

The biodiversity crisis and human accountability essay sample



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INTRODUCTION

The whole eco-system is an extraordinary gift that we have received as natural heritage and it is doing a tremendous amount of good for all humankind: creating soil, cleansing water, creating the very air we breathe, all free! We live in extraordinary times and we know how great the diversity on earth is, we are surrounded by more species of animals and plants. Moreover, it is noticeable that one species, our own, has developed techno-scientific society and expounded the unique ability of so altering its surround that it can destroy whole species, indeed whole environments. It is a known fact that the expansion of techno-scientific society was aimed to achieve a comfortable living and avoid hunger. However, it is causing such damage to the bio-diversity as well as catastrophically resulted into pollution, Islandisation, introduction of alien species, over-harvesting of natural resources and destruction of habitats. Conservation of bio-diversity will depend on how we scale down our excesses in consumption, because if it continues, then our planet will be left as a inhospitable sphere (Attenborough, Sir D).

BIODIVERSITY AND ITS IMPORTANCE

The different naturalist and conservationists groups have come up with several definitions of biodiversity but these can all be summed up with just one thought: Biodiversity is “ the variability among living organisms from all sources including and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems” (UNEP, 1992). In layman’s terms, biodiversity is the interdependence of the

different forms of life and their natural homes. For non-scientists and for people whose knowledge is limited with the economic value of other forms of life, especially plants and animals as food source, the issue on biodiversity crisis may not be appealing. If only all people will be well-informed, or at least may be able to understand how biodiversity works, then perhaps the human specie will have no excuse for taking his part in its protection.

No matter how one puts it, the importance of biodiversity is vital as “ It is a fundamental condition of life itself” (Lovelock, James, 1988). This is basically because all forms of life depend on each other (Mc Neely, Jeffrey et. al).

Every specie support each other and such support “ requires that predators and prey, fire and water, food and shelter, clean air and open space remain in balance with each other and with the environment around them”

(Environmental Protection Agency). Although the links between species are complex, there are few simple reasons to safely agree that “ species do not exist in isolation” (Attenborough, David).

Humans for example need plants and animals including marine resources for food. Humans need trees and tall grass forms for shelter. There are animals which basically feed on plants or marine life. There are also certain marine species which depend on plants for shelter such as species which thrive and reproduce in mangroves. These are simple life relationships based on food and shelter. However, life forms do not just need food and shelter in order to survive; rather there are major players in the biodiversity structure which are vital for all species to survive. Living organisms also need air, water and land as vital players in their natural habitats. These things are slightly or partly

overlooked over the half-century debates on biological diversity conservation.

REASONS FOR BIODIVERSITY CONSERVATION

The importance of biodiversity conservation can be divided into two categories: the intrinsic value and the anthropocentric value of biological diversity. The intrinsic value considers biodiversity as worthy of conservation regardless of its importance to the human species. This means that all forms of life are innately valuable and that human beings are necessarily part of the natural diversity so human beings are held responsible for keeping the natural environment the way it should. This argument excludes the economic benefits (food and shelter) of human beings in its accountability for preserving the natural system out of which it came from and continue to survive.

On the other hand, anthropocentric value of biodiversity holds that humans are “ inextricably and wholly dependent on this diversity of living things for survival” (Erlich, P. R. and H. A. Erlich 1992). Humans need food and shelter and other benefits that can be valued such as medicine and clothing. We also depend on biodiversity for non-economic ecosystem services such as climate, air and water, moisture and other natural cycles that supports human existence (Tackacs, Nicholas 1996).

EVIDENCES SUPPORTING THE LOSS OF BIODIVERSITY

If all relevant figures proving the rapid loss of biodiversity are to be listed, I believe that most will agree that there really is a crisis and that the human

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race should be alarmed, be encouraged and be responsible enough to start doing his part in the conservation of whatever is left to save. The Center for International Environmental Law (CIEL) estimated that two of every three bird species are in decline worldwide, one in every eight plant species is endangered or threatened, and one-quarter of mammals, one-quarter of amphibians and one-fifth of reptiles are endangered or vulnerable. People need to be informed and be educated on the nature of biodiversity and its present condition. This is especially important because “ people must bring themselves into conformity with nature if they want to exist as part of nature’s unity, and they must fit their demands to nature’s availabilities” (Mc Neely, et. al). People need to know that although extinction is a natural phenomenon, human intervention is hastening the time span which this phenomenon is expected to happen. This paper also recognizes the fact that extinction of certain species is needed in order to give way to other species. For example, dinosaur extinction happened due to natural climactic change and without such it may be hardly possible for human specie to live with them. However it is vital that humans be able to realize how they have contributed to the alteration and the loss of biodiversity whether or not such human activities are intentional.

HUMAN ACCOUNTABILITY TO DAMAGE IN BIODIVERSITY

As human population grows, the demand for the use of natural resources also increases. More people will need air and water, plants and animals for food, land use for shelter and manufacture of its other needs. As population grows, more forestlands need to be converted to agricultural and industrial use. “ The human activities have raised the rate of extinction to 1, 000 times
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its usual rate” (Center for International Environmental Law). This is actually supported by the idea of IPAT (Impact equals Population times Affluence times Technology), an environmental impact formula developed by the physicist John Holdren which directly holds humans accountable for the loss of biodiversity the world is currently facing (Meadows, Donella). IPAT formula computes the environmental impact of human activities as: $\text{Impact (I)} = \text{Population (P)} \times \text{Affluence (A)} \times \text{Technology (T)}$. The author of this formula explained that the pollution that each human being contributes to the environment is determined and measured by “counting what is countable” (M. Meadows). This is especially true because the formula obviously ignores the factors of economy and political power which only suggests that the impact is measured irrespective of his status.

The keyword for pointing to the human specie as primarily responsible for the loss of biodiversity is choice. Man has the choice of which, how and how much of the natural resources and the technology he will use and consume. Therefore man has always the choice and the sense of rationality to consider the consequences of his action. In the latest inventory of biodiversity done by the United Nations, a project entitled “The Millennium Ecosystem Assessment” humans were found to have depleted 60% of the world’s grasslands, forests, farmlands, rivers and lakes (Associated Press, April 01, 2005). The report also revealed that one-fifth of the world’s coral reefs and on-third of its mangroves have already been destroyed. The said study was a joint effort of 1, 360 scientists representing ninety five nations.

As human population grows, the demand for the natural resources

necessarily increases and so overharvesting of the earth’s produce has been <https://assignbuster.com/the-biodiversity-crisis-and-human-accountability-essay-sample/>

one of the major reasons for the loss of biodiversity. A report made by the World Wide Fund (WWF) revealed that the fishing industry has harvested more than 250% of what the ocean can produce. " Deforestation had not only rendered the land barren and arid, but had also led to the depletion of the ground water level" (Blua, Antoine 2005). The demand for timber, for food and establishment of manufacturing plants led humans to degrade the forest and to deprive all the organisms that depend on it of their natural habitats. Soil degradation has dramatically reduced crop productivity which challenges food production and its ability to feed 1. 5 billion people in the next 20 years according to the International Food Policy Research Institute (IFPRI) and the World Resources Institute (WRI).

Pollution due to the introduction and development of technology and industries played an important role in the destruction of biodiversity. Tourism is just one of the newest industries which contributed a vast amount of pollutants through air emissions, solid waste, litter, noise, oil and chemical and sewage. World Wide Fund reported that tourism now accounts for more than 60% of air travel. Coalmines release tons and tons of carbon dioxide causing global warming and sulfur dioxide which causes acid rain. Coal burning has been reported to have increased eight times from 1971 to 1995 brought about by electricity generation in Asia alone (WWF, October 19, 2006).

Excessive use of fertilizers, flame-retardants, plasticizers and phenols posed a major concern in the for air pollution (Portal for Plastic Industry, 2004).

Human intervention in the nitrogen cycle has also caused considerably vast damage of the earth's biodiversity. The oversupply of nitrogen is caused by <https://assignbuster.com/the-biodiversity-crisis-and-human-accountability-essay-sample/>

industrial processes that produce nitrogen fertilizers, the combustion of fossil fuels, and the cultivation of soybeans, peas, and other crops that host symbiotic nitrogen-fixing bacteria (Vitousek, Peter M et. al.) Such nitrogen overproduction has also been analyzed by scientists to be the cause of the dramatic shift in the dominant species. As population also increases, more and more people are going to use vehicles and industrial technologies which in turn will increase the emission of carbon dioxide and other greenhouse gases more the atmosphere can contain. Human beings are although aware that

Humans have all the capacity and the ability to destroy the natural environment. Deforestation and degradation have been the major human activities which contributed to the destruction of natural habitats. In crisis are forests and fisheries which accommodate vast variety of species. The World Resources Institute (WRI) reported that there are about one-fifth of the earth's original forest cover which remains intact. What is threatening is that humans continue to degrade such areas to give way with the demands of globalization. There are already about 180 million hectares deforested in developing countries between 1980 and 1995 (WRI, February 14, 2001).

Deforestation caused diverse species to flee as forests are home to 50-90% of terrestrial species. Human beings are also affected as forests provide services to human beings in forms of carbon storage and flood prevention. Indigenous people also were deprived of their natural homes by forest conversion and destruction. Reports by the Food and Agriculture

Organization revealed that overfishing, destructive fishing techniques have destroyed the marine ecosystem. The said UN wing estimated that nearly <https://assignbuster.com/the-biodiversity-crisis-and-human-accountability-essay-sample/>

two-thirds of ocean fisheries are exploited at or beyond capacity, affecting over one billion people, mostly in developing countries, depend on fish as their primary source of animal protein (IPCC, 2001).

The introduction of invasive new species into a certain habitat has caused the loss of biodiversity. Such human activities are initially intended to increase local biodiversity but also caused significant eradication of other species. Experts estimate that an average of three new species per year should be produced with the consideration of biological factors including climate change. "Changes in the biological systems such as start and end of breeding season, shifts in migration patterns, shifts in animal and plant distributions to higher elevations and towards the poles, and changes in body size and population numbers are but proven effects of global warming caused by human activities" (IPCC, 2001).

Considering that there are species extinctions caused by nature as with the case of the extinction of dinosaurs, it is still made clear by studies and researchers that humans have played a major role in the alteration of the natural process in the ecosystem.

CONCLUSION

Human beings co-exist with the rich diversity of other forms of life. Nature provide all of living organisms with their needs for food, shelter, air, water and other processes that make life possible on earth. Human beings being created with the capacity to think and feel and especially man's rationality are expected to dominate nature with love and concern for the earth as a whole. It is however with the increasing demand of human beings for its <https://assignbuster.com/the-biodiversity-crisis-and-human-accountability-essay-sample/>

basic needs that these natural resources continue to be exploited. Also with the demand for globalization and industrialization, human beings need to compromise nature in order to give way for the establishment such progress projects including tourism and technological advances. Whether human beings intentionally damaged the then rich biological diversity or not, it is important that the human specie take the responsibility to make effort in conserving what was left to save. Further intensification of education and information dissemination is still needed in order to make all people aware and be encouraged to participate in the global effort of saving mother earth.

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