

TURTLE THREATS – COASTAL DEVELOPMENT

TURTLES ARE VULNERABLE TO A RANGE OF THREATS BECAUSE:

- When baby turtles are born they are on their own; their mothers aren't around to care for them or teach them how to avoid threats.
- They don't begin breeding until they are about 30 to 40 years old (depending on the species). This means they have to survive a long time before they start breeding and produce more offspring of their own to keep the life cycle going.
- Development and lighting along the coast disturb turtles that need to nest on or close to the same beach that they originally hatched on and stops the hatchlings from being able to find the ocean.
- Their gender is dependent on the temperature of the sand the eggs are hatched in: the warmer the sand the more females will be born. This means that climate change – which will raise temperatures around the globe – could result in too many female turtles and not enough males.
- They make long migrations. Spending so much time travelling in the water means that they are exposed to more impacts, as turtles may travel from safe waters to waters that are full of dangers such as fishing nets, boats or marine debris. They have poor hearing and sight when above the surface of the water. This means boats often hit them.
- There are a range of threats to nesting beaches and nests, including predators, people, vehicles, varying temperatures, and flooding or natural erosion (washing nests away).



HOW DOES COASTAL DEVELOPMENT THREATEN TURTLES?

- Coastal developments can change the beaches that turtles rely on for nesting. In some cases the beaches are so changed that the turtles can no longer nest there.
- Building along the coastline releases a lot of soil and other contaminants into the water. This can make the water dark, and can smother the seagrass, algae and coral, making it harder for them to grow. Turtles use both seagrass beds and coral reefs for food and a place to live.
- When hatchlings break out of their eggs they follow the brightest light, usually the moon reflecting on the sea. However, artificial lighting (like street lights) in coastal areas can lead hatching turtles away from the sea, making them vulnerable to dehydration and predators.

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Once you have read through this information, you will then need to work in your groups to create a poster or presentation to share this information with the other people in your class. You will need to undertake the research necessary to find out the answers to the following points and then include this information in your poster or presentation:

- A description of the threat
- How this threat affects turtles
- Where this threat occurs
- The particular species of turtle that is/are affected



In addition, pick one of the following questions to answer:

- What is one thing that people are doing to help protect turtle nesting beaches and sites?
- What is one thing that coastal communities can do to ensure turtles follow the moonlight to the ocean and not any artificial lights along the coast?
- What is one thing that you found interesting or important about coastal development and/or turtles that you want to share with the class?

Work in your groups to create a poster or presentation to share the information you have found.

SOME PLACES TO GET INFORMATION ABOUT MARINE TURTLES:

- WWF - Green Turtle and Hawksbill Turtle
- Great Barrier Reef Marine Park Authority - Marine Turtles
- Australian Government Department of Environment and Energy - Marine Turtles in Australia
- Sea Turtle Foundation
- Western Cape Turtle Threat Abatement Alliance
- Department of Environment and Heritage Protection - Marine Turtles
- Reef Guardian Schools - Marine Turtles

SOME PLACES TO GET INFORMATION ABOUT COASTAL DEVELOPMENT:

- WWF - Threats To Oceans and Coasts
- Reef Resilience - Coastal Development