

Hawksbills

THE MOST BEAUTIFUL
OF SEA TURTLES

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Remarkable, Tropical, and Hunted for Centuries

Noted for the thick, overlapping, dappled cream-and-brown scutes that cover its carapace and plastron and provide excellent camouflage against a coral reef backdrop, the hawksbill is considered by many to be the most beautiful of all sea turtle species. Its pointed, beak-like head, from which its common name derives, enables it to forage in crevices and feed on prey with leathery or heavily armored outer surfaces. It is the most tropical of sea turtles, nesting on the coasts and islands of some 70 countries whose shores are located primarily between the Tropic of Cancer and the Tropic of Capricorn. The hawksbill demonstrates many surprising biological and ecological traits that make it remarkable among sea turtles.

Hawksbills are pantropical and found in every major ocean basin worldwide. As can be seen on the map (pp. 28–29), the largest population centers for nesting hawksbills include the warm waters of the Gulf of Mexico and the Caribbean Sea, the southwest and northwest Indian Ocean (including the Red Sea and the Persian/Arabian Gulf), and tropical Australasia. Smaller numbers of hawksbills nest in Oceania and the Hawaiian Islands, the eastern Atlantic (West Africa), the western Atlantic (Brazil), and in the recently rediscovered eastern Pacific populations. The IUCN-SSC Marine Turtle Specialist Group recognizes 13 regional management units (RMUs) for hawksbills. Each RMU comprises multiple genetic stocks or management units (MUs) that are mostly defined by significant differences in mitochondrial DNA haplotypes. Each MU may comprise several neighboring rookeries facing similar threats. To date, 30 MUs for hawksbills have been identified globally, and many more are expected to be identified in the near future. Most of the detailed genetic studies undertaken thus far have focused on the western Atlantic and eastern Pacific regions. These have shown genetic differences at unexpectedly fine scales, including differences between rookeries found on opposite sides of the same island. In the Indo-West Pacific, only eight MUs have been defined to date, and the majority of hawksbill populations in the western Pacific have not yet been assessed for their genetic population structure. Significant gaps remain in our understanding of the genetics of hawksbill populations, as evidenced by studies of foraging grounds that have shown variants not previously recorded at rookeries. For more on hawksbill genetics, see “Genetic Tools for Sea Turtle Conservation” on pp. 16–21 of this report.

Decades ago, biologists thought that hawksbills were by nature solitary nesters, but today it is commonly believed that their characteristic low-density nesting is likely an artifact of the long-term overexploitation that has persecuted the species for centuries, mostly for its prized shell (often called tortoiseshell). Tortoiseshell can be fashioned into valuable items ranging from jewelry and trinkets to elaborately carved combs, eyeglass frames, sculptures, and even spurs for fighting roosters. Trade statistics are key to understanding the enormous impact that this commerce has wrought on hawksbills over time. Millions of hawksbills have died in the past century alone, yet the trade can be traced back millennia. Tortoiseshell objects have been found in the graves of the Nubian rulers of predynastic Egypt, the ruins of China’s Han Empire, and the middens of pre-Columbian cultures in the Caribbean. Throughout much of human history, hawksbills have paid a lethal price for their beauty.

AT RIGHT: A hawksbill turtle hovers above the reef. Larger hawksbills are seen on the coral reefs outside of the lagoon in Europa National Natural Reserve, Éparses Islands, France, Indian Ocean. © H. Sauvignat; **PREVIOUS SPREAD:** A hawksbill turtle surfaces at sunset on the Great Barrier Reef as a group of Black Noddies flies overhead. © Jordan Robins Photography



Distinctive among Sea Turtles

Among the six species of hard-shelled sea turtles, adult female hawksbills tend to be smaller than green turtles, loggerheads, and flatbacks, but larger than olive or Kemp's ridleys. Throughout most of their range, hawksbills nest primarily at night, as do the larger species of sea turtle, but in much of the western Indian Ocean they more typically nest during the day. What adaptive value diurnal nesting may offer these animals remains a mystery. Unlike other sea turtles, hawksbills tend to dig relatively shallow nests that are often placed under vegetation, possibly to help optimize incubation temperatures and humidity in their shallow nests. In several areas of the eastern Pacific, hawksbills are distinctly associated with mangrove ecosystems, where they even nest on sandy banks hidden amid mangrove roots and shoots.

The diet of hawksbills is peculiar among sea turtles. During their posthatchling pelagic phase, western Atlantic hawksbills are closely associated with floating rafts of the brown algae *Sargassum* and appear to share the omnivorous and opportunistic diet of posthatchling loggerheads, green turtles, and Kemp's ridleys, feeding on *Sargassum*, fish eggs, tunicates, goose barnacles, and more. When older, hawksbills transition to benthic feeding habitats, where they dine predominantly on sponges, and on items that can include corallimorphs (coral-like anemones), zoanths, tunicates, and algae. At some sites, the hawksbill diet shows variability, particularly where sponges are scarce or absent.

Spongivory is especially rare among other marine creatures given the array of toxic chemical compounds that can be found in sponges, not to mention the gut-piercing glass spicules found in some. Yet hawksbills take these dietary challenges in stride and consume specific sponge species in large quantities. The tendency of hawksbills to consume prey items that other species do not is a strategy that may limit interspecific competition.



Mangrove channels provide habitat for juvenile hawksbill turtles in the lagoon of Europa National Natural Reserve, Éparses Islands, France, Indian Ocean. © H. Sauvignat

Moreover, whether by coincidence or evolutionary design, a diet rich in sponges may be the reason hawksbill meat is sometimes toxic or even fatal to humans who consume it. For this reason, hawksbill meat is frequently off the human menu in some localities in the Indo-Pacific region and elsewhere, where other sea turtle species are preferentially consumed.

Foraging resident hawksbills have a close association with coral reefs and rocky reefs, but they also thrive in a wide variety of other habitats, including seagrass, algal beds, mangrove bays, creeks, and even mud flats. In the eastern Pacific, juvenile and adult hawksbills can spend virtually all of their lives in mangrove-lined estuaries, foraging among aboveground mangrove roots, and even feeding directly on mangrove fruits and seeds.

High density aggregations of juvenile hawksbills have been documented in coastal waters near cities as well. Those "urban hawksbills" inhabit degraded reefs that provide them with food, shelter, and resting sites. In Puerto Rico, the growth rates and weight-to-length relationships of these city-dwelling hawksbills are similar to those of animals that live in more natural habitats, suggesting that the species may be relatively resilient to habitat change. Nevertheless, hawksbills residing in marinas in Seychelles, Hawaii, and some sites in the eastern Pacific often appear emaciated and unhealthy, suggesting limits to their tolerance for habitat degradation.

Though hawksbills inhabit coastal waters in more than 108 countries, their movements are among the least studied of all sea turtle species. In some regions, postnesting hawksbills tend to migrate shorter distances than postnesting green turtles (e.g., the Indian Ocean, Hawaii, and the eastern Pacific, where hawksbill movement corridors are often highly coastal), but this pattern does not hold in the Caribbean or the western Pacific regions (see map on p. 27). Developmental migrations made by immature hawksbills may be even more extensive than the reproductive migrations of adult hawksbills in the same region. Satellite tracking, molecular genetics, and flipper tagging have demonstrated that within each life stage of a hawksbill population, some individuals may engage in particularly extensive migrations. Moreover, larger hawksbills, including postnesting females, seem to venture deeper, farther from shore, and into lesser-known foraging habitats.

Hawksbill hatchlings typically enter a pelagic foraging phase that transitions to benthic foraging at sizes that vary depending on the ocean basin. Those transitions occur at 20, to 25-centimeter carapace length in the Atlantic Ocean and around 30-centimeter length in the Indo-Pacific. Remarkably, in the eastern Pacific some posthatchling hawksbills skip the oceanic stage altogether and remain within the mangrove estuarine habitat that hosts their natal nesting beaches. In such tidally dominated ecosystems, hatchlings grasp floating debris as a dispersal strategy, which may provide energy-saving transport and safety as they cryptically hitchhike with the current.

The Persian/Arabian Gulf experiences dramatic annual fluctuations in sea temperature, ranging from a low of 17°C to a high of 37°C. Although hawksbills appear to be adept at avoiding or tolerating the temperatures in the upper range, many succumb to cold stunning at the lower range. In the United Arab Emirates, hundreds of small hawksbills wash up covered in barnacles and algae each year, and many are subsequently rescued and rehabilitated. Green turtles in the same region are not similarly afflicted, which highlights the tropical nature of hawksbills compared to other sea turtle species.

FEATURE MAPS: HAWKSBILL TURTLES

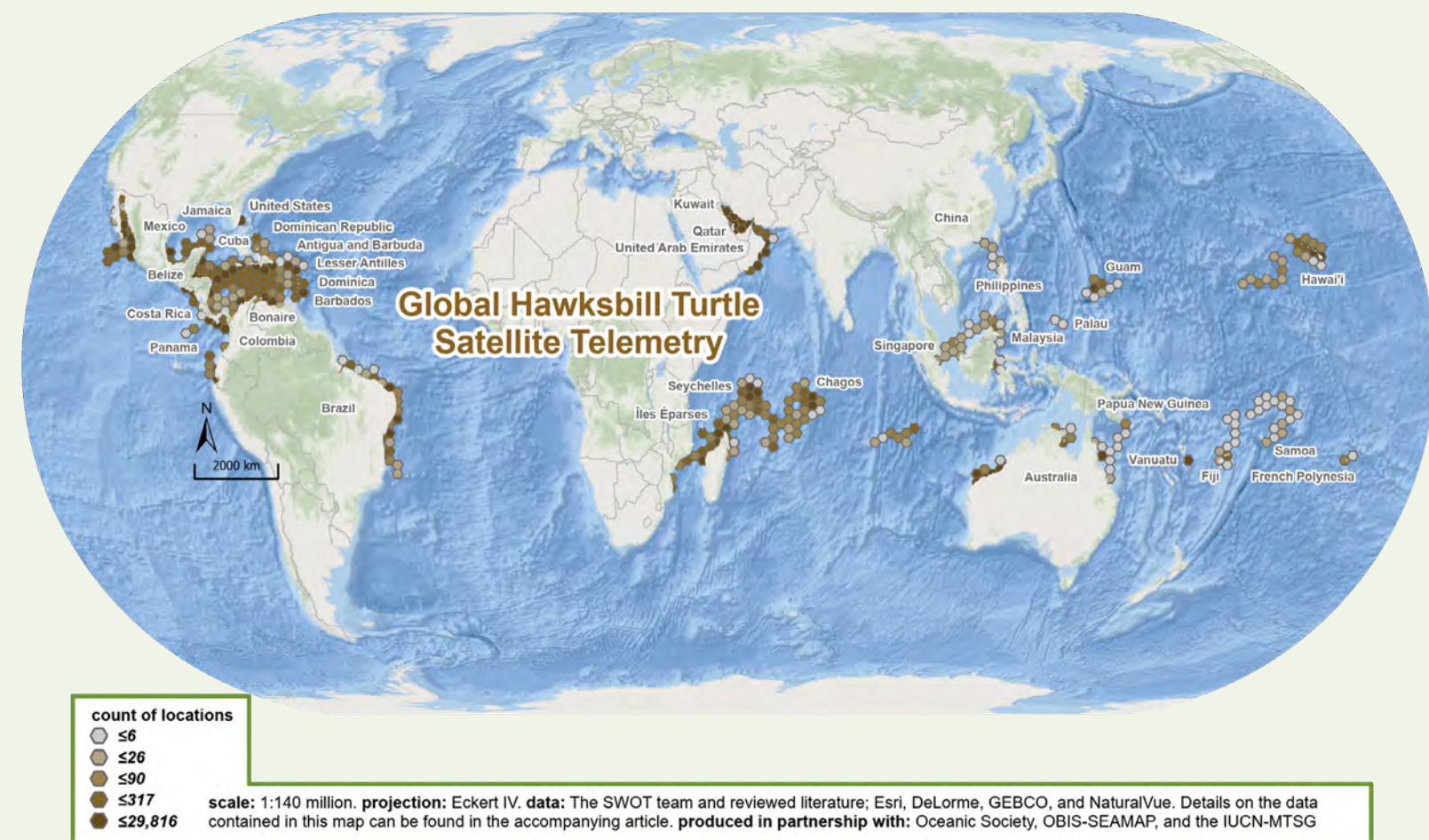
Global Nesting Biogeography

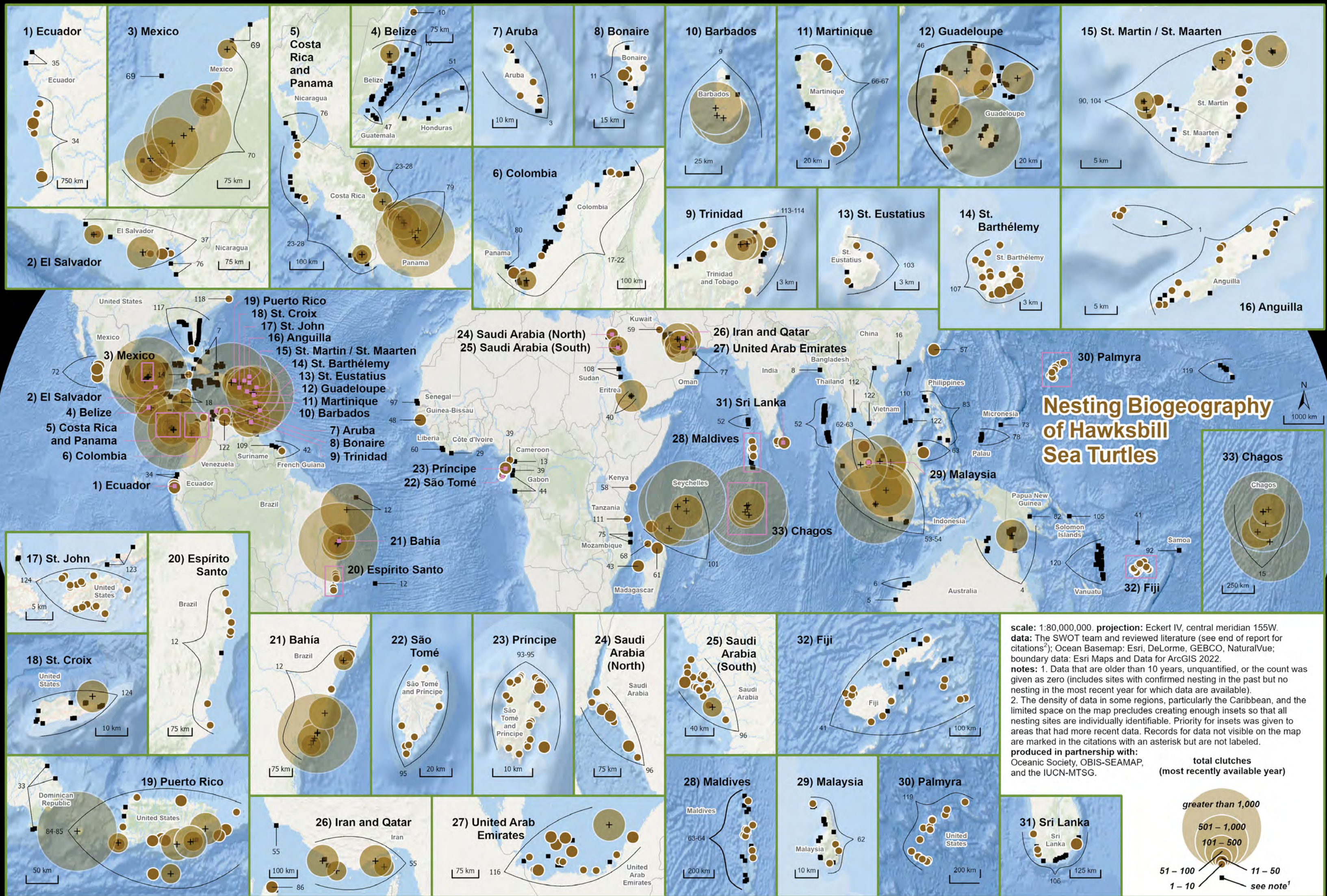
The map on pp. 28–29 displays available nesting data for hawksbill sea turtles. The data include 1,792 nesting sites, which were compiled through a literature review and provided directly to SWOT by data contributors worldwide. For metadata and information about data sources, see the complete data citations on pp. 45–50.

Nesting sites are represented by brown dots scaled according to their relative nesting abundance in the most recent year for which data are available. Black squares represent nesting sites for which data are older than 10 years, data were unquantified, or the nest count for the most recent year was given as zero. For uniformity, all types of nesting counts (such as number of nesting females or number of crawls) were converted to number of clutches, as needed. Conversion factors were as follows: a ratio of 3.6 nests to each nesting female in the eastern Pacific and Indian Oceans, 4.3 nests to each nesting female in the Wider Caribbean and Atlantic Ocean, and 3 nests to each nesting female in Australia, plus a ratio of 0.6 nests for every crawl in all regions.

Global Satellite Telemetry

The map below summarizes all available telemetry data from tags deployed on hawksbill sea turtles around the world. The data consist of more than 300,000 locations from 477 individually tracked turtles and were contributed by more than 51 partners (see data citations, pp. 50–52). Telemetry data are represented as polygons that are shaded according to the number of locations they contain. Darker brown represents a higher number of locations, which can indicate that a high number of tracked turtles were present or that turtles spent a lot of time in that location. Telemetry data are displayed as given by the providers, with minimal processing to remove locations on land and visual outliers. Thus, some tracks are raw Argos or GPS locations, whereas others have been more extensively filtered or modeled. For a complete list of data providers and available metadata, see pp. 50–52.

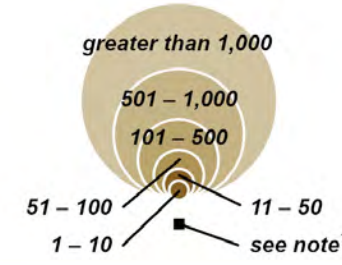




Nesting Biogeography of Hawksbill Sea Turtles

scale: 1:80,000,000. projection: Eckert IV, central meridian 155W.
 data: The SWOT team and reviewed literature (see end of report for citations²); Ocean Basemap: Esri, DeLorme, GEBCO, NaturalVue; boundary data: Esri Maps and Data for ArcGIS 2022.
 notes: 1. Data that are older than 10 years, unquantified, or the count was given as zero (includes sites with confirmed nesting in the past but no nesting in the most recent year for which data are available).
 2. The density of data in some regions, particularly the Caribbean, and the limited space on the map precludes creating enough insets so that all nesting sites are individually identifiable. Priority for insets was given to areas that had more recent data. Records for data not visible on the map are marked in the citations with an asterisk but are not labeled.
 produced in partnership with:
 Oceanic Society, OBIS-SEAMAP, and the IUCN-MTSG.

total clutches (most recent available year)



Conservation Challenges

The following issues present challenges to hawksbill conservation efforts worldwide.

Direct Take and Trade

Hawksbills have been classified globally as critically endangered on the IUCN Red List of Threatened Species since 1996, and a reassessment is currently under way. They were brought to the brink of global extinction in the twentieth century by the unrelenting international tortoiseshell trade. In 1977, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) banned the trade in hawksbill products among its signatory states. But, because some signatory parties had legally registered reservations for hawksbills, CITES had little impact until the 1990s, when all reservations against the ban were dropped. This change led to some wonderful success stories.

In 1994, the government of the Republic of Seychelles reversed a devastating decline in hawksbills by purchasing all worked and unworked tortoiseshell in the country and prohibiting trade in sea turtle products. Then, in 1998, the stockpile of tortoiseshell was publicly burned. Today, you will not find hawksbill shell products for sale anywhere in Seychelles. In March 2022, the government of Cuba also demonstrated its commitment to nonconsumptive, sustainable use of sea turtles for tourism, research, and ecological services by announcing the destruction of its 8.1-metric ton stockpile of hawksbill shell procured in that country prior to 2008, when hawksbill capture became illegal.

The battle to save the hawksbill from human depredation continues despite these and other successes. Illegal international trade and destructive levels of domestic consumption of hawksbill shell continue in many parts of the world. Animals continue to be taken for meat and eggs throughout much of their range, and demand for hawksbill in new and re-emerging black markets in Southeast Asia (including China, Japan, Vietnam, Taiwan, and Hong Kong) is on the rise. This new demand is exacerbated by the growing Chinese presence and purchasing power in the Pacific, combined with illegal, unregulated, and unreported fishing—particularly by the Chinese distant-water fleet. While this demand remains, communities and other small-scale fisheries are becoming increasingly involved and trapped in this vicious trade cycle, whether they are targeting or opportunistically benefitting from it. Also, the marine turtle supply chain has become increasingly fragmented and opaque in some countries, shifting to covert markets that thwart policy responses and enforcement efforts. Using genetics and DNA-based wildlife forensic science, nongovernmental organizations (NGOs), along with local communities, universities, government partners, and international networking efforts, are building a program called ShellBank, a database and platform to help governments, researchers, and conservation managers track the turtle trade from sale to source and to improve the enforcement of bans and identify which populations are most at risk.

Fisheries Bycatch

Some fisheries pose an especially serious threat to hawksbills. Gill nets are particularly problematic, given the hundreds of thousands of small vessels that deploy them in shallow waters throughout the world. Lobster are problematic, as well, since they

capture hawksbills opportunistically, so even when hawksbill numbers are low, the pressure on them continues unabated as long as the more lucrative resource (lobsters) remains reliable.

In the Indian Ocean, fish aggregating devices (FADs) associated with tuna purse seiners pose yet another threat. FADs float at the surface and cast a shadow into the water to attract aggregations of tuna but are often constructed of discarded nets and ropes that hang tens of meters below the surface, where they unintentionally entangle marine life—including sea turtles. In the southwestern Indian Ocean, FADs often drift into shallow waters, where they snag onto coral reefs and kill hawksbills. Discarded fishing gear and ghost nets relentlessly plague global waters, especially targeting young pelagic turtles that forage within these artificial habitats. Hawksbills are also killed by blast fishing in many parts of their range, another destructive technique that uses explosives to kill or stun fish and collaterally causes permanent damage to coral reefs and other sensitive habitats.

Negative Impacts on Nesting Habitat

Hawksbills are vulnerable at all stages of their life cycles, but especially at their breeding beaches, where nesting females and their eggs are easy to exploit. Unregulated coastal development can destroy nesting habitat when buildings and artificial lighting are placed too close to the beach, sea walls and other coastal armoring interfere with sand flow and beach access for nesting turtles, and the coastal vegetation under which hawksbills nest is removed. Daytime nesting hawksbills are shy animals that are vulnerable to disturbance from human activities as innocuous as picnics, sunbathing, swimming, and boating, even when the activity involves well-meaning tourists and local residents. Thus, critical stretches of nesting habitat need to be better incorporated into nature reserves that will be maintained in perpetuity and protected from unsupervised human access. Well-managed nature reserves can also produce revenue from ecotourism.

At many sites, both inside and outside formal nature reserves, hawksbill population decline caused by over-exploitation for meat and eggs has been effectively reversed by combining protective legislation with long-term monitoring of nesting beaches (see *SWOT Report*, vol. III, pp. 10–13, and vol. I, p. 8). Beach monitoring programs not only collect population data, but they also serve as a socially responsible approach to conservation when livelihood incentives are tied to conservation outcomes in low-income regions, and as a deterrent to illegal activity. Those programs are particularly effective when implemented by community members because they help create public awareness and support economic well-being. Such programs, however, are often used to provide index site data to represent the long-term status and trends of sea turtle nesting populations for the wider region, and this can be misleading. For example, index beaches that demonstrate increasing trends may not represent the population status of the wider region, in which many more turtle populations and their nesting habitats remain unmonitored and unprotected and may actually be in decline. Regardless of the situation, the expansion of monitoring programs across more nesting sites will allow for an increased understanding of hawksbill population trends and threats.

Genetic Mixing

In the Brazilian state of Bahia, hybridization between hawksbill and loggerhead turtles poses an unusual threat to both species.

Genetic studies there have confirmed that first generation hybrid females produced by the mating of male hawksbills and female loggerheads have successfully produced viable hatchlings, resulting in a population in which turtles now share the mixed DNA of both species. More than 40 percent of the sampled hawksbill nesting population was found to comprise multigenerational hybrids that display loggerhead mitochondrial DNA haplotypes but morphologically appear to be hawksbills. Similar results were also found in a nearby loggerhead rookery, accompanied by evidence of lower survival of hybrid offspring. Considering the vastly different ecological roles of the two species, which were separated more than 20 million years ago, this is a remarkable and troubling phenomenon. Such findings raise conservation concerns about the evolutionary and ecological implications of hybridization and the processes that may be driving it.

Climate Change and Other Human Activity

Though difficult to quantify, climate change poses a threat to nesting beaches through sea level rise and erosion, as well as higher incubation temperatures that may feminize, decrease fitness, or result in hatchling mortality. Rising temperatures have already resulted in the destruction of critical habitats (such as coral reefs) on which hawksbills depend. And, like other marine turtles and marine life in general, hawksbills are threatened during all of their life stages by boat strikes and countless human-generated chemical toxins (see the article on inorganic pollutants on pp. 10–13). Plastic debris in the sea and washed onto the beach is another challenging threat.

A Hopeful Future

On the bright side, many people and organizations are now taking action to learn more about hawksbills and to tackle the problems the animals face at local, national, and international levels around the world.

In the Indo-Pacific, the Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia (IOSEA MoU) has put in place a framework through which states, territories, governmental entities, and NGOs can work together to conserve marine turtles and their habitats. IOSEA recently published an “Assessment of the Conservation Status of the Hawksbill Turtle in the Indian Ocean and South-East Asia Region” and is currently working to create an action plan for hawksbills in the region. The TImOI project (Tortues Imbriquées de l’Océan Indien, or Hawksbills of the Indian Ocean) is another effort that uses genetics and satellite tracking to look at population connectivity among 13 countries and territories. In the Atlantic/Caribbean region, WIDECAS (the Wider Caribbean Sea Turtle Conservation Network) engages experts from more than 40 nations and territories, and the ICAPO network (Iniciativa Carey del Pacífico Oriental, or Eastern Pacific Hawksbill Initiative) has also made enormous strides over the past decade to amalgamate the efforts of multiple organizations working to engage with local fishers and community members to study and protect hawksbills in that important region (see *SWOT Report*, vol. III, pp. 18–19).

Now in Appendix I of CITES, hawksbills continue to enjoy the protection afforded by a complete ban on legal international trade in hawksbill products by signatory states. Hawksbills are also the focus of a special resolution of the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) that promotes national legislation and conservation actions to protect sea turtles in 16 nations in the Americas.

Although problems persist, history has shown that with enough hard work and perseverance, conservation efforts can and will save this most beautiful of sea turtles. •

New Technology Uses Machine Learning to Tackle Tortoiseshell Trade

By Brad Nahill

A new mobile application (app) has been added to the global toolkit to address the illegal trade of products made from hawksbill shell (tortoiseshell). Called SEE Shell, the app uses machine learning to evaluate images of suspected tortoiseshell products and to determine whether they are made of genuine or faux material. Introduced as part of Too Rare to Wear (see *SWOT Report*, vol. XVI, pp. 34–35), which is a campaign led by the non-profit SEE Turtles, the app enables tourists as well as law enforcement and wildlife officials to quickly identify products made of authentic tortoiseshell.

Despite international laws prohibiting it, the tortoiseshell trade is active in at least 40 countries and remains one of the biggest threats to hawksbills globally. Travelers are the primary consumers of the products in many places; the SEE Shell app will help travelers avoid accidentally purchasing genuine tortoiseshell products. Reports by app users will also help to improve tracking of the illicit trade.

SEE Shell is highly accurate at discerning whether a photo taken by the user shows an item made from real hawksbill shell or other materials, such as resin, horn, bone, seashell, or coconut shell; it can determine content with at least 94 percent accuracy. The application uses deep learning technology that compares user photos with a library of more than 4,000 real and artificial tortoiseshell products. As images are added to the catalog from locations around the world, a clearer understanding of the illegal tortoiseshell trade will emerge, providing information about where trade enforcement and hawksbill conservation are most needed.

Partner organizations in Indonesia and Latin America have helped to test the app in the field and will train local law enforcement officials in its use to help document the existence of tortoiseshell trade in their regions. Participating organizations include Turtle Foundation (Indonesia), Fundación Tortugas del Mar (Colombia), Latin American Sea Turtles Association (Costa Rica), the Leatherback Project (Panama), Sos Nicaragua, and the World Wildlife Fund (also known as the World Wide Fund for Nature) and its Indo-Pacific affiliates.

SWOT Data Citations

We are grateful to all who generously contributed their sea turtle data for inclusion in the maps featured throughout this volume. Data sources are cited throughout the following pages. For information about how the feature maps of hawksbill biogeography were created, please see the sidebar on p. 27.

GUIDELINES OF DATA USE AND CITATION

The nesting and satellite telemetry data that follow correspond to the maps of hawksbill biogeography on pp. 27–29. Nesting data records are numbered to correspond with their respective points on the map. To use data for research or publication, you must obtain permission from the data providers.

Hawksbill Nesting Data Citations

To save space, beach names and clutch counts have been omitted from the following citations, but additional metadata may be found online at <http://seamap.env.duke.edu/swot> or by viewing the original data source (if published). In addition, we have used the abbreviation “Spatial Database for the Wider Caribbean” to refer to Dow, W. E., and K. L. Eckert. 2007. *Sea Turtle Nesting Habitat: A Spatial Database for the Wider Caribbean Region*. WIDECAST Technical Report No. 6, Wider Caribbean Sea Turtle Conservation Network (WIDECAST) and The Nature Conservancy, Beaufort, NC. Due to space limitations, not all data records are labeled on the map; those that are not are marked with an asterisk (*).

ANGUILLA

DATA RECORD: 1

Data Sources: (A) Anguilla National Trust, Anguilla. 2012. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XV (2020). (B) Department of Fisheries and Marine Resources (DFMR), Anguilla. 2008. Ongoing nesting beach surveys. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XV (2020). (C) Godley, B. J., A. C. Broderick, L. M. Campbell, S. Ranger, and P. B. Richardson. 2004. An assessment of the status and exploitation of marine turtles in Anguilla. In *An Assessment of the Status and Exploitation of Marine Turtles in the U.K. Overseas Territories in the Wider Caribbean*, pp. 39–77. Final project report for the Department of Environment, Food, and Rural Affairs and the Commonwealth Office. (D) Gumbs, J. 2008. Hawksbill nesting in Anguilla. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. IV (2009). **SWOT Contacts:** Stuart Wynne, James Gumbs, Farah Mukhida, and Janeczka Richardson

ANTIGUA AND BARBUDA

DATA RECORD: 2*

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Fuller, J. E., K. L. Eckert, and J. I. Richardson. 1992. *Sea Turtle Recovery Action Plan for Antigua and Barbuda*, p. 88. CEP Technical Report No. 16. Caribbean Environment Programme, Kingston, Jamaica. (C) Munhofen, J., and S. Ramirez. 2007. *Tagging and Nesting Research on Hawksbill Turtles (Eretmochelys imbricata) at Jumby Bay, Long Island, Antigua, West Indies*. Jumby Bay Hawksbill Project, WIDECAST. Unpublished report. **SWOT Contacts:** Peri Mason, Cheryl Appleton, James Richardson, and Tricia Lovell

ARUBA

DATA RECORD: 3

Data Sources: (A) Van der Wal, E., and R. Van der Wal. 2010. TurtugAruba (Aruban Foundation for Sea Turtle Protection and Conservation). Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. VI (2011). (B) Van der Wal, E., and R. Van der Wal. 2014. TurtugAruba (Aruban Foundation for Sea Turtle Protection and Conservation). SWOT Database Online 2015. (C) Van der Wal, R. 2021. Aruba. In M. A. Nalovic, S. A. Ceriani, M. M. P. B. Fuentes, J. B. Pfaller, N.E. Wildermann, A. Uribe-Martínez, and E. Cuevas (eds.), *Sea Turtles in the North Atlantic and Wider Caribbean Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (D) Spatial Database for the Wider Caribbean. **SWOT Contacts:** Richard Van der Wal and Edith Van der Wal

AUSTRALIA

DATA RECORD: 4

Data Sources: (A) Bell, I. P., J. J. Meager, T. Eguchi, et al. 2020. Twenty-eight years of decline: Nesting population demographics and trajectory of the north-east Queensland endangered hawksbill turtle (*Eretmochelys imbricata*). *Biological Conservation*, 241, 108376. (B) Broderick, D., C. Moritz, J. D. Miller, et al. 1994. Genetic studies of the hawksbill turtle (*Eretmochelys imbricata*): Evidence for multiple stocks in Australian waters. *Pacific Conservation Biology* 1: 123–131. (C) Limpus, C. J., and J. D. Miller. 2000. *Final Report for Australian Hawksbill Turtle Population Dynamics Project*. Queensland Parks and Wildlife Service and the Japan Bekko Association, Queensland, Australia. **SWOT Contacts:** Colin Limpus, Ian Bell, and Kirstin Dobbs

DATA RECORD: 5

Data Source: Hattingh, K., N. Hajnoczky, and M. Tan. 2015. *Gnaraloo Turtle Conservation Program, Gnaraloo Bay Rookery and Gnaraloo Cape Farquhar Rookery: GTCP Monitoring Procedure 2014/15*. Unpublished report, Gnaraloo Station Trust, Western Australia, www.gnaraloo.com.au. **SWOT Contact:** Karen Hattingh

DATA RECORD: 6

Data Source: Pendoley, K., L. Howitt, M. Speirs, and A. Viternbergs. 2008. Hawksbill nesting in Western Australia. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). **SWOT Contact:** Kellie Pendoley

BAHAMAS

DATA RECORD: 7

Data Sources: (A) Bolten, A. 2008. Hawksbill nesting in Bahamas. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). (B) Mortimer, J. A., and M. Donnelly. 2008. *Eretmochelys imbricata*. In *2008 IUCN Red List of Threatened Species*. IUCN-SSC Marine Turtle Specialist Group. (C) Spatial Database for the Wider Caribbean. **SWOT Contacts:** Karen Bjorndal, Alan Bolten, and Eleanor Phillips

BANGLADESH

DATA RECORD: 8

Data Source: Rashid, S. M. A., and M. Z. Islam. 2006. Status and conservation of marine turtles in Bangladesh. In K. Shanker and B. C. Choudhury (eds.), *Marine Turtles of the Indian Subcontinent*, pp. 200–216. Hyderabad, India: Universities Press. **SWOT Contact:** M. Zahirul Islam

BARBADOS

DATA RECORD: 9

Data Source: Horrocks, J., and C. Daniel. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). **SWOT Contacts:** Julia Horrocks and Carla Daniel

BELIZE

DATA RECORD: 10

Data Sources: (A) Smith, G. W. 1992. Hawksbill turtle nesting at Manatee Bar, Belize. 1991. *Marine Turtle Newsletter* 57: 1–5. (B) Searle, L. 2021. Belize. In M. A. Nalovic, S. A. Ceriani, M. M. P. B. Fuentes, J. B. Pfaller, N. E. Wildermann, A. Uribe-Martínez, and E. Cuevas (eds.), *Sea Turtles in the North Atlantic and Wider Caribbean Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (C) Spatial Database for the Wider Caribbean. **SWOT Contacts:** Isaias Majil, Janet Gibson, University of Belize, Toledo Institute for Development and Environment, South Water Caye Marine Reserve, Sapodilla Cayes Marine Reserve, Glovers Reef Marine Reserve, Gales Point Wildlife Sanctuary Management Team, Friends of Nature, Belize Audubon Society, and Bacalar Chico Marine Reserve

BONAIRE

DATA RECORD: 11

Data Sources: (A) Nava, M. 2006. *Sea Turtle Conservation Bonaire: Progress Report 2006*. Unpublished report. (B) Sea Turtle Conservation Bonaire. 2007. Progress report. Personal communication. SWOT Database Online 2010. (C) Sea Turtle Conservation Bonaire. 2010. Progress report. Personal communication. SWOT Database Online 2011. (D) Sea Turtle Conservation Bonaire. 2011. Progress report. Personal communication. SWOT Database Online 2012. (E) Sea Turtle Conservation Bonaire. 2014. Progress report. Personal communication. SWOT Database Online 2014. (F) Sea Turtle Conservation Bonaire. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). (G) Spatial Database for the Wider Caribbean. **SWOT Contact:** Kaj Tamar Schut

BRAZIL

DATA RECORD: 12

Data Sources: (A) Fundação Projeto TAMAR. 2022. Unpublished data from SITAMAR (Information System of Fundação Projeto Tamar). Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). (B) Mendilaharsu, M. L., M. Á. Marcovaldi, B. Giffoni, L. Medeiros, et al. 2021. Brazil. In M. Á. Marcovaldi, J. Thomé, and

A. Fallabrino (eds.), *Sea Turtles in the Southwest Atlantic Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (C) Santos, A. S., A. P. Almeida, A. B. Santos, et al. 2011. *Plano de Ação Nacional para a Conservação das Tartarugas Marinhas*. Série Espécies Ameaçadas No. 25. Instituto Chico Mendes de Conservação da Biodiversidade, Brasília. **SWOT Contacts:** Alessandro Santos, Maria Ângela Marcovaldi, Eduardo Lima, Frederico Tognin, and Paulo Lara

CAMEROON

DATA RECORD: 13

Data Source: Cerocoma and Protomac. *Rapport des Activités*. Cameroon. Unpublished report. **SWOT Contacts:** Alain Gibudi and Jules Ngunguim

CAYMAN ISLANDS

DATA RECORD: 14

Data Source: Cayman Islands Department of Environment. 2022. Unpublished data. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). **SWOT Contact:** Janice Blumenthal

CHAGOS ARCHIPELAGO

DATA RECORD: 15

Data Sources: Mortimer, J. A., N. Esteban, A. N. Guzman, and G. C. Hays. 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. **SWOT Contacts:** Graeme Hays, Jeanne Mortimer, and Nicole Esteban

CHINA

DATA RECORD: 16

Data Source: Chan, S. K.-F., I.-J. Cheng, T. Zhou, H.-J. Wange, et al. 2007. A comprehensive overview of the population and conservation status of sea turtles in China. *Chelonia Conservation Biology* 6 (2): 185–198. **SWOT Contact:** I-Juann Cheng

COLOMBIA

DATA RECORD: 17

Data Sources: (A) Rosado Gómez, A. J., and Parques Nacionales Naturales de Colombia. 2015. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XI (2016). (B) Monterrosa, M. C. 2012. *Community Based Sea Turtle Conservation at Mendihuaca Beach, Colombia Caribbean: Nesting Season 2012*. Fundación Colombia Marina. (C) Pinzón, C., and Tortugas Marinas de Santa Marta. 2015. Personal

communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XI (2016).

SWOT Contacts: Anderson Jhovany Rosado Gómez, Carolina Monterrosa, Carlos Pinzón, and Juan Manuel Rodríguez-Baron

DATA RECORD: 18

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Ceballos-Fonseca, C. 2004. Distribución de playas de anidación y áreas de alimentación de tortugas marinas y sus amenazas en el Caribe colombiano. *Boletín de Investigaciones Marinas y Costeras* 33: 77–99.

SWOT Contacts: Claudia Ceballos, Zunilda Baldonado, and Elizabeth Taylor

DATA RECORD: 19

Data Source: Cano-Castaño, A. M. 2022. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022).

SWOT Contacts: Fundación Coriácea and Amalia María Cano-Castaño

DATA RECORD: 20

Data Sources: (A) Córdoba Becerra, A., and Parques Nacionales Naturales de Colombia. 2015. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XI (2016). (B) Rodríguez-Baron, J. M., D. F. Amoroch, L. E. Angarita Jiménez, L. Barreto-Sánchez, et al. 2021. Colombia. In M. A. Nalovic, S. A. Ceriani, M. M. P. B. Fuentes, J. B. Pfaller, N. E. Wildermann, A. Uribe-Martínez, and E. Cuevas (eds.), *Sea Turtles in the North Atlantic and Wider Caribbean Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

SWOT Contact: Juan Manuel Rodríguez-Baron

DATA RECORD: 21

Data Sources: (A) Angarita Jiménez, L. E., R. Franke Ante, and Parques Nacionales Naturales de Colombia, Dirección Territorial Caribe. 2015. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XI (2016). (B) Patiño-Martínez, J., and L. Quiñones. 2008. Hawksbill nesting in Colombia. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). (C) Restrepo-Garzón, N., R. A. Álvarez-Rodríguez, C. Ramírez-Gallego, et al. 2021. Conservation of the hawksbill turtle (*Eretmochelys imbricata*) in Rincón del Mar, Colombia. *Boletín de Investigaciones Marinas y Costeras* 50 (2): 53–72.

SWOT Contacts: Luz Elvira Angarita Jiménez, Rebeca Franke Ante, Liliana Quiñones, and Juan Patiño Martínez

DATA RECORD: 22

Data Source: Franke Ante, R., and Parques Nacionales Naturales de Colombia, Dirección Territorial Caribe. 2015. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XI (2016).

SWOT Contact: Rebeca Franke Ante

COSTA RICA

DATA RECORD: 23

Data Sources: (A) Chacón-Chaverri, D. 2008. Hawksbill nesting in Costa Rica. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). (B) Chacón, D. 2014. Personal communication. SWOT Database Online 2015. (C) Spatial Database for the Wider Caribbean.

SWOT Contact: Didiher Chacón-Chaverri

DATA RECORD: 24

Data Sources: (A) Venegas-Li, R., R. Valentín-Gamazo, and A. García. 2014. Hawksbill turtle nesting at Pacuare Reserve, Limón, Costa Rica. SWOT Database Online 2015.

(B) Harrison, E. 2014. Personal communication. SWOT Database Online 2015. (C) Castro-Morales, C., and F. Campos-Rodríguez. 2006. *Final Report: Research and Protection of the Leatherback, Green and Hawksbill Turtles of the Parismina River Mouth*. Asociación Salvemos Las Tortugas de Parismina. Unpublished report.

SWOT Contacts: Claudio Quesada, Emma Harrison, Marco Ramírez-Vargas, and Vicky Taylor

DATA RECORD: 25

Data Sources: (A) Fonseca, L. 2015. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. X (2015). (B) Malaver, M., and D. Chacón. 2009. *Anidación de Tortugas Marinas en la Playa de Gandoca, Caribe Sur, Costa Rica: Temporada 2009*. Report. (C) Skilros, S., and S. Rodríguez Méndez. 2014. *Programa de Conservación e Investigación Colonia Anidadora de Tortugas Marinas Dermochelys coriacea, Estación Las Tortugas*. Research report. (D) WIDECAST. 2012. *Informe de Actividades de Conservación en Playas (31 de Marzo–15 de Octubre 2012)*.

SWOT Contact: Luis Gabriel Fonseca López

DATA RECORD: 26

Data Sources: (A) Arauz, R. 2009. Personal communication. SWOT Database Online 2010. (B) Arauz, R., M. S. Viejobueno, S. P. Sunyer, and I. Naranjo. 2009. *Conservación e Investigación de Tortugas Marinas en el Pacífico de Costa Rica (Punta Banco, Refugio Nacional de Vida Silvestre Caletas-Arío, San Miguel, Corozalito)*. Programa Restauración de Tortugas Marinas. (C) Chacón-Chaverri, D. 2008. Hawksbill nesting in Costa Rica. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). (D) Estación Biológica Caño Palma. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). (E) Malaver Montenegro, M., and D. Chacón-Chaverri. 2009. Personal communication. SWOT Database Online 2010. (F) Piedra, R. 2008. Hawksbill nesting on Playa Langosta, Costa Rica. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). (G) Umaña Ramírez, E. 2009. *Descripción de la Actividad de Anidación y Manejo de Nidadas de Tortuga Marina en Playa Buenavista, Península de Nicoya, Costa Rica: Informe Final, Temporada 2008–2009*. (H) Ward, M., and C. Elkins. 2015. Sea turtles forever. Personal communication. SWOT Database Online 2015.

SWOT Contacts: Randall Arauz, Sandra Viejobueno, Alex Gaos, Maddie Beange, Didiher Chacón-Chaverri, Estación Biológica Caño Palma, Mariana Malaver Montenegro, Rodney Piedra Chacón, Elizabeth Vélez-Carballo, Pilar Santidrián-Tomillo, Chris Elkins, and Marc Ward

DATA RECORD: 27

Data Sources: (A) Cruz, J. C. 2022. Tortugas Preciosas de Osa. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). (B) Piedra-Chacón, R., E. Vélez-Carballo, D. Chacón-Chaverri, P. Santidrián-Tomillo, et al. 2021. Costa Rica. In J. M. Rodríguez-Baron, S. Kelez, M. J. Lilies, A. Zavala-Norzagaray, D. Amoroch, and A. R. Gaos (eds.), *Sea Turtles in the Eastern Pacific Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

SWOT Contacts: Juan Carlos Cruz and Tortugas Preciosas de Osa

DATA RECORD: 28

Data Sources: (A) Piedra-Chacón, R., E. Vélez-Carballo, D. Chacón-Chaverri, P. Santidrián-Tomillo, et al. 2021. Costa Rica. In J. M. Rodríguez-Baron, S. Kelez, M. J. Lilies, A. Zavala-Norzagaray, D. Amoroch, and A. R. Gaos (eds.), *Sea Turtles in the Eastern Pacific Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (B) Alfaro-Shiguetto, J., J. Mangel, J. Darquea, M. Donoso, et al. 2018. Untangling the impacts of nets in the southeastern Pacific: Rapid assessment of marine turtle bycatch to set conservation priorities in small-scale fisheries. *Fisheries Research* 206: 185–192.

CÔTE D’IVOIRE

DATA RECORD: 29

Data Source: Fretey, J. 2001. *Biogeography and Conservation of Marine Turtles of the Atlantic Coast of Africa*. CMS Technical Publication No. 6., United Nations Environment Programme, Convention on Migratory Species Secretariat, Bonn, Germany.

SWOT Contact: Jacques Fretey

CUBA

DATA RECORD: 30*

Data Sources: (A) Azanza Ricardo, J., L. Márquez, D. Cobán, et al. 2010. *Informe Técnico con los Resultados de la Decimotercera Temporada del Proyecto Universitario para el Estudio y Conservación de las Tortugas Marinas en Guanahacabibes*. (B) Spatial Database for the Wider Caribbean. (C) Moncada, F., G. Nodarse, Y. Medina, et al. 2008. *Reporte Anual de Investigación y Conservación de Tortugas Marinas Realizado por el Proyecto de Tortugas Marinas del CIP-MIP*. (D) Moncada, F., J. Azanza Ricardo, G. Nodarse, et al. 2011. *Informe Anual Monitoreo Tortugas Marinas*.

SWOT Contacts: Felix Moncada, Fernando Hernández, and Julia Azanza Ricardo

CURAZAO

DATA RECORD: 31*

Data Sources: (A) Debrat, A. O., and L. J. J. Pors. 1995. Sea turtle nesting activity on northeast coast beaches in Curaçao, 1993. *Caribbean Journal of Science* 31 (3–4): 333–338. (B) Debrat, A. O., N. Esteban, R. Le Scao, A. Caballero, and P. C. Hoetjes. 2005. New sea turtle nesting records for the Netherlands Antilles provide impetus to conservation action. *Caribbean Journal of Science* 41 (2): 334–339. (C) Spatial Database for the Wider Caribbean.

SWOT Contacts: Paul Hoetjes and Brian Leysner

DOMINICA

DATA RECORD: 32*

Data Source: Spatial Database for the Wider Caribbean.

SWOT Contacts: Rowan Byrne, Seth Stapleton, and Stephen Durand

DOMINICAN REPUBLIC

DATA RECORD: 33

Data Source: Spatial Database for the Wider Caribbean.

SWOT Contacts: INTEC, Yolanda León, and Jesús Tomás

ECUADOR

DATA RECORD: 34

Data Sources: (A) Baquero, A. 2009. Personal communication. SWOT Database Online 2010. (B) Carillo, B. 2015. *Reporte de Anidación de Tortugas Carey, Reserva Marina “El Pelado”*. Dirección Provincial de Ambiente de Santa Elena. Ministerio de Ambiente del Ecuador. (C) Miranda, C. 2015. Equilibrio Azul: Sea Turtle Monitoring Project, Ecuador. Unpublished data. (D) Miranda, C., F. Vallejo, E. Palomino, A. Sosa, et al. 2021. Ecuador. In J. M. Rodríguez-Baron, S. Kelez, M. J. Lilies, A. Zavala-Norzagaray, D. Amoroch, and A. R. Gaos (eds.), *Sea Turtles in the Eastern Pacific Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

SWOT Contacts: Alex Gaos, Cristina Miranda, and Felipe Vallejo

DATA RECORD: 35

Data Sources: (A) Baquero, A., J. P. Muñoz, and M. Peña. 2009. Personal communication through Equilibrio Azul. In *SWOT Report—State of the World’s Sea Turtles*, vol. V (2010). (B) Herrera, M., D. Coello, and C. Flores. 2009. *Notas Preliminares: Cabo San Lorenzo, Su Importancia como Área de Reproducción de Tortugas Marinas en el Ecuador*. Unpublished report. (C) Zarate, P. 2008. Hawksbill nesting in Ecuador. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008).

SWOT Contacts: Dially Coello, Equilibrio Azul, Marco Herrera, and Patricia Zarate

EGYPT

DATA RECORD: 36*

Data Source: Hanafy, M. H., A. Salam, M. Abd El-Ghani, et al. 2003. *Marine Turtles on the Egyptian Coast of the Red Sea*. Programme for the Environment of the Red Sea and Gulf of Aden, Egypt.

EL SALVADOR

DATA RECORD: 37

Data Sources: (A) Liles, M. J., M. Vásquez, W. López, et al. 2009. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. V (2010). (B) Liles, M. J., A. Henríquez, and F. Medina. 2021. El Salvador. In J. M. Rodríguez-Baron, S. Kelez, M. J. Lilies, A. Zavala-Norzagaray, D. Amoroch, and A. R. Gaos (eds.), *Sea Turtles in the Eastern Pacific Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

SWOT Contacts: Alex Gaos, Michael Liles, Mauricio Vásquez, Johanna Segovia, Wilfredo López, and Georgina Mariona

ÎLES ÉPARSES

DATA RECORD: 38*

Data Source: Jean, C., S. Ciccione, J. Bourjea, M. Dalleau, and A. Carpentier. 2020. Éparses. In M. Dalleau, J. Bourjea, and R. Nel (eds.), *Sea Turtles in the East Africa and the West Indian Ocean Region: MTSG Annual Regional Report 2020*. IUCN-SSC Marine Turtle Specialist Group.

EQUATORIAL GUINEA

DATA RECORD: 39

Data Source: (A) Fretey, J. 2001. *Biogeography and Conservation of Marine Turtles of the Atlantic Coast of Africa*. CMS Technical Publication No. 6., United Nations Environment Programme, Convention on Migratory Species Secretariat, Bonn, Germany. (B) Hearn, G. W., H. Rader, and J. L. Bradys. 2006. Leatherback nesting in Bioko Island, Equatorial Guinea. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. I (2006). (C) Honarvar, S., D. B. Fitzgerald, C. L. Weitzman, E. M. Sinclair, et al. 2016. Assessment of important marine turtle nesting populations on the southern coast of Bioko Island, Equatorial Guinea. *Chelonian Conservation and Biology* 15 (1): 79–89. (D) Rader, H., S. Nsue Esono, J. Bradys, et al. 2006. Leatherback nesting in Bioko Island, Equatorial Guinea. In *SWOT Report—State of the World’s Sea Turtles*, vol. II (2007). (E) Tomás, J., B. J. Godley, J. Castroviejo, et al. 2010. Bioko: Critically important nesting habitat for sea turtles of West Africa. *Biodiversity and Conservation* 19: 2699–2714.

SWOT Contacts: Jacques Fretey, Gail W. Hearn, and Shaya Honarvar

ERITREA

DATA RECORD: 40

Data Sources: (A) Goitom, M. 2008. Ministry of Fisheries. Personal communication. SWOT Database Online 2010. (B) Rees, A. 2021. Eritrea. In A. D. Phillott and A. F. Rees (eds.), *Sea Turtles in the Middle East and South Asia Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

SWOT Contact: Mahta Goitom

FIJI

DATA RECORD: 41

Data Sources: (A) Prakash, S. S., T. M. Tuiono, S. Clay, et al. 2020. Temporal and geographic distribution of hawksbill turtle (*Eretmochelys imbricata*) nests in Fiji, South Pacific. *Testudo* 9 (2): 12–23. (B) Bell, L. 2013. Community Turtle Conservation and Monitoring Network. Community Ecosystem Partnership Fund and Conservation International Pacific Islands Program, Apia, Samoa. (C) Guinea, M. 1993. *Sea Turtles of Fiji*. South Pacific Regional Environmental Programme, Apia, Samoa.

SWOT Contacts: Aisake Batibasaga and Neema Nand

FRENCH GUIANA

DATA RECORD: 42

Data Sources: (A) Kelle, L. 2008. Hawksbill nesting in French Guiana. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. III (2008). (B) Kwata NGO. 2022. Personal communication. In *SWOT Report—State of the World’s Sea Turtles*, vol. XVII (2022). (C) Réserve Naturelle de

l'Amama. 2022. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).

SWOT Contacts: Laurent Kelle, Kwata NGO, and Réserve Naturelle de l'Amama

FRENCH SOUTHERN TERRITORIES

DATA RECORD: 43

Data Sources: (A) Bourjea, J., and S. Ciccione. 2008. Hawksbill nesting in French overseas territories. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (B) Laurent-Stepher, M., S. Ciccione, and J. Bourjea. 2010. Monitoring of marine turtles' reproductive activities in Juan de Nova, Eparses Islands, South Western Indian Ocean, based on tracks count and width. *Indian Ocean Turtle Newsletter* 11: 18–24. **SWOT Contacts:** Claire Jean, Stéphane Ciccione, Jérôme Bourjea, and Mayeul Dalleaud

GABON

DATA RECORD: 44

Data Sources: (A) Girard, A., M. C. Godgenger, A. Gibudi, J. Fretey, et al. 2016. Marine turtles nesting activity assessment and trend along the Central African Atlantic coast for the period of 1999–2008. *International Journal of Marine Science and Ocean Technology* 3 (3): 21–32. (B) Verhage, B., E. B. Moundjim, and S. R. Livingstone. 2006. *Four Years of Marine Turtle Monitoring in the Gamba Complex of Protected Areas, Gabon, Central Africa, 2002–2006*. World Wildlife Fund—Gabon. **SWOT Contacts:** Samuel Mbungu Ndamba, Aimee Leslie, and Bas Verhage

GRENADA

DATA RECORD: 45*

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Fastigi, M., and YWF-Kido Foundation. 2008. Sea turtle nesting on Carriacou Island, Grenada. Personal communication. SWOT Database Online 2009. (C) Fastigi, M., YWF-Kido Foundation. 2010. Sea turtle nesting on Carriacou Island, Grenada. Personal communication. SWOT Database Online 2011. (D) Lloyd, C., and Ocean Spirits. 2009. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. V (2010). **SWOT Contacts:** Rebecca S. King, Carl Lloyd, Gregg Moore, Kate Charles, and Marina Fastigi

GUADELOUPE

DATA RECORD: 46

Data Sources: (A) Delcroix, E. 2007. *Rapport d'Activité Gestion du Réseau Tortues Marines de Guadeloupe 2007*. Unpublished report. (B) Delcroix, E., et al. 2010. Unpublished data. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. VI (2011). (C) Spatial Database for the Wider Caribbean. (D) Girard, A., and M. Girondot. 2016. *Analyse des Données d'Activités de ponte des Tortues Marines en Guadeloupe (Incluant ses Dépendances et Saint-Martin): Période 2004–2014*. Office National de la Chasse. **SWOT Contacts:** Alain Goyeau, Alain Saint-Auret, Alexandra Le Moal, Blandine Guillemot, Caroline Cestor, Caroline Rinaldi, Cécile Lallemand, Eric Delcroix, Fabien Créantor, Fortuné Guiougou, Franciane Le Quellec, Gérard Portecop Fortuné Guiougou, Guilhem Santelli, Jean Boyer, Jérôme Flereau, Julien Chalifour, Laurent Malglaive, Moise Chasselas, Monique Charrieau, Natacha Lamy, Olivier Raynaud, Olivier Tartaglino, Pauline Malterre, Philippe de Proft, Renato Rinaldi, René Dumont, Sandrine Bonotto, Sebastien Rives, Simone Mege, Sophie Bedel, Sophie Guilloux-Glorieux, Thierry Guthmuller, Xavier Delloue, and Caroline Cremades

GUATEMALA

DATA RECORD: 47

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Fundación Mario Dary Rivera, Consejo Nacional de Áreas Protegidas, and The Nature Conservancy. 2006. *Plan de Conservación de Área, 2007–2011: Refugio de*

Vida Silvestre Punta de Manabique. Fundary-Proarca-TNC.

SWOT Contacts: Anabella Barrios and Ana Beatriz

GUINEA-BISSAU

DATA RECORD: 48

Data Sources: (A) Barbosa, C. 2022. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (B) Barbosa, C., A. C. Broderick, and P. Catry. 1998. Marine turtles in the Orango National Park (Bijagós Archipelago, Guinea-Bissau). *Marine Turtle Newsletter* 81: 6–7. (C) Catry, P., C. Barbosa, B. Indjai, A. Almeida, et al. 2002. First census of the green turtle at Poilão, Bijagós Archipelago, Guinea-Bissau: The most important nesting colony on the Atlantic coast of Africa. *Oryx*, 36 (4): 400–403. (D) Fretey, J. 2001. *Biogeography and Conservation of Marine Turtles of the Atlantic Coast of Africa*. CMS Technical Publication No. 6. United Nations Environment Programme, Convention on Migratory Species Secretariat, Bonn, Germany. **SWOT Contacts:** Fernando Miguel Madeira, Ana Rita Patrício, Aissa Regalla, Castro Barbosa, Rui Rebelo, and Paulo Catry

GUYANA

DATA RECORD: 49*

Data Sources: (A) de Freitas, R., and P. Pritchard. 2011. *Aspect of Marine Turtle Nesting in Guyana, 2011*. World Wildlife Fund Technical Report, Guianas Forest and Environment Conservation Project (GFCEP). (B) Kalamandeen, M., R. de Freitas, K. Stewart, et al. 2006. *Aspects of Marine Turtle Nesting in Guyana, 2006*. World Wildlife Fund Technical Report, GFCEP. (C) Saheed, D. 2010. Personal communication. SWOT Database Online 2011. **SWOT Contacts:** Romeo de Freitas, Michelle Kalamandeen, and Dominique Saheed

HAITI

DATA RECORD: 50*

Data Sources: (A) Chacón, D., C. Quesada, and C. Drews. 2006. Hawksbill turtles of the Caribbean. (B) Spatial Database for the Wider Caribbean. (C) Kavanagh, R. 1984. The national report: Haiti. In P. Bacon, F. Berry, K. Bjørndal, H. Hirth, L. Ogren, and M. Weberer (eds.), *Proceedings of the Western Atlantic Sea Turtle Symposium, Volume 3*. Miami, FL: University of Miami Press. (D) Ottenwalder, J. A. 1987. *Ad Hoc National Report to WATS II for Haiti*. Presented to the Second Western Atlantic Turtle Symposium, WATS2 044, September 1987, Mayagüez, Puerto Rico. **SWOT Contact:** Jean Wiener

HONDURAS

DATA RECORD: 51

Data Sources: (A) Aronne, M. 2000. *Anidación Semiarificial para la Conservación de Tortuga Marina Carey (Eretmochelys imbricata) en el Área Protegida de Cayos Cochinos, del 18 Junio al 30 Octubre 2000*. Fundación Hondureña para los Arrecifes Coralinos. (B) Spatial Database for the Wider Caribbean. (C) Macias, F. S. 2006. *Honduras Second Annual Report*. Inter-American Convention for the Protection and Conservation of Sea Turtles and Directorate of Biodiversity/SERNA. **SWOT Contacts:** Carlos Molinero, Gerson Martínez, Lidia Salinas, Rafael Gutiérrez, Marcio Aronne, Michelle Fernández, and Fundación Calentura y Guaimoreto

INDIA

DATA RECORD: 52

Data Sources: (A) Andrews, H., S. Krishnan, and P. Biswas. 2006. *The Status and Distribution of Marine Turtles around the Andaman and Nicobar Archipelago*. Andaman and Nicobar Islands Environmental Team, Center for Herpetology, Madras Crocodile Bank Trust, Andaman and Nicobar Islands, India. (B) Bhaskar, S. 1993. *The Status and Ecology of Sea Turtles in the Andaman and Nicobar Islands*. Publication No. ST 1/93. Centre for Herpetology, Madras Crocodile Bank Trust, Tamil Nadu, India. (C) Tripathy, B.,

K. Shanker, and B. C. Choudhury. 2006. Sea turtles and their habitats in the Lakshadweep Islands. In K. Shanker and B. C. Choudhury, *Marine Turtles of the Indian Subcontinent*, 119–136. Hyderabad, India: Universities Press. **SWOT Contacts:** Harry Andrews and Manish Chandi

INDONESIA

DATA RECORD: 53

Data Sources: (A) Inoguchi, E. 2022. Everlasting nature of Asia. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (B) Everlasting nature of Asia. 2011. Personal communication. SWOT Database Online 2012. **SWOT Contacts:** Emi Inoguchi and Hiroyuki Suganuma

DATA RECORD: 54

Data Sources: (A) Muurmans, M., and Yayasan Pulau Banyak, Aceh, Indonesia. 2009. Personal communication. SWOT Database Online 2010. (B) Putra, K. S. 2005. *Brief Overview of Turtle Conservation in Indonesia*. Unpublished report. **SWOT Contacts:** Maggie Muurmans and Ketut Sarjana Putra

IRAN, ISLAMIC REPUBLIC OF

DATA RECORD: 55

Data Sources: (A) Mobaraki, A. 2021. Iran. In A. D. Phillott and A. F. Rees (eds.), *Sea Turtles in the Middle East and South Asia Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (B) Mobaraki, A., and A. M. Elmi. 2005. First sea turtle tagging program in Iran. *Marine Turtle Newsletter* 110: 6–7.

JAMAICA

DATA RECORD: 56*

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Harker, T. 2006. *Status and Conservation of Sea Turtles in Jamaica*. Unpublished report. (C) Haynes-Sutton, A., R. Kerr Bjorkland, and A. Donaldson. In K. L. Eckert (ed.), *Sea Turtle Recovery Action Plan for Jamaica*. CEP Technical Report No. 54, Caribbean Environment Programme, Kingston, Jamaica. (D) Tennant, M. 2008. Hawksbill nesting on Gibraltar Beach, Jamaica. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contacts:** Andrea Donaldson, Rhema Kerr Bjorkland, Shakira Azan, and The Nature Conservancy

JAPAN

DATA RECORD: 57

Data Source: Okuyama, J., H. Ishii, S. Tanizaki, T. Suzuki, et al. 2020. Quarter-century (1993–2018) nesting trends in the peripheral populations of three sea turtle species at Ishigakijima Island, Japan. *Chelonian Conservation and Biology* 19 (1): 101–110. **SWOT Contact:** Junichi Okuyama

KENYA

DATA RECORD: 58

Data Source: Izava, M., and WWF Kenya. 2016. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XII (2017). **SWOT Contact:** Mike Olendo

KUWAIT

DATA RECORD: 59

Data Sources: (A) Rees, A. F. 2022. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (B) Rees, A. F., N. Papatthanasopoulou, and B. J. Godley. 2019. Tracking hawksbills in Kuwait: Contributions to regional behavioral insights. *Chelonian Conservation and Biology* 18 (1): 86–90. **SWOT Contact:** Alan Rees

LIBERIA

DATA RECORD: 60

Data Source: Save My Future Foundation (SAMFU). 2008. Hawksbill nesting in Liberia. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contact:** Alex Peal

MADAGASCAR

DATA RECORD: 61

Data Source: Bourjea, J., S. Ciccione, and R. Rantsimbazafy. 2006. Marine turtle survey in Nosy Iranja Kely, northwestern Madagascar. *Western Indian Ocean Journal of Marine Science* 5 (2): 209–212. **SWOT Contacts:** Claire Jean, Stéphane Ciccione, Jérôme Bourjea, Mayeul Dalleau, and Ignace Vandry

MALAYSIA

DATA RECORD: 62

Data Source: Fisher, C., and I. Roslan. 2013. *Nesting Population of Sea Turtles on Tioman Island, Malaysia*. Juara Turtle Project. Unpublished report. **SWOT Contact:** Charles Fisher

DATA RECORD: 63

Data Source: (A) Bali, J., and Sarawak Forestry Corporation. 2008. Hawksbill nesting in Sarawak, Malaysia. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (B) Bin Rusli, M. U. 2022. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (C) Marine Research Unit, Sabah Parks. 2007. *Turtle Islands Park and Sipadan Island Turtle Research Report*. Unpublished report. (D) Pilcher, N. 2022. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (E) Sabah Department of Wildlife. 2008. Hawksbill nesting in Sabah, Malaysia. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (F) Wagiman, S., and Malaysia Fisheries Department. 2008. Hawksbill nesting in Johor, Malacca, Pahang and Terengganu, Malaysia. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contacts:** Eng-Heng Chan, Sukarno Wagiman, Fazrullah Rizally, James Bali, Nicolas Pilcher, and Mohd Uzair Bin Rusli

MALDIVES

DATA RECORD: 64

Data Source: Zahir, H. 2008. Hawksbill nesting in Maldives. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contact:** Hussein Zahir

DATA RECORD: 65

Data Source: Olive Ridley Project. 2022. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). **SWOT Contact:** Olive Ridley Project

MARTINIQUE

DATA RECORD: 66

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) KAWAN (Marine Turtle Network of Martinique). 2014. Hawksbill nesting in Martinique. SWOT Database Online 2014. **SWOT Contacts:** Jean-Claude Nicolas, Séverine Raigné, Claire Cayol, and Cécile Gaspar

DATA RECORD: 67

Data Sources: (A) National Office of Wildlife and Hunting. 2008. Unpublished data from the 2006 nesting season. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (B) National Wildlife and Hunting Agency and KAWAN. 2009. Unpublished data from the 2008 nesting season. Personal communication via R. Le Scao. In *SWOT Report—State of the World's Sea Turtles*, vol. V (2010). (C) KAWAN. 2008. Hawksbill nesting in Martinique. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (D) NGO SEPANMAR (Society for the Study,

Protection, and Development of Nature in Martinique). *Nesting Season 2006: Parts 1, 2, and 3*. Technical report. Fort de France, Martinique: Ministry of Ecology and Sustainable Development.
SWOT Contact: Rozenn Le Scao

MAYOTTE

DATA RECORD: 68

Data Sources: (A) Bourjea, J., and S. Ciccione. 2008. Hawksbill nesting in French overseas territories. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (B) Quillard, M. 2011. Les tortues marines à Mayotte: Bilan des actions de protection et perspectives. *Bulletin de la Société Herpétologique de France*. 139–140: 113–129. (C) Philippe, J.-S., J. Bourjea, S. Ciccione, et al. 2014. *Plan National d'Actions en Faveur des Tortues Marines des Territoires Français de l'Océan Indien: La Réunion, Mayotte et Îles Éparses (2015–2020)*. Ministry of Ecology, Sustainable Development, and Energy.

SWOT Contacts: Jérôme Bourjea, Stéphane Ciccione, Mireille Quillard, and Katia Ballorain

MEXICO

DATA RECORD: 69

Data Source: (A) Arias, R. 2006. *Informe de Resultados de la Temporada 2006*. Presented at a meeting of the Centros Indígenas para la Protección de la Tortuga Marina en Veracruz, Comisión Nacional para el Desarrollo de los Pueblos Indígenas, and Centro de Desarrollo Indigenista, Acayucan, Veracruz, November 25. (B) Bravo, G., P. R. Martínez, and R. C. Martínez. 2007. *Breve Reseña y Resultados de la Protección y Conservación de las Tortugas Marinas en el Estado de Veracruz, 2003–2006*. Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT), Comisión Nacional de Áreas Naturales Protegidas (CONANP), and Parque Nacional Sistema Arrecifal Veracruzano (PNSAV). (C) Spatial Database for the Wider Caribbean. (D) Erosa, S. A. 2002. *Informe de Resultados del Programa de Protección de Tortugas Marinas en la Zona Hotelera de Cancún, Temporada 2002*. Benito Juárez, Quintana Roo: Dirección General de Ecología. (E) Erosa, S. A. 2003. *Informe de Resultados del Programa de Protección de Tortugas Marinas en la Zona Hotelera de Cancún, Temporada 2002*. Benito Juárez, Quintana Roo: Dirección General de Ecología. (F) Erosa, S. A., and J. Juárez G. 1996. *Primer Registro de Anidación de Dermochelys coriacea en la Zona Hotelera de Cancún: Mem. del XIII Encuentro Interuniversitario para la Conservación de las Tortugas Marinas, Jalapa, Veracruz*. (G) González, P., and G. A. González. 2003. *Proyecto de Protección y Conservación de las Tortugas Marinas*. H. Ayuntamiento Municipal de Tuxpan, Veracruz, and Dirección de Ecología. (H) González, P., and G. A. González. 2005. *Resultados Parciales de la Temporada de Anidación de las Tortugas Marinas del Período de Abril a Julio de 2005 en el Centro de Protección y Conservación de las Tortugas Marinas en la Playa de Ejido Barra de Galindo, Tuxpan, Veracruz*. Consejo Estatal de Protección al Ambiente de Gobierno del Estado and Facultad de Ciencias Biológicas y Agropecuarias, Universidad Veracruzana. (I) Guzman, V. 2006. *Informe Técnico Final del Programa de Conservación de Tortugas Marinas de Campeche, México en 2005*. Dirección General de Manejo para la Conservación. (J) Guzman, V., and Área de Protección de Flora y Fauna Laguna de Términos, CONANP. 2010. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. VI (2011). (K) Jaramillo, A. P. 2006. *Mexico: Second Annual Report for the Inter-American Convention for the Protection and Conservation of Sea Turtles*. National Fisheries and Aquaculture Commission, SEMARNAT. (L) Sedere. 2003. *Proyecto del Centro Veracruzano para la Investigación y Conservación de la Tortuga Marina*. Gobierno del Estado de Veracruz, Sedere-CEMA, and Pemex—Gerencia Regional de Seguridad Industrial y Protección Ambiental, Xalapa, Veracruz.

SWOT Contacts: Adriana Laura Sarti Martínez,

Alberto Abreu Grobois, Augusto Segoviam, SEMARNAT, René Kantún, Higher Institute of Marine Economics (ISEMAR), Roberto Herrera-Pavón, Vicente Guzman, Enlaces con tu Entorno, Ría Lagartos Reserva de la Biosfera, CONANP, and EcoSur

DATA RECORD: 70

Data Sources: (A) Berzunza-Chío, J., and Secretaría de Medio Ambiente, Biodiversidad, Cambio Climático y Energía (SEMABICC). 2015–22. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (B) Cosgalla, J., and A. C. Quelonios. 2015–20. Personal communication via SEMABICC. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (C) Díaz, A., and Universidad Autónoma del Carmen. 2015–22. Personal communication via SEMABICC. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (D) Gongora, L. A. 2015–22. Personal communication via SEMABICC. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (E) Guzmán, H. V. 2022. *Informe Técnico 2021 del Programa de Conservación de Tortugas Marinas en Laguna de Términos, Campeche, México*. (F) Medina, M., and Enlaces con tu Entorno A.C. 2015–22. Personal communication via SEMABICC. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).

SWOT Contacts: Pedro García, Laura Sarti, Vicente Guzman, Silvia Cruz, Javier Gómez, Rosario Velueta, Daniel Velueta, and Eduardo Pastrana

DATA RECORD: 71*

Data Source: Pronatura Península de Yucatán, A.C. 2011. Personal communication. SWOT Database Online 2013.

SWOT Contact: Eduardo Cuevas

DATA RECORD: 72

Data Sources: (A) Delgado-Trejo, C., C. Bedolla-Ochoa, L. A. Sarti Martínez, C. Hart, et al. 2021. Mexico. In J. M. Rodríguez-Baron, S. Kelez, M. J. Lillies, A. Zavala-Norzagary, D. Amorcho, and A. R. Gaos (eds.), *Sea Turtles in the Eastern Pacific Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (B) Fishermen/ex-guards from Islas Marias Penitentiary. 2009. Personal communication. SWOT Database Online 2010.

SWOT Contact: Alex Gaos

MICRONESIA, FEDERATED STATES OF

DATA RECORD: 73

Data Source: Cruce-Johnson, J. 2006. *Yap State Sea Turtle Conservation Program, Ulithi Tagging Project, Gielop and Iar Islands, Summer 2005*. Marine Resources Management Division Report. Yap State, Federated States of Micronesia.

SWOT Contacts: Jennifer Cruce and Wayne Sentman

MONTSERRAT

DATA RECORD: 74*

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Martin, C. S., J. Jeffers, and B. J. Godley. 2005. The status of marine turtles in Montserrat (eastern Caribbean). *Animal Biodiversity and Conservation* 28 (2): 159–168.

SWOT Contact: John Jeffers

MOZAMBIQUE

DATA RECORD: 75

Data Sources: (A) Costa, A. 2007. *Report of Marine Turtle Conservation in Quirimbas National Park, Cabo Delgado*. Marine Programme, WWF Mozambique, Maputo. (B) Costa, A., and A. Mate. 2009. Personal communication. SWOT Database Online 2010. (C) *Vamizi Island Conservation and Community Report, 2014–2015*. Pemba, Mozambique.

SWOT Contacts: Alice Costa, Alfredo Mate, and Isabel Marques da Silva

NICARAGUA

DATA RECORD: 76

Data Sources: (A) Altamirano, E., and Y. Rodríguez. 2008–09. *Informe de Proyecto de Conservación de Tortugas Marinas en la RN Isla Juan Venado, Leon-Nicaragua*. (B) Campbell, C. L., C. J. Lagueux, and V. Huertas. 2007. *2006 Pearl Cays Hawksbill Conservation Project, Nicaragua: Final Report*. Wildlife Conservation Society. (C) Delegación MARENA-Rivas. 2009. *Informe de Monitoreo de Tortuga Pasmala (Lepidochelys olivacea) en el RVS La Flor (Departamento de Rivas, Nicaragua)*. Unpublished report, 2008–2009 season. (D) Gaos, A. 2009. Personal communication. SWOT Database Online 2010. (E) Manzanares, L. 2009. Personal communication. SWOT Database Online 2010. (F) Muurmans, M., and Society for Environmental Exploration/Frontier Nicaragua—Darwin Initiative. 2009. Personal communication. SWOT Database Online 2010. (G) Otterstrom, S. 2009. Personal communication. SWOT Database Online 2010. (H) Torres, P., M. Chavez, and L. Salmerón. 2009. *Informe Proyecto de Conservación de Tortuga Tora (Dermochelys coriacea) en Playa Salamina, Villa El Carmen (Departamento de Managua), Nicaragua*. 2008–2009 season. **SWOT Contacts:** Alex Gaos, Velkiss Gadea, Edgar Herrera, Perla Torres Gago, Cynthia Lagueux, and Cathi Campbell

OMAN

DATA RECORD: 77

Data Sources: (A) Marine Fauna of Oman and A. Rees. 2010. Personal communication. SWOT Database Online 2010. (B) Rees, A. 2008. Hawksbill nesting in Oman. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008).

SWOT Contacts: Alan Rees

PALAU

DATA RECORD: 78

Data Source: Klain, S., and J. Eberdong. 2007. *Palau Marine Turtle Conservation and Monitoring Program, 2005–2006: Report to National Oceanic and Atmospheric Administration (NOAA)*. Unpublished report.

SWOT Contacts: Sarah Klain and Joshua Eberdong

PANAMA

DATA RECORD: 79

Data Sources: (A) Meylan, A.B., P.A. Meylan, and C. Ordoñez. 2013. Marine turtles of Bocas del Toro Province and the Comarca Ngöbe-Buglé, Republic of Panama. *Chelonian Conservation and Biology* 12: 17–33. (B) Eckert, K. L., and A. E. Eckert. 2019. *An Atlas of Sea Turtle Nesting Habitat for the Wider Caribbean Region*. Revised Edition. WIDECAS Technical Report No. 19. Godfrey, Illinois.

SWOT Contacts: Emma Harrison, Anne Meylan, Cristina Ordoñez, and the Sea Turtle Conservancy

DATA RECORD: 80

Data Source: Patiño-Martínez, J., and L. Quiñones. 2008. Hawksbill nesting in Panama. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008).

SWOT Contact: Juan Patiño-Martínez

DATA RECORD: 81*

Data Source: Rodríguez, J., A. Ruíz, M. Abrego, et al. 2009. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. V (2010). **SWOT Contacts:** Argelis Ruíz, Carlos Peralta, Harold Chacón, Jacinto Rodríguez, and Marino Abrego

PAPUA NEW GUINEA

DATA RECORD: 82

Data Source: Horrocks, J., B. Krueger, and A. Harewood. 2008. Unpublished data.

SWOT Contact: Barry Krueger

PHILIPPINES

DATA RECORD: 83

Data Sources: (A) Cruz, R. 2008. Hawksbill nesting in the Philippines. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (B) Torres, D., E. Santa Cruz, L. I. Mansanero, et al. 2004. Conservation of a remnant Hawksbill nesting habitat in Punta Dumlag, Brangay Matina Aplaya, Davao City, Philippines.

SWOT Contacts: Renato Cruz, Romeo Trono, and Angie Viloria

PUERTO RICO

DATA RECORD: 84

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Proyecto Carey. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).

SWOT Contact: Carlos Díez

DATA RECORD: 85

Data Sources: (A) Díez, C. 2012. Internal report submitted to Puerto Rico Department of Natural and Environmental Resources. (B) Montero, L. 2006. *Proyecto de Conservación de Tortugas Marinas Humacao, Yabucoa y Maunabo, Puerto Rico, Temporada 2006*. Puerto Rico Department of Natural and Environmental Resources. (C) Puerto Rico Departamento de Recursos Naturales y Ambientales. 2012. Unpublished database for nesting of sea turtles in Puerto Rico.

SWOT Contacts: Carlos Díez and Robert van Dam

QATAR

DATA RECORD: 86

Data Sources: (A) Ras Laffan Industrial City. Unpublished data. SWOT Database Online 2009. (B) Rees, A. F., and M. Chatting. 2021. Qatar. In A. D. Phillott and A. F. Rees (eds.), *Sea Turtles in the Middle East and South Asia Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

SWOT Contact: Nicolas Pilcher

SAINT KITTS AND NEVIS

DATA RECORD: 87*

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Pemberton, E., and Nevis Department of Fisheries. 2008. Hawksbill nesting in Nevis. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (C) St. Kitts Sea Turtle Monitoring Network and Ross University School of Veterinary Medicine. 2008. Hawksbill nesting in St. Kitts. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (D) Stewart, K., and St. Kitts Sea Turtle Monitoring Network. 2006. Leatherback nesting in St. Kitts. In *SWOT Report—State of the World's Sea Turtles*, vol. I (2006).

SWOT Contacts: Kate Orchard, Ralph Wilkins, Kimberly Stewart, and Emile Pemberton

SAINT LUCIA

DATA RECORD: 88*

Data Sources: (A) Bacon, P. R. 1981. The status of sea turtle stocks management in the western central Atlantic. Western Central Atlantic Fishery Commission. (B) d'Auvergne, C., and K. L. Eckert. 1993. *Sea Turtle Recovery Action Plan for St. Lucia*. CEP Technical Report No. 26, Caribbean Environment Programme, United Nations Environment Programme, Kingston, Jamaica. (C) Spatial Database for the Wider Caribbean. (D) Murray, P. A. 1984. National report for the country of Saint Lucia. In P. Bacon, F. Berry, K. Bjørndal, H. Hirth, L. Ogren, and M. Weberer (eds.), *Proceedings of the Western Atlantic Sea Turtle Symposium, Volume 3*, pp. 370–380. Miami, FL: University of Miami Press.

SWOT Contact: Dawn Pierre-Nathaniel

DATA RECORD: 89*

Data Source: Durrell Wildlife Conservation Trust and St. Lucia Forestry Department, Ministry of Agriculture. 2008. Hawksbill nesting in St. Lucia. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008).

SWOT Contact: Matthew Morton

SAINT MARTIN

DATA RECORD: 90

Data Sources: (A) Réserve Naturelle Nationale (RNN) de Saint-Martin. 2010. *Rapport 2009 Suivis des Pontes de Tortues Marines et des Tortues Marines en Alimentation*. (B) RNN de Saint-Martin. 2011. *Rapport 2010 Suivis des Pontes de Tortues Marines et des Tortues Marines en Alimentation*. (C) RNN de Saint-Martin. 2012. *Suivi des Pontes de Tortues Marines à Saint-Martin, Bilan de la Campagne 2012*. (D) RNN de Saint-Martin. 2012. *Suivi des Pontes de Tortues Marines à Saint-Martin, Bilan de la Campagne 2012*. (E) RNN de Saint-Martin. 2014. *Suivi des Pontes de Tortues Marines à Saint-Martin, Bilan de la Campagne 2013*. (F) RNN de Saint-Martin. 2015. *Suivi des Pontes de Tortues Marines à Saint-Martin: Saison 2014*. Final report. (G) Chalifour, J. 2015. *Suivi des Tortues Marines en Ponte et en Alimentation: Année 2015*. RNN Saint-Martin. (H) Bousquet, C., and J. Chalifour. 2017. *Suivi des Tortues Marines en Ponte et en Alimentation: Année 2016*. RNN Saint-Martin. (I) Chalifour, J. 2017. *Suivi des Pontes de Tortues Marines à Saint-Martin: Saison 2017*. RNN Saint-Martin. (J) Chalifour, J. 2019. *Suivi des Pontes de Tortues Marines à Saint-Martin: Saison 2018*. RNN Saint-Martin. (K) Eckert, K. L., and A. E. Eckert. 2019. *An Atlas of Sea Turtle Nesting Habitat for the Wider Caribbean Region*. Rev. ed. WIDECAST Technical Report 19, Godfrey, IL.

SWOT Contacts: Julien Chalifour, Réserve Naturelle de Saint-Martin, Claire Saladin, Agence Territoriale de l'Environnement de Saint Barthélemy

SAINT VINCENT AND THE GRENADINES

DATA RECORD: 91

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Morris, K. 1984. The national report for the country of St. Vincent. In P. Bacon, F. Berry, K. Bjørndal, H. Hirth, L. Ogren, and M. Weberet (eds.), *Proceedings of the Western Atlantic Sea Turtle Symposium*, Vol. 3, pp. 381–385. Miami, FL: University of Miami Press. (C) Scott, N., and J. A. Horrocks. 1993. Sea turtle recovery plan for St. Vincent and the Grenadines. CEP Technical Report No. 27, Caribbean Environment Programme, United Nations Environment Programme. **SWOT Contact:** Lucine Edwards

SAMOA

DATA RECORD: 92*

Data Sources: (A) Momoemausu, M., J. Ward, M. Iakopo, et al. 2006. *Report on the Hawksbill Turtle Nesting Survey 2005–2006*. Division of Environment and Conservation, Ministry of Natural Resources and Environment, Samoa. (B) Ward, J., and I. Asotasi. 2008. *An Assessment of the Current Status of the Hawksbill Turtles (Eretmochelys imbricata) on the Aleipata Islands, 2007–2008*. Division of Environment and Conservation, Ministry of Natural Resources and Environment, Samoa. **SWOT Contacts:** Juney Ward and Malama Momoemausu

SÃO TOMÉ AND PRÍNCIPE

DATA RECORD: 93

Data Source: Bollen, A. 2016. Sea Turtle Conservation Programme of Fundação Príncipe Trust. Personal communication. SWOT Database Online 2016. **SWOT Contact:** An Bollen

DATA RECORD: 94

Data Sources: (A) Ferreira, R., A. Bolten, O. Przeres, and H. R. Martins. 2012. Sea turtle nesting in Príncipe Island. Poster presented at the 32nd International Sea Turtle Symposium, March 11–16, Huatulco, Mexico. (B) Loureiro, N. S. 2010. Personal communication. SWOT Database Online 2010. (C) Monzón-Argüello, C., N. S. Loureiro, C. Delgado, A. Marco, et al. 2011. Príncipe island hawksbills: Genetic isolation of an eastern Atlantic stock. *Journal of Experimental Marine Biology and Ecology* 407 (2): 345–354. **SWOT Contacts:** Nuno de Santos Loureiro and Rogério Ferreira

DATA RECORD: 95

Data Sources: (A) Association for the Research, Protection, and Conservation of Sea Turtles in Lusophone Countries (ATM). 2012–13. *Sea Turtle Conservation Project of the Island of Príncipe*. Nontechnical report. (B) ATM and Marapa. 2015–16. *Tatô Program: Sea Turtle Conservation Project of the Island of São Tomé*. Technical report. (C) Hancock, J., and H. Lima. 2012. Personal communication. SWOT Database Online 2017. (D) Vieira, S., H. Lima, J. Hancock, et al. 2015. Personal communication. SWOT Database Online 2017. **SWOT Contact:** Sara Vieira

SAUDI ARABIA

DATA RECORD: 96

Data Sources: (A) Miller, J. D. 2021. Saudi Arabia. In A. D. Phillott and A. F. Rees (eds.), *Sea Turtles in the Middle East and South Asia Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (B) Pilcher, N. J. 1999. The hawksbill turtle, *Eretmochelys imbricata*, in the Arabian Gulf. *Chelonian Conservation and Biology* 3 (2): 312–317. **SWOT Contact:** Nicolas Pilcher

SENEGAL

DATA RECORD: 97

Data Source: Fretey, J. 2001. Biogeography and conservation of marine turtles of the Atlantic Coast of Africa. CMS Technical Publication No. 6. United Nations Environment Programme, Convention on Migratory Species Secretariat, Bonn, Germany. **SWOT Contact:** Jacques Fretey

SEYCHELLES

DATA RECORD: 98

Data Source: Marques, C., T. Godding, M. J. Schulze, et al. 2020. Hawksbill turtle nesting on Cousine Island, Seychelles. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). **SWOT Contacts:** Christina Marques, Tammy Godding, Melissa Schulze, Sean Evans

DATA RECORD: 99

Data Sources: (A) French, G., and D. Monthy. 2010. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. VI (2011). (B) Mathiot, M., and E. Talma. 2009. Personal communication. SWOT Database Online 2010. (C) Stiponovich, J., and E. Talma. 2009. Personal communication. SWOT Database Online 2010. (D) Talma, E., and R. Matombe. 2008. Personal communication. SWOT Database Online 2010. **SWOT Contacts:** Devis Monthy, Georgia French, Elke Talma, and Joanna Bluemel

DATA RECORD: 100

Data Source: Derand, G.-D. 2008. Nature Seychelles. Unpublished data. Personal communication. SWOT Database Online 2009. **SWOT Contact:** Gilles-David Derand

DATA RECORD: 101

Data Source: (A) Allen, Z. C., N. J. Shah, A. Grant, et al. 2010. Hawksbill turtle monitoring in Cousin Island Special Reserve, Seychelles: an eight-fold increase in annual nesting numbers. *Endangered Species Research* 11: 195–200. (B) Burt, A. J., N. Dunn, C. Mason-Parker, et al. 2015. Curieuse National Park, Seychelles: critical management needs for protection of an important nesting habitat. *Marine Turtle Newsletter* 147: 6–11. (C) Mortimer, J. A., J.-C. Camille, and N. Boniface. 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: 26–33. (D) Mortimer, J. A., N. Esteban, A. N. Guzman, et al. 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. (E) Mortimer, J. A. 1984. *Marine Turtles in the Republic of Seychelles: Status and Management*. Publication of IUCN Conservation Library: Gland, Switzerland.

(F) Mortimer, J.A. 1998. *Turtle & Tortoise Conservation Project J1: Environmental Management Plan of the Seychelles*. Final report to the Republic of Seychelles Ministry of Environment and the Global Environment Facility (GEF). January 1998. Vols. 1 and 2.

(G) Mortimer, J. A. 2004. *Seychelles Marine Ecosystem Management Project (SEYMEMP): Turtle Component*. Final Report. Vols. 1 and 2. (H) Mortimer, J. A. 2017. *Community Monitoring of Nesting Sea Turtles at D'Arros and St. Joseph, Seychelles: Turtle Track Count Analysis for 13 Seasons (2004–05 to 2016–17)*. Unpublished report. Save Our Seas Foundation, Switzerland. (I) Mortimer, J.A. 2020. *Final Report: Alphonse Group Nesting Turtles*. Unpublished report to GOS-UNDP-GEF Outer Island Project. (J) Mortimer, J. A. 2020. *Final Report: Desroches Atoll Nesting Turtles*. Unpublished report to GOS-UNDP-GEF Outer Island Project. (K) Mortimer, J. A. 2020. *Final Report: Farquhar Atoll Nesting Turtles*. Unpublished report to GOS-UNDP-GEF Outer Island Project. (L) Mortimer, J.A. 2020. *Final Report: Poivre Atoll Nesting Turtles*. Unpublished report to GOS-UNDP-GEF Outer Island Project.

SWOT Contacts: Alphonse Foundation, Bird Island Lodge, Constance Lémuria Resort, D'Arros Research Centre (DRC) / Save Our Seas Foundation (SOSF), Denis Is Private Desroches Foundation, Farquhar Foundation, Fregate Is Private, Global Vision International Seychelles (GVI), Green Island Foundation, Island Conservation Society (ICS), Marine Conservation Society Seychelles (MCSS), Nature Seychelles, North Island, Platte Island Foundation, Poivre Foundation, Seychelles Islands Foundation (SIF), Seychelles Ministry of Agriculture, Climate Change and Environment (MACCE), Seychelles Parks & Gardens Authority (SPGA), Silhouette Foundation, and WiseOceans

DATA RECORD: 102

Data Sources: (A) Nature Protection Trust of Seychelles. 2009. 2008–2009 *Silhouette Conservation Project: Quarterly Report*. Unpublished report. (B) Nature Protection Trust of Seychelles. 2010. 2009–2010 *Silhouette Conservation Project: Quarterly Report*. Unpublished report. (C) Vanherck, L. 2008. Hawksbill nesting on North Island, Seychelles. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contacts:** Justin Gerlach, Linda Vanherck, and Javier Cotin

SINT EUSTATIUS

DATA RECORD: 103

Data Sources: (A) Berkel, J. 2010. *St. Eustatius National Parks Foundation Sea Turtle Conservation Program Annual Report 2009*. Galloway Bay, St. Eustatius. (B) Esteban, N., and J. Berkel. 2009. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. V (2010). (C) Berkel, J. 2013. St. Eustatius National Parks Foundation Sea Turtle Conservation Program. Personal communication. SWOT Database Online 2015. (D) Berkel, J. 2014. St. Eustatius National Parks Foundation Sea Turtle Conservation Program. Personal communication. SWOT Database Online 2015. (E) Spatial Database for the Wider Caribbean. **SWOT Contacts:** Arturo Herrera, Nicole Esteban, and Jessica Berkel

SINT MAARTEN

DATA RECORD: 104

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Nisbeth, B. M., and the Nature Foundation. 2008. Hawksbill nesting in Gibbs Bay, St. Maarten. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (C) Vissenberg, D., and the Nature Foundation. 2008. Hawksbill nesting in Guana Bay, St. Maarten. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contacts:** Dominique Vissenberg, Tadzio Bervoets, and Beverly Mae Nisbeth

SOLOMON ISLANDS

DATA RECORD: 105

Data Source: Siota, C., and P. Ramohia. 2007. *Peak Hawksbill Nesting Activities in the Arnava Community Marine Conservation Area: A Report for The Nature Conservancy*. Solomon Islands Field Office, Honiara. **SWOT Contacts:** Catherine Siota and Peter Ramohia

SRI LANKA

DATA RECORD: 106

Data Sources: (A) Ekanayake, E. M. L., K. B. Ranawana, T. Kapurusinghe, et al. 2002. Marine turtle conservation in Rekawa turtle rookery in southern Sri Lanka. *Ceylon Journal of Science (Biological Science)* 30: 79–88. (B) Jayathilaka, R. A. M., H. A. C. C. Perera, and S. S. K. and Haputhanthri. 2017. Marine turtles of Sri Lanka; status, issues, threats and conservation strategies. *Working Party on Ecosystems and Bycatch (WPEB)* 1: 13–36. (C) Kapurusinghe, T. 2006. Status and conservation of marine turtles in Sri Lanka. In K. Shanker and B. C. Choudhury (eds.), *Marine Turtles of the Indian Subcontinent*, pp. 173–187. Hyderabad, India: Universities Press. (D) Rajakarun, R. S., L. Ekanayake, and P. A. C. N. B. Suraweera. Sri Lanka. 2021. In A. D. Phillott and A. F. Rees (eds.), *Sea Turtles in the Middle East and South Asia Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group.

ST. BARTHÉLÉMY, FRANCE

DATA RECORD: 107

Data Sources: (A) Agence Territoriale de l'Environnement de Saint Barthélemy. *Rapport de Suivi des Pontes de Tortues Imbriquées (Eretmochelys imbricata), 2012–2021 de Saint Barthélemy*. (B) Eckert, K. L., and A. E. Eckert. 2019. *An Atlas of Sea Turtle Nesting Habitat for the Wider Caribbean Region*. Rev. ed. WIDECAST Technical Report No. 19, Godfrey, IL. **SWOT Contact:** Karl Questel, Agence Territoriale de l'Environnement de Saint Barthélemy and Claire Saladin, Agence Territoriale de l'Environnement de Saint Barthélemy

SUDAN

DATA RECORD: 108

Data Source: El Mahdi, A.-R. The marine turtle in the Republic of Sudan: Their biology and conservation. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). **SWOT Contact:** Abdel-Rahman El Mahdi

SURINAME

DATA RECORD: 109

Data Sources: (A) Mitro, S. 2005. Country report of Suriname. In *Proceedings of the Seventh Sea Turtle Symposium for the Guianas (October 25–27, 2004)*. Georgetown, Guyana. (B) De Dijn, B. 2003. Country report of Suriname: Marine turtle season 2002. In I. Nolivos, L. Kelle, B. De Thoisy, and S. Lochoon (eds.), *Proceedings of the Sixth Sea Turtle Symposium for the Guianas*, pp. 8–10. Remire-Montjoly, French Guiana. **SWOT Contacts:** Edo Goverse and Maartje Hilterman

TAIWAN, REPUBLIC OF CHINA

DATA RECORD: 110

Data Sources: (A) Cheng, I.-J. 1995. Sea turtles at Dungsha Tao, South China Sea. *Marine Turtle Newsletter* 70: 13–14. (B) Cheng, I.-J. 1996. Sea turtles at Taipin Tao, South China Sea. *Marine Turtle Newsletter* 75: 6–8. (C) Liang, W.-L., J.-L. Dai, C.-W. Liu, et al. 1990. *The Investigation of Sea Turtle Resources in the South China Sea, and the Development of the Artificial Hatching Techniques for Sea Turtles: Report on the Conservation Situations of South Sea Turtle Resources*. Bureau of Agriculture, Guangdong Province, China. **SWOT Contact:** I. Jiunn Cheng

TANZANIA

DATA RECORD: 111

Data Sources: (A) Joynson Hicks, C., and L. West. 2017. Sea turtle nesting in Tanzania. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XII (2017). (B) Muir, C. 2008. Hawksbill nesting in Tanzania. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). **SWOT Contacts:** Catharine Joynson Hicks, Lindsey West, and Catherine Muir

THAILAND

DATA RECORD: 112

Data Source: Charuchinda, M., and S. Monanunsap. 1998. Monitoring survey on sea turtle nesting in the Inner Gulf of Thailand, 1994–1996. *Thailand Marine Fisheries Research Bulletin* 6: 17–25.

TRINIDAD AND TOBAGO

DATA RECORD: 113

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Fournillier, K., and K. L. Eckert. 1998. *Draft WIDECASST Sea Turtle Recovery Action Plan for Trinidad and Tobago*. United Nations Caribbean Environment Programme, Kingston, Jamaica. (C) Livingstone, S. R. 2006. *Sea Turtle Ecology and Conservation on the North Coast of Trinidad*. PhD dissertation, University of Glasgow, Scotland. **SWOT Contacts:** Dennis Sammy, Scott Eckert, Stephen Poon, Grande Riviere Environmental Trust, Toco Foundation, Pat Turpin, Tanya Clovis, North East Sea Turtles (NEST), Heather Pepe, Thakoorie Boodoo, and Suzanne Livingstone

DATA RECORD: 114

Data Source: Walker, G. 2013. *An Update on Sea Turtle Nesting in the Northeast of Tobago*. Unpublished report. **SWOT Contact:** Grant Walker

TURKS AND CAICOS ISLANDS

DATA RECORD: 115*

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Siota, C., and P. Ramohia. 2007. *Peak Hawksbill Nesting Activities in the Arnavon Community Marine Conservation Area: A Report for The Nature Conservancy*. Solomon Islands Field Office, Honiara. **SWOT Contacts:** Judith Garland-Campbell, Lorna Slade

UNITED ARAB EMIRATES

DATA RECORD: 116

Data Sources: (A) Al Ameri, H. M., H. S. Das, C. J. Rodriguez-Zarate, and M. Antonopoulou. United Arab Emirates. 2021. In A. D. Phillott and A. F. Rees (eds.), *Sea Turtles in the Middle East and South Asia Region: MTSG Annual Regional Report 2021*. IUCN-SSC Marine Turtle Specialist Group. (B) Emirates Marine Environmental Group. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). (C) Emirates Marine Environmental Group. Personal communication. SWOT Database Online 2013. **SWOT Contact:** Laurence Vanneyre

UNITED STATES

DATA RECORD: 117

Data Source: Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute. 2015. *Statewide Atlas of Sea Turtle Nesting Occurrence and Density*. <http://myfwc.com/research/wildlife/sea-turtles/nesting/nesting-atlas/> **SWOT Contacts:** Florida Fish and Wildlife Conservation Commission and Anne Meylan

DATA RECORD: 118

Data Source: Finn, S., W. P. Thompson, B. M. Shamblin, and C. J. Nairn. 2016. Northernmost records of hawksbill sea turtle nests and possible trans-Atlantic colonization event. *Marine Turtle Newsletter* 151: 27–30. **SWOT Contacts:** Matthew Godfrey, Sarah Finn, William Thompson, and Brian Shamblin

DATA RECORD: 119

Data Sources: (A) Parker, D., G. H. Balazs, M. King, W. Seitz, et al. 2015. *Map Guide to Hawaiian Marine Turtle Nesting and Basking*. www.GeorgeHBalazs.com. (B) Parker, D. M., G. H. Balazs, C. S. King, et al. 2009. Short-range movements of hawksbill turtles (*Eretmochelys imbricata*) from nesting to foraging areas within the Hawaiian Islands. *Pacific Science* 63 (3): 371–382. **SWOT Contacts:** George Balazs and Denise Parker

VANUATU

DATA RECORD: 120

Data Sources: (A) Fletcher, M. 2008. Personal communication. SWOT Database Online 2010. (B) Wan Smolbag, G. P. 2008. Personal communication. SWOT Database Online 2009. **SWOT Contacts:** Michelle Fletcher and George Petro

VENEZUELA

DATA RECORD: 121

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Espinoza, R., P. Vernet, L. Moran, et al. 2013. Primer reporte de la actividad de anidación de tortugas marinas en la costa nor-occidental del Golfo de Venezuela. *Boletín del Centro Investigaciones Biológicas* 47 (1): 86–95. (C) Guada, H. 2008. Hawksbill nesting in Venezuela. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008). (D) Guada, H. J., and G. Solé. 2000. *WIDECASST Plan de Acción para la Recuperación de las Tortugas Marinas de Venezuela*. Informe Técnico del PAC No. 39. United Nations Environment Programme, Caribbean Environment Programme, Kingston, Jamaica. (E) Guada, H. J. 2000. *Áreas de Anidación e Impactos Hacia las Tortugas Marinas en la Península de Paría y Lineamientos de Protección*. M. thesis, Universidad Simón Bolívar, Sartenejas. (F) Rodríguez-Baron, J. M.. 2015. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XI (2016). (G) Quijada, A., and C. Balladares. 2004. Conservación de las tortugas marinas en el Golfo de Paría. In R. Babarro, A. Sanz, and B. Mora (eds.), *Tortugas Marinas en Venezuela: Acciones para Su Conservación*, pp. 47–54. Oficina Nacional

de Diversidad Biológica and Fondo Editorial Fundambiente Caracas.

SWOT Contacts: Hedelvy Guada, Clemente Balladares, Juan Manuel Rodríguez-Baron, Kelvin García Sanabria, Héctor Barrios-Garrido, Vincent Vera, and Juan Carlos Figuera

VIETNAM AND SPRATLY ISLANDS

DATA RECORD: 122*

Data Source: Hamann, M., C. The Cuong, N. Duy Hong, et al. 2006. Distribution and abundance of marine turtles in the Socialist Republic of Viet Nam. *Biodiversity and Conservation* 15: 3703–3720.

VIRGIN ISLANDS, BRITISH

DATA RECORD: 123

Data Sources: (A) Spatial Database for the Wider Caribbean. (B) Eckert, K. L., J. A. Overing, and B. B. Lettsome. 1992. *Sea Turtle Recovery Action Plan for the British Virgin Islands*. CEP Technical Report No. 15, Caribbean Environment Programme, Kingston, Jamaica. **SWOT Contacts:** Bertrand Lettsome, Shannon Gore, Mervin Hastings, Joel Dore, and Arlington Pickering

VIRGIN ISLANDS, UNITED STATES

DATA RECORD: 124

Data Sources: (A) Buck Island Sea Turtle Research Program, National Park Service. 2016. Hawksbill nesting at Buck Island Reef National Monument, St. Croix, U.S. Virgin Islands. SWOT Database Online 2017. (B) Spatial Database for the Wider Caribbean. (C) Mackay, A. L. 2005. *Sea Turtle Monitoring Program the East End Beaches of St. Croix, U.S. Virgin Islands, 2005*. West Indies Marine Animal Research and Conservation Service, St. Croix. (D) Virgin Islands National Park (VINP) Sea Turtle Program. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022). **SWOT Contacts:** Clayton Pollock, Steve Garner, Rafe Boulon, U.S. Virgin Islands Division of Fish and Wildlife, Adren Anderson, Willow Melamet, and VINP Sea Turtle Program

Hawksbill Telemetry Data Citations

The following data records refer to satellite telemetry datasets from tags that were deployed on hawksbill turtles worldwide. These records were combined to create the map on p. 27. The data are organized by country of deployment. For information regarding data processing and filtering, see the note on the map on p. 27. These data were generously contributed to SWOT by the people and partners listed subsequently. Records that have a SWOT ID can be viewed in detail in the SWOT online database and mapping application at <http://seamap.env.duke.edu/swot>, which contains additional information about the projects and their methodologies.

To save space, we have used the following abbreviations in the data source fields: (1) “STAT” refers to Coyne, M. S., and B. J. Godley. 2005. Satellite Tracking and Analysis Tool (STAT): An integrated system for archiving, analyzing, and mapping animal tracking data. *Marine Ecology Progress Series* 301: 1–7. (2) “SWOT Online Database” refers to Kot, C. Y., E. Fujioka, A. DiMatteo, B. P. Wallace, B. J. Hutchinson, J. Cleary, P. N. Halpin, and R. B. Mast. 2015. The State of the World's Sea Turtles Online Database. Data provided by the SWOT Team and hosted on OBIS-SEAMAP. Oceanic Society, IUCN Marine Turtle Specialist Group, and Marine Geospatial Ecology Lab, Duke University. <http://seamap.env.duke.edu/swot>. (3) “OBIS-SEAMAP” refers to Halpin, P. N., A. J. Read, E. Fujioka, B. D. Best, B. Donnelly, L. J. Hazen, C. Kot, K. Urian, E. LaBrecque, A. DiMatteo, J. Cleary, C. Good, L. B. Crowder, and K. D. Hyrenbach. 2009. OBIS-SEAMAP: The world data center for marine mammal, sea bird, and sea turtle distributions. *Oceanography* 22 (2): 104–115. When listed, these sources indicate that the dataset was contributed online through STAT, SWOT, or OBIS-SEAMAP.

AUSTRALIA

DATA RECORD 1 | SWOT ID: 8043

Project Title: Post Rehabilitation Success of Marine Turtles
Metadata: 1 juvenile, rehabilitated and released *E. imbricata*
Data Sources: (A) Gilbert, J. 2021. Post rehabilitation success of marine turtles. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/644>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=501). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.

SWOT Contact: James Cook University, Cairns

DATA RECORD 2

Project Title: Hawksbills Tracked in Northern Australia
Metadata: 2 adult female *E. imbricata* and 1 adult *E. imbricata* of undetermined sex
Data Sources: (A) Hoenner, X., S. D. Whiting, M. A. Hindell, and C. R. McMahon. 2012. Enhancing the use of Argos satellite data for home range and long distance migration studies of marine animals. *PLoS One* 7 (7): e40713. (B) Hoenner, X., S. D. Whiting, M. Hamann, and C. J. Limpus. 2015. High-resolution movements of critically

endangered hawksbill turtles help elucidate conservation requirements in northern Australia. *Marine and Freshwater Research* 67 (8): 1263–1278. **SWOT Contact:** Scott Whiting and Xavier Hoenner

BARBADOS

DATA RECORD 3

Project Title: Post-nesting Hawksbills Tracked from Barbados
Metadata: 7 postnesting female *E. imbricata*
Data Source: Horrocks, J. A., and D. C. B. Browne. Unpublished hawksbill turtle tracks

from Barbados (2004–2018). Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).

SWOT Contact: Julia Horrocks

BELIZE

DATA RECORD 4 | SWOT ID: 18281

Project Title: Hope: Hawksbill Hope and Marymount University
Metadata: 28 adult *E. imbricata*
Data Sources: (A) Rimkus, T. 2022. Hope: Hawksbill Hope and Marymount University. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/769>) on

March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=655). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Todd Rimkus

BOINAIRE

DATA RECORD 5 | SWOT ID: 4808

Project Title: Sea Turtle Tracking in Bonaire, 2003–2011
Metadata: Postnesting female *E. imbricata*
Data Sources: (A) Nava, M. 2013. Sea turtle tracking in Bonaire, 2003–2011. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/753>) on March 15, 2022. (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Mabel Nava

DATA RECORD 6 | SWOT ID: 7784

Project Title: Satellite Tracking of Three Species of Sea Turtles on Bonaire
Metadata: 11 adult *E. imbricata*
Data Sources: (A) Nava, M. 2021. Satellite tracking of three species of sea turtles on Bonaire. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/879>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=798). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Sea Turtle Conservation Bonaire

BRAZIL

DATA RECORD 7 | SWOT ID: 16079

Project Title: Study of the Biology of Sea Turtles in Brazil through Satellite Telemetry
Metadata: 15 adult *E. imbricata*
Data Sources: (A) Projeto TAMAR. 2021. Study of the Biology of Sea Turtles in Brazil through Satellite Telemetry. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/984>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=63). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Projeto TAMAR

CHAGOS

DATA RECORD 8

Project Title: Travel Routes to Remote Ocean Targets Reveal the Map Sense Resolution for a Marine Migrant
Metadata: 22 postnesting female *E. imbricata*
Data Source: Hays, G. C., N. Atchison-Balmond, G. Cerritelli, J.-O. Laloë, P. Luschi, J. A. Mortimer, A. Rattray, and N. Esteban. 2022. Travel routes to remote ocean targets reveal the map sense resolution for a marine migrant. *Journal of the Royal Society Interface* 19 (190): 2021.0859. <https://doi.org/10.1098/rsif.2021.0859>
SWOT Contacts: Graeme Hays, Nadine Atchison-Balmond, Giulia Cerritelli, Jacques-Olivier Laloë, Paolo Luschi, Jeanne A. Mortimer, Alex Rattray, and Nicole Esteban

DATA RECORD 9

Project Title: Hawksbill/Green Turtles, Chagos Archipelago, Western Indian Ocean
Metadata: 21 juvenile *E. imbricata*
Data Sources: (A) Hays, G. C., J. A. Mortimer, A. Rattray, T. Shimada, and N. Esteban. 2021. High accuracy tracking reveals how small conservation areas can protect marine megafauna. *Ecological Applications* 31 (7): e02418. <https://doi.org/10.1002/eap.2418>. (B) Hays, G. C., J. A. Mortimer, A. Rattray, T. Shimada, and N. Esteban. 2021. Data from High accuracy tracking reveals how small conservation areas can protect marine megafauna. Movebank Data Repository. <https://doi.org/10.5441/0011.r72ph75f>.
SWOT Contacts: Graeme Hays, Nicole Esteban, Jeanne Mortimer, and Alex Rattray

CHINA

DATA RECORD 10

Project Title: Hawksbills Tracked in China
Metadata: 1 *E. imbricata*
Data Sources: Parker, D. 2013. Hawksbills tracked in China. Personal communication.

In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).

SWOT Contact: Denise Parker

COLOMBIA

DATA RECORD 11

Project Title: Hawksbill Tracked From Gorgona, Colombia
Metadata: 1 female and 1 male *E. imbricata*
Data Source: Amorcho, D. 2013. Hawksbill tracked from Gorgona, Colombia. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contact: Diego Amorcho

DATA RECORD 12 | SWOT ID: 1724

Project Title: Caribbean Colombian Sea Turtle Satellite Tracking
Metadata: 1 adult, 1 subadult, and 3 juvenile *E. imbricata*
Data Sources: (A) Sea Turtles and Marine Mammal Conservation Program (ProCTMM). 2021. Caribbean Colombian sea turtle satellite tracking. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1292>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=471). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: ProCTMM

DATA RECORD 13 | SWOT ID: 4351

Project Title: World Wide Fund for Nature (WWF) Sea Turtle Satellite Tracking in Latin America and the Caribbean
Metadata: *E. imbricata*
Data Sources: (A) Amorcho, D. 2021. WWF sea turtle satellite tracking in Latin America and the Caribbean. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1306>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=791). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Research Center for Environmental Management and Development (CIMAD)

COSTA RICA

DATA RECORD 14

Project Title: Hawksbills Tracked in Costa Rica
Metadata: 2 *E. imbricata*
Data Source: Tortuguero National Park and World Wide Fund for Nature. 2022. Hawksbills tracked in Tortuguero National Park, Costa Rica. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contact: Tortuguero National Park, WWF, and Denise Parker

DATA RECORD 15 | SWOT ID: 91

Project Title: Cocos Island Monitoring and Research (C-MAR) Project
Metadata: 1 juvenile *E. imbricata*
Data Sources: (A) Arauz, R. 2021. C-MAR project. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1086>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=953). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Pretoma

CUBA

DATA RECORD 16

Project Title: Hawksbill Turtles from the Cuban Shelf
Metadata: 13 *E. imbricata*
Data Source: Moncada, F. G., L. A. Hawkes, M. R. Fish, B. J. Godley, et al. 2012. Patterns of dispersal of hawksbill turtles from the Cuban shelf inform scale of conservation and management. *Biological Conservation* 148 (1): 191–199.
SWOT Contact: Félix Guillermo Moncada Gavilán

DOMINICA

DATA RECORD 17 | SWOT ID: 5708

Project Title: Sea Turtles of Dominica
Metadata: 2 juvenile *E. imbricata*

Data Sources: (A) Levenson, J. 2021. Sea Turtles of Dominica. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/890>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=773). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Jacob Levenson

DOMINICAN REPUBLIC

DATA RECORD 18 | SWOT ID: 6684

Project Title: Dominican Republic 2008: Hawksbill Turtles
Metadata: 4 adult *E. imbricata*
Data Sources: (A) Hawkes, L. A., J. Tomás, O. Revuelta, Y. M. León, J. M. Blumenthal, A. C. Broderick, M. Fish, J. A. Raga, M. J. Witt, and B. J. Godley. 2012. Migratory patterns in hawksbill turtles described by satellite tracking. *Marine Ecology Progress Series* 461: 223–232. (B) Revuelta, O., L. Hawkes, Y. M. León, B. J. Godley, J. A. Raga, and J. Tomás. 2015. Evaluating the importance of Marine Protected Areas for the conservation of hawksbill turtles (*E. imbricata*) nesting in the Dominican Republic. *Endangered Species Research* 27: 169–180. (C) Tomás, J. 2021. Dominican Republic 2008: hawksbill turtles. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1905>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=301). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Marine Turtle Research Group

ÎLES ÉPARSES

DATA RECORD 19

Project Title: Movements of Postnesting Hawksbill Turtle Satellite-Tracked from Juan de Nova, Éparses Islands, under the Southwest Indian Ocean Fisheries Project (SWIOFP) and Run Sea Science Project
Metadata: 1 adult female *E. imbricata*
Data Source: Ballorain, K., A. Barat, C. Jean, M. Nivière, and C. Gobeaut. 2022. *TlMOI: Tortues Imbriquées de l'Océan Indien—Comprendre la Connectivité des Populations; Résultats préliminaires, Mai 2022*. Technical report of the INTERREG V Indian Ocean project. Centre d'Étude et de Découverte des Tortues Marines (CEDTM), Kelonia.
SWOT Contacts: Manon Nivière, Jeanne Mortimer, Claire Jean, Katia Ballorain, and CEDTM Institut de Recherche pour le Développement

FIJI

DATA RECORD 20

Project Title: Hawksbills Tracked in Fiji
Metadata: 2 *E. imbricata*
Data Source: *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: World Wide Fund for Nature, National Trust of Fiji, Lui Bell, Secretariat of the Pacific Regional Environment Programme, University of the South Pacific, Aisake Batibasaga, DFMFF, Mamanuca Environment Society, National Oceanic and Atmospheric Administration, Denise Parker, and George H. Balazs

FRENCH POLYNESIA

DATA RECORD 21

Project Title: Hawksbills Tracked in French Polynesia
Metadata: 1 *E. imbricata*
Data Sources: Gaspar, C., D. Parker, and G. H. Balazs. 2012. Hawksbills tracked in French Polynesia. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: Te Mana o Te Moana, Cecil Gaspar, Department of Environment, National Oceanic and Atmospheric Administration, Denise Parker, and George H. Balazs

GUAM

DATA RECORD 22

Project Title: Hawksbills in Guam
Data Sources: Gaos, A., M. Martin, and J. Seminoff. Hawksbills in Guam. Personal

communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: Alexander Gaos, Summer Martin, Jeffrey Seminoff, and National Oceanic and Atmospheric Administration Pacific Islands Fisheries Science Center and Southwest Fisheries Science Center

JAMAICA AND ANTIGUA

DATA RECORD 23

Project Title: Hawksbills Tracked from Antigua and Jamaica
Metadata: 8 *E. imbricata*
Data Source: Maurer, A. S., C. Dawson, R. Bjorkland, A. Donaldson, S. P. Stapleton, J. I. Richardson, D. M. Parker, G. H. Balazs, and B. A. Schroeder. 2022. Satellite telemetry elucidates migratory pathways and new foraging areas for hawksbill sea turtles, *E. imbricata*, in the Caribbean. *Caribbean Journal of Science* (accepted for publication).
SWOT Contact: Andrew Maurer

KUWAIT

DATA RECORD 24

Project Title: Tracking Hawksbills in Kuwait
Metadata: 4 adult female *E. imbricata*
Data Source: Rees, A. F., N. Papathanasopoulou, and B. J. Godley. 2019. Tracking hawksbills in Kuwait: Contributions to regional behavioral insights. *Chelonian Conservation and Biology* 18 (1): 86–90.
SWOT Contact: ALan Rees

LESSER ANTILLES

DATA RECORD 25

Project Title: Green and Hawksbill Turtles in the Lesser Antilles Demonstrate Behavioural Plasticity in Inter-nesting Behaviour and Post-nesting Migration
Metadata: 2 postnesting female *E. imbricata*
Data Source: Esteban, N., R. van Dam, E. Harrison, A. Herrera, and J. Berkel. 2015. Green and hawksbill turtles in the Lesser Antilles demonstrate behavioural plasticity in inter-nesting behaviour and post-nesting migration. *Marine Biology* 162 (6): 1153–1163. <https://doi.org/10.1007/s00227-015-2656-2>.
SWOT Contacts: Robert van Dam, Emma Harrison, and Arturo Herrero

MEXICO

DATA RECORD 27 | SWOT ID: 794

Project Title: Migratory Patterns of Yucatán Peninsula Hawksbills
Metadata: 6 postnesting adult female *E. imbricata*
Data Sources: (A) Cuevas, E. 2021. Migratory patterns of Yucatán Peninsula hawksbills. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/364>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=154). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Eduardo Cuevas

DATA RECORD 28 | SWOT ID: 707

Project Title: Movimiento Migratorio de la Tortuga Carey, Islas del Parque Nacional Sistem Arrecifal Veracruzano (PNSAV)
Metadata: 3 postnesting female *E. imbricata*
Data Sources: (A) Miron, R. 2021. Movimiento migratorio de la tortuga carey. Islas del PNSAV, Veracruz, Mexico. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1197>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=1023). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Acuario de Veracruz A.C.

DATA RECORD 29 | SWOT ID: 38505

Project Title: Tortugas Carey en el Pacífico Mexicano.
Metadata: 14 adult, 2 juvenile, and 2 subadult *E. imbricata*
Data Sources: (A) Hart, C. 2022. Tortugas carey en el Pacífico mexicano. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1002>) on March 15, 2022, and originated from STAT (<http://www.seaturtle.org/tracking/index>

.shtml?project_id=916). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Red Tortuguera A.C.

PALAU

DATA RECORD 30

Project Title: Hawksbills Tracked in Palau
Metadata: 1 *E. imbricata*
Data Source: Secretariat of the Pacific Regional Environment Programme (SPREP) and World Wide Fund for Nature (WWF). 2022. Hawksbills tracked in Palau. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: SPREP, WWF, and Denise Parker

PANAMA

DATA RECORD 31

Project Title: Hawksbill Tracked from Panama
Metadata: 1 female *E. imbricata*
Data Source: Amorochio, D. 2013. Hawksbill tracked from Panama. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contact: Diego Amorochio

PAPUA NEW GUINEA

DATA RECORD 32

Project Title: Satellite Tracking of Hard-Shell Sea Turtles of Papua New Guinea
Metadata: 3 *E. imbricata*
Data Source: Gearhart, G. 2018. Data from Satellite tracking of hard-shelled sea turtles of Papua New Guinea. Movebank Data Repository.
SWOT Contact: Geoffrey Gearhart

PHILIPPINES

DATA RECORD 33

Project Title: Hawksbills Tracked in the Philippines
Metadata: 2 *E. imbricata*
Data Sources: Philippine Turtle Island Park and D. Parker. 2002. Hawksbills tracked in the Philippines. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: Philippine Turtle Island Park and Denise Parker

PUERTO RICO

DATA RECORD 34 | SWOT ID: 2835

Project Title: Understanding the Effects of Climate Change on Caribbean Hawksbill Turtles: Satellite Tracking Hawksbill Migrations
Metadata: 6 adult *E. imbricata*
Data Sources: (A) Drews, L. 2021. Understanding the effects of climate change on Caribbean hawksbill turtles: Satellite tracking hawksbill migrations. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/469>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=291). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: WWF

QATAR

DATA RECORD 35 | SWOT ID: 10502

Project Title: Reproductive Biology of Marine Turtles Under Extreme Climatic Conditions
Metadata: 1 adult and 4 juvenile *E. imbricata*
Data Sources: (A) Pilcher, N. 2021. Reproductive Biology of Marine Turtles under Extreme Climatic Conditions. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1134>) on March 15, 2022, and originated from STAT (<http://www.seaturtle.org/tracking/index>

.shtml?project_id=978). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Marine Research Foundation

SABAH

DATA RECORD 36

Project Title: Hawksbills Tracked in Sabah
Metadata: 3 *E. imbricata*
Data Sources: Pilcher, N. J., J. Bali, J. Buis, et al. 2019. A review of sea turtle satellite tracking in Malaysia. *Indian Ocean Turtle Newsletter* 29: 11–22.
SWOT Contact: Denise Parker

SAMOA

DATA RECORD 37

Project Title: Hawksbills Tracked in Samoa
Metadata: 1 *E. imbricata*
Data Sources: Bell, L., D. Parker, and G. H. Balazs. 2010. Hawksbills tracked in Samoa. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contact: Lui Bell, Secretariat of the Pacific Regional Environment Programme, Ministry of Natural Resources, National Oceanic and Atmospheric Administration, Denise Parker, and George H. Balazs

SEYCHELLES

DATA RECORD 38

Project Title: Movements of Post-nesting Hawksbill Turtle Satellite-Tracked from Mahe, Seychelles, under the Marine Conservation Society Seychelles (MCSS) Mahe Seychelles Hawksbill Project
Metadata: 2 adult female *E. imbricata*
Data Sources: (A) Seychelles turtles with MCSS (<http://seychelles-turtles.blogspot.com/>). (B) *TimOI: Tortues Imbriquées de l'Océan Indien—Comprendre la Connectivité des Populations; Résultats préliminaires, Mai 2022*. Technical report of the INTERREG V Indian Ocean project. Centre d'Étude et de Découverte des Tortues Marines (CEDTM), Kelonia
SWOT Contacts: Manon Nivière, Jeanne Mortimer, Claire Jean, Katia Ballorain, MCSS, and CEDTM

DATA RECORD 39

Project Title: Post-nesting Migrations of Hawksbill Turtles in the Granitic Seychelles
Metadata: 5 postnesting female *E. imbricata*
Data Source: Mortimer, J. A., and G. H. Balazs. 2000. Post-nesting migrations of hawksbill turtles in the granitic Seychelles and implications for conservation. In H. Kalb and T. Wibbels (eds.), *Proceedings of the 19th Annual Symposium on Sea Turtle Biology and Conservation*, pp. 22–26. NOAA Technical Memorandum NMFS-SEFSC-443, 291, National Oceanic and Atmospheric Administration, Washington, D.C.
SWOT Contact: Jeanne Mortimer

SINGAPORE

DATA RECORD 40

Project Title: Hawksbills Tracked in Singapore
Metadata: 8 *E. imbricata*
Data Sources: Pending
SWOT Contact: Denise Parker

UNITED ARAB EMIRATES

DATA RECORD 41 | SWOT ID: 10568

Project Title: Gulf Turtle Tracking Project 2010
Metadata: 20 adult *E. imbricata*
Data Sources: (A) Antonopoulou, M. 2021. Gulf Turtle Tracking Project 2010. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1255>) on March

15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=658). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Emirates Wildlife Society—WWF

DATA RECORD 42 | SWOT ID: 23710

Project Title: Gulf Turtle Tracking Project 2011
Metadata: 24 adult *E. imbricata*
Data Sources: (A) Antonopoulou, M. 2021. Gulf Turtle Tracking Project 2011. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1257>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=737). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Emirates Wildlife Society—WWF

DATA RECORD 43 | SWOT ID: 35709

Project Title: Marine Turtle Conservation Project, 2012–2013
Metadata: 36 adult *E. imbricata*
Data Sources: (A) Antonopoulou, M. 2021. Marine Turtle Conservation Project, 2012–2013. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1282>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=494). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: Emirates Wildlife Society—WWF

U.S.A.

DATA RECORD 44

Project Title: Home Range and Movement Patterns of Subadult Hawksbill Sea Turtles in Southeast Florida
Metadata: 6 subadult *E. imbricata*
Data Source: Wood, L. D., B. Brunnick, and S. L. Milton. 2017. Home range and movement patterns of subadult hawksbill sea turtles in Southeast Florida. *Journal of Herpetology* 51 (1): 58–67. <https://doi.org/10.1670/15-133>.
SWOT Contact: Larry Wood

DATA RECORD 45

Project Title: Hawksbills Tracked in Hawaii
Metadata: 11 *E. imbricata*
Data Sources: (A) Parker, D. M., G. H. Balazs, C. S. King, L. Katahira, and W. Gilmartin. 2009. Short-range movements of hawksbill turtles (*E. imbricata*) from nesting to foraging areas within the Hawaiian Islands. *Pacific Science* 63 (3): 371–382. <https://doi.org/10.2984/049.063.0306>. (B) Parker, D. M., C. King, M. Rice, and G. Balazs. 2014. First use of a GPS satellite tag to track a post-nesting hawksbill (*E. imbricata*) in the Hawaiian Islands with an indication of possible mortality. *Marine Turtle Newsletter* 142: 10–13.
SWOT Contact: Denise Parker

DATA RECORD 46

Project Title: Hawksbills in Hawaii
Data Source: Gaos, A., M. Martin, and J. Seminoff. Hawksbills in Hawaii. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contact: Alexander Gaos, Summer Martin, Jeffrey Seminoff, and National Oceanic and Atmospheric Administration Pacific Islands Fisheries Science Center and Southwest Fisheries Science Center

VANUATU

DATA RECORD 47

Project Title: Hawksbills Tracked in Vanuatu
Metadata: 1 *E. imbricata*
Data Sources: Parker, D., and G. H. Balazs.

2008. Hawksbills tracked in Vanuatu. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: Secretariat of the Pacific Regional Environment Programme, World Wide Fund for Nature, Wan Smolbog Theatre, National Oceanic and Atmospheric Administration, Denise Parker, and George H. Balazs

MULTINATIONAL

DATA RECORD 48

Project Title: Movements of Post-nesting Hawksbill Turtle Satellite-Tracked from the South Western Indian Ocean under INTERREG V Indian Ocean TImOI Project and STORM-IO Project
Metadata: 10 adult female *E. imbricata* from Seychelles, 5 from Madagascar, and 1 from Comoros
Data Sources: Ballorain, K., A. Barat, C. Jean, M. Nivière, and C. Gobeaut. 2022. *TimOI: Tortues Imbriquées de l'Océan Indien—Comprendre la Connectivité des Populations; Résultats préliminaires, Mai 2022*. Technical report of the INTERREG V Indian Ocean project. Centre d'Étude et de Découverte des Tortues Marines (CEDTM), Kelonia.
SWOT Contacts: Manon Nivière, Jeanne Mortimer, Claire Jean, Katia Ballorain, CEDTM, Marine Conservation Society Seychelles, Island Biodiversity and Conservation Center at Seychelles University, Seychelles Parks and Gardens Authority, Wildlife Conservation Society, Institut Halieutique et des Sciences Marines de l'Université de Toliara, Madagascar National Parks, Time+Tide Foundation, Laboratoire de l'Atmosphère et des Cyclones de l'Université de La Réunion, and Parc National de Mohéli

DATA RECORD 49 | SWOT ID: 15878

Project Title: Iniciativa Carey del Pacífico Oriental (ICAPO) Eastern Pacific Hawksbill Initiative
Metadata: 30 adult, 7 subadult, 6 juvenile *E. imbricata*
Data Sources: (A) Seminoff, J. 2021. ICAPO Eastern Pacific Hawksbill Initiative. Data downloaded from OBIS-SEAMAP (<http://seamap.env.duke.edu/dataset/1336>) on March 15, 2022, and originated from STAT (http://www.seaturtle.org/tracking/index.shtml?project_id=295). (B) STAT. (C) SWOT Online Database. (D) OBIS-SEAMAP.
SWOT Contact: U.S. National Oceanic and Atmospheric Administration Southwest Fisheries Science Center

DATA RECORD 50

Project Title: Movements and Distribution of Hawksbill Turtles in the Eastern Indian Ocean
Metadata: 42 postnesting female *E. imbricata* tagged in Australia and Timor-Leste
Data Source: Fossette, S., L. C. Ferreira, S. D. Whiting, J. King, et al. Movements and distribution of hawksbill turtles in the eastern Indian Ocean. *Global Ecology and Conservation* 29: e01713.
SWOT Contacts: Sabrina Fossette, Tony Tucker, Scott Whiting, Michele Thums, Luciana Ferreira, and Kellie Pendoley

DATA RECORD 51

Project Title: Hawksbills Tracked in the East Pacific
Metadata:
Data Source: Gaos, A., M. Martin, and J. Seminoff. Hawksbills Tracked in the East Pacific. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. XVII (2022).
SWOT Contacts: Sabrina Fossette, Tony Tucker, Scott Whiting, Michele Thums, Luciana Ferreira, and Kellie Pendoley