

Lesson Five

How might the G8 Sea Island Summit encourage the protection of Georgia's endangered sea turtle population?

Objective

Students will describe reasons for, and the nature of the threats facing the sea turtle population along the Georgia coast and investigate what can be done to protect them.

Resources

- **Sea Turtles Found in US Waters** *data retrieval chart*
- **Sea Turtle Facts** *website*
www.fpl.com/environment/endangered/contents/sea_turtles_overview.shtml#TopOfPage
- **International Year of the Ocean** *website*
www.yoto98.noaa.gov/books/turtles/turtle2.hmt
- **St. Catherine's Sea Turtle Exhibit** *website*
www2.gasou.edu/cturtle/027exhib.html
- **Turtle Tracking Project** *website*
www.cccturtle.org/sat1.htm

Introduction

Sea turtles are large, air-breathing reptiles who spend most of their life in the ocean. Over the past century, their numbers have dropped as they have been slaughtered for their meat, eggs, shells, and leather. All six of the species of sea turtles found in US waters are currently protected under the Endangered Species Act. However, their numbers continue to drop, and some like the loggerhead, actually face extinction. Georgia and other states along the southeastern coast of the United States is one of the few places left in the world where these turtles continue to nest.

Many environmental problems exist because there are no clear rights of ownership. In the past, there was a market for turtle meat and shells, so people killed them. No one "owned" the turtles or other endangered species, so no one had an owner's incentive to look after them. When there are no rights of ownership, "common pool" problems arise. Air and water pollution are additional examples of "common pool" problems. In the case of the turtles, the Endangered Species Act has not been an adequate measure of protection as evidenced by their numbers. If the presence of fishing boats in the turtle's habitat is a major threat, there would have to be a strong incentive system to discourage people from fishing in that area. The reality, however, appears to lie in the fact that, because turtle migration patterns are extensive, their protection must come from both governmental and non-governmental initiatives, including the international community. Additional strategies to create "ownership," such as "adopt a turtle," and measures to create awareness of the full nature of the problem, such as improved education, could be discussed and pursued by policy makers, conservation groups, and interested individuals.

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Task

In this lesson, students will locate information on sea turtles living along the Georgia coast and identify threats to their survival. They will also track the migration of individual turtles through a web site to raise awareness that the protection of the turtles must be a collaborative effort across state and national boundaries, and between government and private initiatives.

Process

Begin this lesson by distributing the Sea Turtles Found in US Waters data retrieval chart for students to complete using the Internet sites *International Year of the Ocean*, *Anna Maria Island Florida*, and *Sea Turtle Facts*. When they finish, ask students to share their findings to answer the following questions.

- What are the most common threats to the sea turtle?
- How might the G8 Sea Island Summit members work together to insure greater protection for the environment?
- Why has the number of sea turtles not increased even though they are protected under the Endangered Species Act?
- Why is there a role for government in the protection of endangered species?
- What can ordinary citizens do to encourage protection of the sea turtle?

Students can trace the migration of turtles that have been tagged by going to the Turtle Tracking Project website at www.cccturtle.org/sat1.htm. The teacher can download a Turtle Educators Guide that includes maps that can be used to plot the track of specific turtles. This activity will help students understand that because turtle migration patterns are extensive, their protection must come from many sources including local, state and national government in the United States, as well as non-governmental organizations and the international community.

To conclude this lesson, arrange a visit to your school of the St. Catherine's Classroom Sea Turtle exhibit. The exhibit, developed by the St. Catherine's Sea Turtle Conservation Program, can be borrowed by Georgia schools for up to two weeks at no charge. The user pays for shipping and insurance against damage. To arrange for the exhibit, visit St. Catherine's Sea Turtle Exhibit website [www2.gasou.edu/cturtle/027exhib.html] or contact

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Sea Turtles Found in US Waters

	Green Turtle	Hawksbill Turtle	Kemp's Ridly	Leatherback Turtle	Loggerhead Turtle	Olive Ridly Turtle
Scientific Name						
Physical Description						
Current Population						
Lifespan						
Diet						
Nesting Habits						
Environmental Threats						
Conservation Efforts						

What are Turtle Excluder Devices and how effective have they proven to be?

Turtle Strandings Along the Coast of Cumberland Island, Georgia

<i>Year</i>	<i>Number of Turtles Found</i>
1990 <i>(TEDs mandatory)</i>	69
1991	55
1992	71
1993	42
1994	89
1995	67
1996	87
1997	83
1998	100
1999	78
2000	61
2001	77
2002	103
2003	106
<i>Source: Carol Ruckdeschel, Cumberland Island Museum, January 3, 2004</i>	<i>Possible causes of death related to suffocation during forced submergence in trawl nets, shock and physical trauma, some boat propeller strikes</i>