



# ANTHROPOGENIC INTERVENTIONS ON RENEWABLE RESOURCES AND CONSERVATION OF BIODIVERSITY

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## ABSTRACT

Primitive humans used natural resources to satisfy their basic needs of air, water, food and shelter. These natural and unprocessed resources were readily available in the biosphere, and the residues produced by the use of these resources were generally compatible with or easily assimilated by the environment. Rapid development activities have been associated with more and more exploitation of various natural resources. Technological development has resulted in fast depletion of non-renewable energy resources, mainly coal and petroleum, and also various minerals. Mining activities, dam, building, urbanization and industrialization have all interfered with the ecological balance of nature due to large scale impact. Tourism and recreation impact in various ways on the natural environment. On the one hand, natural areas form the very basis of many touristic attractions by highlighting scenic value or exceptional encounters with fauna and flora. However, some forms of tourism can be extremely detrimental to ecologically sensitive areas, resulting in habitat degeneration or destruction, in the disturbance or hunting even rare or threatened species. The pressure from short holiday seasons and specific, sometimes small, locations of touristic interest result in conflicting land-uses, such as in the Alpine regions, at Mediterranean beaches and along many banks of inland waters.

### Key words:

## Introduction

The human factor has become significant in the balance of concept that determines sustainable development. The pool of atmosphere gases, with economic important effects, by inducing the green house gases, global warming and sea level rise could have serious consequences on agriculture, livestock production and management, water resources management, forests and forestry, fisheries and other economic activities, from the summary of emission from energy sectors and per capita sectoral and gross emission in Nigeria (Ojo, 2007).

Climate change and ozone layer depletion affect the physiology of aquatic animals and plants once the environment become warmer, as they might not be able to survive heat disorder, which will affect their nutrition, food, making them susceptible to nutritional diseases (Babalola and Amosu, 2006). It is a well known fact that global warming accelerates the occurrence of sun burn, heat strokes, heat rashes and other skin blemishes. Increased humidity and tem-

perature will lead to the rapid multiplication of pests; malaria may get to epidemic stage. Very distressing things about the Earth's biological diversity is that it is being destroyed very rapidly. In the next half-century—less than one human lifetime—the Earth could lose blue whales, giant pandas, tigers, black rhinoceroses and millions of lesser-known species. Entire ecosystem types, such as tropical dry forests, mangroves, and Floodplain Rivers could be damaged beyond repair. Our planet is now facing the most devastating biological catastrophe in the last 65 million years, since a huge asteroid hit the Earth and caused appalling damage, killing off the dinosaurs and more than half of the planet's other species. But today's mass extinction has a very different cause: the way we humans live our lives.”

Since the early 1980's, increasing attention has been paid to the importance of biodiversity and to the increasing number of species being depleted at an alarming rate. Many biologists believe that we are in the midst of a mass extinction because the rate of spe-

species loss is higher now than ever before. It is estimated that between 17,000 and 100,000 species are eliminated each year. Studies have shown that as many as one in eight plant species are threatened with extinction. The majority of these species losses are due to human activity, particularly habitat destruction as more and more land becomes developed for human use.

The global destruction of rainforests, coral reefs, mangroves, and other rich habitats has become a hot issue being addressed by conservation organizations and by global legislation to try and reverse damaging trends and encourage sustainable management of resources.

Scientists believe that when human development and agriculture reduce the natural world, the loss is not simply a matter of size. Scientists who study "biodiversity" posit that many wild species are becoming extinct, and that this extinction of wild species -- many of them still unknown or not well understood -- bodes ill for the future of the planet. Since the dawn of agriculture, human survival has been based on the domestication for food purposes of wild plants. Yet, many plant species are being destroyed in the wild, before their food or medicinal value can be assessed. The continuation of wild or partially-wild varieties of plants such as corn is necessary to the future health of domesticated varieties.

In addition, whole ecosystems, such as riverine estuaries, coral reefs, mountain forests, and the creatures that live in them, are under stress due to human-caused pollution or over-development. Yet, these ecosystems, in all their marvelous complexity, cleanse water of pollutants, provide the air we breathe, and produce much of our food, making human existence possible. In effect, the vast web of biological diversity, with its millions of species on the invention of agriculture made it possible for the human race to increase its numbers exponentially and spread across the planet. "The sheer bulk of

human numbers, "probably nearly doubling to over 10 billion [thousand million] by mid-21st century -- is wreaking havoc on Earth, on its species, ecosystems, soils, waters, and atmosphere." Eldredge foresees a coming "Sixth Extinction" of life forms on this planet, rivaling the previous five known mass extinctions of life in prehistoric times.

Due to modern agricultural practices, "we are eroding the very ecological foundations of plant biodiversity and losing unique gene pools, species, and even any observers now feel that one of the prime responsibilities of human community, for spiritual, aesthetic, and extremely pragmatic reasons, must be to take steps to preserve biological diversity for future generations, before the richness of life on this planet is diminished forever." The first time in the entire history of life, one species, our species, *Homo sapiens*, has stepped outside of the local ecosystem. Agriculture changes the entire relation between humans and everything else living in the vicinity. Each population is limited by the environmental carrying capacity, the number of individuals that, on average, a local habitat can support, taking into account available food and nutrient resources, and other important factors, such as prevalence of predators and disease-causing microbes, and even more general factors, such as climate and rainfall, the total number of individuals of any species is the average size of its local populations multiplied by the number of those existing populations. We are the current cause of this great environmental crisis, this threat to the global system that looms even as we have entered the Second Millennium. We have created the biodiversity crisis, the next great wave of mass extinction. Three themes crop up in everybody's lists of why diversity matters.

Globally, each day we depend on over 40,000 species of plants, animals, fungi, and microbes. Only those species that we are deliberately exploiting. Still others, such as the microbe *Escherichia coli*, which live by the millions in our intestines and is absolutely

vital for normal digestion,

Evolution works through natural selection, the process Darwin (and Alfred Russell Wallace) discovered. On average, the organisms that thrive best will survive and reproduce, passing to their offspring the very traits that allowed them to flourish. Breeders do the same thing, allowing only those sheep, say, that have the woolliest coats to reproduce in the hopes of producing future sheep with even thicker coats than their forerunners had.

But selection alone -- whether natural or artificial -- will not do the trick. Another ingredient is required: the presence of genetic variation. The reason why evolution did not stop billions of years ago is that spontaneous genetic changes -- mutations -- occur each generation, renewing and increasing genetic variation.

Conservation International (CI) identifies 34 hotspots worldwide where 75 percent of the planet's most threatened mammals, birds, and amphibians survive within habitat covering just 2.3 percent of the Earth's surface.

A changing climate endangers whole ecosystems and entire species. Instead of preserving Earth's biodiversity, human actions are advancing its destruction. In so doing, we destroy one of our best defenses against the impacts of global warming. According to the most recent UN assessment, 20-30 percent of the Earth's plant and animal species face extinction if global warming boosts average temperatures between 1.5 and 2.5 degrees Celsius.

### **Some of the basic threats to biodiversity**

#### **include:**

- Increasing human populations out of balance with the scale of natural resources
- Heavy consumption and excessive exploitation of natural resources
- Lack of sufficient knowledge and understanding of species and ecosystems
- Destruction of ecosystems and habitats due to increased land use, urbanization, and pollution
- Underestimating the value of nature and its

resources

- Global climate change
- Ecological disasters such as large-scale fires and floods

### **Things to be done:**

- New global agreements: recognize the existing value of their natural resources and its value to future generations.
- Conservation of biological diversity
- Sustainable use of its components

### **Conclusion:**

- "While most threats to biodiversity are human-driven, human actions alone can prevent many species from becoming extinct." Today human-induced habitat loss and fragmentation are seen to be major threats to biodiversity conservation. Generally, loss of biodiversity should be regarded seriously, not only because the organisms that have become extinct represent a big loss for both ethical and utilitarian (useful benefit) reasons, but also because the organisms that remain have become more vulnerable (exposed) to extinction in the future.
- Some people think that major problems lies in the fact that many people still don't know how big problem biodiversity loss really is and this serious problem hasn't so far received appropriate public attention that definitely deserves. This problem needs involvement of politicians and worldwide media in order to get more attention. Without appropriate political action biodiversity decline will continue, and our future generations will have to face hunger, thirst, diseases and different natural disasters if we carry on this losing biodiversity trend. Modern man's activities are contributing to a steady decline in the world's biodiversity, which leads to a growing awareness worldwide of the potentially disastrous consequences of this trend for the earth's ecological functions and the fulfillment of basic human development needs (USAID, 1993)

- ❖ And as we all know we are all connected in food chain and therefore we're all required for proper functioning of food chain. If biodiversity takes heavy loss, so will the food chain and on the end so will we and our entire planet. Biodiversity loss current decline could have direct impact on our life. Reduced biodiversity means shortage in water and food supply, vulnerability to diseases (with fewer new medicines), and much greater vulnerability to natural disasters and greater effects from global warming.
- ❖ In order to preserve food, water, medicines, and protection from natural disasters we need to preserve the species that support them, their natural habitats and ecosystems. Reduced biodiversity means reduced use of resources, and biodiversity loss must become urgent political question, not only from ecological but also from economic point of view.

“It is our moral obligation to preserve our planet for future generations.”

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