

Natural Resource Conservation and Preservation

COLLAPSE: *How Societies Choose to Fail or Succeed* is a book by Jared Diamond in which he explains the decline of past civilizations and the causes. A society of note is that of Easter Island, which collapsed entirely because of environmental damage from the people inhabiting the island. One has to believe the outcome would have been different had natural resources been conserved.



Objectives:



1. Differentiate between conservation and preservation.
2. Recognize historic events, influential people, and government policies in conservation.

Key Terms:



conservation	Migratory Bird Conservation Act	Pittman-Robertson Act
conservationist	Migratory Bird Hunting Stamp Act	preservation
ecology	National Park Service	preservationist
Endangered Species Act	overexploitation	U.S. Forest Service
exploitation		Wildlife Refuge System
Lacey Act		

Conservation and Preservation

Humans use natural resources to help meet their basic needs of food, clothing, and shelter. As they do so, they consume natural resources. Each time a resource is used, its supply is reduced. If consumption goes unchecked, the availability of the natural resource may be threatened and even exhausted. Two practices that protect natural resources are conservation and preservation.

The wise use of our natural resources is called **conservation**. Conservation is necessary to continue to meet human needs and maintain a standard of living to which people are accustomed. Examples of conservation include reducing the amount of natural resources used, reusing products, and recycling products. A person who studies and promotes conservation and believes that natural resources should be used responsibly is called a **conservationist**.

The choice not to use our natural resources is called **preservation**. An example of preservation would be preventing logging of an old-growth forest to promote biodiversity rather than logging the trees for timber products. Someone who believes in and promotes preservation is called a **preservationist**.

One situation may call for conservation measures, whereas another might call for preservation. For example, it is unquestioned that the rich soils that support agricultural production should be conserved. Also, most people hold the opinion that unique ecosystems should be preserved.

Some reasons for conserving and preserving natural resources seem self-evident. A few reasons are:

- ◆ Most natural resources cannot be easily reproduced by humans. Therefore, conserving them wisely is important.
- ◆ Natural resources are essential for human life.
- ◆ Natural resources are necessary to meet the needs of future generations.
- ◆ Conservation of habitats helps preserve biodiversity.



FIGURE 1. Preservationists believe that some old-growth forests should be protected for future generations.

Historic Events, Influential People, and Government Policies

The concepts of conservation and preservation of natural resources are relatively new.

HISTORIC EVENTS

When the Europeans settled in North America in the 1600s, natural resources were plentiful. Nature provided people with resources to build homes and clothe and feed themselves.

The general feeling was that natural resources were inexhaustible. Eventually, need turned into want, and many people began to destroy wildlife for sport rather than necessity. This led to exploitation. **Exploitation** is the use of natural resources for profit.

Overexploitation is the overharvesting of a natural resource to a point of diminishing returns. An excellent example is the passenger pigeon, which once numbered in the billions but is now extinct because of overhunting and habitat loss. Another is the near extermination of the American bison.

It wasn't until the late 1800s that people began to see the need for conservation of our natural resources. During this time the Morrill Act was passed and the Yellowstone National Park established.

The Morrill Act was passed in 1862. The purpose of this act was to establish colleges to teach agricultural practices.

Yellowstone National Park was established in 1872. This was the first national park to be developed in the world. Its purpose was to preserve the natural resources of the area, including wildlife.



FIGURE 2. For years natural resources were exploited. (Courtesy, U.S. Fish & Wildlife Service)

INFLUENTIAL PEOPLE

Many people have had an impact on the wildlife conservation movement over the past few centuries. Some of these people include John James Audubon, John Muir, Theodore and Franklin Roosevelt, Aldo Leopold, Gifford Pinchot, Hugh Bennett, Jay Darling, Rachel Carson, and Gaylord Nelson.

John James Audubon

John James Audubon (1785–1851) was a bird lover. He watched and studied birds and eventually published a book about them. In 1905 the National Audubon Society was formed.

John Muir

John Muir (1838–1914) was partly responsible for the development of the Yellowstone and Sequoia National Parks. Through his encouragement, President Theodore Roosevelt established these parks. Muir was also responsible for starting the Sierra Club, whose purpose is to promote conservation. A forest in California was also named for John Muir.

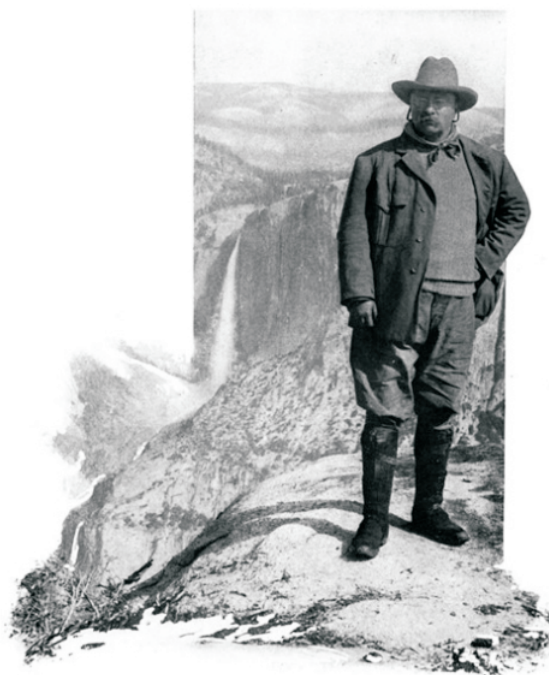
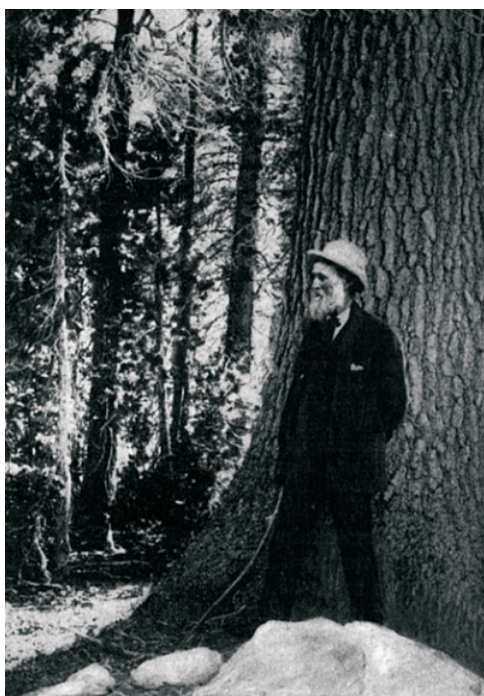


FIGURE 3. President Theodore Roosevelt (right) and John Muir both had impacts on the wildlife conservation movement.

Theodore and Franklin Roosevelt

Theodore Roosevelt (1858–1919) and Franklin Roosevelt (1882–1945) were both U.S. presidents. Theodore Roosevelt was responsible for passing legislation to help protect our natural resources. He is considered the “father of the conservation movement.” Franklin Roosevelt was the president who set up the Soil and Water Conservation Department within the USDA.

Aldo Leopold

Aldo Leopold (1886–1948) is noted for applying ecology to wildlife. **Ecology** is the study of the interrelations between living organisms and their environment. Leopold believed that people should enjoy nature but not destroy it in the process. His book *Game Management* was used to help educate future wildlife biologists.

Gifford Pinchot

Gifford Pinchot (1865–1946) authored the book *The Fight for Conservation*. Pinchot’s efforts focused on the conservation of forests. He was one of the first leaders of what eventually became known as the U.S. Forest Service.

What’s Your Profile?



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Hugh Bennett

Hugh Bennett (1881–1960) was the first person to run the Soil Conservation Service. He is known as the “father of soil conservation.” He promoted the use of scientific investigation in determining soil needs.

Jay Darling

Jay Darling (1876–1962) was the designer of the first migratory bird hunting stamp. He is remembered for his cartoons of wildlife and natural resources. He used his cartoons to make the public aware of the need for natural resource conservation.

Rachel Carson

Rachel Carson (1907–1964) was responsible for making people aware of the problems caused by pesticides. She was a biologist and a writer who authored a book titled *Silent Spring*.



FIGURE 4. Rachel Carson. (Courtesy, U.S. Fish & Wildlife Service)

Gaylord Nelson

Wisconsin Senator Gaylord Nelson (1916–2005) is credited for creating Earth Day, which first took place on April 22, 1970. The intent of Earth Day was to bring environmental issues to the forefront of the national agenda. Earth Day was an important precursor to the formation of the Environmental Protection Agency (EPA).

GOVERNMENT POLICIES

Federal, state, and local governments are all responsible for developing and carrying out the laws related to wildlife conservation. Wildlife conservation is also important on the international level. The World Wildlife Fund is an international organization that raises money to fund wildlife conservation.

Federal Government

Many laws have been enacted at the federal level that address the conservation of wildlife.

National Park Service

In 1916 the National Park Service was established. The **National Park Service** is the federal government agency that manages 394 units in the National Parks System. Some of the units are 123 historic parks or sites, 74 monuments, 58 national parks, 25 battlefields or mili-

tary parks, 18 preserves, 18 recreation areas, 10 seashores, 4 parkways, 4 lakeshores, and 2 reserves.

Lacey Act

The **Lacey Act** is the 1900 law responsible for regulating the shipment of illegally killed animals. This act also made it illegal to trade protected wildlife on the international level.

Migratory Bird Conservation Act

The **Migratory Bird Conservation Act**, passed in 1929, was the first step in protecting migratory birds; however, it did not provide money to help protect the animals.

Migratory Bird Hunting Stamp Act

The **Migratory Bird Hunting Stamp Act**, passed in 1934, is a law requiring people planning to hunt migratory birds to buy special stamps. Since 1934, these stamps have raised \$1 billion for the protection of migratory birds.



BROADENING AWARENESS...

AMAZING FACTS: Overexploitation

Overexploitation is the overharvesting of a natural resource to a point of diminishing returns. There are numerous examples of overexploitation in human history.

The feathers of mammo birds in Hawaii were used to make cloaks for the kings. A single cloak could have the feathers of up to 70,000 birds. The mammo was hunted to extinction.

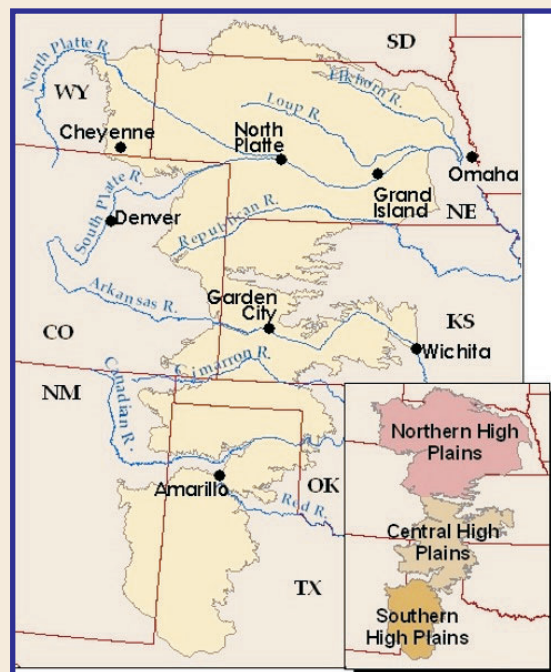
New Zealand was home to 10 species of the giant moa bird. All were hunted to extinction by the Maori, who settled the islands.

The northern bluefin tuna is currently being overexploited. Studies show that 7,500 tons can be harvested sustainably each year. Yet, harvests are amounting to 60,000 tons annually. At this rate, the population will soon collapse.

Haitians have relied on forests for fuel. Much of their country has been denuded of its forests for this purpose. As a result, fuel is scarcer, and deforested lands are subject to erosion and landslides.

Water from the Ogallala Aquifer, from which many people in the central United States draw their water, is being extracted at a rate exceeding the rate of replenishment. In time, this water source will grow more limited.

What could have been done or can be done in these situations?



The Ogallala Aquifer is a natural resource in danger of overexploitation. (Courtesy, U.S. Geological Survey)

Pittman-Robertson Act

The **Pittman-Robertson Act** is the 1937 law that raises money in the form of taxes on hunting equipment and ammunition. The federal government collects the taxes and returns matching money to the states.

Endangered Species Act

The **Endangered Species Act**, passed in 1966, is a law that has as its purpose the identification and management of rare, threatened, and endangered species of wildlife.

Wildlife Refuge System

The **Wildlife Refuge System** is a system of wildlife refuges across the United States established in 1966. The Wildlife Refuge System is a part of the U.S. Fish & Wildlife Service.

U.S. Forest Service

The **U.S. Forest Service** is the federal agency that manages the nation's 155 national forests and 20 national grasslands, which encompass 193 million acres, or 8.5 percent of the total land area in the United States. The public lands managed by the Forest Service are known collectively as the National Forest System. National forests are managed for logging, farming, mining, rangeland, oil and gas extraction, recreation, hunting, and fishing. The natural resources on these lands are some of the nation's greatest assets and have major economic, environmental, and social significance for all Americans.

State and Local Governments

State and local governments are also responsible for wildlife conservation. Conducting education programs, setting up wildlife sanctuaries, and maintaining parks and zoos are examples of how state and local governments can provide protection to wildlife.

Summary:



Two practices that protect natural resources are conservation and preservation. The wise use of our natural resources is called conservation. The choice not to use our natural resources is called preservation.

It wasn't until the late 1800s that people began to see the need for conservation of our natural resources. Many people have had an impact on the wildlife conservation movement over the past few centuries. Some of these people include John James Audubon, John Muir, Theodore and Franklin Roosevelt, Aldo Leopold, Gifford Pinchot, Hugh Bennett, Jay Darling, Rachel Carson, and Gaylord Nelson.

Federal, state, and local governments are responsible for developing and carrying out the laws related to wildlife conservation. The National Park Service, the Lacey Act, the Migratory Bird Conservation Act, the Migratory Bird Hunting Stamp Act,

the Pittman-Robertson Act, the Endangered Species Act, the Wildlife Refuge System, and the U.S. Forest Service are important actions taken by the federal government to promote conservation of natural resources.

Checking Your Knowledge:



1. How do conservation and preservation compare?
2. How has conservation changed since Europeans first settled North America?
3. What is the meaning of “exploitation”?
4. Who are some people who have had an impact on wildlife conservation?
5. What are some important actions taken by the federal government to promote conservation of natural resources?

Expanding Your Knowledge:



Are there any conservation areas near where you live? Likely there are some. Conduct research to determine the location of local conservation areas and what is being conserved.

Web Links:



Conservation

http://www.globio.org/glossopedia/article.aspx?art_id=20

Theodore Roosevelt: The Conservation of Natural Resources

http://usinfo.org/PUBS/LivingDoc_e/naturalresource.htm

Agricultural Career Profiles

<http://www.mycart.com/career-profiles>