

Frequently Asked Questions



A leatherback nests in front of a hotel on Grande Riviere Beach, Trinidad. When not properly managed, artificial lighting can significantly impact nesting and hatching turtles. © Ashleigh Bandimere

Why Are Lights on the Beach Bad for Sea Turtles?

By Blair Witherington

Although lighting the way at night may seem like a harmless necessity, artificial lighting is one of the most profound ways humans alter the natural world. For animals that are active at night, such as nesting and hatching sea turtles, natural light fields provide important information that guides critical behaviors. Artificial lighting pollutes those light fields with dangerous misinformation. For example, artificial lights visible from sea turtle nesting beaches can deter female turtles from nesting and can confuse females and their hatchlings as they orient seaward. The disruption of hatchling movement has lethal consequences to hatchlings both on the beach and in nearshore waters. Artificial lighting has a most severe effect on sea turtles and is a major conservation challenge on human-occupied nesting beaches.

Hatchling turtles emerging from nests at night rely on the natural brightness contrast between seaward and landward directions—such as that presented by celestial light visible over

an open seaward horizon and an opposing landward horizon silhouetted by a dune or coastal plants. In experimental light fields, hatchlings move toward the center of the brightest horizon with low light across a broad span. Over millennia, this orientation trait has consistently led hatchlings to the sea. Orienting toward a broadly bright horizon favors seaward movement, even when a celestial light such as the full moon shines above the land. The moon's light may be bright, but it's not as low as the seaward horizon, and its light passes through Earth's atmosphere, lighting up competing directions and making the moon just one part of a brightened light field. Artificial light sources are different. Although proximity makes their light seem bright, the brightness is not sufficient to light other directions. As a result, artificial lighting on land produces a misleading light field with the brightest light overwhelmingly directed toward the land. Misinformed hatchlings that move in that direction often never make it to the sea. •

What Can I Do to Help Sea Turtles?

Where do you call home? Is it near a beach? In the heart of a city? In the mountains? Wherever it is, sea turtles and the threats they face are closer than you might think. We live in a globalized, interconnected world in which our lives and lifestyle choices have impacts far beyond our immediate surroundings. As a result, we each have the power to help save sea turtles every day and in a variety of ways.

According to the IUCN-SSC Marine Turtle Specialist Group, the primary threats that endanger sea turtles are fishery impacts, pollution, climate change, coastal development, and direct consumption. Following are ways you can help address each of those threats to sea turtles in your daily life:

- **Fishery Impacts:** Every time you eat seafood, you are supporting the fishery from which it came. Does that fishery harm sea turtles? Is it taking steps to be sustainable? Learn about the sustainability of your seafood choices by asking knowledgeable people, watching documentaries, or doing online research; those efforts will enable you to make more sustainable seafood choices.
- **Pollution:** Plastic and chemical contaminants are two types of pollution that you can readily reduce at home. Take stock of your consumption of single-use plastics and household chemicals and look for environmentally sound alternatives. Explore the extensive online resources that are available for ideas and advice about these topics.
- **Climate Change:** There are many ways to reduce your carbon footprint, including reducing the electricity used in your home, changing the way you get around, and making sustainable food choices. Evaluate your energy use and transportation needs to see if there are ways you can cut back. Consider reducing your consumption of meat—especially beef, which is a major contributor of greenhouse gas emissions.
- **Coastal Development:** When planning your next beach vacation, choose to stay at a hotel or other accommodation that is working to protect the environment. If it is in a sea turtle nesting area, confirm that the establishment has taken steps to ensure the safety of nesting females, nests, and hatchlings. If you live near a sea turtle nesting beach, follow best practices to reduce light pollution and to minimize other disturbances to nesting and hatching turtles. Help others to do the same.
- **Direct Take:** Many people are surprised to learn that hawksbill turtle shells are still widely used to make items sold to tourists, particularly in the Caribbean, Latin America, and Asia. There are no sustainable sources of tortoiseshell; you should never purchase such items. Learn how to recognize items made from tortoiseshell so you can avoid them whenever you travel (see p. 31).

Above all, choose to do the things that make you feel good about helping sea turtles. You will find joy and motivation in knowing that you are not the only one making such choices in your daily life—you are part of a vast global movement of people dedicated to living sustainably. Together, our actions make a meaningful difference. For more ideas, visit <https://www.seaturtlestatus.org/how-you-can-help>. •



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