

**Directions: Use the Ch. 1 outline to help you answer the following questions.**

**Key Issue 1: How Do Geographers Describe Where Things Are?**

*\*\*\*Always keep your unit outline out when you read. Check off the terms as you study them.*

1. Define **map**:
2. What is the science of mapmaking called?
3. What are the **two** purposes that maps serve?
4. Who first used the term “geography”?
  - a. What does the term “geography” mean? (You may have to look it up!)
5. Provide examples of developments in geography from different cultures:
6. Define **scale**:
  - a. What is the advantage of a map which shows only a small portion of the earth’s surface – like a neighborhood – that is, a **large-scale map**?
  - b. What advantage does a map which shows the entire globe, a **small-scale map**, have?
7. When geographers convert the round Earth to a flat map, they use a **projection**. All projections have some distortion (only a globe has none). List the **four** things that typically become distorted in various projections and explain the distortion.
8. Two important projections are the **Mercator** and the **Robinson**.

	<b>Mercator</b>	<b>Robinson</b>
<b>Advantages</b>		

<b>Disadvantages</b>		
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9. What place is designated as 0 degrees longitude?
10. What is the name for the line drawn at 0 degrees longitude?
11. What is the name for the line drawn at 0 degrees latitude?
12. How many degrees of longitude do you need to travel across to pass through one “hour” of time (or one time zone)?      How many time zones are there?
13. What is the longitude of the International Date Line?
14. Use page 11 and the information in the reading to annotate the map below.
  - a. Draw the **Prime Meridian** and **International Date Line**.
  - b. Label the country that moved that moved the Date Line in 1997



15. Define **remote sensing**:
16. List several things that geographers can map using remotely sensed data.
17. Complete the following regarding a **Global Positioning System**

Elements/Components	Uses/Implementation
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- Geographers use **GIS** (Geographic Information System) to store “layers” of data. Give **four** examples of types of data stored in a single layer.
- Explain a **mashup** in relation to geography and GIS.

**Key Issue 2: Why Is Each Point on Earth Unique?**

- Define **toponym**:
- Identify **four** ways in which places can receive names
- Define **site**:
- List some **site characteristics**:
- Complete the following sentence about site:
  - Human actions can \_\_\_\_\_ the characteristics of a site.
- Define **situation**:
- A **region** is an \_\_\_\_\_ of \_\_\_\_\_ defined by one or more \_\_\_\_\_.
- One contemporary (current) approach to studying the cultural landscape is called the **regional studies approach**. What do geographers who adopt this view believe regarding regions?
- Complete the chart below which details types of regions identified by geographers:

	Formal Region	Functional Region	Vernacular Region

Also Called			
Definition			
Example			

10. Prepare a bulleted list about the word **CULTURE**.
  
11. How does a geographer conclude that two (or more) phenomena are “spatially associated,” that is, that they bear some sort of cause and effect relationship?

**Key Issue 3: Why Are Different Places Similar?**

1. Define **globalization**:
  
2. In what ways is globalization of culture manifested in the landscape? Provide an example.
  
3. In what ways has the **communications revolution** played a role in globalization?
  
4. Why might some group(s) of people oppose globalism or globalization?
  
5. Define **space**.
6. Define **distribution**.
  
7. Define **density**:
  
8. The way in which a feature is spread over space is known as **concentration**. What are the opposite ends of the spectrum of concentration?
  - a.
  - b.
  
9. In the boxes below, draw 10 dots in each so that the density is the same in each, but illustrate and label the two different kinds of concentration.

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10. List the two different types of **pattern** given in the text.
11. **Diffusion** is defined as the process by which a characteristic spreads across space. With regard to diffusion, define and, where possible, give an example of each of the following:

<b>Diffusion</b>							
	<table border="1"> <tr> <td style="width: 20%;"><b>Hearth</b></td> <td></td> </tr> <tr> <td><b>Relocation Diffusion</b></td> <td></td> </tr> </table>	<b>Hearth</b>		<b>Relocation Diffusion</b>			
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	<b>Contagious Diffusion</b>						
<b>Stimulus Diffusion</b>							

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12. Describe the phenomenon known as **distance decay**.
  
13. What is **space-time compression**?
  
14. Give some examples of things that slow/prevent interaction among groups.
  
15. Global culture and economy are increasingly centered in the 3 core (**hearth**) regions of:
  - a.
  - b.
  - c.
16. What are the **three** major reasons for these three areas being **hearths**?
  - a.
  - b.
  - c.
17. Explain one reason why there is an increasing economic gap between regions in the world. (AKA: **uneven development**).

**Key Issue 4: Why Are Some Human Actions Not Sustainable?**

1. Explain the difference between **renewable resources** and **nonrenewable resources**.
  
2. What are the **two** major misuses of resources geographers observe?
  
3. Define **sustainability**:
  
4. In the table below, explain and give a bulleted list of details about each of the **pillars of sustainability**

<b>3 Pillars of Sustainability</b>	
<b>Environment</b> <i>(focus on conservation vs. preservation)</i>	

<b>Economy</b>	
<b>Society</b>	

5. Explain **two** major criticisms about sustainability
  
6. In what major way does climate influence human activities? (Give an example)
  - a. Why are human geographers interested in ecosystems involving interaction of humans with the biosphere and abiotic spheres? For example- soil: What are the **two** major problems with which geographers are concerned as far as soil is concerned?
  
7. Discuss why geographers are concerned about the following terms:
  - a. **Cultural Ecology**
  
  - b. **Environmental determinism**
  
  - c. **Possibilism**

# Basic Concepts

## Learning Outcomes

*After reading, studying, and discussing the chapter, students should be able to:*

**Learning Outcome 1.1.1:** Explain differences between early maps and contemporary maps.

**Learning Outcome 1.1.2:** Describe the role of map scale and projections in making maps.

**Learning Outcome 1.1.3:** Explain how latitude and longitude are used to locate points on Earth's surface.

**Learning Outcome 1.1.4:** Identify contemporary analytical tools, including remote sensing, GIS, and GPS.

**Learning Outcome 1.2.1:** Identify geographic characteristics of places, including toponym, site, and situation.

**Learning Outcome 1.2.2:** Identify the three types of regions.

**Learning Outcome 1.2.3:** Describe two geographic definitions of culture.

**Learning Outcome 1.3.1:** Give examples of changes in economy and culture occurring at global and local scales.

**Learning Outcome 1.3.2:** Identify the three properties of distribution across space.

**Learning Outcome 1.3.3:** Describe different ways in which geographers approach aspects of cultural identity such as gender, ethnicity, and sexuality.

**Learning Outcome 1.3.4:** Describe how characteristics can spread across space over time through diffusion.

**Learning Outcome 1.3.5:** Explain how places are connected through networks and how inequality can

hinder connections.

**Learning Outcome 1.4.1:** Describe the three pillars of sustainability.

**Learning Outcome 1.4.2:** Describe the three abiotic physical systems.

**Learning Outcome 1.4.3:** Explain how the biosphere interacts with Earth's abiotic systems.

**Learning Outcome 1.4.4:** Compare ecosystems in the Netherlands and Southern Louisiana.

## Chapter Outline

**Introduction** Geography is more than rote memorization: Geographers ask where things are and why they are where they are. They use concepts of **location** and **distribution** to do so. Especially important in the study of human geography is the tension between **globalization** and local diversity.

### Key Issue 1: How Do Geographers Describe Where Things Are?

A **map** is a two-dimensional or flat-scale model of the real world, made small enough to work with on a desk or computer. **Cartography** is the science of making maps. Maps are used for reference (where things are located) and for communication of the distribution of some feature or features.

**Early Mapmaking** Maps have been created for thousands of years. The earliest maps were used as reference tools—simple navigation devices designed to show a traveler how to get from Point A to Point B. Mapmaking as a reference tool was revived during the Age of Exploration and Discovery. Explorers who sailed across the oceans in search of trade routes and resources in the fifteenth and sixteenth centuries required accurate maps to reach their desired destinations without wrecking their ships.

**Contemporary Mapping** Maps are used by geographers primarily for displaying geographic information and for offering geographic explanation. Maps are geographer's most essential tool.

**Map Scale** The map's **scale** is the relationship between map units and the actual distance on Earth. Ratio or fraction scale gives the relationship as a ratio, for example, 1:100,000 is that 1 unit on the map equals 100,000 units on the ground. In a written scale units are expressed in a convenient way, for example, "1 centimeter equals 1 kilometer." A graphic scale is given by a scale bar showing the distance represented on Earth's surface.

**Projection** Maps are a planar (flat) representation of Earth's curved surface. Earth is nearly a sphere and is therefore only accurately represented on a globe. Thus, some distortion must result when using maps, especially at small scales (continental or whole-Earth maps). Cartographers must choose a **projection** that results in some set of distortions between shape, distance, relative size, and direction.

**Geographic Grid** Mathematical location describes a place's location using a coordinate system such as **latitude** and **longitude**. Longitude is culturally defined as starting at Greenwich, England, and measures degrees of east and west of that line of longitude, or **meridian**. The zero degree longitude line in Greenwich, England, is known as the **prime meridian**. Latitude measures north and south distance with the **equator** being the line of latitude halfway between the poles. A latitude line is known as a **parallel**

because all latitude lines are parallel to the equator. The equator is the parallel with the greatest circumference and is the baseline for measuring latitude.

**Telling Time** Longitude plays an important role in calculating time. If we let every fifteenth degree of longitude represent one time zone, and divide 360 degrees by 15 degrees, we get 24 time zones. As the Earth rotates eastward, any place to the east of you always passes under the Sun earlier. Thus as you travel eastward from the prime meridian you are catching up with the Sun, so you must turn your clock ahead 1 hour by each 15 degrees. If you travel westward from the prime meridian, you are falling behind the Sun, so you turn your clock back by 1 hour for each 15 degrees. During the summer, many places in the world, including most of North America, move the clocks ahead 1 hour.

When you cross the **International Date Line** you move the clock back one entire day, if you are heading eastward toward America. You turn the clock ahead 24 hours if you are heading westward toward Asia. The International Date Line for the most part follows 180 degrees longitude. However, several islands in the Pacific Ocean belonging to the countries of Kiribati and Samoa, as well as to New Zealand's Tokelau territory, moved the International Date Line several thousand kilometers to the east.

**Collecting Data: Remote Sensing** The acquisition of data about Earth's surface from a satellite orbiting Earth or from airplanes is known as **remote sensing**. At any moment a satellite sensor records the image of a tiny area called a pixel. A map created by remote sensing is essentially a grid that contains many rows of pixels. Geographers use remote sensing to map the changing distribution of a wide variety of features, such as agriculture, drought, and sprawl.

**Pinpointing Location: GPS** The **Global Positioning System (GPS)** uses satellites to reference locations on the ground. GPS is most commonly used for navigation. Pilots of aircraft and ships stay on course with GPS. On land, GPS detects a vehicle's current position, the motorist programs the desired destination into a GPS device, and the device provides instructions on how to reach the destination. GPS can also be used to find the precise location of a vehicle or person. Geographers find GPS to be particularly useful in coding the precise location of objects collected in fieldwork.

**Layering Data: GIS** A **geographic information system (GIS)** is a complex computer system which stores and presents geographically referenced data. GIS is more efficient than pen and ink for making for making a map: Objects can be added or removed, colors brightened or toned down, and mistakes corrected without having to tear up the paper and start from scratch. Each type of information can be stored in a layer. Separate layers could be created for boundaries of countries, bodies of water, roads, and names of places. Most maps combine several layers and GIS maps permits construction of much more complex maps than can be drawn by hand.

**Mixing Data: Mashups** The term mashup refers to the practice of overlaying data from one source on top of one of the mapping services. Computer users have the ability to do their own GIS because mapping services provide access to the application programming interface, which is the language that links a database such as an address list with software such as mapping. A mashup map can show the locations of businesses and activities within a neighborhood in a city. The requested information could be all pizza parlors within a mile of a certain address. Mapping software can also show the precise locations of gas stations with the lowest prices or current traffic tie-ups on highways.

## Key Issue 2: Why Is Each Point on Earth Unique?

**Place Names** A place name or **toponym** is the most common way of describing a location. Many uninhabited places are even named. Place names sometimes reflect the cultural history of a place, and a change in place name is often culturally motivated. Examining changes in place name geography is a useful insight into the changing cultural context of a place. The Board of Geographical Names was established in the late nineteenth century to be the final arbiter of names on U.S. maps. In recent years the board has been especially concerned with removing offensive place names.

**Site** The term **site** makes reference to the physical characteristics of a place. Important site characteristics include climate, water sources, topography, soil, vegetation, latitude, and elevation. The combination of physical features gives each place a distinctive character. People disagree on the attributes of a good location for settlement. What is considered a good site depends on cultural values.

**Situation** The term **situation** describes a place in terms of its location relative to other places. Understanding situation can help locate an unfamiliar place in terms of known places, or it can help explain the significance of a place. We give directions to people by referring to the situation of a place. We identify important buildings, streets, and other landmarks to direct people to the desired location.

**Region: A Unique Area** An area of Earth defined by one or more distinctive characteristics is a **region**. A particular place can be included in more than one region, depending on how the region is defined. A region gains uniqueness from possessing not a single human or environmental characteristic but a combination of them. The **cultural landscape** is a recurrent theme throughout this text. It represents the total sum of cultural, economic, and environmental forces combining to make distinctive landscapes across Earth.

**Formal Region** A **formal region** is a region with a predominant or universal characteristic. Formal regions commonly have well-defined boundaries. The shared feature could be a cultural value such as a common language or an environmental property such as climate. In a formal region, the selected characteristic is present throughout the region. Some formal regions are easy to identify, such as countries or local government units. A characteristic may just be predominant rather than universal. For example, the North American wheat belt is a formal region in which wheat is the most commonly grown crop, but other crops are grown there as well.

**Functional Region** A **functional region** is defined by an area of use or influence of some feature. Often used in economic geography, functional regions have “fuzzy” boundaries as the influence of the central feature decreases over distance. The functional region is organized around a focal point. A good example of a functional region is the reception area of a television station. A television station’s signal is strongest at the center of its service area and becomes weaker at the edge and eventually can no longer be distinguished. At some distance from the center, more people are watching a station originating in another city. That place is the boundary between functional regions of two TV market areas.

**Vernacular Region** A **vernacular region** is the most ambiguously defined as they rely on a mental conception of a place as belonging to a common region for complex cultural reasons. Such regions emerge from people’s informal sense of place rather than scientific models developed through geographic

thought. A vernacular region is an individual's **mental map**, which is an internal representation of a portion of Earth's surface. A mental map depicts what an individual knows about a place, containing personal impressions of what is in the place and where the place is located.

**Culture: What People Care About** A body of customary beliefs, material traits, and social forms that together constitutes the distinct tradition of a group of people is known as **culture**. Important cultural values derive from a group's language, religion, and ethnicity. These three cultural traits are both an excellent way of identifying the location of a culture and the principle means by which cultural values become distributed around the world. These cultural traits are covered in detail in chapters 5, 6, and 7.

**Culture: What People Take Care Of** Another element of culture of interest to geographers is production of material wealth—the food, clothing, and shelter that humans need to survive and thrive. All people consume food, wear clothing, and build shelter, but different cultural groups obtain their wealth in different ways. Various characteristics—such as per capita income, literacy rates, and TVs per capita—distinguish developed regions and developing ones. Most people in developing countries are engaged in agriculture, whereas most people in developed countries earn their living through performing services in exchange for wages. These concepts are discussed in chapters 9, 10, 11, 12, and 13.

**Spatial Association** Different levels of regional analysis can demonstrate dramatically different characteristics. Geographers attempt to explain regional differences by looking for factors with similar distributions.

### **Key Issue 3: Why Are Different Places Similar?**

**Globalization of Economy** The **globalization** of economic activities has come as a result of increasing connections between places and the rapid movement of goods and information around the world. Every place in the world is part of the global economy. **Transnational corporations** are often seen as emblematic of this globalization. Transnational corporations conduct research, operate factories, and sell products in many countries, not just where its headquarters and principle shareholders are located. Each place in the world plays a distinctive role in the global economy based on its local assets, as assessed by transnational corporations.

**Globalization of Culture** Economic globalization is matched with an increasing global influence and spread of some cultures, resulting in more uniform cultural landscapes across the world. Groups with distinctive local cultures may feel threatened by the globalization of culture, causing conflict or a sense of loss. The survival of a local culture's distinctive beliefs, forms, and traits may be threatened by interaction with social customs as wearing jeans and Nike shoes, consuming Coca-Cola and Mc Donald's hamburgers, and communicating using cell phones and computers. Yet despite globalization, cultural differences among places not only persist but actually flourish in many places.

**Distribution Properties: Density** Geographers think about the arrangement of people and activities found in space and try to understand why those people and activities are distributed across space as they are. **Space** refers to the physical gap or interval between two objects. Geographers measure the arrangement of features in space as part of their study of Earth. The arrangement of a feature in space is

known as its **distribution**. **Density** measures the number of features per area of land. Other measures, such as physiological or agricultural density, are based on a subgroup of people or a subtype of land.

**Distribution Properties: Concentration** The extent of a feature's spread over space is its **concentration**. If the objects in an area are close together, they are *clustered*; if they are far apart they are *dispersed*. Geographers use concentration to explain distribution. In a dispersed neighborhood, each house has a large private yard, whereas in a clustered neighborhood, the houses are close together and open space is shared as a community park.

**Distribution Properties: Pattern** The term **pattern** describes whether features are arranged along geometric or other predictable arrangements. Geographers observe that many objects form a linear distribution, such as the arrangement of houses along a street or stations along a subway line. Many American cities contain a regular pattern of streets, known as a grid pattern, which intersect at right angles at uniform intervals to form square or rectangular blocks.

**Distribution across Space** Humans often arrange their activities in space along ethnic or gender divisions. Most concepts of difference among humans are culturally constructed and changes in cultural concepts of difference are sometimes reflected in changing arrangements. Openly homosexual men and lesbian women may be attracted to some locations to reinforce spatial interactions with other gays. *Humanistic Geography* is a branch of human geography that emphasizes the different ways that individuals perceive their surrounding environment.

**Movement Across Space** Traditional roles and relationships influence how people move across space. The location of a family's home is selected primarily to ease the husband's daily commute to work. Movement across space varies by ethnicity because in many neighborhoods the residents are virtually all white or virtually all persons of color.

**Cultural Identity in Contemporary Geography Thought** The experiences of women differ from those of men, blacks from whites, and gays from straights. Distinctive spatial patterns by gender, race, and sexual orientation are constructed by the attitudes and actions of others. Although it is illegal to discriminate against people of color, spatial segregation persists. In many places in the world, it is legal to discriminate against gays. For geographers, concern for cultural diversity is not merely a political expediency; it lies at the heart of geography's spatial tradition.

**Relocation Diffusion** The term **connection** refers to the relationships among people and objects across the barrier of space. **Diffusion** refers to the spread of anything from a cultural trait, people, things, or ideas from some point of origin (a **hearth**). Geographers document the location of hearths and the processes by which diffusion carries things elsewhere over time. The spread of an idea through the physical movement of people from one place to another is termed **relocation diffusion**. When people move, they carry with them their culture, including language, religion, and ethnicity.

**Expansion Diffusion** The spread of a feature from one place to another in an additive process is **expansion diffusion**. Expansion diffusion refers to the growth of an idea to new areas through a hierarchy (**hierarchical diffusion**), popular notions or even contact (**contagious diffusion**), or the spread of an underlying idea divorced from its original context (**stimulus diffusion**).

**Spatial Interaction** Some places are well-connected by communications or transportation networks, other are not as much. Contact diminishes with increasing distance and eventually disappears. This trailing-off phenomenon is called **distance decay**. In the contemporary world, distance decay is much less severe because connection between places takes less time. Geographers apply the term **space-time compression** to describe the reduction in time it takes for something to reach another place. Interaction takes place through a **network**, which is a chain of communication that connects places. Ideas that originate in a hearth are now able to diffuse rapidly to other areas through communication networks. Distant places seem less remote and more accessible to us.

**Unequal Access** In the modern world, barriers to interaction are more likely to derive from unequal access to electronics. Internet access depends on availability of electricity to power the computer and a service provider. A person must be able to afford to pay for the communications equipment and service. Countries in Africa, Asia, and Latin America find themselves on a periphery with respect to wealthier core regions of North America, Europe, and Japan. The increasing gap in economic conditions between regions in the core and periphery that results from globalization is known as **uneven development**. In a global culture and economy, every area of the world plays some role intertwined with the roles played by other regions.

#### **Key Issue 4: Why Are Some Human Actions Not Sustainable?**

A **resource** is a substance in the environment that is useful to people, economically and technologically feasible to access, and socially acceptable to use. A **renewable resource** is produced in nature more rapidly than it is consumed by humans. A **nonrenewable resource** is produced in nature more slowly than it is consumed by humans. The use of Earth's renewable and nonrenewable natural resources in ways that ensure resource availability in the future is **sustainability**.

**Three Pillars of Sustainability** According to the United Nations, sustainability rests on three pillars: environment, economy, and society. Sustainability requires the curtailing the use of nonrenewable resources and limiting the use of renewable resources to the level at which the environment can continue to supply them indefinitely. The sustainable use and management of Earth's natural resources to meet human needs such as food, medicine, and recreation is **conservation**. Conservation differs from **preservation**, which is the maintenance of resources in their present condition, with as little human impact as possible. Preservation does not regard nature as a resource for human use.

**Sustainability's Critics** Biologically productive land is defined as the amount of land required to produce the resources currently consumed and handle the wastes currently generated by the world's 7 billion people at current levels of technology. The Earth has only 11.4 billion hectares of biologically productive land, so humans are already using all of the productive land and none is left for future growth. Others have said that resource availability has no maximum, and Earth's resources have no absolute limit because the definition of resources changes drastically and unpredictably over time.

**Earth's Physical Systems** A **biotic** system is composed of living organisms. An **abiotic** system is composed of nonliving or inorganic matter. Three of Earth's four systems are abiotic. The **atmosphere** is a thin layer of gases surrounding Earth. The **hydrosphere** is all the water on Earth or near Earth's surface. The **lithosphere** is Earth's crust and a portion of upper mantle directly above the crust. Only one of

Earth's systems is biotic. The **biosphere** is all living organisms on Earth, including plants and animals, as well as microorganisms.

**Interactions in the Biosphere** A group of living organisms and abiotic spheres with which they interact is an **ecosystem**. The scientific study of ecosystems is **ecology**. Living organisms in the biosphere interact with each of the three abiotic systems. Human geographers are especially interested in ecosystems involving the interaction of humans with the rest of the biosphere and the three abiotic spheres. If the atmosphere contains pollutants or its oxygen level is reduced, humans have trouble breathing. Without water, humans waste away and die. A stable lithosphere provides humans with materials for buildings and fuel for energy. The rest of the biosphere provides humans with food.

**Cultural Ecology: Integrating Culture and Environment** Human geographers are especially interested in the fact that different cultural groups modify the natural environment in distinctive ways. The geographic study of human-environmental relationships is known as **cultural ecology**. **Environmental determinism**, largely dismissed by modern geographers, states that physical factors cause cultures to develop and behave as they do. Environmental determinists believe that human geographers should apply laws from the natural sciences to understanding relationships between the physical environment and human actions. **Possibilism** recognizes the constraints of the physical environment while also crediting human cultures with the ability to adapt to the environment in many ways—including by changing it.

**Modifying the Environment** A **polder** is a piece of land that is created by draining water from an area. All together, the Netherlands has 2,600 square miles of polders. The Dutch government has reserved most of the polders for agriculture to reduce the country's dependence on imported food. The Dutch have also constructed massive dikes to prevent the North Sea from flooding much of the country. A second ambitious project in the Netherlands is the Delta Plan. The low-lying delta in the southwestern part of the country is very vulnerable to flooding. The Delta Plan called for the construction of several dams to close off most of the waterways from the North Sea.

The lowlands in South Florida are environmentally sensitive areas, but have been modified less sensitively than those in the Netherlands. The U.S. Army Corps of Engineers built a levee around Lake Okeechobee during the 1930s, drained the northern one-third of the Everglades during the 1940s, and diverted the Kissimmee River into canals during the 1950s. These modifications opened up hundreds of thousands of hectares of land for growing sugarcane and protecting farmland as well as the land occupied by the growing South Florida population from flooding. Polluted water, mainly from cattle grazing along the banks on the canals, flowed into Lake Okeechobee. The modification of barrier islands along South Florida's coast by humans has caused a lot of damage.