

Free biodiversity and conservation essay example

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Biodiversity is a result of various ecological and evolutionary processes.

Derived from the words bios meaning life and diversity meaning variety, the term biodiversity refers to the variety of living organisms in the world, their diversity and a wide range of ecosystems in a specific area. Biodiversity addresses a variety of living beings available in the biosphere observed at three levels, which include genetic diversity, species diversity and ecosystem diversity . Genetic diversity refers to the variability among living beings belonging to a specific species. On the other hand, species diversity refers to the number of plant and animal species present in a specific region. Natural tropical forests are rich in species diversity. Ecosystem diversity refers to the diversity of various ecosystems, which constitute of distinct interrelated species. Biodiversity offers direct and indirect values to mankind. Since humans depend upon various plant and animal species either directly or indirectly, it is essential to conserve biodiversity for the wellbeing of humans .

Conservation of biodiversity is essential to protect the plant and animal species so that they do not extinct due to loss of habitat. The underlying causes of loss of biodiversity involve various factors related to economic activities that lead to the depletion of species either directly or through devastation of the habitat. Such economic activities include changes is the usage of land due to urbanization, industrialization and infrastructure, extraction of resources, excess burning of fossil fuels and many others . The transformation of hydrological cycles in turn changes the living conditions of organisms, thereby causing alterations in the biodiversity. One of the key policy problems in the loss of biodiversity is that the private value of biological resources, such as an individual's willingness to pay or accept

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compensation for a transformation in the biological resources is not equal to the societal opportunity costs of such resources .

Biodiversity increases or decreases whenever there is an increase and decrease in the area or complexity of the habitat respectively. Several factors determine biodiversity within a community. One such factor is size of habitat, which refers to the number of species living in a specific area. Another factor is spatial patchiness, which allows distinct organisms possessing different requirements to live together. The third factor known as hardness of the habitat influences the number of species that are able to survive in a community. Disturbances in the habitat also affect the biodiversity in an adverse way, which makes the environment too harsh for the species to survive . The last factor is isolation of habitat, which refers to the colonization of species in a particular area. One of the human factors, such as wildlife poaching or trading the animals illegally is also another major factor that affects the biodiversity.

There are various threats to biodiversity, which include loss of habitat, human activities and over exploitation of resources. Wildlife requires shelter in the form of forests, rivers, vegetation and grasslands. Any harm caused to such habitat in turn affects biodiversity, thereby affecting the environment. Without strict rules and regulations, human factors continue to exist, thereby affecting biodiversity of species . Over exploitation or commercial exploitation of resources, such as medicinal plants and horticultural plants also affects biodiversity. Other factors include loss of gene flow, reduction in the reproductive rate, position of organisms in the food chain and many others. Conflicts between man and wildlife also lead to a decrease in biodiversity due to the migration of wildlife, which demands for essential

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care in order to preserve them.

The strategies involved in the conservation of biodiversity include in-situ, ex-situ, restoration and rehabilitation, land use management, policy and institutions . While in-situ deals with the establishment and management of various protected areas, ex-situ refers to the creation of artificial environments, such as seed banks, for the maintenance of species.

Restoration and rehabilitation refer to the repair and reconstruction of ecosystems. It is equally important to incorporate biodiversity conservation in the strategies of distinct policies and practices. The government should provide appropriate support with regards to infrastructure and finance.

Increasing the awareness and involvement of the public also plays a major role in the biodiversity conservation and environmental protection . There are various international treaties and environmental laws that emphasize on the importance of biodiversity conservation, such as the Rio Convention and World Heritage Convention .

The following are certain guidelines that help to protect the environment.

Planting trees on a regular basis and taking care of them, reducing the destruction of trees for wood and other products, saving energy and using alternate forms of energy, such as wind and solar energy, increasing the efficiency of irrigation, building rainwater harvesting system whenever possible, reducing the use of pesticides, using green manure and many others . The fundamental objectives in the conservation of biodiversity should include the maintenance of adequate biodiversity to secure the resilience of various ecosystems. However, the conservation of biodiversity depends on the attitudes of individuals to recognize the social implications of their actions. Since the current conservation efforts have concentrated on

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species diversity, it is important to extend the efforts to ecosystem diversity for better results of environmental protection.

One of the recent and most important emerging mechanisms of conserving biodiversity is conservation banking. It aims at protecting key areas of biodiversity, which face major threats . Conservation banking promotes various public policies that are not only conservation-friendly, but also environment-friendly. It leads to a reduction in the temporal disturbances or loss of habitat, thereby preserving biodiversity. Although there are various conservation strategies that protect the environment and its biodiversity, they are not sufficient unless there is a proper response from the general public. It is necessary to conduct awareness programs, which educate the public about the importance of preserving biodiversity and the threats caused by various human activities . The government should also take strict action against those who indulge in destroying the environment for commercial purposes. The world countries should raise their voices and act together in protecting the environment.

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