The background of the slide features a pattern of stylized, overlapping leaves and branches in various shades of brown and tan, creating a natural, organic feel. The text is centered and rendered in a bold, serif font with a yellow-gold color and a dark outline.

Chapter 16: Human Impact on Ecosystems

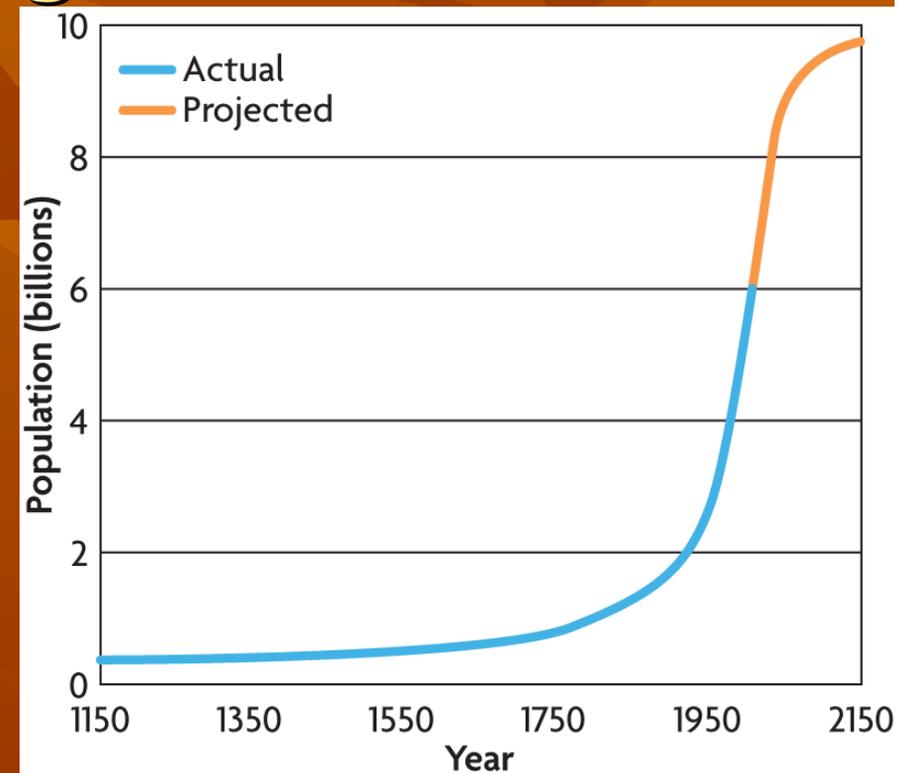
The background of the slide is a solid brown color with a pattern of stylized, overlapping leaves and branches in a lighter shade of brown. The text is centered and reads:

**Population Growth
&
Natural Resources**

As the human population grows, the demand for Earth's resources increases.

- Earth's human carrying capacity is unknown.
- Technology has increased Earth's carrying capacity
 - farm equipment
 - medicine

□ Population on Earth: 6 billion

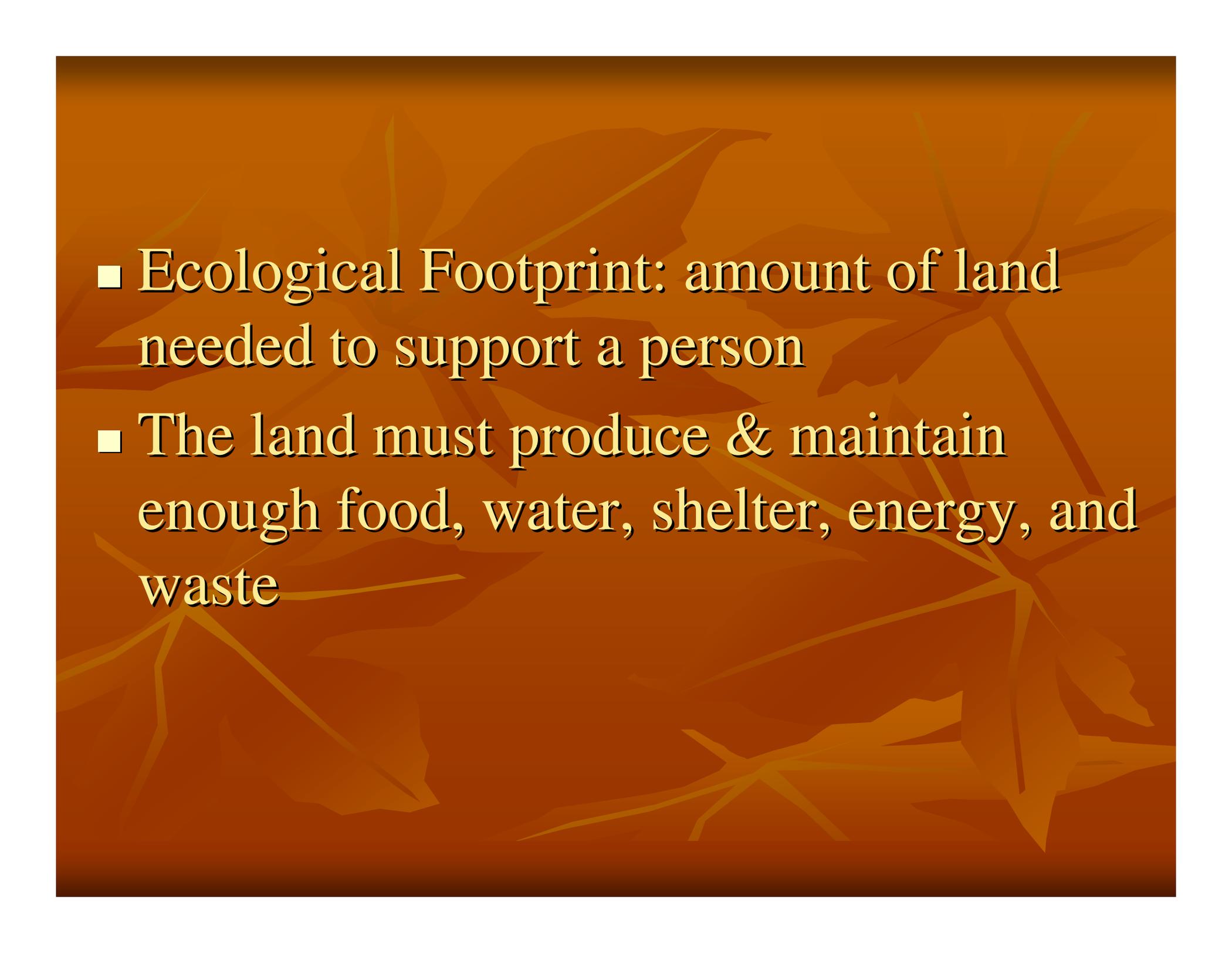


- Nonrenewable resources:
resources that are used faster
than they are formed
 - coal & oil
- Renewable resources: resources
that cannot be used up or that
are replenished over time
 - wind, water, sunlight

- Earth's resources must be used responsibly.
- Easter Island is an example of irresponsible resource use.



- Trees were cut down faster than they could grow back.

- 
- Ecological Footprint: amount of land needed to support a person
 - The land must produce & maintain enough food, water, shelter, energy, and waste

The background of the slide is a solid dark brown color with a pattern of lighter brown, stylized autumn leaves scattered across it. The leaves have prominent veins and are in various orientations, creating a textured, seasonal feel.

Air Quality

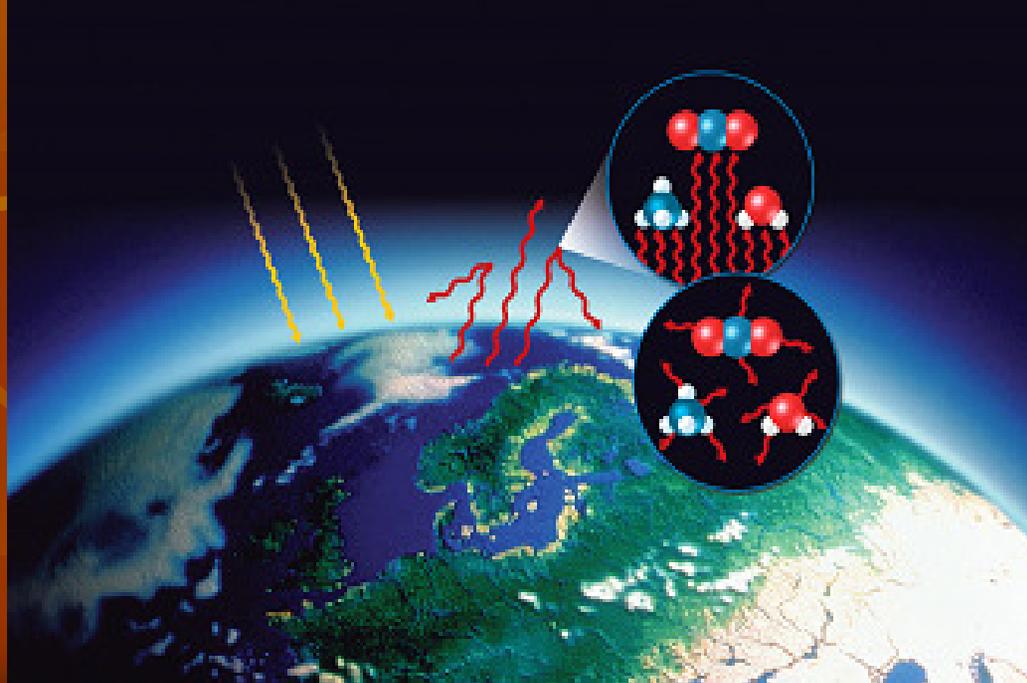
- Pollution: any undesirable factor added to the air, water, or soil
- Smog is a type of air pollution caused by the interaction of sunlight with pollutants produced by fossil fuel emissions

- Acid rain: type of precipitation produced when pollutants in the water cycle cause pH levels to drop below normal levels
 - caused by fossil fuel emissions
 - can be harmful lakes, streams, plants, animals, etc.

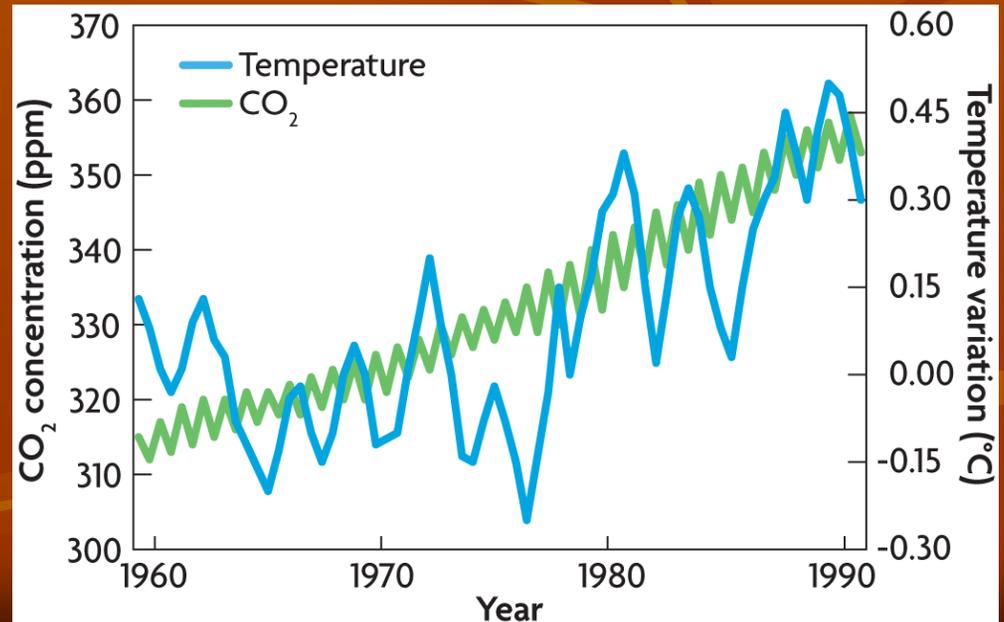
The background of the slide is a solid brown color with a pattern of faint, overlapping autumn leaves in various shades of brown and tan. The leaves are scattered across the entire area, creating a textured, seasonal feel.

Greenhouse Effect & Global Warming

- The greenhouse effect slows the release of heat from Earth's atmosphere.
 - greenhouse gases trap heat preventing it from escaping Earth's atmosphere & the temperature of Earth increases



- Global warming: refers to the trend of increasing global temperatures
- CO₂ levels rise & fall with the temperature of Earth



The image features a dark brown background with a faint, repeating pattern of stylized leaves. The leaves are rendered in a lighter shade of brown, creating a subtle texture. Centered on this background is the text "Water Quality" in a large, bold, serif font. The text is a light yellow or gold color, which stands out against the dark background. The overall aesthetic is clean and professional, suitable for a presentation or report.

Water Quality

- Water pollution can affect entire ecosystems
 - chemicals, raw sewage, trash, etc.
- Indicator species: provide a sign of an ecosystem's health.
 - Ex.: frogs & water quality

- Biomagnification causes accumulation of toxins in a food chain
 - predators eat contaminated prey
 - pollution accumulates at each stage of the food chain
 - Top consumers, including humans, are most affected.



Threats to Biodiversity

- The loss of biodiversity has long-term effects.
 - loss of medical and technological advances
 - extinction of species
 - loss of ecosystem stability



- Habitat fragmentation prevents an organism from accessing its entire home range.
 - occurs when a barrier forms within the habitat
 - often caused by human development



- An introduced species is one that is brought to an ecosystem by humans.
 - Invasive species can have an environmental and economic impact.



Invasive species often push out native species.

- kudzu (southeastern U.S.)



The background of the slide is a solid dark brown color with a pattern of lighter brown, stylized autumn leaves scattered across it. The leaves have prominent veins and are oriented in various directions, creating a textured, organic feel.

Conservation

- The Endangered Species Act works to protect individual species from extinction.
- Umbrella species: species whose protection allows other species to be protected as well



- The Environmental Protection Agency (EPA) develops policies & regulations to protect the environment
- Legislation helps to protect the environment and endangered species.
 - Clean Air Act
 - Clean Water Act
 - Endangered Species Act



- There are several ways that people can help protect the environment.
 - control population growth
 - develop sustainable technology and practices (conserve)
 - protect and maintain ecosystems

