

Species Loss – The Environmental Problem

"If people want to live in a world that is more than pigeons, rats, cockroaches and starlings, we need to do more than set aside land... We have to protect endangered species before they are destroyed."

*-Carter Roberts,
Vice President of the Nature Conservancy*

Biodiversity—the variety of plant and animal species present in the natural environment—is not only fundamental to the quality of human life. It is essential for human survival. Goods and services such as food, clothing, housing and medicines are derived from diverse biological resources. Advances in biotechnology have also led to many new medical and agricultural applications, all dependent on biologically diverse sources.

Forests, grasslands, tundras, deserts, rivers, lakes and seas are home to most of earth's distinct biological species; however, the variety of species on earth is threatened chiefly by environmental degradation. Mass extinctions are being reported with increasing frequency worldwide, at a rate that far exceeds the appearance of new species. According to the Global Biodiversity Assessment (GBA) released by the United Nations Environment Programme (UNEP) in November 1995, almost three times as many bird and mammal species alone--112--became extinct from 1810 to 1995 were lost between 1600 and 1810--38 species. The loss of other life forms, such as mollusks, plants, fish and insects, numbers in the thousands.

Factors contributing to species loss include habitat destruction, invasion of new habitats by non-native species, global warming and depletion of the ozone layer in the atmosphere. In the latter case, life-destroying ultraviolet rays threaten human, animal and plant life on land and in the oceans.

Action to promote sustainable development worldwide, including efforts to halt the loss of biodiversity, will be the focus of a special session of the United Nations General Assembly, when it meets in New York from 23 to 27 June 1997. "Earth Summit+5", as the special session is called, will review and appraise implementation of Agenda 21, adopted by the UN Conference on Environment and Development, popularly known as the Earth Summit, held in Rio de Janeiro, Brazil, in 1992. Agenda 21 contains strategies for preventing environmental degradation and establishing a basis for a sustainable way of life.

Habitat Destruction

Disappearance of natural habitats, especially tropical forests, is the primary cause of species loss. This is mainly the result of human action: deforestation, air and water pollution, ocean dumping of waste and the side effects of development in general -- all of which are linked, indirectly or otherwise, to the growth of human population. According to the GBA, in the early to mid-1980s, humid tropical rain forests were losing nearly 25 million acres each year (10 million hectares), just under 1 per cent globally. These forests cover only 7 per cent of the Earth's surface but provide habitats for 50 to 80 per cent of the planet's species. For example, in a typical 2,500-acre area of tropical rain forest, some 1,500 species of flowering plants, 750

different tree species, 400 bird species and 150 different butterfly species can be found.

Alien Invasion

Second only to habitat destruction as a cause of species loss is "alien invasion", which can occur when plants or animals from one ecosystem are introduced into another. In the new environment, they often destroy indigenous species if diseases, predators or pests that usually inhibit them are absent. In Hawaii, for example, imported pigs (now wild) have decimated native plant species, and strict controls have been established there regarding the importation of animals and plants.

*Adapted from: United Nations Department of Public Information (1997). "The United Nations Convention on Biological Diversity: A Constructive Response to a Global Problem."
<http://www.un.org/ecosocdev/geninfo/sustdev/es&5biod.htm> [Accessed 30 September 2007]