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Modern Concepts of Nature Protection in the U.S.

Topics, organizations, and projects

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Introduction

The United States "vast in geographical extent, it harbors the largest number of known species of any temperate country. It contains the widest spread of biome types, ranging from rain forest to Arctic tundra and from coral reefs to great lakes, of any country in the world."¹

Rich in land and biota, this country contains a large variety of species that have only partially been discovered. Although a variety of animals and plants are already considered to be endangered, others still remain to be detected. A major goal of conservation policy is to ensure that fauna and flora have a habitat in which to thrive and develop. Numerous organizations focusing on conservation issues exist in order to achieve this goal. This policy paper considers the following questions: Which non-governmental and conservation organizations exist and how are they acting to preserve the natural habitat? What are the different concepts of nature protection and examples of conservation activities? How are political policies linked to conservation issues? Possible answers to these questions will be developed in this paper.

1. Which topics are currently being discussed in the nature protection debate in the U.S.?

1.1. Bill Clinton: making politics and saving the environment

President Theodore Roosevelt established the National Antiquities Act in 1906, which prohibited the destruction of land. This law enables the president of the United States to designate federal land as a national monument, without the consent of the Congress.

Thirteen presidents from both the Democratic and Republican parties have implemented this act since its establishment. Two examples include the protection of the Grand Canyon National Park and the Statue of Liberty National Monument.²

"Mr. Clinton has used the antiquated law 10 times since taking office to restrict public use and development on more than 3 million acres of federal property..."³ His first use of this regulation was in 1996, when he declared the 1.2 million-acre Grand-Staircase Escalante Monument in Utah to be a National Monument.⁴

On July 18, 2000, the Senate came close to repealing the National Antiquities Act: A majority of only 50 to 49 votes allowed the president to maintain the right to designate land as a national monument.⁵

Republican lawmakers, who attacked Bill Clinton's frequent implementation of the National Antiquities Act, claimed that this decision was unrelated to real environmental concerns, but was instead politically motivated.⁶

¹ www.tnc.org/news/magazine/may-jun00/2ndstory1.html

² National Parks and Conservation Association 1999 Annual Report. P. 8.

³ "Senate Fails to Rein in Clinton," Hudson, Audrey, The Washington Times. 07/19/00.

⁴ Ibid.

⁵ "Senate Defeats Land Measure," The Washington Post, 07/19/00.

⁶ "Senate Fails to Rein in Clinton," Hudson, Audrey, The Washington Times. 07/19/00.

Clinton further demonstrated his support for environmental issues in the Interior spending bill of 2000. This bill includes the provision to boost the funding for the U.S. Fish and Wildlife Service, the National Park Service, the Forest Service, and the Bureau of Land Management up to \$258 million.⁷ These examples underscore how political decisions have an immense impact on creating and enacting environmental protection policy.

1.2. Maintaining the survival of flora and fauna

According to The Nature Conservancy (TNC), approximately one-third of the species in the U.S. are considered to be endangered.⁸ Efforts to save threatened species include listing them in maps, analyzing the factors that lead to extinction, and creating ecosystems in which endangered biota (this term means flora and fauna) can have a safe habitat. Creating these ecosystems has the double benefit of maintaining the heritage of flora and fauna that are endangered as well as those that are not endangered. Referring to The Nature Conservancy, 538 species have become extinct or are missing in the U.S. John Sawhill, former president of TNC, asked accordingly: "But who knows what benefits other plant species, now extinct, might have held?"⁹ According to Sawhill, the loss of these natural resources lowers the quality and the life expectancy not only of flora and fauna, but also of human beings. A habitat that fails to provide a healthy environment for biota is also not beneficial for humans. Thus, conserving landscapes to give what The Nature Conservancy describes as "America's 204,700 species"¹⁰ a place to flourish is also a contribution to the life of humans and their essential interaction with nature. Referring to a study from World Wildlife Fund (WWF) and the Conservation Biology Institute (CBI),¹¹ the area currently reserved for saving animals and plants from extinction is also far too small. According to their research, only 5 percent of land in the U.S. is protected as national parks, wilderness areas and monuments, and another 5 percent is safeguarded as wildlife refuges and state parks. Providing more areas, sites, and habitats is therefore a crucial topic of nature conservation, especially for the organizations that are involved in nature conservation. According to The World Conservation Union (IUCN), a protected area is "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means."¹² Which groups are currently active in the U.S., which are involved in conservation issues, and provide protected areas at the same time?

2. Which national organizations influence the debate regarding nature issues?

2.1. The Nature Conservancy (TNC)

Founded by ecologists in 1951, The Nature Conservancy now has more than 1 million members and calls itself the "world's leading private, international conservation group" caring for "1,300

⁷ Ibid.

⁸ consci.tnc.org/library/pubs/96report/priority.html

⁹ www.tnc.org/news/magazine/may-jun00/president.html

¹⁰ Ibid.

¹¹ www.worldwildlife.org/news/headline.cfm?newsid=54

¹² www.panda.org/resources/publications/sustainability/indigenous2/intro.html

preserves -- the largest system of private nature sanctuaries in the world."¹³ TNC focuses primarily on maintaining biodiversity through safeguarding habitat. About three thousand employees are working toward this aim of the conservation group, which has an annual revenue of \$780 million.¹⁴

One of the recent successes of this organization was the purchase of 286 square miles¹⁵ along the St. John River in Maine. This territory will be left untouched by human beings and will be the habitat of plants and animals. The Furbish lousewort, a plant that belongs to the snapdragon family, is endemic to the region.

TNC, which is represented in all 50 U.S. states and has the task of maintaining biodiversity throughout the country, is linked with the Maryland Heritage and the Biodiversity Conservation Program. The heritage program provides scientific information for TNC, which serves as the basis for deciding whether and how an area should be protected. But TNC is not only connected with scientists: It also works together with government agencies, landowners, corporations, and local organizations. The common goal of these various groups is to preserve the ecosystem and to establish natural sites, such as forests, parks, and refuges. TNC's priorities for conservation are particularly grounded on:

"1) the conservation status of species and ecosystems; 2) the threats to these resources; and 3) the opportunity to maximize the conservation benefit of our actions."¹⁶

According to TNC, 538¹⁷ plant and animal species are extinct or missing in the U.S. and the number is increasing. In an effort to reverse this trend, TNC appeals to the public to become aware of their attitudes regarding nature. By educating the public through their publications, TNC hopes to raise the public consciousness of concepts concerning nature protection. Furthermore, as TNC argues, people's involvement in nature conservation has led to an increased life expectancy of several animals and plants, but it could also lead to a new understanding and awareness for natural heritage in general. Therefore, as people treat their own environment more carefully, part of the work of TNC - such as preserving nature - will likewise be fulfilled.

The former president of TNC, John Sawhill, proudly declared: "All in all, The Nature Conservancy took direct action to bring more than 900,000 acres of biologically significant land in the United States into conservation ownership or management. That brings the Conservancy's 48-year total to well over 11 million acres, an area larger than Switzerland."¹⁸

2.2. World Wildlife Fund (WWF)

A further conservation organization is the World Wildlife Fund (WWF), which supports various initiatives:

- Fifteen women¹⁹ belong to the Women and Conservation Committee, which was founded two years ago to encourage women in developing countries to become self-reliant and independent in their work for the environment.

¹³ The Nature Conservancy. (undated brochure published by TNC).

¹⁴ nature.org/frames/index.html

¹⁵ www.tnc.org/success/index.html

¹⁶ consci.tnc.org/library/pubs/96report/priority.html

¹⁷ www.tnc.org/news/magazine/may-jun00/president.html

¹⁸ Sawhill, John C.: "Make No Little Plans." In: The Nature Conservancy. Annual Report Fiscal Year 1999. P. 3.

¹⁹ World Wildlife Fund 1999 Annual Report. P. 48.

- A guide published by WWF, "Biodiversity Basics", is designed to educate U.S. pupils about biodiversity and is distributed at educational institutions.²⁰

- WWF's Conservation Action Network (CAN) received support from 12,000 people from 120 countries for its internet-based conservation campaigns.²¹

Currently, one out of every 225 Americans belongs to WWF,²² whose revenue in 1999 exceeded \$100 million.²³

WWF has three main focuses of work:

"(1) saving key habitats, including some 200 of the world's most biologically distinctive and important ecoregions; (2) safeguarding those critically endangered species that cannot be saved by habitat protection alone; and (3) addressing global threats -- unsustainable timber trade, overfishing, toxic pollution, and global warming -- that imperil all of the Earth's wildlife and wildlands."²⁴

2.3. National Parks and Conservation Association (NPCA)

The National Park Association was founded in 1919 by conservationists who aimed to protect the national park system from private and commercial interests. In 1970, the organization was renamed as the National Parks and Conservation Association (NPCA). This organization is a private and non-profit association. Roughly 500,000 members are currently registered at NPCA. Its aim is to safeguard, maintain, and heighten the National Park System. In the U.S., NPCA counts as one of the five largest nature protection associations.²⁵

According to the NPCA, the "...park system contains a gallery of American treasures, the finest of nature and our cultural past, protected and preserved for our time and, hopefully, for all time."²⁶ One main purpose of the NPCA is to preserve biota, particularly in national parks. The following four areas of NPCA's activities are even more important:²⁷

1. Park Resource Protection. NPCA enacted the 'Park Policy Agenda', which aims to improve the scientific management of parks and to increase funding from Congress for the preservation of parks.

2. Visitor Experience. Activities of visitors to national parks are diverse. They must be limited, especially if they disturb the ecological balance in the park. Therefore, supporting alternative transport systems, such as installing a shuttle system in a national park and banning the use of snowmobiles, is one of their goals.

3. Park Funding and Management. The NPCA believes firmly that the national parks are underfunded. Therefore, it advocates partnerships with companies, landowners, and politicians to ensure financial support. In 1998, the NPCA invented a 'business plan' for establishing the

²⁰ Ibid., P. 50.

²¹ Ibid., P. 51.

²² Ibid., P. 52.

²³ Ibid., P. 55.

²⁴ A Call to Action. The Living Planet Campaign. April 1999. Washington DC. (A brochure published by WWF). P. 3.

²⁵ Collins, Kevin: „The National Parks and Conservation Association.“ In: Environment. Volume 39. Number 3. April 1997. Washington DC. P. 44.

²⁶ Visiting the National Parks. How to have a quality experience. Washington DC. (undated brochure published by NPCA).

²⁷ National Parks Conservation Association 1999 Annual Report. P. 6.

income and expenditures for national parks and to ensure the financial support of protected areas as costs continue to rise.

4. Public Support. Knowing that national parks are considered a main attraction for people, the NPCA is seeking to inform visitors, politicians, and the media about enhancing the national parks via educational programs and alliances. In 1916, the National Park Service (NPS),²⁸ an agency of the U.S. Department of the Interior, was established to manage protected areas, such as national parks and monuments. This federal bureau is working in cooperation with the NPCA. Its aim is "to conserve the scenery and the natural and historic objects and the wildlife therein".²⁹

3. Projects and examples for nature protection:

3.1. National Parks

The popularity of national parks in the U.S. is astounding: In 2000 approximately 300 million people³⁰ will visit protected areas. More and more people are coming each year to experience what the NPCA describes as one of "over 370 individual units covering 80 million acres, preserving places and events that reflect the sweep of the United States' land, life and history."³¹ The purpose of creating a national park is to have a sheltered place for culture, history, and nature, to offer visitors an opportunity to explore American heritage, and to provide vacation opportunities.

Yellowstone, the first national park in the world, was founded in 1872.³² This was the beginning of a new era. Never before had public land been put under protection. Currently, 378 national parks³³ have been created in the United States and the National Parks and Conservation Association (NPCA) is seeking to designate 15 more sites as national parks. Ten of them are planned to be new national parks, while five others would enlarge previously existing national parks. In the publication, "Parks in the 21st Century Initiative,"³⁴ NPCA underscores its goal to achieve the recognition of these 15 sites as national parks. Assuming that the U.S. Congress will support their aim, the following areas will be considered national parks:³⁵

- Kalaupapa additions (HI) Hawaii,
- Craters of the Moon additions (ID) Idaho,
- Great Sand Dunes additions (CO) Colorado,
- Canyonlands completion (UT) Utah and
- Petrified Forest additions (AZ) Arizona

²⁸ www.nps.gov/legacy/legacy.html

²⁹ Ibid.

³⁰ www.npca.org/exploreparks/newparks.html

³¹ Visiting the National Parks. How to have a quality experience. Washington DC. (undated brochure published by NPCA).

³² Ibid.

³³ Watson, William G./Kiernan, Thomas C.: Letter from Chair and President. National Parks Conservation Association 1999 Annual Report. P. 3.

³⁴ www.earthvision.net/ColdFusion/News_Page1.cfm?NewsID=11323

³⁵ Ibid.

The following new parks (new units³⁶) are under consideration:

- “Designation of Organ Pipe Cactus National Monument and the adjacent Cabeza Prieta National Wildlife Refuge and Barry M. Goldwater Air Force Range as a Sonoran national park/preserve in Arizona would create one of the largest national parks...” and “...protect nationally significant cultural and recreational resources, as well as an area of world-class biological diversity.
- Inclusion of Gullah/Geechee sites in South Carolina and Georgia in the National Park System will recognize the unique culture of enslaved West Africans and their descendants in the southeastern United States.
- Establishment of a World War II national historic park that includes North Field on Tinian Island in the Northern Marianas (from which the Enola Gay and Boxcar aircraft took off to drop atomic bombs on Hiroshima and Nagasaki) will honor the memory of the Allied forces and island inhabitants who lost their lives in the Pacific and helped bring an end to World War II.
- Designation of 200,000 acres of the magnificent Gaviota Coast north of Santa Barbara in California as a national seashore will protect what scientists describe as the ecological meeting place of northern and southern California as well as a concentration of ancient Chumash tribal village sites.
- Designation of the 52-mile Erie Canalway in New York State as a national heritage corridor will protect historic sites, provide wonderful recreational opportunities, and shed light upon the role this outstanding canal system played in American history.
- Protection of Bioluminescent Bay in Puerto Rico as a unit of the National Park System will help ensure the survival of the bay's abundant, tiny marine organisms—dinoflagellates—which emits a spectacular radiance that glows in the dark and is visible miles away.
- Establishment of the high dunes in the Loess Hills of western Iowa as a unit of the National Park System will protect one of only two such remnants of wind-driven silt deposits in the world.
- Designation of the site of the 1864 Sand Creek massacre in southeastern Colorado as a national historic site will protect this area. Dozens of unarmed Cheyenne and Arapaho people were tragically killed here by Colorado militia, marking a key event in western American history.
- In the Shenandoah Valley Battlefields National Historic District of western Virginia, the designation of the Cedar Creek area as a national battlefield park and cooperative state/ federal management of other areas will greatly...” encourage the public to visit the “...Civil War sites in the valley.
- Designation of the W.E.B. Du Bois Boyhood Homesite National Historic Landmark in southwestern Massachusetts as a national historic site will at last create a national park unit as a tribute to one of this country's leading African American proponents of civil rights.”

³⁶ www.npca.org/exploreparks/newparks.html

For restoration of the national parks, it is estimated by the National Park Service (NPS) that \$6 billion³⁷ will have to be spent. Traffic jams, ecological damage, and "nonnative invasive plant species" destroy the parks; they therefore have to be restored.

Also, visitors pursue various activities in the parks, some of which have negative effects. For example, driving in a car through a protected area results in pollution. Traffic congestion disturbs the wildlife and the recreation of the visitors.

In 1999, Bill Richardson, Secretary of Energy, established the Green Energy Parks Initiative in tandem with the U.S. Department of the Interior.³⁸ The task of this initiative in the national parks is to save energy and associated costs in order to spend the money saved on improvements and sustainable developments of the parks, which are under the custody of the NPS.

In the beginning, the aim of the NPS was to protect large areas of natural habitat. Its task subsequently developed into the preservation of cultural, historic, and archaeologically important sites.

In 1933, President Franklin Roosevelt added some battlefields and ancient monuments to the national park system, something which had hardly ever been done before.³⁹

The most visited national park is the Great Smoky Mountains National Park, with 10 million visitors each year.⁴⁰ As all national parks in the U.S., it is managed through the National Park Service (NPS). This organization is part of the U.S. Department of the Interior. Its task is to maintain both the natural integrity of the national parks and to make the parks accessible and enjoyable for visitors.

The following statistics provide more information about the Great Smoky Mountains National Park: The elevations in the Park, covering 800 square miles with 95 percent of it forested, vary from 800 to 6,643 feet.⁴¹ The park, which is open all year and does not require an admission fee, is located in the states of North Carolina and Tennessee. The park is most frequented in the months from June to August and in October as visitors spend approximately four hours⁴² in the park. Cooperating with the National Park Service, Friends of the Great Smoky Mountains National Park have financially supported the park since 1993.⁴³ With their help, it is possible to preserve the park. A variety of activities are offered to provide recreational value to visitors. "Camping, hiking, picnicking, sightseeing, fishing, auto touring, horseback riding, nature viewing, and photographic opportunities,"⁴⁴ as well as educational programs such as exhibitions, talks and workshops, and special events such as the Mountain Life Festival and the Old Timers' Day successfully draw large crowds of visitors.

The Great Smoky Mountains National Park is not only a national park, but also an International Biosphere Reserve. What are the reasons for also designating it as a Biosphere Reserve?

³⁷ www.earthvision.net/ColdFusion/News_Page1.cfm?NewsID=11292

³⁸ www.earthvision.net/ColdFusion/News_Page1.cfm?NewsID=11259

³⁹ www.npca.org/exploreparks/newparks.html

⁴⁰ Williams, Ted: "Clinton's Last Stand." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 56.

⁴¹ www.nps.gov/grsm/

⁴² Williams, Ted: "Clinton's Last Stand." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 56.

⁴³ www.nps.gov/grsm/

⁴⁴ www.nps.gov/grsm/

First, it provides a habitat for an immense variety of species: "about 1,600 species of flowering plants, 60 species of mammals, and 230 species of birds."⁴⁵ Also, 130 types of trees⁴⁶ exist in the Great Smoky Mountains National Park.

Daniel Janzen, a tropical ecologist, established the "All Taxa Biodiversity Inventory".⁴⁷ Sponsored by the organization, "Discover Life in America", this allowed for the first inventory of wild habitat of all national parks. The Smoky Park, according to the author and photographer Gary Braasch, is especially affected by airborne ozone, acid precipitation, and tree-killing insects. Therefore, it is necessary that the park receives special care. The following statement about the Great Smoky Mountains National Park indicates the immense variety of biodiversity it has:

"The inventory's organizers estimate that 40,000 to 70,000 multicellular species may occur within the park -- slightly less than half of all North American species."⁴⁸ Keeping this in mind, this park needs to be protected from environmental pollution and to be saved for further generations.

3.2. National Wildlife Refuges

In the United States, there are over 520 National Wildlife Refuges.⁴⁹ From October 8-14, 2000, the National Wildlife Refuge Week will be celebrated throughout the U.S. Visitors who are at a refuge at this time of the year will have a lot of opportunities to enjoy the wildlife: watching birds, fishing, hunting, guided tours through the refuge, and educational programs are only some of the activities which are being planned. An example for a wildlife refuge is in the state of Virginia. Migratory birds are protected and have had a protected habitat in Chincoteague, Virginia since 1943.⁵⁰ This National Wildlife Refuge belongs to Assateague Island, a barrier island divided between the states of Maryland and Virginia. Managed by the U.S. Fish and Wildlife Service, the Refuge offers different activities: guided bus tours and walks, audiovisual shows about the wildlife. Also, opportunities to watch birds and enjoy nature are provided. An example of one of the threatened birds is the Piping plover, which nests at Assateague Island. Every year, a special event takes place in May and October at the Wildlife Refuge: the International Migratory Bird Week.

3.3. Biosphere Reserves

Preserving biodiversity and ecosystems is one of the aims of the biosphere reserves. The other two functions include forming an alliance between environment and development, as well as an international and scientifically acting network.⁵¹ Creating appropriate zones around these sites is also important for their protection. A biosphere reserve usually consists of a core area in the

⁴⁵ Braasch, Gary: "All Things Great & Even Microscopic." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 55-56.

⁴⁶ www.americanparknetwork.com/reading/index.html

⁴⁷ Braasch, Gary: "All Things Great & Even Microscopic." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 56.

⁴⁸ Ibid., P. 59.

⁴⁹ bluegoose.arw.r9.fws.gov/NWRSFiles/General/NWRSWeek/NWRS_Week.html

⁵⁰ Assateague Island. Official Map and Guide. (undated brochure published by the National Park Service).

⁵¹ Batisse, Michel: „Biosphere Reserves: A Challenge for Biodiversity Conservation and Regional Development.“ In: Environment. Volume 39. Number 5. June 1997. Washington DC. P. 12.

center. It is then surrounded by a buffer zone, whereby the last circle of the buffer zone serves as a transition area to the land outside the biosphere reserve.

In 1995, the General Conference of UNESCO introduced the Statutory Framework for the World Network of Biosphere Reserves. This framework contains the specifications for what makes an area into a Biosphere Reserve as defined by three functional criteria, including the zoning pattern, the cooperative approach, and the fulfilling of specified principles before a site can enter into the World Network of Biosphere Reserves. In an effort to maintain the sites, as well as to improve them, a plan was created to exclude sites that no longer fulfill the criteria. This incentive system seeks to ensure that the reserves are well maintained in order to minimize the risk of being dismissed from the World Network.⁵²

An international Biosphere Reserve, the Congaree Swamp National Monument, is located in South Carolina, in the county of Richland. Designated by the Congress as a wilderness area, this reserve is famous for its “largest intact tract of old-growth floodplain forest in North America.”⁵³

3.4. Forests

According to the scientists Roger A. Sedjo and Daniel Botkin, 40 percent of the surface of the earth was covered by forests and woodlands in 1990.⁵⁴ However, the deforestation process that has occurred over several years has had devastating results on the environment: The warming of the earth, extinction of plants and species, and the decline of habitat for biota. To stop this damaging process, it is important to protect forests as a refuge for plants and animals.

Forests keep the air clean while regulating the climate. Thus, they “play a key role in the Earth's biosphere, affecting the atmosphere, the water cycle, the carbon cycle and other biogeochemical cycles, and erosion.”⁵⁵

Many people argue that there is a direct link between the destruction of forests and climate change. Overexploitation leads not only to the loss of animals and nature, but also results in the non-production of oxygen and an overabundance of carbon dioxide.

WWF has started the “Forests for Life Campaign”⁵⁶ which consists of:

1. working together with companies and citizens to deal with the timber trade in an environmentally responsible manner.
2. cooperation with governments and agencies to create protected areas in which “at least 10 percent of each different type of forest found in every country”⁵⁷ is preserved.

Especially during the summertime, national forests and parks are vulnerable to drying from heat. Lightning is the most frequent cause of forest fires. But human influence also contributes to conditions that create fires, such as the clear-cutting of forests. This measure creates conditions for the wind and sun to dry the landscape into fuel that is easily inflamed by sparks from machinery. As of August 2000, according to The Washington Post, 65 major fires occurred nationwide and 4 million acres of forest had already burned down. The cost for measures to extinguish the fires is high; \$250 million have already been spent in the summer of 2000.

⁵² Ibid., P. 31.

⁵³ www.nps.gov/cosw/home.htm

⁵⁴ Sedjo, Roger A./Botkin, Daniel: „Using Forest Plantations to Spare Natural Forests.“ In: Environment. Volume 39. Number 10. December 1997. Washington DC. P. 15.

⁵⁵ Sedjo, Roger A./Botkin, Daniel: „Using Forest Plantations to Spare Natural Forests.“ In: Environment. Volume 39. Number 10. December 1997. Washington DC. P. 15.

⁵⁶ www.worldwildlife.org/forests/forest.cfm

⁵⁷ World Wildlife Fund 1999 Annual Report. Washington DC.

On the subject of protecting forests, the WWF agrees with President Bill Clinton's plan "to permanently protect from road building and logging as much as 60 million acres of many of [the U.S.'s] last great wildlands -- the roadless areas within our national forests."⁵⁸ His goal is to preserve nature and the storehouses of biodiversity.

Forest Trends is a conservation organization which focuses on the preservation and the restoration of forests. It supports measures to alter trade in the forest sector. Furthermore, it proposes to financially support companies and communities that deal with the forests in a sustainable way.⁵⁹ Old growth forests and frontier forests are diminishing due to the use of more timber by an increasing population. A new model for sustaining and conserving forests, the Forest Plantations,⁶⁰ has therefore been developed. It involves the intensive plantation of trees on small parcels of land. Whereas this model has economic benefits for the timber industry, it also provides advantages for the environment. The supply and demand for timber and wood can be satisfied with forest plantations, which achieve a heavy crop on a relatively small area. Thus, old forests no longer need to be cut down for human needs and the species in the previously threatened forests can maintain their habitat.

Forest Plantations also minimize erosion. In order to adequately care for forest plantations, it is important to protect areas surrounding forests by buffer zones.

Logging is not necessarily the most economic use of forests. "According to the Forest Service, outdoor recreation contributes 31.4 times more income to the nation's economy than logging and creates 38.1 times more jobs."⁶¹

3.5. Living Lakes

The Living Lakes project was initially sponsored by the German Environmental Fund and the Global Nature Fund. This initiative has the goal of preserving lakes and their surrounding areas and wildlife through the international cooperation of organizations. In accordance with the United Nations Agenda 21, which was established for supporting sustainable development, the Living Lakes partnership also became a project of the world exhibition EXPO 2000 in Hanover.

Mono Lake has a surface of approximately 70 square miles and an average depth of 60 feet.⁶² Five different streams supply the Mono Lake with water. Glaciers continually formed the lake into a basin and water dispersed from the lake only through evaporation. Today, the basin attracts a lot of tourists who appreciate the quality of the water.

The diversion of water from four of the five streams that feed the Mono Lake began in 1941 by the city of Los Angeles. The effect of this urban water use was that the level of the Lake sank; over four decades it lost half of its volume.⁶³ Linked with it was the loss of animals and plants around the lake. In 1994, the so-called Water Board decision was initiated by the State Water Resources Control Board to limit the water use license of the Department of Water and Power of Los Angeles, to restore the Mono Lake, and to further protect wildlife and habitat.

⁵⁸ www.worldwildlife.org/actions/targetedaction.cfm?action_id=60

⁵⁹ www.forest-trends.org/whoweare/

⁶⁰ Sedjo, Roger A./Botkin, Daniel: „Using Forest Plantations to Spare Natural Forests.“ In: Environment. Volume 39. Number 10. December 1997. Washington DC. P. 15.

⁶¹ Williams, Ted: "Clinton's Last Stand." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 95.

⁶² Ibid.

⁶³ Ibid.

Today, the conservation and the recycling of water, educational programs and recreation activities such as walking tours around the Basin have priority. Still, the process of restoration and transformation of the Lake has to continue, as the results of the previous damage are still evident.

3.6. Arsenal or the return of the bald eagles

Nerve gas, weapons, rocket fuel and pesticides -- these products were manufactured in Colorado's Rocky Mountain Arsenal which was created in 1942 and has been used as such during most of the Cold War. As early as 1951, farmers detected damaged crops and in 1957, citizens living near the arsenal discovered that the well-water was contaminated.⁶⁴ The production and the storage of weapons lasted until the 1980's. The Environmental Protection Agency (EPA) and, in 1989, the National Wildlife Federation, mandated a cleanup after it was discovered that the 27-square-mile area was contaminated.⁶⁵

The conversion of the arsenal to a wildlife refuge was highly contested. For example, the discussions about how expensive and extensive this process should be were quite controversial. Two main conflicts existed: The first concerned the question of who should be financially responsible for the cleanup of the site. The conflict was between Shell Chemical and the U.S. army, which both profited from the site. The second issue centered on the question of who should be responsible for the actual cleanup process; this was contested between the federal government and the state of Colorado. The option to establish a wildlife refuge in Colorado was attractive, as the economic development of the area had been restricted in earlier days by the presence of the arsenal. Hence, commercially, it was supposed that the refuge -- located close to Denver -- would bring employment and more tax income to this area.

Eventually, three factors made the conversion of the arsenal possible. First, a final agreement between the federal and state government regarding the cleanup of the site in 1995/6; second, a new infrastructure around the arsenal with a new international airport and a regional beltway; and finally, in 1986, bald eagles, a national symbol of America, settled down southeast of the arsenal.⁶⁶ This was significant because bald eagles are an endangered specie and have been preserved under an Act of Congress since 1940.⁶⁷ The U.S. Fish and Wildlife Service (FWS) is responsible for their protection.

The following picture of a bald eagle was taken by Don Pfitzer. I am very grateful to the U.S. Fish and Wildlife Service (FWS) and Don Pfitzer for allowing the publication of this picture.

⁶⁴ Wiley, Karen B./Rhodes, Steven L.: "From Weapons to Wildlife. The Transformation of the Rocky Mountain Arsenal." In: Environment. Volume 40. Number 5. June 1998. Washington DC. P. 7.

⁶⁵ Ibid., P. 5.

⁶⁶ Ibid., P. 6.

⁶⁷ Ibid., P. 29.



Several groups were involved in this debate about transforming the arsenal: local, state, and federal politicians, the Shell company, the U.S. army, the EPA, the National Wildlife Federation (NWF), and other environmental groups which were campaigning for the transformation, and last, but not least, concerned citizens.

Transformed into "the country's largest urban wildlife refuge"⁶⁸, the previous Rocky Mountain Arsenal attracts 30,000 visitors each year who enjoy hiking, observing animals, and relaxing in nature.⁶⁹ Recreation and aesthetic beauty are now in the foreground of this site, which has progressed from being a military base into an area where over 300 species of wildlife now have their habitat.⁷⁰

Managed by the U.S. Department of the Interior, waste from the site will have to be packed in a landfill according to the "Conceptual Remedy"⁷¹ from 1995. In accordance with this plan, structures will have to be demolished and contaminated material must be stored. Supposedly, the cleanup will cost \$2.2 billion, and will last until 2012, but most of the contaminated material has to be cleaned. It is unknown how long this will take.⁷² Nevertheless, the newly established wildlife refuge is now open to the public.

In an interview Karen B. Wiley, associate professor at the Colorado School of Mines, stated in 1998 that the bulk of the cleanup had been done. But there are other sites as well, such as the Rocky Flats in Colorado, which were once a site for producing nuclear weapons. The future of the Rocky Flats is being debated in the U.S. Congress in the form of the bill HR 2179. There are different ideas being discussed about how this site could be transformed: either into an open space area or into a wildlife refuge. Another option still under debate would be to develop it in some manner. All in all, Wiley pointed out that the transformation of a nuclear weapons facility, with all of its consequences, would be much more difficult than the conversion of a biochemical site. In any case, the conversion of all such sites will require a long time and much debate before it can be realized.

3.7. Roadless areas or is there a wall around forests?

The WWF has recommended "that roadless areas larger than 500 acres be protected east of the Mississippi River, and areas larger than 1000 acres be protected in the western U.S."⁷³ Another attempt by Bill Clinton to demonstrate his concern for the environment is his proposal for keeping roads out of 54 million acres of national forest.⁷⁴ Clinton's project is controversial. In particular, The American Forest and Paper Association is against it and argues: "They are building a wall around the national forests."⁷⁵ Republican Senator Larry Craig from Idaho made

⁶⁸ Wiley, Karen B./Rhodes, Steven L.: "From Weapons to Wildlife. The Transformation of the Rocky Mountain Arsenal." In: Environment. Volume 40. Number 5. June 1998. Washington DC. P. 10.

⁶⁹ Ibid., P. 30.

⁷⁰ Ibid., P. 28.

⁷¹ Ibid., P. 31.

⁷² Ibid., P. 33.

⁷³ www.worldwildlife.org/news/headline.cfm?newsid=58

⁷⁴ Williams, Ted: "Clinton's Last Stand." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 3.

⁷⁵ Williams, Ted: "Clinton's Last Stand." In: Audubon. Volume 102. Number 3. May-June 2000. New York. P. 48.

it even more clear when he accused "King William" of re-creating "feudal Europe," "lock[ing] up" the national forests "to all but an elite few," and making an "overt political move to shore up support for Prince Albert."⁷⁶

Roads have been constructed through wilderness areas for the purpose of harvesting timber, although natural habitats are often destroyed in the process.

Thus, the attempt by Bill Clinton to save areas from new road construction is especially important, considering the following fact: "The national forests are already laced with 380,000 miles of roads, enough to circle the globe 15 times, and the [Forest Service] doesn't have the money to maintain 80 percent of them."⁷⁷ This statement was made by Michael Dombeck, the director of the Bureau of Land Management before he took over the position as chief of the Forest Service. Dombeck is an advocate for the roadless initiative.

The construction of many logging roads throughout national parks results in the loss of wildlife, water, and wood. Prior to the appointment of Mr. Dombeck it was common practice to pay a timber company for building a road through a forest. Corporations received "purchaser road credits" on the wood they cut down.⁷⁸ Finally, in 1999 a plan was launched to temporarily cease the construction of new roads in 130 of 156 national forests and to establish a transportation policy that will be less harmful to wildlife.⁷⁹

3.8. Brownfields or how to win a National Award?

What are possible solutions in dealing with the abandoned and contaminated industrial and commercial sites called brownfields? Brownfields are defined by the EPA as: "abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination."⁸⁰ The number of brownfield sites - leftovers of the industrial era, which have potential for redevelopment and reuse-, is increasing. The Environmental Protection Organization (EPA) has therefore established the Brownfield Economic Redevelopment Initiative, designed to "empower states, communities, and other stakeholders in economic redevelopment to work together in a timely manner to prevent, assess, safely clean up, and sustainably re-use brownfields."⁸¹ For this initiative, the EPA received the National Award for Sustainability in the field of Hazardous Waste and Management and Recycling this year from the environmental organization Renew America and the President's Council on Sustainable Development. This prize is given to programs which support the cooperation of environment, economy and community concerning sustainability. The EPA itself is funding cleanup programs which support people who are concerned about contaminated sites and to provide employment in the environmental field. Therefore, their initiative to re-use and clean contaminated sites in teamwork with communities contributes to a beneficial environment. According to the EPA, over 35 states have voluntary cleanup programs (VCPs) that encourage private parties to cleanup a blighted site with support from the state.⁸²

In Buffalo, in the State of New York, a steel site has been converted into a tomato farm under the support of the EPA's Brownfield Initiative. In 1995, the agency gave a \$200,000 grant to help

⁷⁶ Ibid., P. 48.

⁷⁷ Ibid., P. 90.

⁷⁸ Ibid., P. 48.

⁷⁹ Ibid., P. 49.

⁸⁰ www.epa.gov/swerosps/bf/glossary.htm

⁸¹ www.epa.gov/swerosps/bf/pilot.htm

⁸² www.epa.gov/swerosps/bf/gdc.htm

create this 22-acre farm, which now offers 175 people jobs.⁸³ This transformation from a former contaminated site into a redeveloped brownfield involved the EPA, state and federal institutions, and farms. Today the farm produces 65 tons of tomatoes per day.

The program focusing on brownfields became politically significant when Bill Clinton signed the Taxpayer Relief Act on August 5, 1997. It included a tax incentive which was meant to transform abandoned, industrial sites into areas of production while providing economic recovery for citizens through job opportunities.⁸⁴

3.9. Ecoregions

Ecoregions are large areas where flora and fauna are safeguarded. Currently there are 900 terrestrial ecoregions worldwide.⁸⁵ The WWF is not only mapping the ecoregions, but is also analyzing their natural resources. The WWF defines the term ecoregion as follows:

“An ecoregion is defined as a relatively large area of land or water that contains a geographically distinct assemblage of natural communities. These communities (1) share a large majority of their species, dynamics, and environmental conditions, and (2) function together effectively as a conservation unit at global and continental scales.”⁸⁶

David M. Olson from the WWF remarked in an interview on July 12, 2000: “Every ecoregion loses diversity. Everything has already been modified.” Therefore, it is essential to save the ecoregions, which are essential for the life of species as well as for conservation units.

⁸³ www.epa.gov/swerosps/bf/html-doc/ss_buffl.htm

⁸⁴ www.epa.gov/swerosps/bf/gdc.htm

⁸⁵ World Wildlife Fund 1999 Annual Report. Washington DC.

⁸⁶ WWF: Terrestrial Ecoregions of North America. A Conservation Assessment. Washington DC, 1999.

Conclusion

The cooperation between the government, companies, local citizens, and communities and conservation groups is essential for finding good solutions and implementing nature protection projects. Establishing projects often requires the agreement between various groups that have different responsibilities for a project. Nature protection can therefore only become a public task through the inclusion of various points of view. The media also plays a key role in environmental politics by informing the public about environmental issues. The joint cooperation of groups can help in establishing sensibility for nature protection. Public awareness for environmental issues is also relevant for nature protection -- even more so, as many of the environmental problem facing us today are global in character.

Albert Gore, who is currently running for president of the United States, wrote the book Earth in the Balance, which was published in 1992. His candidacy has pushed environmental topics to the fore of the political agenda. In a chapter of his book, titled "Environmentalism and Spirit", he says about climate change:

"A study sponsored by the National Academy of Sciences (...) suggested that as the earth warms, we might create huge corridors of wilderness as pathways to accommodate all of the species trying to migrate from south to north in search of a familiar climate."⁸⁷ To avoid this appalling scenario is the goal of nature protection. It is therefore absolutely critical to preserve natural habitats and to safeguard the environment for generations to come.

⁸⁷ Gore, Albert: Earth in the Balance. Ecology and the Human Spirit. Boston, 1992. P. 240.

Abbreviations and Acronyms:

EPA: Environmental Protection Agency
IUCN: The World Conservation Union
NPCA: National Parks and Conservation Association
NPS: National Park Service
NWF: National Wildlife Federation
TNC: The Nature Conservancy
UNESCO: United Nations Educational, Scientific and Cultural Organization
WWF: World Wildlife Fund

Organizations:

- American Forests www.americanforests.org
- American Park Network www.americanparknetwork.com, www.nps.gov/shen
- Center for Environmental Research and Conservation (CERC) www.cerc.columbia.edu
- Environmental Protection Agency (EPA) www.epa.gov
- Friends of the Earth www.foe.org
- Living Lakes www.livinglakes.org, www.monolake.org
- National Park Service (NPS) www.nps.gov
- National Wildlife Federation www.nwf.org
- Resources for the Future (RFF) www.rff.org
- Sierra-Club www.sierraclub.org
- The Conservation Fund www.conservationfund.org
- The Nature Conservancy www.tnc.org
- Wildlife Conservation Society/Magazine www.wildlifeconservation.com
- World Wildlife Fund (WWF) www.panda.org, www.worldwildlife.org
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