Peterson, N., Hof, C., Limpus, C. 2019. A report on turtle harvest and trade in Solomon Islands. The Nature Conservancy, Solomon Islands. 34 p.
- Wallace, B. P., DiMatteo, A. D., Hurley, B. J., Finkbeiner, E. M., Bolten, A. B., Chaloupka, M. Y., ... & Bourjea, J. (2010). Regional management units for marine turtles: a novel framework for prioritizing conservation and research across multiple scales. *Plos one*, 5(12), e15465.
- Wallace, B. P., DiMatteo, A. D., Bolten, A. B., Chaloupka, M. Y., Hutchinson, B. J., Abreu-Grobois, F. A., ... & Bourjea, J. (2011). Global conservation priorities for marine turtles. *PloS one*, 6(9), e24510.
- White M. 2012. Sea Turtles in the Cook Islands: Volume One (2009-2012).
- Williams, J.L., Pierce, S.J., Hamann, M. and Fuentes, M.M., 2019. Using expert opinion to identify and determine the relative impact of threats to sea turtles in Mozambique. *Aquatic Conservation: marine and freshwater ecosystems*, 29(11), pp.1936-1948.
- Work, T.M., Parker, D, Balazs, G.H. (eds). 2020. Sea Turtles in Oceania: MTSG Annual Regional Report 2020. Report of the IUCN-SSC Marine Turtle Specialist Group.

Annex 1: Overview of relevant national legislation by country relevant to the Hawksbill Turtle

Country	National Protection Status	Law protecting species	Legal protection from killing, egg harvesting and trade	Penalties	Responsible Authority
American Samoa	Endangered	<p>Hawksbill turtles are fully protected under the U.S. Endangered Species Act (ESA) of 1973. The ESA prohibits the take (capture, hunt, harassment, etc.) of hawksbill turtles, as they are listed as endangered under the Act. Federally funded or permitted activities must avoid jeopardy to listed threatened and endangered species and avoid destruction of critical habitat. The ESA also authorizes the designation of critical habitat within the U.S. territory and waters for the hawksbill and permits scientific research and non-federal activities. Regulations specify mitigation resuscitation, and prohibitions for all commercial fishermen for incidentally caught sea turtles and specific regulations are put in place to reduce sea turtle interactions and increase survivorship in gillnets, longline, and purse seine fisheries throughout the country.</p> <p>The Dept. of Marine and Wildlife Resources regulates fishing and hunting activities within U.S. territorial waters. These regulations, located in Chapter 09, Title 24 of the American Samoa Administrative Code, were last amended in 1995. Areas restricted to fishing and/or other activities include the Fagatele Bay National Marine Sanctuary (Section 24.0907-09) and the Rose Atoll National Wildlife Refuge. Section 24.0935 applies to sea turtles and includes prohibitions on importation, exportation, sale of sea turtles, take of sea turtles, and possess, delivery, carrying, transporting or shipping of sea turtles or their body parts. While this section specifically mentions green, hawksbills, and leatherbacks, they should likely apply to any loggerheads encountered</p>	The Endangered Species Act of 1973 prohibits the take (capture, hunt, harassment, etc.) of all sea turtles.	SEC. 11 of the ESA (a) CIVIL PENALTIES.— (1) Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of this Act, may be assessed a civil penalty by the Secretary of not more than \$ 25,000 for each violation. Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of any other regulation issued under this Act may be assessed a civil penalty by the Secretary of not more than \$ 12,000 for each such violation.	<p>National Oceanic and Atmospheric Administration (marine environment) and U.S. Fish and Wildlife Service (terrestrial environment).</p> <p>American Samoa also has a Department of Marine and Wildlife Resources.</p>
Australia	<p>Commonwealth: Vulnerable State: QLD: Endangered NSW: Not listed NT: Vulnerable TAS: Vulnerable</p>	Australia has a Federal Government with 8 separate State or Territory Governments. The Australian Government has responsibility for matters in the national interest, and for nonstate/territory areas, which includes the marine environment from 3 nautical miles out to the edge of the Exclusive Economic Zone	Yes, through Commonwealth and State/Territory implementing legislation, noting the native title rights provided under the Native Title Act 1993 (refer below). The Recovery Plan for Marine Turtles in Australia (2017) identifies threats to the three hawksbill	The EPBC Act provides penalties (financial and incarceration time) for various offences relating to listed marine turtles. Fines in respect of the illegal killing, injuring, taking, trading, keeping or moving of marine turtles have a maximum of 3,000 penalty units. Note: 1 penalty unit	Department of Agriculture, Water and the Environment (C 'wealth) Great Barrier Reef Marine Park Authority (C 'wealth) Australian Fisheries

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	<p>WA: Vulnerable VIC: Not listed SA: Not listed ACT: Not listed</p>	<p>(EEZ). The State and Territory governments have responsibility for issues within their jurisdictional borders, including State/Territory waters. Hawksbills are listed as threatened, migratory and marine under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). It is an offence to kill, injure, take, trade, keep or move the species in a Commonwealth area (i.e. Commonwealth waters), unless the person taking the action holds a permit under the EPBC Act, the act is consistent with native title rights under the Native Title Act (1993), or 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.</p> <p>Implementing legislation: Commonwealth: Environment Protection and Biodiversity Conservation Act 1999, classified as a Matter of National Environmental Significance. Great Barrier Reef Marine Park Act 1975 protects Hawksbills as a protected species from taking or injuring in the Great Barrier Reef Marine Park. Torres Strait Fisheries Act 1984 QLD: Nature Conservation Act 1992 Marine Parks Act 2004 NSW: Biodiversity Conservation Act 2016, protected as a native reptile (offense to harm), National Parks and Wildlife Act 1974 NT: Territory Parks and Wildlife Conservation Act 2000 WA: Biodiversity Conservation Act 2016</p> <p>Rookeries and waters within the Torres Strait or western Cape York Peninsula regions, while outside of protected areas, fall under ownership of Indigenous groups. However, under the Torres Strait Treaty, Papua New Guineans are allowed to take hawksbill turtles throughout much of the Torres Strait.</p>	<p>management unit genetic stocks including international trade and indigenous take, as very high to high risk threats. Under the EPBC Act the Minister for the Environment must not make a decision that is inconsistent with a recovery plan and a Commonwealth agency must not take any action that contravenes a recovery plan. In Queensland, protection of islands used as rookeries have been gazetted as National Parks under the Nature Conservation Act 1992. Mandatory inclusion of turtle excluder devices (TEDs) was introduced in the East Coast Otter Trawl Fishery in 2001. TEDs are also in place in all vessels in the Northern Prawn Fishery, Western Australian trawl fisheries and the Torres Strait Prawn Fishery. Section 211 of the Native Title Act 1993 provides a native title right to direct harvest of marine turtles by Traditional Owners, where that harvest is for the purpose of satisfying personal, domestic, or non-commercial communal needs; and in the exercise of native title rights and interests.</p>	<p>currently = \$AUD170. Penalties for offenses relating to turtles exist under other Commonwealth, State and Territory legislation.</p>	<p>Management Authority (C 'wealth)</p>
<p>Brunei Darussalam</p>	<p>Endangered</p>	<p>The Wildlife Protection Act of 1978 (amended in 1984) lists the Hawksbill turtle, as well as the Green and Leatherback turtles in its list of protected animals. Nevertheless, the Hawksbill turtle does not have full legal protection since</p>	<p>The Wild Fauna and Flora Order, 2007 prohibits the trade in any specimen of any species listed in CITES Appendix I without appropriate permits or certificates (Article 47/1a). Any person in possession of a specimen</p>	<p>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:</p>	<p>Ministry of Primary Resources and Tourism</p>

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		taking or trading protected species are permitted with appropriate licenses.	of any species listed in the CITES Appendix is guilty of an offence (Article 48/1).	“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).	
Cambodia	Endangered	The 2006 Law on Fisheries prescribes the rules governing fishery resource management in Cambodia, including the management of marine reptiles. The Sub-decree No: 123 (2009) lists the hawksbill turtle as an Endangered Fisheries Resource.	Article 23 of the Law on Fisheries prohibits, among others, the following activities to take place without a permit: -Catching, selling, buying, stocking, and transporting fingerling or fish eggs and other aquatic animals' offspring or eggs -Transporting, processing, buying, selling, and stocking endangered fishery resources -Buying or selling ornamental shells of rare species. Article 3 of the Law on Fisheries protects the rights on traditional use of fishery resources for local communities.	Article 92 of the Law on Fisheries provides that a transactional fine in the amount of “two to three times of the market price” in cash be given to those that commit, among others, the following fishery offences: -Catching, selling, buying, transporting, collecting, processing and stocking all types of endangered natural fishery products -Exporting and importing all types of natural fishery products of endangered species	Ministry of Agriculture, Forestry and Fisheries
China (incl. Macau)	Class I (Highest level of protection)	In 2003, Ministry of Agriculture, P.R.China has issued a regulation stipulating the management measures of bycatch including sea turtle requiring all longline vessels be equipped with de-hookers and encouraging fishing vessels using round hooks	Class I protection prohibits hunting, killing, smuggling or trading the protected animals <u>Wild animals protection ordinance - chapter 170 (2007)</u> provides for the protection of wild animals (including all reptiles) and their living areas, the prohibition of hunting, possessing and trading animals, nest or eggs	Jail sentences up to 10 years for those caught violating Class I species	Ministry of Agriculture and Rural Affairs The National Forestry and Grassland Administration
Commonwealth of the Northern Mariana Islands	Endangered	Hawksbill turtles are fully protected under the U.S. Endangered Species Act (ESA) of 1973. The ESA prohibits the take (capture, hunt, harassment, etc.) of hawksbill turtles, as they are listed as endangered under the Act. Federally funded or permitted activities must avoid jeopardy to listed threatened and endangered species and avoid destruction of critical habitat. The ESA also authorizes the designation of critical habitat within the U.S. territory and waters for the hawksbill and permits scientific research and non-federal activities. Regulations specify mitigation	The Endangered Species Act of 1973 prohibits the take (capture, hunt, harassment, etc.) of all sea turtles.	SEC. 11 of the ESA (a) CIVIL PENALTIES.— (1) Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of this Act, may be assessed a civil penalty by the Secretary of not more than \$ 25,000 for each violation. Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of any other regulation issued	National Oceanic and Atmospheric Administration (marine environment) and U.S. Fish and Wildlife Service (terrestrial environment). Commonwealth of the Northern Mariana Islands Department of Lands and Natural Resources, Division of Fish and Wildlife

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		<p>resuscitation, and prohibitions for all commercial fishermen for incidentally caught sea turtles and specific regulations are put in place to reduce sea turtle interactions and increase survivorship in gillnets, longline, and purse seine fisheries throughout the country.</p> <p>Hawksbill sea turtles are listed under CNMI Public Law 02-51.</p>		under this Act may be assessed a civil penalty by the Secretary of not more than \$ 12,000 for each such violation.	
Cook Islands	None	<p>The Cook Islands is an independent nation (1965) that has the Queen of England as its Head of State and is in a Free Association with New Zealand.</p> <p>The <i>Marine Resources Act 1989</i> provides for the protection and management of fishery resources, the definition of which includes marine turtles.</p> <p>The Environment Act (2003) provides provisions for listing species as protected but only applies to the islands of Rarotonga, Atiu and Aitutaki (it does not apply to any other Outer Island unless otherwise specified by the Queen's Representative by Order in Executive Council). In 2008, two Southern Group islands: Takutea and Mitiaro, developed regulations within the provisions of this Act that directly protects sea turtles in the Cook Islands where traditional use is allowed.</p>	Cook Islanders have customary rights to harvest natural resources under the Cook Islands Act 1915.		By Order in Executive Council (Queen's Representative)
Federated States of Micronesia	Endangered	Yap State Environmental Quality Protection Act (Y.S.L 3-73) establishes restrictions on the harvest of sea turtles.	The harvest of hawksbill turtles is allowed in FSM, with provisions for minimum size limits for hawksbills and green turtles (27 inches and 34 inches CCL, respectively) and closed seasons (June 1 to August 31 and December 1 to January 31). Harvesting of eggs is not allowed for any species.		Yap State Environmental Protection Agency
Fiji		<p>Offshore Fisheries Management Regulations 2014</p> <p>Hawksbill turtles are protected under Regulation 5 of the Offshore Fisheries Management Regulations (OFMR) 2014. One is not permitted to kill, take, land, sell or offer or expose for sale, deal in, transport, receive or possess any fish listed in CITES Appendix I & II. Hawksbill Turtles are listed in Appendix I.</p>	<p>Offshore Fisheries Management Regulations 2014</p> <p>The Offshore Fisheries Management Act (OFMA)2012 defines "fish" means any aquatic plant or animal, whether piscine or not, and includes any oyster or other mollusc, crustacean, coral, sponge, holothurian (beche-de-mer), or other echinoderm, turtle and marine mammal,</p>	<p>Fine provisions are under:</p> <ol style="list-style-type: none"> Schedule 11 of the OFMR 2014 states the penalty for breaching Regulation 5. Individual - \$10,000 Entity - \$20,000 Fisheries Act, s.10(1)-(8) states that the penalty for offending against Regulation 20 is "imprisonment for three months or a fine of five hundred dollars or both such penalties" 	Ministry of Fisheries and the Ministry of Environment.

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		<p>Fisheries Act 1941 Under the Fisheries Act 1941, Regulation 20 (1) turtles with a carapace length less than 455 mm are prohibited from being molested, taken, sold, offered or exposed for sale, or killed. In addition, all turtles are not permitted to be harvested during the months of November, December, January and February. Furthermore, 20 (2) states "No person shall be in possession of, sell, offer or expose for sale or export any turtle shell the length of which is less than 455 mm [eighteen inches]". Regulation 9 provides clear instructions on the type of gear that is permitted for the harvesting of sea turtles and it states: "No person shall harpoon any turtle unless the harpoon is armed with at least one barb of which the point projects not less than 9.5 mm [3/8 inch] from the surface of the shaft, measured at right angles to the long axis of the shaft".</p> <p>Endangered and Protected Species Act 2002 The Endangered and Protected Species Act (EPSA) 2002 regulates the import, export, re-export and introduction from the sea of CITES listed species (Sections 9, 10, 11 and 12)</p> <p>Fiji renewed their Sea Turtle Recovery Plan to 2030</p>	<p>and includes their eggs, spawn, spat and all juvenile stages and any of their parts. Therefore, hawksbill eggs are also regulated under Regulation 5 of the OFMR 2014 Fisheries Act 1941 Section 20 (1) of the Fisheries Act 1941 states that "No person shall at any time dig up, use, take, sell, offer or expose for sale, or destroy turtle eggs of any species"</p>	<p>3. Endangered & Protected Species Act, Part 7 ss.23-2</p>	
French Polynesia (France)		<p>Hawksbill turtles are fully protected in French Polynesia (since 1990) under DELIBERATION No. 90-83 AT du 13 Juillet 1990 relative à la protection des tortues marines en Polynésie Française. Destruction and degradation of sensitive habitats is also prohibited.</p>	<p>It is strictly forbidden to harm, own or hunt sea turtles or engage in commerce of any kind pertaining to the sale of shell, meat and eggs</p>		
Guam (USA)	Endangered	<p>Hawksbill turtles are protected by the Endangered Species Act of Guam and fully protected under the U.S. Endangered Species Act (ESA) of 1973 (USA). The ESA prohibits the take (capture, hunt, harassment, etc.) of hawksbill turtles, as they are listed as endangered under the ESA. Federally funded or permitted activities must avoid jeopardy to listed threatened and endangered species and avoid destruction of critical habitat. The ESA also authorizes the designation of critical habitat within the U.S. territory and waters for the</p>	<p>The Endangered Species Act of 1973 prohibits the take (capture, hunt, harassment, etc.) of all sea turtles.</p>	<p>SEC. 11 of the ESA (a) CIVIL PENALTIES.— (1) Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any provision of this Act, may be assessed a civil penalty by the Secretary of not more than \$ 25,000 for each violation. Any person who knowingly violates, and any person engaged in business as an importer or exporter of fish, wildlife, or plants who violates, any</p>	<p>National Oceanic and Atmospheric Administration (marine environment) and U.S. Fish and Wildlife Service (terrestrial environment). Guam's Dept of Aquatic and Wildlife Resources</p>

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		hawksbill and permits scientific research and non-federal activities. Regulations specify mitigation resuscitation, and prohibitions for all commercial fishermen for incidentally caught sea turtles and specific regulations are put in place to reduce sea turtle interactions and increase survivorship in gillnets, longline, and purse seine fisheries throughout the country.		provision of any other regulation issued under this Act may be assessed a civil penalty by the Secretary of not more than \$ 12,000 for each such violation.	
Hong Kong (China)	Endangered	Appendix 1 of <u>Protection of Endangered Species of Animals and Plants Ordinance (Chapter 586). (2009)</u> includes Cheloniidae spp. (marine turtles, sea turtles) <u>Fisheries Protection Ordinance (Chapter 171). (2000)</u> promotes the conservation of fish and other forms of aquatic life within the waters of Hong Kong and to regulate fishing practices and to prevent activities detrimental to the fishing industry	<u>Protection of Endangered Species of Animals and Plants Ordinance (Chapter 586). (2009)</u> regulate the import, introduction from the sea, export, re-export, and possession or control of endangered species of wild fauna and flora covered by CITES	<u>Protection of Endangered Species of Animals and Plants Ordinance (Chapter 586). (2009)</u> Penalties relating to import of specimen of Appendix I species commits an offence and is liable on conviction to a fine at level 6 and to imprisonment for 1 year. Higher penalties for offences relating to specimens of Appendix I: fine of \$5000000 and to imprisonment for 2 years. <u>Fisheries Protection Ordinance (Chapter 171). (2000)</u> penalties do not exceed \$200000 and imprisonment for 6 months. (Amended 68 of 1987 s. 5; 36 of 1998 s. 2)	
Indonesia		Under the Government regulation No 7/1999, Indonesia accords all 6 (six) species of turtles' protection status. 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. Articles 38/1 and 40/1 of the Government Regulation No:60 2007 only allow for the trade, import, export and re-export of unprotected fish species and types of fish that can be traded in accordance with international law.	A maximum penalty of five years imprisonment and up to Rp 200.000.000 in fines.	The Ministry of Marine Affairs and Fisheries
Japan		The Basic Act on Ocean Policy (Act No:33 of 2007) ensures, among others, that the State shall take necessary measures on conservation and management of living aquatic resources (Article 17). The Act on Conservation of Endangered Species of Wild Fauna and Flora protects all specimens of all species of sea turtles, including the hawksbill turtle, by prohibiting their domestic trade.	Domestic trade of hawksbill turtles is prohibited under the Act on Conservation of Endangered Species of Wild Fauna and Flora, barring permission by the Minister of the Environment, or with a registration of individuals etc. The transfer of parts of shells is also allowed, nevertheless Specified International Species Business Operators must have their notice to the Minister of the Environment and the Minister of	The Act on Conservation of Endangered Species of Wild Fauna and Flora prescribes penalties of up to five years' imprisonment or a fine of up to five million yen, or both, for individuals, and up to 100 million yen for corporations in a case of illegal transfer of specimens. In the event of non-compliance of the Specified International Species Business Operators' obligations under the Act, the	Ministry of Agriculture, Forestry and Fisheries Ministry of the Environment

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			Economy, Trade and Industry be accepted in advance (except dealing processed products thereof).	Minister of the Environment and the Minister of Economy, Trade and Industry may order the suspension of the whole or part of the business for a period not exceeding three months. Both Ministers may also request reports on the business and conduct on-site inspections. If a Specified International Business Operator violates the law, it is subject to penalties of up to six months imprisonment or a fine up to 500,000 yen.	
Kiribati			The Fisheries Regulations of 2019 prohibits the disturbing, taking, receiving or having the possession, purchasing or selling any turtle species eggs found in Kiribati, including the hawksbill turtle (Article 12/2). Interfering with turtle nests regardless of the species, harvesting turtles while on the beach or the selling, purchasing or exporting any turtle meat or shell is also prohibited (Article 12/2).	A fine of up to \$10,000 and, in default, imprisonment of maximum 2 years, or both, is prescribed in Article 13/7.	Ministry of Fisheries and Marine Resources Development
Lao People's Democratic Republic		<p>The Wildlife and Aquatic Law of 2007 aims to protect and sustainably regenerate aquatic species by restricting anthropogenic pressure on decreasing species and the extinction of aquatic species. The Law classifies species into three categories, namely "prohibition category", "management category" and "common or general category" wildlife and aquatic species. The degree of protection of aquatic species depends on which category the species falls under.</p> <p>The Order No:05/PM of 2018, on Strengthening Strictness of the Management and Inspection of Prohibited Wild Fauna and Flora, aims to strengthen the rules on the hunting, importing, transiting, exporting and trading of prohibited and protected species in the Wildlife and Aquatic Law of 2007 and CITES.</p>	<p>Article 71 of the Wildlife and Aquatic Law prohibits the catching hunting, stealing trading or possessing species in the prohibition category, in addition to importing, exporting, re-exporting, transshipping and transiting species unlawfully.</p> <p>The Penal Code (amended in 2017) prohibits the trading or possessing aquatic species in the prohibited category (Article 334). Importing, exporting, transiting or moving aquatic species unlawfully with regulations relating to CITES is prohibited (Article 335).</p>	<p>The penalty for an offence prescribed in Wildlife and Aquatic Law Article 71 is 3 months to 5 years of imprisonment (Article 72). In the event of damages over 200.000 Kip, individuals, organizations or enterprises in contravention of the law shall pay a fine double the amount of their damages (Article 72, Article 70). Recurring offences shall be fined three times the damages in the prohibition category and two times the damages in the management category (Article 72, Article 70).</p> <p>The penalty for an offence prescribed in Article 334 of the Penal Code is an imprisonment of 3 months to five years, with a fine of 3,000,000 to 10,000,000 Kip. The penalty for an offence prescribed in Article 335 of the Penal Code is an imprisonment of 3 months to five years, with a fine double damage value. If the offence is performed as part of an organized group or is recurring, the offender shall be punished to imprisonment of 5 to 10 years, with a fine triple the damage value.</p>	Ministry of Agriculture and Forestry

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Malaysia		<p>In Malaysia, turtles fall under the jurisdiction of Federal (<i>Fisheries Act 1985</i>) and related state turtle legislation for individual states waters and territories.</p> <p>Federally, there are no explicit provisions on ban, on possession and trade of hawksbill eggs, meat and shell. Egg collection is regulated via state legislation for conservation purposes.</p> <p>There are general provisions for killing disturbing, injuring hawksbill turtles (provisions vary among states) in both federal and state legislations.</p> <p>In Sabah, hawksbill turtles are listed as a totally protected species protected under the <i>Wildlife Conservation Enactment 1997</i> for state waters. The nesting sites are protected as part of Turtle Islands Heritage Protected Area (TIHPA) and under the <i>Parks Enactment 1984</i> for any other protected areas</p>	<p>The ban of turtle egg consumption and sale only covers the whole state of Sabah.</p>		<p>The two government bodies that oversee the management and protection of turtles in Sabah are Sabah Parks (only in marine protected areas) and the Sabah Wildlife Department.</p>
Myanmar:	Completely protected	<p>Sea turtle conservation programme started in Myanmar in 1905 under the Burma Fisheries Act (III - 1905). Protection for turtle hatching areas and turtles was included; also, trespassing on those areas without official consent was prohibited. Since then, the government has enacted several laws to protect marine turtles. More recently, in 1990, Myanmar promulgated the Marine Fisheries Law (DoF), under which no person shall search for and collect any marine products without a license (Section 40). In Chapter 1, Section (2), Subsection (r) it is mentioned that "Marine Products mean fishes obtained from the sea, aquatic organisms, excrete, scales, bones, skins, plants, etc." The expression also includes marine turtles and eggs. In 1993, the Department of Fisheries declared Notification No. 2/93 for "Sea Turtle Conservation". The new protection of Wildlife, Wild Plants and Conservation of Natural Areas Law (replacing the old Myanmar Wildlife Protection Act of 1936) was enacted in 1994 (Forest Department).</p> <p>The Forest Department Notification No: 583/94 of 1994 lists the hawksbill turtle as completely</p>	<p>Myanmar has enacted legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products.</p> <p>Articles 36 and 37 of the Protection of Wildlife and Conservation of Natural Areas Law No:6 1994 prohibits the killing, hunting or wounding a normally protected wild animal or seasonally protected wild animal without permission, as well as the killing, hunting or wounding of a completely protected wild animal. Possessing, selling, transporting or transferring such wild animal or any part thereof without permission is also prohibited.</p>	<p>Violations against completely protected wild animals are punishable with imprisonment for a term which may extend to 7 years or with fine which may extend to kyats 50,000 or with both (Article 37/1).</p>	

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		protected wild animals within Myanmar.			
Nauru		<p>The Fisheries Act 1997 and the Nauru Fisheries and Marine Resources Authority Act 1997 call for the protection and conservation of fisheries within Nauru, which broadly include turtles under “living aquatic animals” and their eggs. Nevertheless, neither legislation has provisions on endangered species.</p> <p>The Environmental Management and Climate Change Act 2020 gives powers to the Cabinet and the Secretary for the Department responsible for Environment and Climate Change the powers to make regulations relating to the conservation of endangered species.</p>			Ministry for Fisheries, and the Ministry of Commerce, Industry and Environment
New Caledonia (France)			It is forbidden to fish for, capture, remove, intentional perturbation, mutilation, destruction, butchering, transport, put for sale, sale, purchase, eat all marine turtle species, dead or alive, including their eggs, and any part of the animals. It is also forbidden to export marine turtles. In case of bycatch all efforts will be taken to free the animals alive and minimize injury. All bycatch has to be declared. Special permits can be issued for scientific studies and stock enhancement.		Ecology and Sustainable Development NC: Fisheries Department All provinces (New Caledonia Govt (NC), Northern Province, Southern Province, Island Province): Environmental Services
New Zealand	Listed as vagrant, with the qualifier Threatened Overseas.	<p>Hawksbill turtles are fully protected under the Wildlife Act 1953 and have been assessed as Migrant - Threatened Overseas according to the New Zealand Threat Classification System (NZTCS).</p> <p>The Wildlife Act deals with the protection and control of wild animals and birds and the management of game. Marine turtles are absolutely protected under the Act. No-one may kill or have in their possession any such turtle, unless they have a permit.</p>	Yes, through Wildlife Act.		Department of Conservation.
Niue		The Niue National Strategic Plan 2016-2026 addresses the importance of protecting and conserving marine resources, and draws attention to the sustainable use and management of resources.	The Domestic Fishing Act 1995 stipulates that the Cabinet may “restrict the export of any species of fish and or their meat or body parts by regulation” (Article 11/1).	Exporting in contravention of Article 11/1 of the Domestic Fishing Act 1995 shall be liable to “a fine not exceeding 5 penalty units or to imprisonment for a term not exceeding 6 months, or both such fine and imprisonment” (Article 11/3)	Department of Agriculture, Forestry and Fisheries

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			To that end, the Domestic Fishing Regulations 1996 Article 3 prohibits the export of all turtle species, and Article 7 prohibits the taking, killing or bringing ashore all turtle species.		
Palau	Endangered	In 2018, Palau enacted a ten-year moratorium on the harvest and sale of hawksbill turtles or their products in response to concerns that populations were declining. Previously, the harvest of hawksbill turtles was permitted in Palau under domestic fishing laws (24 PNCA 1201), with provisions for minimum size limits (27 inches CCL) and closed seasons from June 1 to August 31 and December 1 to January 31 (Secretariat of the Pacific Community and Bureau of Marine Resources Palau, 2007). Taking of eggs or female turtles while onshore is prohibited at all times. Nesting females, eggs, and habitats are also protected within the Ngerukewid Islands Wildlife Preserve	Full protection until 2028	1,000 USD first offence, 2,000 second, 3,000 third and 20,000 thereafter	
Papua New Guinea	Not protected.	All protected fauna are the property of the State. Only leatherback turtles are protected in Papua New Guinea.	<p>Pursuant to the Fauna (Protection and Control) Act of 1966, the taking or killing of protected fauna is an offense (Article 8), where taking or killing refers to hunting, shooting, killing, poisoning, netting, snaring, spearing, pursuing, taking, disturbing or injuring.</p> <p>The buying, selling, offering or consigning for sale, possessing or controlling a protected animal is also considered an offense (Article 9/1).</p> <p>According to the Fisheries Management Act of 1998 (amended in 2015), the rights of customary owners of fisheries resources and fishing rights shall be fully recognized and respected in all transactions affecting the resource or the area in which the right operates (Section 26).</p> <p>The International Trade (Fauna and Flora) Act of 1979 restricts the trade of species listed in CITES, including the Hawksbill turtle.</p>	<p>The penalty for an offence prescribed in Article 8 is a fine not exceeding K500.00- K1,000.00 for each protected fauna.</p> <p>The penalty for an offence prescribed in Article 9/1 is a fine not exceeding K500.00 for each protected animal.</p>	The Department of Environment and Conservation

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Philippines	Critically endangered	<p>The <i>Wildlife Resources Conservation and Protection of 2001</i> (Republic Act No. 9147) has helped further mobilize efforts to support biodiversity research and implement stronger enforcement interventions to save wildlife from various anthropogenic threats, especially the illegal wildlife trade.</p> <p>Republic Act 11038 known as the “Expanded National Integrated Protected Areas System” enacted in 2018 provides the guidelines in protecting marine turtle habitats</p>	<p>Use of explosives devices and noxious substances are banned</p> <p>Republic Act 9147 or the “Wildlife Resources Conservation and Protection Act of 2001” bans the harvest and trade of marine turtles, their eggs and byproducts.</p> <p>Article VIII from Fisheries Act (Act no. 4003) addresses Hawksbill turtle fisheries. Taking of Hawksbill turtles are only allowed providing a license or special permit. Shipment, exportation, fishing, taking, wounding, killing, possessing or trading are prohibited.</p> <p><u>Fisheries Administrative Order No. 29-1</u> following rules and regulations regarding the gathering of aquatic turtle eggs particularly in the Turtle Island Group, Turtle Islands: The annual concession fee for gathering turtle eggs for all the seven (7) islands consisting of the Turtle Island shall not be less than P10,000.00 per annum</p>	<p><u>REPUBLIC ACT NO. 8550</u> <u>THE PHILIPPINE FISHERIES CODE OF 1998</u></p> <p>SEC. 97 on Fishing or Taking of Rare, Threatened or Endangered Species. - It shall be unlawful to fish or take rare, threatened or endangered species as listed in the CITES and as determined by the Department.</p> <p>Violation of the provision of this section shall be punished by imprisonment of twelve (12) years to twenty (20) years and/or a fine of One hundred and twenty thousand pesos (P120,000.00) and forfeiture of the catch, and the cancellation of fishing permit.</p>	<p>Department of Environment and Natural Resources</p> <p>Bureau of Fisheries and Aquatic Resources</p>
Pitcairn Islands (UK)		<p>The Endangered Species Ordinance of 2004 provides for the protection of, among others, endangered species, and regulates the trade of such species.</p> <p>In September 2016, the Government of Pitcairn Islands designated the entire Exclusive Economic Zone (EEZ) and territorial sea of Pitcairn Islands as a Marine Protected Area (MPA) under the Pitcairn Islands Marine Protected Area Ordinance 2016. As such, 99.5% of the MPA constitutes a no take zone, where no extraction activities are allowed.</p>	<p>The export or import of any specimen of a species listed in CITES Appendix I, II or III is prohibited by Article 3/1 of the Endangered Species Ordinance.</p> <p>The Pitcairn Islands Marine Protected Area Ordinance 2016 Section 8 prohibits fishing within the designated area, where fishing refers to “catching, taking, or harvesting of fish or other marine life” (Section 3).</p>	<p>Exporting or importing any specimen of a species as prescribed in Article 3/1, shall be liable:</p> <p>“(a) on summary conviction in the Magistrate's Court, to a fine not exceeding \$1000 or imprisonment for a term not exceeding 18 months; or</p> <p>(b) on conviction on information by the Supreme Court, to a fine not exceeding \$1,000,000 or imprisonment for a term not exceeding 5 years “ (Article 3/6).</p> <p>A person engaging in activities in breach of Section of the Pitcairn Islands Marine Protected Area Ordinance 2016 shall be liable to imprisonment for up to 12 months or a fine of up to \$50,000, or both, in the event that the offender is a natural person. In the case of an offender other than a natural person, the person shall be liable to a fine up to \$500,000.</p>	<p>Environmental, Conservation & Natural Resources Division</p>
Republic of	Marine Organisms	<u>Conservation and Management of Marine</u>	<u>Conservation and Management of Marine</u>	Punished by imprisonment with labor for	Ministry of Oceans and

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Korea	Under Protection	<p><u>Ecosystems Act:</u></p> <p>Article 19 sets plans to conserve, protect, reproduce and restore marine organisms under protection</p> <p>Article 25 addresses the importance of the designation and management of MPAs</p> <p>Article 46 addresses restoration of marine ecosystems where the major habitats or spawning areas of marine organisms under protection are destroyed or damaged, which endangers the existence of species</p>	<p><u>Ecosystems Act:</u></p> <p>Article 20 prohibits against capturing, collecting, transplanting, processing, distributing, storing or damaging marine organisms under protection; and installing explosives, nets or fishing gear, or use harmful substances or electric currents to capture these species.</p> <p>Article 42 restricts imports and exports, except holding a permission from MOF</p> <p>Article 20 prohibits capturing, collecting, transplanting, processing, distributing, storing or damaging marine organisms under protection, and installing explosives, nets or fishing gear, or use harmful substances or electric current.</p>	<p>not more than 3 years or by a fine not exceeding 30 million won: Any person who captures, collects or damages marine organisms under protection, or who installs explosives, nets or fishing gear or uses harmful substances or electric currents, so as to capture or damage marine organisms under protection</p> <p>Punished by imprisonment with labor for not more than 2 years or by a fine not exceeding 20 million won: Any person who transplants, processes, distributes or stores marine organisms under protection; and to Any person who exports, imports, ships out or brings in marine organisms under protection without permission</p> <p>Punished by imprisonment with labor for not more than 1 year or by a fine not exceeding 10 million won: Any person who obtains permission by fraud or other wrongful means.</p> <p>Article 63-2 (Aggravated Punishment of Capturing Marine Organisms under Protection). Aggravated punishment: Where anyone is punished by imprisonment with labor for committing a crime under subparagraph 2 of Article 61 or subparagraph 1 of Article 62 for the purpose of trade, he/she shall be imposed concurrently by penalty more than two folds and less than ten folds of the value which he/she has acquired or may acquire through such trade.</p>	Fisheries
Republic of the Marshall Islands	Endangered	<p>The Endangered Species Act 1975 ensures the protection of endangered species of fish, shellfish and games within the territory of the Marshall Islands. A subsequent Regulation dating 1976 listed the hawksbill turtle as an endangered species.</p> <p>The Fisheries Act (amended in 2017) manages and controls living and non-living resources within the Fishery Waters of the Marshall Islands, with a part dedicated exclusively to limitations on taking turtles.</p>	<p>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. Section 309 further prohibits the import of endangered species. However, the taking of endangered species by way of traditional rights does not constitute a breach of prohibited activities (Section 307/4).</p>	<p>Under Section 312 of the Endangered Species Act 1975, a person guilty of an offence prescribed in the Act shall pay a fine of up to \$10,000 or be liable to a term of imprisonment of up to one year, or both.</p> <p>Offences committed against the provisions in Section 215 titled "Limitations on Taking Turtles" of the Fisheries Act, shall pay a fine of up to \$10,000 or be imprisoned up to six months, or both.</p>	The Marshall Islands Marine Resources Authority

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		The Jaluit and Namdrik atolls in the Marshall Islands are the breeding areas of the hawksbill turtle and the green turtle, and they are declared as wetlands of international importance.	Section 215 of the Fisheries Act prohibits taking or intentionally killing of the hawksbill turtle while on shore, as well as the taking of their eggs unless authorized. Paragraph two provides that "No hawksbill turtle shall be taken or killed except for subsistence fishing and where its shell is at least twenty-seven inches when measured over the top of the carapace shell lengthwise." Paragraph 5 further prohibits buying, selling, displaying for sale, offering for sale or otherwise marketing any turtle or turtle product.		
Samoa		There are no Acts that deal exclusively with endangered species.			Ministry of Natural Resources and Environment
Singapore		Cheloniidae spp. and <i>Dermochelys coriacea</i> are protected under Wildlife Act 1965 and Wildlife (Protected Wildlife Species) Rules 2020. The Endangered Species (Import and Export) Act contains provisions to control the trade of CITES-listed animals. The Fisheries Act provides for the protection and conservation of fisheries within Singapore. Nevertheless, the Act does not contain provisions on endangered species.	The Endangered Species (Import and Export) Act prohibits the import, export, re-export or introduction from the sea any CITES-listed species, as well as possessing or selling such species (Section 4/1, Section 4/2).	The Endangered Species (Import and Export) Act prescribes a fine not exceeding \$50,000 for each scheduled species (but not to exceed in the aggregate \$500,000) or imprisonment for a term not exceeding 2 years, or both, for any person in breach of Section 4/1, and 4/2.	National Parks Board
Solomon Islands		The Fisheries Regulations in 1993 banned the sale, purchase and export of any turtle product, which saw the legal trade in hawksbill turtle shell cease. The regulations under the 2015 Fisheries Management Act provide the current policy framework for turtle conservation in Solomon Islands. Under the existing legislation, only the leatherback turtle (<i>Dermochelys coriacea</i>) is fully protected. Other marine turtle species can be harvested for subsistence purposes. However, the sale of any turtle product (meat, eggs or shell) is banned, as is the harvesting of turtle eggs or a nesting turtle (Fisheries Management Prohibited Activities Regulations, 2018)	Taking, landing, selling, dealing in, transporting, receiving, buying, possessing or trading any turtle that has been wholly or partly processed, declared as protected or endangered is prohibited (Section 31/2).	Fisheries Management Act 2015 prescribes a fine not exceeding 500,000 penalty units or to imprisonment of up to 6 months, or both (Section 31/3). Pursuant to Fisheries Management (Prohibited Activities) Regulations 2018, fishing or any retaining, being in possession of, selling, buying or exporting any nesting turtle has a penalty of 40,000 penalty units or 4 months imprisonment, or both. Selling, buying or exporting any turtle has a penalty of 40,000 penalty units or 4 months imprisonment, or both. Destroying any turtle nest or eggs, turtle with a tag attached, or tag attached to a	Ministry of Fisheries and Marine Resources

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				turtle has a penalty of 40,000 penalty units or 4 months imprisonment, or both.	
Taiwan (China)		Fisheries Act (2018) is enacted to conserve and rationally utilize aquatic resources and sets regulations for conservation and management of aquatic organisms (Chapter 5).	Fisheries Act (2018) Article 44 states that the competent authority may promulgate regulations on the following matters: (1) Restriction or prohibition of the catching, harvesting, or processing of aquatic organisms. (2) Restriction or prohibition of the sale or possession of aquatic organisms or the products made therefrom	Fisheries Act (2018) Violation to Article 44(1) and (2) shall be subject to imprisonment not exceeding three years, short-term imprisonment, or in lieu thereof or in addition thereto a fine of not exceeding one hundred and fifty thousand New Taiwan Dollars.	Council of Agriculture
Thailand		Chapter 5 of the Royal Ordinance on Fisheries, B.E.2558 (2015) set measures for conservation and management of aquatic animal resources and ecosystem in a sustainable manner based on a precautionary approach. Section 56 states: No person shall catch aquatic animals in an aquatic species sanctuary..." Section 58 states that no person shall engage in activities that are harmful to aquatic animals. Section 63 prohibits building any kind of structure that may block the passage of aquatic animals or preempting the natural growth of aquatic animals, Section 66 "No person shall catch aquatic mammals, rare aquatic animals or aquatic animals near extinction" Section 70 "No person shall engage in a fishing operation during a season of aquatic animals' ovulation and egg-spawning, larvae rearing or during any other period of time designated for the protection of aquatic animals"	Section 61 of the Royal Ordinance on Fisheries, B.E.2558 (2015) states "No person shall have in possession aquatic animals or aquatic animal products for commercial purposes knowing that these aquatic animals or aquatic animal products are acquired through wrongdoings..." Section 65 prohibits the importation, exportation, bringing in transit, culturing or possession of any kind of aquatic animal.	The provisions of Chapter 11 of the Royal Ordinance on Fisheries, B.E.2558 (2015) aim to provide criminal sanctions which are adequate in severity: Section 138 "Any person violating section 56 or section 70 shall be subject to a fine of between five thousand baht and fifty thousand baht, or to a fine of five times the value of the aquatic animals obtained from the fishing operation. In whichever case, the higher fine shall apply" Section 140. Any person violating section 58 shall be subject to a fine of between three hundred thousand baht and five hundred thousand baht. Section 143. Any person violating section 62 or section 63 shall be subject to a fine of between ten thousand baht and one million baht and shall dismantle any such structure or fitting or restore the fishing ground back to its normal state, or pay the compensation expenses..."	Department of Fisheries
Timor Leste		A Joint Ministerial Order No: 18/MAP/MCIA/II/2017 establishing the List of Protected Aquatic Species listed in its Annex I all sea turtles, thereby the hawksbill turtle, as protected species.	Article 3 of the Joint Ministerial Order prohibits the collection and capture of hawksbill turtles. Article 4 further prohibits harvesting eggs. The Penal Code further prohibits the hunting, fishing, trading or trafficking of, in whole or in part, endangered species or species at risk of extinction (Article 218).	A person in breach of Articles 3 and 4, shall be liable for the suspension of their fishing permit for a period of one to 6 months (Article 161 of the Decree Law No:6/2004 of 21 April 2004). In the event of a second offence within 12 months, the offender shall have their fishing permit revoked, without eligibility to obtain a new permit for up to 24 months.	Ministry of Agriculture and Fisheries

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				A person guilty of an offence prescribed in Article 218 of the Penal Code shall be liable to a fine or imprisonment of up to 5 years.	
Tokelau		There are no national protections for hawksbill turtles in Tokelau. Rules and regulations are determined separately for each atoll and village of Tokelau			
Tonga		The Fisheries Management (Conservation) Regulations 2008, which implements the Fisheries Management Act 2002, has a dedicated "Species Conservation and Management" part where Article 24 prescribes rules for the protection of turtles. While leatherback turtles, female turtles of any species and eggs of any turtle species enjoy full legal protection, male turtles are not fully protected during open season in Tonga.	Article 24 of the Fisheries Management (Conservation) Regulations 2008 prohibits the disturbing, taking, having in possession, selling or purchasing any turtle eggs, as well as interfering with, destroying or disturbing turtle nests. Moreover, using a spear or spear gun to capture, kill or take any species of turtles is prohibited. Fishing, capturing, possessing, destroying female turtles is prohibited year round, however male turtles may be fished, captured, possessed, sold or purchased in the open season so long as they meet the size specifications.	Any person who fishes or engages in a related activity in relation to protected or endangered species, subspecies, class or type of fish, shall be liable on conviction to a fine not exceeding \$25,000 (Fisheries Management Act 2002, Section 19/5) Knowingly landing, displaying for sale, selling, receiving, dealing in, transporting or possessing protected or endangered species, or having reasonable cause to believe so, shall be convicted to a fine not exceeding \$100,000 (Section 19/7).	Ministry of Fisheries
Tuvalu		The Marine Resources Act 2006, aiming to ensure the long-term conservation and sustainable use of living marine resources, enables the Minister to declare any stock or species of fish, including turtles and their eggs, as protected (Section 11/1). The Conservation Areas Act provides a degree of protection to turtles in Section 14.	If declared as a protected species, the Marine Resources Act 2006 prohibits fishing for, landing, displaying for sale, dealing in, transporting, receiving, possessing or buying or selling (Section 11/2). The Conservation Areas Act prohibits the hunting, killing or capturing of any turtle in conservation areas designated in the Act (Section 14/2).	Any person guilty of an offence prescribed in Section 11/2 shall be fined \$50,000 plus the fair market value of the subject fish in the market for which it is reasonably supposed to be destined, and to imprisonment for 6 months (Section 11/2). Any person in contravention of the Conservation Areas Act Section 14/2 shall be liable for a fine of \$5,000 or to imprisonment for 28 months (Section 14/4).	Ministry of Fisheries and Trade
Vanuatu		Take of sea turtles has been prohibited in Vanuatu since 2005 (Fisheries Act No. 55 of 2005). In 2009, an amendment to the 2005 prohibition was passed, which closed earlier loopholes and prohibited the killing of any sea turtle species. Provisions of the law allow for traditional harvests through application to the Department of Fisheries (Rice et al. 2018). The	The Fisheries Regulations Order 2009 prohibits the taking, killing, possessing, exporting, selling, or purchasing the hawksbill turtle (Section 59/1,a,ii), including its shell (Section 59/1,b) and eggs (Section 59/1,f). It is also prohibited to disturb a turtle nest (Section 59/1,c). Harming, capturing, killing, consuming	A person in contravention of Section 59 of the Fisheries Regulations Order 2009 is guilty of an offence and is liable to a fine of up to VT 200,000 in case of a natural person, or VT 1,000,000 in case of a legal person (Section 75).	Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity

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		<p>Vanuatu Fisheries Department has recently begun training community members to monitor fisheries violations at the village level, including for turtle related offenses (Hickey 2020 in Work et al. 2020).</p> <p>The Fisheries Act No:10 of 2014 provides provision for the management, development and regulation of fisheries. To that end, it enables the Minister to make regulations prescribing measures for the protection of, among others, turtles (Section 147/2,x). The Fisheries Act also establishes a Vanuatu Observer Programme which records, collects and reports information on, especially, protected or vulnerable species including turtles for scientific, management and compliance purposes (Section 113).</p> <p>Fisheries Regulations Order 2009 further provides detailed provisions on the conservation and protection of marine turtles.</p> <p>The International Trade (Flora and Fauna) Act [Cap. 210] and the International Trade (Flora and Fauna) Regulations (Order No. 2 of 1991) implement CITES within Vanuatu.</p>	selling, purchasing, exporting or destroying any turtle species (hatchlings, juveniles or adults) by use of any weapon is also prohibited (Section 59/1,g).		
Viet Nam	<p>Listed in the Vietnamese Red Data Book (2007)</p> <p>Listed in the Decree No: 160/2013/ND-CP (2013) as <i>Endangered, Precious and Rare Species Prioritized in Protection</i></p>	<p>The Vietnamese government prohibited the domestic use of marine turtles in 2002 (Decree 48/2002/ND-CP). In 2004, the Vietnamese Ministry of Fisheries launched the Marine Turtle Conservation Action Plan for Viet Nam to 2010 and a revised plan for 2016 to 2025.</p> <p>Additionally, a circular from the Ministry of Fisheries dating 30 March 2006 which supplements a Government Decree dating 4 May 2005, as well as a Government Decree dating 2014 further prohibit the catching and commercial exploitation of marine turtles and their products in Viet Nam.</p> <p>The Biodiversity Law (20/2008/QH12) of 2008 and the Fisheries Law (18/2017/QH14) of 2017 provide for additional protection of aquatic species, including the Hawksbill Turtle.</p>	<p>The Biodiversity Law prohibits the “hunting, fishing, exploiting bodily parts of, illegally killing, consuming, transporting, purchasing and selling species on the list of endangered precious and rare species prioritized for protection; illegally advertising, marketing and consuming products originated from species on the list of endangered precious and rare species prioritized for protection.” (Article 7)</p> <p>Article 244 of the 2015 Vietnamese Criminal Code (amended in 2017) prescribes up to 15 years’ imprisonment for offences against regulations on protection of endangered and rare species.</p>	<p>Compensation for damages (Biodiversity Law, Article 75)</p> <p>The CITES Vietnamese 2018-2020 Implementation Report states that “For all violations of CITES Appendices I and II (ivory, rhino horn, lizard, marine turtle...), Vietnam put on trial with the highest sentence of 12 years in imprisonment and VND 660 million.” (Indicator 1.7.3f)</p> <p>To that end, Annex 1 of the 2018-2020 Implementation Report listed 5 offences for Hawksbill Turtle crime, with penalties ranging from 2 years to 10 years’ imprisonment and fine.</p>	Ministry of Agriculture and Rural Development, and Ministry of Natural Resources and Environment
Wallis and Futuna (France)					