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19 Debates on Environmental Issues

The Precautionary Principle - Global Engineering - and More!

Taking Sides: Clashing Views on Controversial Issues, Twelfth Edition

For the classroom or seminar, this anthology provides a concise introduction and student summary of the major arguments and viewpoints on critical issues in environmental science. The readings, which represent the viewpoints of leading environmental scientists, policy makers, and experts in the field, are arranged thematically for easy access.
Is Biodiversity Overprotected?

YES: David N. Laband, from “Regulating Biodiversity: Tragedy in the Political Commons,” Ideas on Liberty (September 2001)

NO: Howard Youth, from “Silenced Springs: Disappearing Birds,” Futurist (July/August 2003)

ISSUE SUMMARY

YES: Professor of economics David N. Laband argues that the public demands excessive amounts of biodiversity largely because decision makers and voters do not have to bear the costs of producing it.

NO: Wildlife conservation researcher and writer Howard Youth argues that the actions needed to protect biodiversity not only have economic benefits but also are the same actions needed to ensure a sustainable future for humanity.

Extinction is normal. Indeed, 99.9 percent of all the species that have ever lived are extinct, according to some estimates. But the process is normally spread out over time, with the formation of new species by mutation and selection balancing the loss of old ones to disease, new predators, climate change, habitat loss, and other factors. Today, human activities are an important cause of species loss mostly because humans destroy or alter habitat but also because of hunting, the introduction of competitors, and the introduction of diseases. According to Martin Jenkins, “Prospects for Biodiversity,” Science (November 14, 2003), some 350 (3.5 percent) of the world’s bird species may vanish by 2050. Other categories of living things may suffer greater losses, leading to a “biologically impoverished” world. He states that the consequences for human life are “unforeseeable but probably catastrophic.”

Awareness of the problem has been growing. In 1973 the United States adopted the Endangered Species Act to protect species that were so reduced in numbers or restricted in habitat that a single untoward event could wipe them out. The act barred construction projects that would further threaten endangered species. In one famous case, construction on the Tellico Dam on the Little Tennessee River in Loudon County, Tennessee, was halted because it threatened the snail darter, a small fish. Another case involved the spotted owl, which was threatened by logging in the Northwest. Those in favor of the dam or the timber industry felt that the endangered species was trivial compared to the human benefits at stake. Those in favor of the act argued that the loss of a single species might not matter to the world, but where one species went, others would follow. Protecting one species also protects others. However, the number of U.S. threatened and endangered species has not diminished. In fact, that number has increased more than sevenfold, from 174 in 1976 to 1311 in May 2006 (see http://ecos.fws.gov/tess_public/TESSBoxscore for a current tally).

Internationally, species protection is covered by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This agreement has banned trade in such natural products as elephant ivory to prevent the continued slaughter of elephants. Less successfully, it has also tried to protect rhinoceroses (killed for their horns) and about 5,000 other species of animals and 25,000 species of plants, including some whole groups, such as primates, cetaceans (whales, dolphins, and porpoises), sea turtles, parrots, corals, cacti, and orchids. The 2006 IUCN Red List (http://www.iucn.org/themes/ssc/redlist2006/redlist2006.htm) says that worldwide the number of species threatened with extinction is 16,119.

Is it enough to stop construction projects and ban trade? Some argue that efforts should be made to undo some of the damage that has already been done. For example, there is a movement to tear down dams that block the path of migratory fish, such as salmon and shad, so that they may once more breed and multiply (see http://www.americannrivers.org). For another example, urbanization and agricultural development have greatly altered the Everglades in Florida: rivers have been straightened, water has been diverted, and land has been drained for farms. This activity has resulted in low water tables, increased fire danger, smaller bird populations, and the decline of the Florida panther, among other negative impacts. Currently, the Army Corps of Engineers is planning to undo some of the changes to the Everglades’ water flow in order to restore the natural habitat as much as possible. The Comprehensive Everglades Restoration Plan (CERP) was approved by Congress in 2000, will cost almost $8 billion, and will take more than 30 years. See Phyllis McIntosh, “Reviving the Everglades,” National Parks (January 2002).

Is too much being done to protect the species with which we share the earth? In the following selection, David N. Laband argues that it is, largely because the people who set environmental policy do not need to pay for protection efforts themselves. Instead, the costs of protecting biodiversity are unfairly laid upon landowners. In the second selection, Howard Youth reviews the declining state of the world’s birds, describes what is causing the decline and what can be done, and argues that actions that protect birds can have economic benefits. These actions are also needed to ensure a sustainable future for humanity.
Regulating Biodiversity: Tragedy in the Political Commons

Last summer, lightning struck and killed an enormous pine tree on one side of my backyard. At about the same time, voracious pine bark beetles girdled and killed an equally impressive pine tree on the other side. Now bereft of needles, these two arboreal giants pose a potential threat to my house: if they were to fall at just the right angle, the damage could be substantial. In the interest of safety, my wife wants to have the trees removed; for the sake of promoting biodiversity on my two-acre lot, I do not.

Our personal dilemma mirrors a much larger struggle that quietly threatens to destroy the rights of private timberland owners across the United States—their desire of urban dwellers to have their cake and eat it too. They demand houses made of wood, wood furniture, paper and paper products, and so on, while also demanding environmental amenities such as aesthetically pleasing landscape views, biodiversity, and animal habitat. At a personal level this can’t be done. If the trees are removed, my wife has peace of mind, but the many animals that depend on dead pine trees for their existence, either directly or indirectly, will vanish. If the trees stay, we will be promoting the ecological diversity of our property, but my wife will worry about our house with every gust of wind. We can’t have it both ways. Similarly, at a macro level, there is a tradeoff between production/consumption of timber and production/consumption of related environmental amenities.

The Role of Intensively Managed Forests

The problem of how to grow and harvest increasing amounts of timber while simultaneously producing a steadily increasing array and level of environmental amenities associated with forested land has resulted in an industry-wide discussion of how to simultaneously achieve both objectives. There is a growing appreciation within the forestry community for the prospect that intensively managed forests may yield increasing amounts of wood while minimizing the total acreage from which wood is harvested. This maximizes the amount of acreage available to meet other demands—such as agricultural production, animal habitat, and other environmental amenities associated with natural forests.

However, intensively managed forests have come under heavy fire from self-proclaimed environmentalists. In these so-called plantation forests, man, not nature, regenerates the trees, which accordingly grow in even-aged stands. Their well-being is affected by the application of herbicides and pesticides, as well as by occasional thinning and fire management. In contrast to naturally (re)generated timberland, plantation timberland has been described as an “ecological desert,” with the stated or implied conclusion that the nature and extent of biological diversity associated with natural forests is both greater and therefore more desirable than that associated with plantation forests.

The Threat to Private Landowners and Social Welfare

Such pejorative rhetoric is both misleading and counterproductive. The unfortunate but nonetheless compelling truth is that we can’t have our cake and eat it too. We must make responsible choices about what to produce and how to produce it. A serious threat to private landowners develops when citizens living in urban areas demand that private owners of timberland (definitionally located in rural areas) produce environmental amenities such as aesthetically pleasing views, biodiversity, animal habitat, and the like, provided the urbanites don’t have to pay for it.

Further, they seek to enforce their demands by using the political process to pass regulations that require landowners disproportionately to bear the cost of producing these environmental amenities. For example, Oregon law requires private timberland owners to replant within two years areas from which they cut trees. Other regulations forbid clearcutting of timberland. Federal regulations pertaining to endangered species are incredibly restrictive and intrusive with respect to an individual’s property rights. The pursuit of environmental amenities that we are told are vital to some vaguely defined public interest through policies that impose virtually all the costs on relatively small numbers of private landowners generates what might be termed a “tragedy of the political commons.”

Garrett Hardin introduced us to the tragedy of the commons. Hardin developed a stylized example of a communal pasture open to all comers. There are no private property rights to the pasture, or rules, customs, or norms for shared use. In this setting, each shepherd, seeking to maximize the value of his holdings, keeps adding sheep to his flock as long as doing so adds an increment of gain. Further, the shepherds graze their sheep on the commons as long as the pasture provides any sustenance. Ignorant of the effects of their individual actions on the others, the shepherds collectively (and innocently) destroy the pasture. As Hardin concludes: “Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in freedom of the commons.”
Other People's Costs

Many of the key decisions about the future of our planet are made by politicians and business leaders. These decisions often have a significant impact on the environment and our quality of life. However, the consequences of these decisions are not always clear or easily understood.

The problem of environmental damage is an important one, and it is important to take action to prevent it. One way to help is by supporting policies that encourage sustainable practices. For example, governments can implement policies that incentivize renewable energy sources, or businesses can adopt greener practices to reduce their environmental impact.

By supporting these policies, we can help to protect our planet for future generations. This is not only the right thing to do, but it is also good for our economy and our health. So let's all work together to create a sustainable future.

Notes


References


Other useful resources include:

- "The Story of Stuff" (2010).
- "Environmental Quality Indicators: A Review of the Literature" (2012).

Databases containing information on environmental policies and other relevant topics include:

- "The World Bank's Development Indicators" (2019).

The future of our planet is in our hands. Let's work together to ensure a sustainable future for all.
Habitat loss: The greatest threat

Susceptibility: The other threats: roads, human activity, and development

Roads: the greatest threat to birds and biodiversity in general.

Many new bird species are described every year. One of this century’s

In recent years, many species have been discovered in St. Lucia in 2002. The first new bird species

Their social interactions can be studied from their behavior. In a

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**Biological Hot Spots**

Topics and are-return to a general world tropics.

Europe and the Mediterranean, where the Mediterranean parental biota spreads in the Northern Atlantic.

**Bulle's Cage, Chemicals, and Climate**

Measures to control the spread of toxic chemicals used in industry and agriculture, and to reduce the potential for chemical pollution in the environment. But it also involves the development of new methods for the production of chemicals that are less toxic and more environmentally friendly.

**Exotic Animals and Plants**

The proliferation of exotic species and plants is already decimating European ecosystems, as invasive species can displace native species and alter ecosystems. This is particularly concerning in the case of invasive aquatic plants, which can clog waterways and degrade the habitat of native species. To combat this, efforts are being made to control the spread of invasive species, including through the development of early detection and rapid response strategies. Additionally, efforts are being made to understand the ecological impacts of invasive species and to develop strategies for their effective management.
Success in Florida

is driven by economic, social, and environmental factors. This industry is one of the most important contributors to the state's economy, providing jobs and income. The success of Florida's programs and policies can be attributed to the integration of these factors.

Conservation Programs That Work

Conservation programs in Florida have proven successful in protecting and preserving natural resources. These programs aim to balance economic development with environmental stewardship, ensuring the sustainability of Florida's ecosystems. The programs also focus on education and outreach, engaging communities in conservation efforts. By promoting sustainable practices and protecting natural habitats, these programs contribute to the overall well-being of Florida's residents and the environment.
Bird Watching

Bird trails follow decades of growing interest in birding, a hobby that turns most of its participants into supporters of conservation efforts that protect birds and their habitat. The Seychelles magpie-robin is rebounding after being introduced to the Seychelles Islands after a population of 200 birds after predator control and after reductions in pesticide use in the 1970s. The whooping crane and the American alligator are examples of species that have benefited from conservation efforts.

Economic Impact:

Birding has a large economic impact, with the industry spending an estimated $40 billion on equipment and travel expenses. Birding is a source of income for many local communities, particularly in rural areas. The industry is growing, with more people engaging in birding activities. A good part of the economic activity is concentrated in rural areas, particularly in the southeastern United States.

Conservation Efforts:

Conservation efforts are focused on protecting critical habitats, such as wetlands, forests, and grasslands, and on the protection of endangered species. The Endangered Species Act provides federal protection for threatened and endangered species. The Fish and Wildlife Service is responsible for implementing the act. The act is a key tool in the conservation of biodiversity and the protection of ecosystems.

Incentives for Conservation:

Incentives for conservation include tax credits for the acquisition of land and for the creation of wetland and forested habitats. Federal programs provide financial assistance to states and local governments to acquire land and to create and manage wetland and forested habitats. The Natural Resources Conservation Service provides financial assistance to farmers and landowners for the conservation of natural resources.

Future Challenges:

The future of bird conservation will depend on the continued support of the public, the government, and the private sector. The challenge is to maintain and improve natural habitats, to protect endangered species, and to ensure the sustainability of bird populations. The future of bird conservation will also depend on the development of new technologies and on the continued support of the public and the government.