



National Conservation Council

Overview: Conservation Plan for Sea Turtles

The Cayman Islands once supported one of the world's largest green turtle nesting populations and abundant nesting by loggerhead, hawksbill, and leatherback turtles. These populations were driven to the verge of extinction by historical harvesting but surveys by Department of Environment (DoE) over the past two decades revealed encouraging upward trends in green, loggerhead, and hawksbill nesting numbers. However, in real terms nesting numbers are still critically low and our endangered sea turtle nesting populations now face increasing threats.

The goal of this Conservation Plan is to facilitate the survival and recovery of Cayman Islands sea turtle populations by addressing the threats to their survival, ensuring that sea turtles continue to inhabit our waters and nest on our shores.

Through twenty years of population monitoring, DoE has identified artificial lighting on nesting beaches and illegal hunting/poaching as the greatest threats to our sea turtle nesting populations. Without addressing these and other threats, Cayman Islands sea turtle populations cannot survive.

Artificial Lighting:

Artificial lighting on beaches creates the greatest threat to the long-term survival of turtle nesting populations in the Cayman Islands.

Every year, thousands of baby turtles die unnecessarily when they become misoriented by artificial lighting. When baby turtles (called hatchlings) emerge from their nests at night, they find the ocean by heading toward the brightest light they can see. On an undeveloped beach, this is the moon and stars reflecting off the ocean's surface, but artificial lights are often much brighter and lead the baby turtles toward land, where they die from exhaustion, dehydration, vehicles, or predators.

Fortunately, "turtle friendly lighting" offers a proven solution to this problem. It is designed to meet the needs of beachfront property owners for safe and attractive illumination of their properties without discouraging female turtles from laying their eggs or causing the death of baby turtles. Turtle friendly lighting does not mean that beachfront properties must be dark – instead, lights can be directed away from the beach and bulbs with a visually appealing amber wavelength can be used; this colour resembles candlelight and studies have shown that it is least likely to misorient hatchling turtles away from the ocean. Turtle friendly lighting is cost-effective and energy-efficient so property owners can enjoy long-term cost-savings. It has been a legal requirement on nesting beaches in Florida for over twenty years.

In recognition of the significant and increasing threat that artificial lighting on our nesting beaches presents, this Conservation Plan proposes that from the date of coming into force, turtle friendly lighting be required for new developments that will impact sea turtle **critical habitat**¹. Many important turtle nesting beaches are already highly developed and artificial lighting from existing properties also threatens the survival of nesting populations. Therefore,

¹ The National Conservation Law defines "critical habitat" as the specific areas of land containing the physical, biological and ecological features needed for the conservation of a species as specified in the Conservation Plan for the species. In this Conservation Plan critical habitat for sea turtles is identified as beaches which have had the highest density of turtle nesting over the monitoring period (1998-2018).

for existing properties in and impacting sea turtle critical habitat, it is proposed that proprietors replace lighting that illuminates the beach with turtle friendly lighting within 3 years.

By committing to turtle friendly lighting, the Cayman Islands would safeguard endangered sea turtle nesting populations, benefit many economic sectors, and make a national and international statement on our commitment to sea turtle conservation and the protection of a national symbol of our cultural heritage.

Illegal harvesting:

A study conducted by the DoE and the University of Exeter found that illegal harvesting of turtles in the Cayman Islands was high relative to the size of the wild turtle nesting population, with at least 200 households estimated to have bought illegal turtle meat in the year prior to the survey.

Because legal turtle products (from Cayman Turtle Centre) and illegal turtle products (from wild Cayman Islands sea turtle populations) are largely indistinguishable, poaching of endangered wild turtles and sale of illegal wild turtle products is made significantly easier. In order to control illegal hunting, legal turtle meat from the Cayman Turtle Centre will soon be sold in marked, individually identifiable and non-reusable bags (e.g. freezer-safe barcoded bags with a tamper-evident seal) which will identify legal turtle meat and allow law enforcement officers to distinguish between legal and illegal meat.

This Conservation Plan proposes that consumers must store turtle meat in the tamper-evident marked bag it was purchased in until the bag is opened for the meat to be cooked. This method of identifying legal turtle products would assist in reducing poaching, which is a major threat to the survival of wild turtle nesting populations.

Other Threats:

Other important threats to turtles include operation of vehicles and heavy equipment on the beach which can crush turtle nests, disturbance of turtle mating and nesting, and unregulated bonfires on beaches during the turtle nesting season.