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Competitive Exams: Forest Conservation

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The conservation movement also known as nature conservation is a political, social and, to some extent, scientific movement that seeks to protect natural resources including plant and animal species as well as their habitat for the future.

The early conservation movement included fisheries and wildlife management, water, soil conservation and sustainable forestry. The contemporary conservation movement has broadened from the early movement's emphasis on use of sustainable yield of natural resources and preservation of wilderness areas to include preservation of biodiversity. Some say the conservation movement is part of the broader and more far-reaching environmental movement, while others argue that they differ both in ideology and practice. Chiefly in the United States, conservation is seen as differing from environmentalism in that it aims to preserve natural resources expressly for their continued sustainable use by humans. In other parts of the world conservation is used more broadly to include the setting aside of natural areas and the active protection of wildlife for their inherent value, as much as for any value they may have for humans.

Early Worldwide Conservation Movement

The nascent conservation movement slowly developed in the 19th century, starting first in the scientific forestry methods pioneered by the Germans and the French in the 17th and 18th centuries. While continental Europe created the scientific methods later used in conservationist efforts, British India and the United States are credited with starting the conservation movement.

Foresters in India, often German, managed forests using early climate change theories (in America, see also, George Perkins Marsh) that Alexander von Humboldt developed in the mid 19th century, applied fire protection, and tried to keep the "house-hold" of nature. This was an early ecological idea, in order to preserve the growth of delicate teak trees. The same German foresters who headed the Forest Service of India, such as Dietrich Brandis and Berthold Ribbentrop, traveled back to Europe and taught at forestry schools in England (Cooper's Hill, later moved to Oxford) . These men brought with them the legislative and scientific knowledge of conservationism in British India back to Europe, where they distributed it to men such as Gifford Pinchot, which in turn helped bring European and British Indian methods to the United States.

Philosophy of Early American Conservation Movement

During the nineteenth century, Americans developed a deep and abiding passion for nature. The early evolution of the conservation movement began through both public and private recognition of the relationship between man and nature often reflected in the great literary and artistic works of the nineteenth century. Artists, such as Albert Beirstadt, painted powerful landscapes of the American West during the mid nineteenth century, which were incredibly popular images representative of the unique natural wonders of the American frontier. Likewise, in 1860, Frederic Edwin Church painted “Twilight in the Wilderness” which was an artistic masterpiece of the era that explored the growing importance of the American wilderness.

Many American writers also romanticized and focused upon nature as a subject matter. However, the most notable literary figure upon the early conservation movement proved to be Henry David Thoreau. Throughout his work, *Walden*, Thoreau detailed his experiences at the natural setting of Walden Pond and his deep appreciation for nature. In one instance, he described a deep grief for a tree that was cut down. Thoreau went on to bemoan the lack of reverence for the natural world: “I would that our farmers when they cut down a forest felt some of that awe which the old Romans did when they came to thin, or let in the light to, a consecrated grove” As he states in *Walden*, Thoreau “was interested in the preservation” of nature. In 1860, Henry David Thoreau delivered a speech to the Middlesex Agricultural Society in Massachusetts; the speech, entitled “The Succession of Forest Trees” explored forest ecology and encouraged the agricultural community to plant trees. This speech became one of Thoreau’s “most influential ecological contributions to conservationist thought”

The early conservation movement in the United States was also successful due to the hard work of John Muir. Muir was a former carriage worker who was nearly blinded by an accident at work. After almost losing his sight, Muir decided to see “America’s natural wonders” Based upon his travels throughout Yosemite and the Sierra Nevada Mountains, Muir wrote a collection of articles for *Century* magazine, entitled “Studies in the Sierra” In 1892, John Muir joined forces with the editor of “*Century*” Magazine, Robert Underwood Johnson, to establish the Sierra Club, an organization designed to protect America’s natural resources and public parks. Early Americans recognized the importance of natural resources and the necessity of wilderness preservation for sustained yield harvesting of natural resources. In essence, the preservation of wilderness and landscapes were recognized as critical for future generations and their continued subsistence in a healthy environment. The foundation of the conservation movement is grounded during this period between 1850 and 1920. Ultimately, historical trends and cultural mind-sets were united, which influenced ideas and policy towards the early history of the conservation movement in the United States.

Early American Conservation Movement

America had its own conservation movement in the 19th century, most often characterized by George Perkins Marsh, author of *Man and Nature*. The expedition into

northwest Wyoming in 1871 led by F. V. Hayden and accompanied by photographer William Henry Jackson provided the imagery needed to substantiate rumors about the grandeur of the Yellowstone region, and resulted in the creation of Yellowstone National Park, the world's first, in 1872. Travels by later US President Theodore Roosevelt through the region around Yellowstone provided the impetus for the creation of the Yellowstone Timberland Reserve in 1891. The largest section of the reserve was later renamed Shoshone National Forest, and it is the oldest National Forest in the US. But it was not until 1898 when German forester Dr. Carl A. Schenck, on the Biltmore Estate, and Cornell University founded the first two forestry schools, both run by Germans. Bernard Fernow, founder of the forestry schools at Cornell and the University of Toronto, was originally from Prussia (Germany), and he honed his knowledge from Germans who pioneered forestry in India. He introduced Gifford Pinchot, the "father of American forestry" to Brandis and Ribbentrop in Europe. From these men, Pinchot learned the skills and legislative patterns he would later apply to America. Pinchot, in his memoir history *Breaking New Ground*, credited Brandis especially with helping to form America's conservation laws.

"Conservation means the greatest good to the greatest number for the longest time. Pinchot"

Pinchot wrote that the principles of conservation were:

1. Development: "The use of the natural resources now existing on this continent for the benefit of the people who live here now. There may be just as much waste in neglecting the development and use of certain natural resources as there is in their destruction. The development of our natural resources and the fullest use of them for the present generation is the first duty of this generation."
2. Conservation: "The prevention of waste in all other directions is a simple matter of good business. The first duty of the human race is to control the earth it lives upon."
3. Protection of the public interests: "The natural resources must be developed and preserved for the benefit of the many, and not merely for the profit of a few."

History

In 1891, Congress passed the Forest Reserve Act, which allowed the President of the United States to set aside forest lands on public domain. A decade after the Forest Reserve Act, presidents Harrison, Cleveland, and McKinley had transferred approximately 50,000, 000 acres (200,000 km²) into the forest reserve system. However, President Theodore Roosevelt is credited with the institutionalization of the conservation movement in the United States.

For President Roosevelt, the conservation movement was not about the preservation of nature simply for nature itself. After his experiences traveling as an enthusiastic, zealous hunter, Roosevelt became convinced of "the need for measures to protect the game species from further destruction and eventual extinction" President Roosevelt

recognized the necessity of carefully managing America's natural resources. According to Roosevelt, "We are prone to speak of the resources of this country as inexhaustible; this is not so" Nonetheless, Roosevelt believed that conservation of America's natural resources was for the successful management and continued sustain yield harvesting of these resources in the future for the benefit and enjoyment of the American people. Roosevelt took several major steps to further his conservation goals. In 1902, Roosevelt signed the National Reclamation Act, which allowed for the management and settlement of a large tract of barren land. Then, in 1905, President Roosevelt helped to create the United States Forest Service and then appointed respected forester, Gifford Pinchot, as the first head of the agency. By the end of his presidency, Theodore Roosevelt, in partnership with Gifford Pinchot, had successfully increased the number of national parks as well as added area to existing forest reserves.

Despite these advancements, the American conservation movement did have difficulties. In the early 1900s the conservation movement in America was split into two main groups: Conservationists, like Pinchot and Roosevelt, who were utilitarian foresters and natural rights advocates who wanted to protect forests "for the greater good for the greatest length" and preservationists, such as John Muir, the founder of the Sierra Club. Important differences separated conservationists like Roosevelt and Pinchot from preservationists like Muir. As a preservationist, Muir envisioned the maintenance of pristine natural environments where any development was banned. Whereas conservationists wanted regulated use of forest lands for both public activities and commercial endeavors, preservationists wanted forest to be preserved for natural beauty, scientific study and recreation. The differences continue to the modern era, with sustainable harvest and multiple-use the major focus of the US Forest Service and recreation emphasized by the National Park Service.

Legislation lobbied by hunters

Hunters have worked closely with local and federal governments to enact legislation to protect wildlife habitats. The following examples represent hunter-advocated legislation enacted to generate funds for preserving and establishing habitats (Hunters Rule) .

The Ontario Federation of Anglers and Hunters successfully lobbied to prevent cuts in funding for the Community Fisheries and Wildlife Involvement Program by 50 % .

Pittman-Robertson Wildlife Restoration Act of 1937

In 1937, hunters successfully lobbied Congress to pass the Pittman-Robertson Wildlife Restoration Act, which placed an 11 % tax on all hunting equipment. This self-imposed tax now generates over \$ 700 million each year and is used exclusively to establish, restore and protect wildlife habitats. It is named for Nevada Senator Key Pittman and Virginia Congressman Absalom Willis Robertson.

Federal Duck Stamp Program

On March 16, 1934 President Roosevelt signed the Migratory Bird Hunting Stamp Act, which requires an annual stamp purchase by all hunters over the age of sixteen. The stamps are created on behalf of the program by the US Postal Service and depict wildlife artwork chosen through an annual contest. They play an important role in habitat conservation because 98 % of all funds generated by their sale go directly toward the purchase or lease of wetland habitat for protection in the National Wildlife Refuge System. In addition to waterfowl, it is estimated that one third of the nation's endangered species seek food and shelter in areas protected using Duck Stamp funds. Since 1934, the sale of Federal Duck Stamps has generated \$ 670M and helped to purchase or lease 5.2 million acres (21,000 km²) of habitat. The stamps serve as a license to hunt migratory birds, an entrance pass for all National Wildlife Refuge areas and are also considered collectors items often purchased for aesthetic reasons outside of the hunting and birding communities. Although non-hunters buy a significant number of Duck Stamps, 87 % of their sales are contributed to hunters. Distribution of funds is managed by The Migratory Bird Conservation Commission (MBCC) .

Conservation Organizations Founded by Hunters

There are a number of organizations founded by hunters and by those interested in preserving wildlife populations and habitats. One of the oldest and most well-known organizations is Ducks Unlimited. Another internationally recognized hunters' conservation organization is Safari Club International.

Modern American Conservation Movement

Ultimately, the modern conservation movement in the United States continues to strive for the delicate balance between the successful management of society's industrial progress while still preserving the integrity of the natural environment that sustains humanity. In a large part, today's conservation movement in the United States is a joint effort of individuals, grassroots organizations, nongovernmental organizations, learning institutions, and various government agencies, such as the United States Forest Service.

For the modern era, the US Forest Service has noted three important aspects of the conservation movement: The climate change, water issues, and the education of the public on conservation of the natural environment, especially among children. In regards to climate change, the US Forest Service has undertaken a twenty year research project to develop ways to counteract issues surrounding climate change. However, some small steps have been taken regarding climate change. As rising greenhouse gases contribute to global warming, reforestation projects are seeking to counteract rising carbon emissions. In Oregon, the Department of Forestry has developed such a small reforestation program in which landowners can lease their land for one hundred years to grow trees. In turn, these trees offset carbon emissions from power companies. Moreover, reforestation projects have other benefits: Reforested areas serve as a natural filter of agricultural fertilizers even as new wildlife habitats are created. Reforested land can also contribute to the local economy as rural landowners also distribute hunting leases during the years between harvests.

In essence, projects, such as reforestation, create a viable market of eco-friendly services mutually beneficial to landowners, businesses and society, and most importantly, the environment. Nonetheless, such creative plans will be necessary in the near future as the United States struggles to maintain a positive balance between society and the finite natural resources of the nation. Ultimately, through dedicated research, eco-friendly practices of land management, and efforts to educate the public regarding the necessity of conservation, those individuals dedicated to American conservation seek to preserve the nation's natural resources.

Problem Areas

Deforestation and overpopulation are issues affecting all regions of the world. The consequent destruction of wildlife habitat has prompted the creation of conservation groups in other countries, some founded by local hunters who have witnessed declining wildlife populations first hand. Also, it was highly important for the conservation movement to solve problems of living conditions in the cities and the overpopulation of such places.

Boreal Forest and Arctic

The idea of incentive conservation is a modern one but its practice has clearly defended some of the sub Arctic wildernesses and the wildlife in those regions for thousands of years, especially by indigenous peoples such as the Evenk, Yakut, Sami, Inuit and Cree. The fur trade and hunting by these peoples have preserved these regions for thousands of years. Ironically, the pressure now upon them comes from non-renewable resources such as oil, sometimes to make synthetic clothing which is advocated as a humane substitute for fur (See Raccoon Dog for case study of the conservation of an animal through fur trade.) . Similarly, in the case of the beaver, hunting and fur trade were thought to bring about the animal's demise, when in fact they were an integral part of its conservation. For many years children's books stated and still do, that the decline in the beaver population was due to the fur trade. In reality however, the decline in beaver numbers was because of habitat destruction and deforestation, as well as its continued persecution as a pest (it causes flooding) . In Cree lands however, where the population valued the animal for meat and fur, it continued to thrive. The Inuit defend their relationship with the seal in response to outside critics.

In other regions of the Arctic, the Sami in Scandinavia, Russia and the Evenk in Siberia, indigenous peoples and their traditional hunting and fur trade are making a clear stand against the more "modern" resource exploitation. In Canada the Boreal Forest Conservation Framework is a multi-stakeholder initiative, which includes the Aboriginal peoples in the Canadian north.

Eighty percent of the worlds furs are produced in these regions either through farming by groups such as SAGA or 22 % by indigenous peoples. Fur and hunting it appears, as indeed Greenpeace are finding out in the Sami forests, is an economic barrier to development, deforestation etc. The WWF has established areas of traditional hunting

and animal use in Siberia and these sable reserves are clearly based on the principles of “incentive conservation”

Latin America (Bolivia)

The Izoceno-Guarani of Santa Cruz, Bolivia is a tribe of hunters who were influential in establishing the Capitania del Alto y Bajo Isoso (CABI) . CABI promotes economic growth and survival of the Izoceno people while discouraging the rapid destruction of habitat within Bolivia’s Gran Chaco. They are responsible for the creation of the 34,000 square kilometre Kaa-Iya del Gran Chaco National Park and Integrated Management Area (KINP) . The KINP protects the most biodiverse portion of the Gran Chaco, an ecoregion shared with Argentina, Paraguay and Brazil. In 1996, the Wildlife Conservation Society joined forces with CABI to institute wildlife and hunting monitoring programs in 23 Izoceno communities. The partnership combines traditional beliefs and local knowledge with the political and administrative tools needed to effectively manage habitats. The programs rely solely on voluntary participation by local hunters who perform self-monitoring techniques and keep records of their hunts. The information obtained by the hunters participating in the program has provided CABI with important data required to make educated decisions about the use of the land. Hunters have been willing participants in this program because of pride in their traditional activities, encouragement by their communities and expectations of benefits to the area.

Because of their spiritual beliefs, many hunters indigenous to this area used conservative approaches to hunting even before population declines were noted. Common self-imposed conservation techniques followed by this tribe include seasonal rotation of hunting areas; not hunting young animals; not hunting excessively beyond the needs of ones family; not hunting vulnerable species; and the substitution of other activities during certain seasons (fishing/farming) .

Africa (Botswana)

In order to discourage illegal South African hunting parties and ensure future local use and sustainability, indigenous hunters in Botswana began lobbying for and implementing conservation practices in the 1960s. The Fauna Preservation Society of Ngamiland (FPS) was formed in 1962 by the husband and wife team: Robert Kay and June Kay, environmentalists working in conjunction with the Batawana tribes to preserve wildlife habitat.

The FPS promotes habitat conservation and provides local education for preservation of wildlife. Conservation initiatives were met with strong opposition from the Botswana government because of the monies tied to big-game hunting. In 1963, BaTawanga Chiefs and tribal hunter/adventurers in conjunction with the FPS founded Moremi National Park and Wildlife Refuge, the first area to be set aside by tribal people rather than governmental forces. Moremi National Park is home to a variety of wildlife, including lions, giraffes, elephants, buffalo, zebra, cheetahs and antelope, and covers an

area of 3,000 square kilometers. Most of the groups involved with establishing this protected land were involved with hunting and were motivated by their personal observations of declining wildlife and habitat.

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