

## Why Preserve Biodiversity?

Preserving a diversity of life on Earth has come to be an accepted goal for many people. But when that goal comes into conflict with other goals, such as economic development, the question becomes, "How much diversity and at what cost?" To find the answer it is important to think carefully about the values of biological diversity and to separate those based on science from those based on other present or potential values, such as aesthetic, ethical, religious, or economic values.

In 1980, the International Union for Conservation of Nature and Natural Resources (IUCN) proposed a statement to form a basis for conserving biological diversity. That statement summarizes most of the arguments used as a rationale for conserving diversity. Read the statements reproduced below and answer the questions that follow. (Each sentence, or group of sentences, has been given a number for convenience in referring to it.)

### An Ethical Basis for Preserving Biodiversity

1. The world is an interdependent whole made up of natural and human communities. The well-being and health of any one part depends on the well-being and health of the other parts.
2. Humanity is part of nature, and humans are subject to the same immutable ecological laws as are all other species on the planet.
3. All life depends on the uninterrupted functioning of natural systems that ensure the supply of energy and nutrients, so ecological responsibility among all people is necessary for the survival, security, equity, and dignity of the world's communities.
4. Human culture must be built on a profound respect for nature, a sense of being at one with nature, and a recognition that human affairs must proceed in harmony and in balance with nature.
5. The ecological limits within which we must work are not limits to human endeavor; instead, they give direction and guidance as to how human affairs can sustain environmental stability and diversity.
6. All species have an inherent right to exist. The ecological processes that support the integrity of the biosphere and its diverse species, landscapes, and habitats are to be maintained. Similarly, the full range of human cultural adaptations to local environments is to be enabled to prosper.
7. Sustainability is the basic principle of all social and economic development.
8. Personal and social values should be chosen to accentuate the richness of flora, fauna, and human

experience. This moral foundation will enable the many utilitarian values of nature—for food, health, science, technology, industry, and recreation—to be equitably distributed and sustained for future generations.

9. The well-being of future generations is a social responsibility of the present generation. Therefore, the present generation should limit its consumption of nonrenewable resources to the level that is necessary to meet the basic needs of society and ensure that renewable resources are nurtured for their sustainable productivity.
10. All persons must be empowered to exercise responsibility for their own lives and for the life of Earth. They must therefore have full access to educational opportunities, political enfranchisement, and sustaining livelihoods.
11. Diversity in ethical and cultural outlooks toward nature and human life is to be encouraged by promoting relationships that respect and enhance the diversity of life, irrespective of the political, economic, or religious ideology in a society.

### Critical Thinking Questions

1. Which of the statements are scientific, that is, are based on repeatable observations, can be tested, and are supported by evidence?
2. Using the table that follows, which statement from the argument for preserving biodiversity is implied by the type of value given? Write the number of the statement in the right column. A statement may fit into more than category.

Type of Value	Source of Value of Living Organisms	Statement
Ethical	The fact that they are alive	
Aesthetic	Their beauty and the rewards humans derive from their beauty	
Economic	The direct and indirect ways in which they benefit humans	
Ecological	Their contributions to the health of the ecosystem	
Intellectual	What they can contribute to knowledge	
Emotive	The sense of awe and wonder they inspire in humans	
Religious	Having been created by a supernatural being or force	
Recreational	Sport, tourism, and other recreations	

3. What is the rank of the types of values given?