

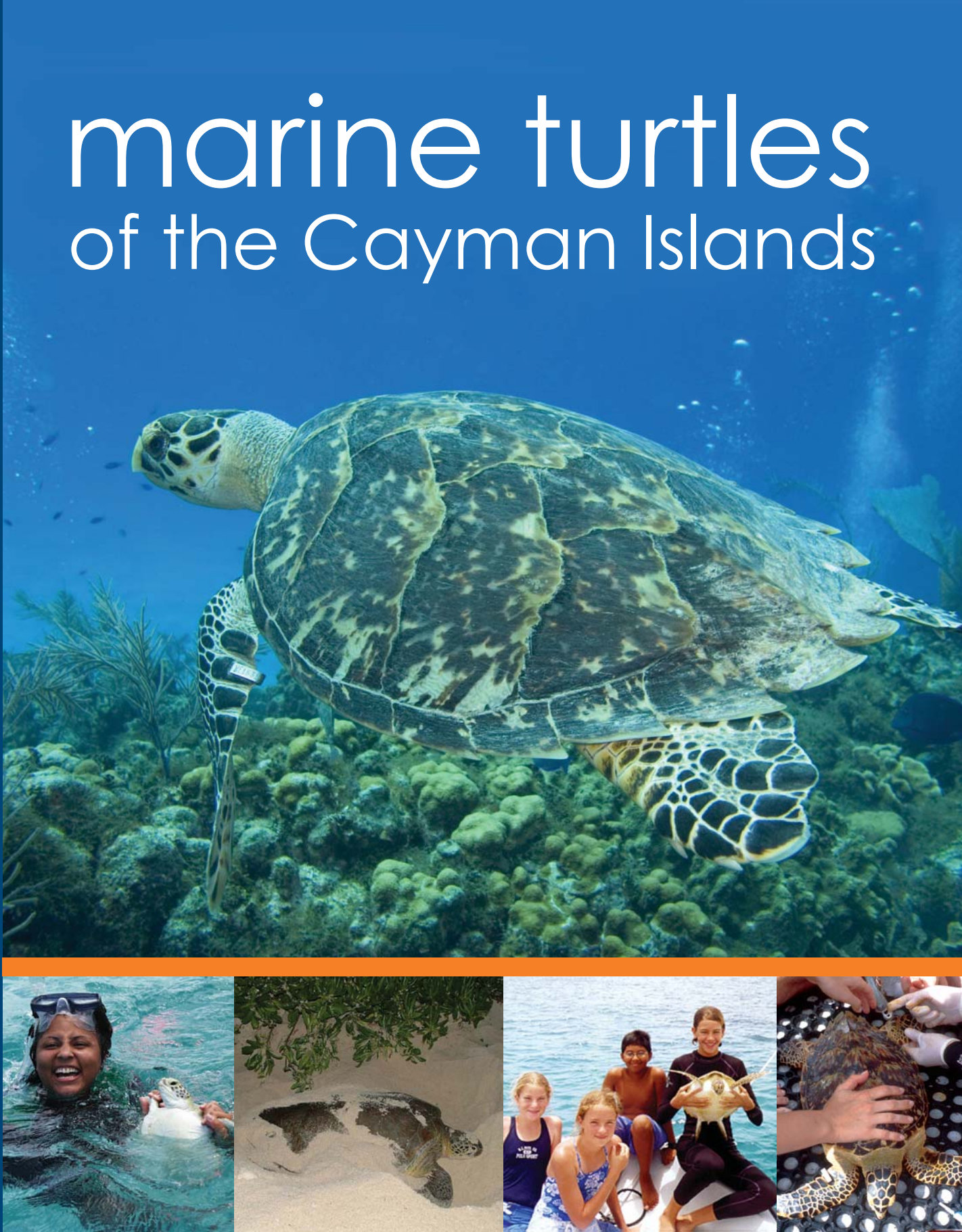
Marine turtle management and legislation

Sea turtles are protected under the Cayman Islands Marine Turtle Conservation law. This makes it illegal for unlicensed persons to harm, disturb, or take sea turtles or their eggs. The Cayman Islands Department of Environment is committed to research leading to an increased understanding of sea turtle management needs, and its monitoring programmes rely heavily on the support of the community. Local schools, civic organisations and businesses sponsor satellite transmitters to track turtles on international migrations, dive companies and recreational divers record sea turtle sightings, and volunteers from the public are trained to assist with nesting beach monitoring. For information on becoming involved, or to share ideas and concerns, contact the Department of Environment.

There are various Multi-lateral Environmental Agreements (MEAs) which provide important frameworks to help ensure the survival of endangered species like turtles and the marine environment on which they depend. The Foreign and Commonwealth Office is responsible for the external affairs of the UK Overseas Territories and works with their governments to decide which MEAs they would like to commit to. The UK Overseas Territory participation in these agreements is summarised here. You can download a complete guide to the UK Overseas Territories and MEAs www.seaturtle.org/mtrg/projects/tukot/MEA_Guide.pdf

KEY											
	ANGUILLA	ASCENSION	BERMUDA	BRITISH INDIAN OCEAN TERRITORY	BRITISH VIRGIN ISLANDS	CAYMAN ISLANDS	GIBRALTAR	MONTserrat	PITCAIRN ISLANDS	ST HELENA	TURKS AND CAICOS ISLANDS
 Signed up											
 Not Signed up											
N/A Not Applicable (This agreement does not apply to this Overseas Territory)											
AARHUS CONVENTION ON ACCESS TO INFORMATION, PUBLIC PARTICIPATION IN DECISION MAKING AND ACCESS TO JUSTICE IN ENVIRONMENTAL MATTERS www.unece.org/env/pp											
CONVENTION ON BIODIVERSITY www.biodiv.org											
WORLD HERITAGE CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE whc.unesco.org/pg.cfm											
CONVENTION ON MIGRATORY SPECIES OF WILD ANIMALS www.cms.int/											
CONVENTION ON TRADE IN ENDANGERED SPECIES www.cites.org www.ukcites.gov.uk											
THE CARTAGENA CONVENTION FOR THE PROTECTION AND DEVELOPMENT OF THE MARINE ENVIRONMENT OF THE WIDER CARIBBEAN REGION (SPAW PROTOCOL) http://www.cep.unep.org/law/cartnut.php		N/A	N/A	N/A			N/A		N/A	N/A	
THE RAMSAR CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT www.ramsar.org											
THE INTER AMERICAN CONVENTION FOR THE PROTECTION AND CONSERVATION OF SEA TURTLES www.seaturtle.org/iac		N/A	N/A	N/A			N/A		N/A	N/A	
THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (KYOTO PROTOCOL) www.unfccc.int											

marine turtles of the Cayman Islands



Other sources of information:

About the TUKOT project: www.seaturtle.org/mtrg/projects/tukot
About marine turtles in the Caribbean UK Overseas Territories: www.seaturtle.org/mtrg/projects/tcot/
About marine turtles and their conservation: www.mcsuk.org and www.seaturtle.org/MTN

Cayman Islands Department of Environment, Box 486 GT, George Town, Cayman Islands
Tel: (345) 949-8469 E-mail: DoE@gov.ky
Emergency: 911 to be referred to Marine Enforcement

Front Cover Images:
Hawksbill turtle, Michele Foss • In-water turtle capture for research, Jennifer Gray • Nesting green turtle, Mark Orr • Children with turtle, CIDoE • Tagging a hawksbill turtle, Peter Richardson/MCS





Juvenile hawksbill turtle



Green turtle hatchling



A satellite tagged loggerhead turtle returning to the sea



Young green turtle on seagrass



Marine Turtles of the Cayman Islands

The people of the Cayman Islands have had a long relationship with marine turtles. Since the time of Christopher Columbus, turtles have served as a food source, a cultural symbol and a tourist attraction and have added to the diversity of these unique islands.

Marine turtle nesting in Cayman

Before the Cayman Islands were settled by humans, millions of turtles migrated to the islands to nest. When Christopher Columbus discovered the Cayman Islands in 1503, he named them "Las Tortugas" in honour of the abundant turtles and his expedition recounted that the islands were "...full of tortoises, as was all the sea about, insomuch as that they looked like little rocks...". Turtle fishing ('turtling') came to form the basis of the economy and culture of the Cayman Islands, providing a traditional food source and means of livelihood. However, by the beginning of the 19th century, commercial exploitation had driven the enormous nesting populations in the Cayman Islands to the edge of extinction. Today, green and loggerhead turtles still nest on the beaches of Grand Cayman, Little Cayman, and Cayman Brac, but in critically low numbers and urgent conservation action is needed to ensure the survival of the nesting populations. The Cayman Islands Department of Environment monitors turtle nesting, so please pass on any information about nests, nesting females, or hatchling turtles. (Contact details on back of leaflet)

Marine turtles in Caymanian waters

Around the Cayman Islands, you are very likely to see young green and hawksbill turtles popping their heads above water to breathe. These juvenile turtles are quite abundant around the island, but are unrelated to the nesting turtles. They come to the Cayman Islands to feed on the reefs and seagrass beds. Once they reach a certain size they will leave Caymanian waters and travel to distant foraging sites before returning to the beaches where they hatched to breed and nest.

Images: hawksbill turtle and juvenile green on seagrass, Peter Richardson/MCS • Green turtle hatchling, Pedrin Lopez • Loggerhead turtle with satellite tag, Janice Blumenthal/CIDoE

Threats to marine turtles

Over-exploitation

For centuries marine turtle eggs and meat were an important source of protein for fishing communities. In addition, the shell of marine turtles, in particular that of the hawksbill turtle (also known as tortoiseshell), was made into jewellery and sold to tourists. Many marine turtle populations around the world have been decimated as a result of decades of over-harvest.

Incidental capture

Marine turtles are often accidentally caught in fisheries targeting other species. Trawl nets and gill nets entangle turtles and many drown before they can be released. Turtles are attracted to the baited long-line hooks set on the high seas for tuna and swordfish and end up hooked or entangled in the lines themselves. It is estimated that more than 250,000 turtles are caught in long-line fisheries operating around the globe each year. Turtles are exposed to all the pressures of large scale, industrialised fisheries when they leave Caymanian waters.

Habitat loss

Loss of habitat, often associated with development, is a major problem for both nesting and foraging turtles. Inappropriate beachfront lighting is also a major problem in Grand Cayman. When the young turtles emerge from the nest at night, they are drawn toward the lights instead of the water. A single light can cause hundreds of misdirected hatchlings to be killed by cars on nearby roads and parking lots, dehydrate in the morning sun, and increase their chance of being killed by predators. Foraging grounds, especially coral reefs and seagrass beds, are degraded by declining water quality, anchor damage, and destructive fishing practices.

Climate change

The Cayman Islands are no strangers to turbulent weather and Caymanians have survived severe hurricanes, like Ivan in 2004, which devastated much of Grand Cayman. Global climate change is set to create huge environmental challenges for people, but is also considered a massive potential threat to turtles. Sea level rise, increased temperatures and an increase in severe storms may seriously impact nesting and foraging sites in the Cayman Islands. Some nesting beaches must be left undeveloped so that they can naturally migrate inland as the sea level rises.

Predation

At all stages of their life cycle marine turtles are predated upon by other animals including crabs, birds, sharks and other large fish, and loose or feral animals (such as cats and dogs). If large numbers of nests are destroyed, there is no recruitment to the population and this can have devastating effects on marine turtle numbers.

Images: Enforcement officer disentangling a turtle from a fishing net, Mark Orr • Cruise ship off the Cayman Islands, Sue Ranger/MCS • hurricane damage on the Cayman Islands, Matt Cottam • Dog digging up turtle eggs, Marcus Tordir



Enforcement officer disentangling a turtle from a fishing net



The turtle's tale

A marine turtle's life is an epic journey. Throughout their long lives they roam the world's oceans, facing many threats at every stage. This is the turtle's tale.



Green turtles • Doug Perrine/Seapics.com

The mating game

Until they become adults at about 25 years old, male and female turtles look very similar. When males reach maturity they develop a long tail, used to deposit sperm during mating. Courtship and mating take place in the water near the nesting beach and can last for several hours.



Nesting green turtle • Peter Richardson

The big night

Female turtles come ashore at night to lay their eggs on the same beach on which they were born. They are vulnerable on land and are scared by lights and movement on the beach. If undisturbed, the female carefully digs a nest up to 1 metre deep in the sand at the back of the beach. She lays about 100 soft, white eggs. Females nest several times in a season, laying hundreds of eggs.



Green turtle hatchlings • Peter Richardson/MCS

Happy birthday hatchlings

About 6-10 weeks later the eggs begin to hatch. Digging out of the nest is a team effort and the hatchlings emerge from the nest as a group in the cool of the night. They make a dash for the sea, finding their way by heading for the lightest and lowest natural horizon, the sea.



Juvenile hawksbill turtle • Doug Perrine

The lost years

There are many predators in coastal waters including sharks and other large fish. Once in the water, hatchlings instinctively paddle against the waves, swimming non-stop, straight out to the safer open ocean for about 24 hours. This is known as the "juvenile frenzy". It's unclear how hatchlings survive in their first "lost years", but hatchlings of some species have been found in mats of seaweed floating far out in open ocean currents.



Leatherback turtle • Mike Daines

World travellers

Upon reaching adulthood, males and females migrate thousands of kilometres between their adult feeding and breeding grounds. Covering these vast distances takes a lot out of the turtles and so they don't usually undertake their migration every season. Leatherback turtles however are the ultimate ocean wanderers and continually roam the high seas.



Hawksbill turtle • Peter Richardson/MCS

Back in the shallows

In all species other than the leatherback, juveniles migrate back to coastal waters after several years when they are about the size of a dinner plate. They then adopt specific feeding grounds such as coral reefs and seagrass beds. In these nursery areas, young turtles from distant nesting sites live together. They tend to spend long periods at a single site, but will typically use several foraging sites before they reach adulthood.

Marine turtles in the UK and the UK Overseas Territories

Although small in land area, the UK Overseas Territories host extremely high levels of biodiversity, in total far more than Great Britain and Northern Ireland. Many islands are tropical or subtropical and host important habitats for marine turtle nesting and foraging.

The juvenile turtles foraging in the waters around the Overseas Territories are usually unrelated to the nesting adults. The map below shows which species are found in each of the Territories where turtles occur and whether they are nesting adults or foraging juveniles.

1 TURKS AND CAICOS ISLANDS



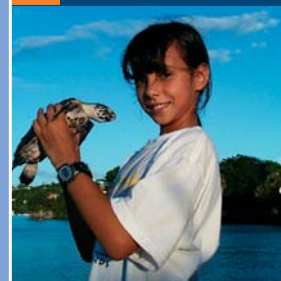
There are small nesting populations of green, hawksbill and possibly loggerhead turtles. The islands are a significant foraging site for juvenile green and hawksbill turtles.

2 BRITISH VIRGIN ISLANDS



There are small nesting populations of leatherback, hawksbill and green turtles. The islands are a significant foraging site for juvenile green and hawksbill turtles.

3 BERMUDA



Bermuda's green turtle nesting population is now extinct and only very rare loggerhead nests are laid. Bermuda remains a significant foraging site for green and hawksbill turtles.

4 UNITED KINGDOM

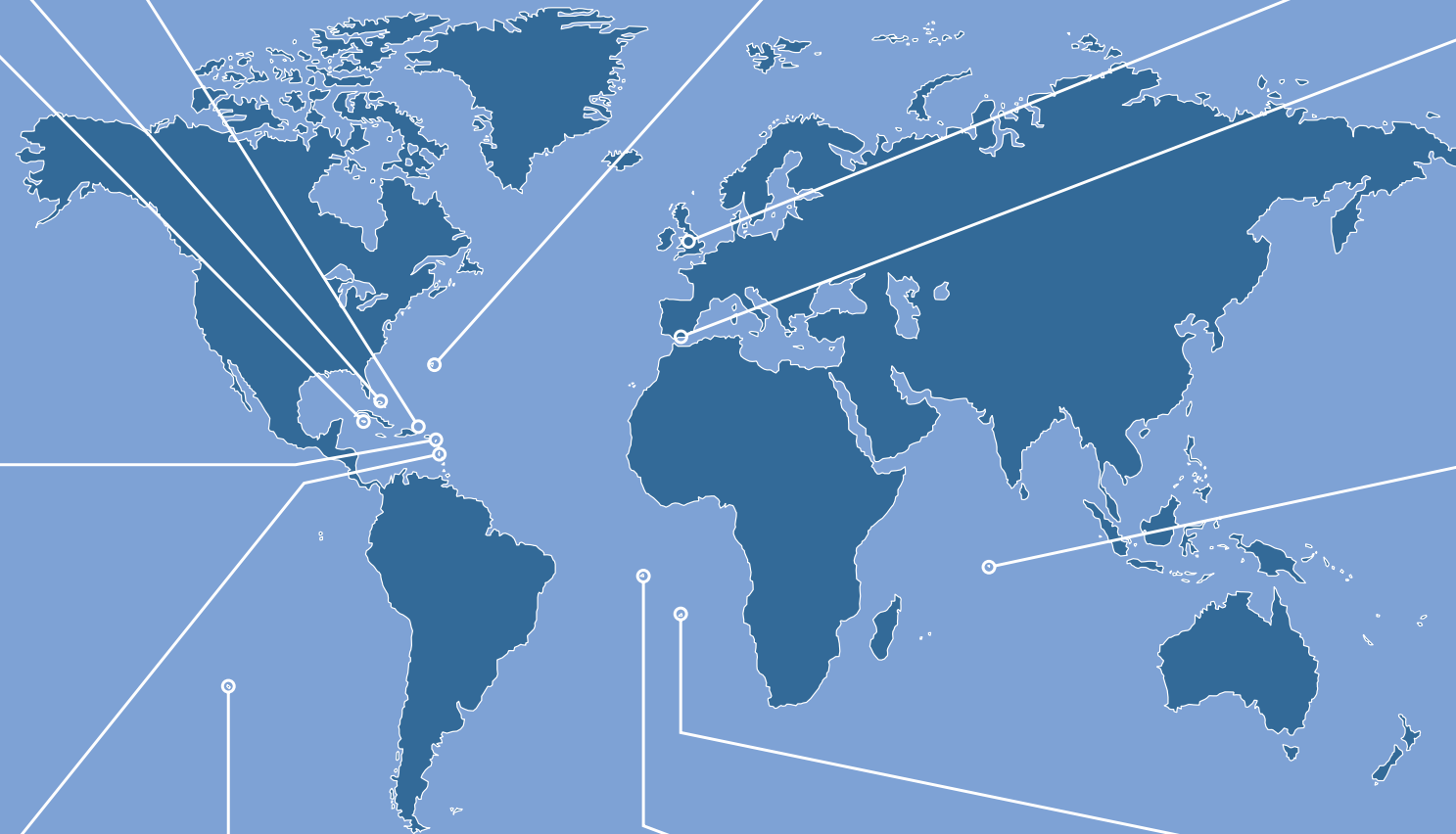


Adult foraging leatherback turtles visit UK waters every summer. Juvenile loggerhead, Kemp's ridley, green and hawksbill turtles are occasionally recorded.

12 CAYMAN ISLANDS



There are small green and loggerhead nesting populations. The islands are a foraging site for juvenile green and hawksbill turtles.



5 GIBRALTAR



As a result of its location, the waters of Gibraltar are an important pathway for immature loggerhead and adult leatherback turtles into and out of the Mediterranean.

11 ANGUILLA



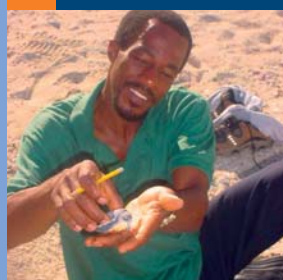
There are small nesting populations of green, leatherback and hawksbill turtles. The island is a significant foraging site for juvenile green and hawksbill turtles.

6 BIOT



Early indications are that the British Indian Ocean Territory hosts significant nesting and foraging green and hawksbill turtle populations.

10 MONTSERRAT



There are small green and hawksbill turtle nesting populations and the island is a foraging site for juvenile green and hawksbill turtles.

9 PITCAIRN ISLANDS



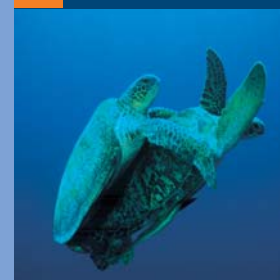
There is a small population of green turtles nesting on these remote and isolated islands. Most nesting occurs on Henderson Island, which is a World Heritage Site.

8 ASCENSION ISLAND



Ascension island has the second largest nesting population of green turtles in the Atlantic ocean (4,000 females/year), and a small foraging population of juvenile hawksbills.

7 ST HELENA



St Helena now has very little sandy coastline, and rare green turtle nests are occasionally recorded. Mating green turtles and juvenile hawksbills are a regular sight in St Helena's waters.

Images: 1. Measuring a green turtle (Peter Richardson/MCS), 2. Staff and leatherback turtle (CFD), 3. Child with hawksbill - Bermuda (Bermuda Aquarium), 4. Leatherback turtle (Mike Daines), 5. Loggerhead turtle (Graeme Cresswell), 6. Juvenile hawksbill turtle - (Brendan Godley)

7. Mating green turtles (Doug Perrine/Seapics.com) 8. Children observing research (Brendan Godley), 9. Nesting green turtle (Peter Richardson), 10. JJ with green turtle hatchling (Brendan Godley), 11. Green turtle (Sue Ranger), 12. Satellite tagged loggerhead turtle (Janice Blumenthal)