

# **BIODIVERSITY CONSERVATION AND NATIONAL DEVELOPMENT: ITS POTENTIALS AND CHALLENGES.**

**BY**

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Biodiversity conservation is germane to national development as there are a lot of benefits of biodiversity conservation. What is biodiversity conservation? Biodiversity conservation can be defined as the protection, preservation and management of biodiversity (variety of life on Earth at all levels) to derive sustainable benefits for the present and future generations. Biodiversity includes every living thing not only the species we consider rare or endangered, biodiversity consist of humans and even organisms we know little about such as fungi, microbes and invertebrates etc. This essay will discuss the importance of biodiversity conservation in national development and the challenges in biodiversity conservation.

Biodiversity conservation is important in a nation's development. Biodiversity is the pillar that allows ecosystems to function and humans to thrive. Biodiversity conservation plays a significant role in both human and the economy of the nation thereby resulting in national development. Biodiversity and biodiversity conservation is important in the following ways, the importance we are divided into, Ecosystem services, biological resources and social benefits.

Ecosystem service: Per the 2006 Millennium Ecosystem Assessment (MA), ecosystem services are "the benefits people obtain from ecosystems". The ecosystem services that make biodiversity conservation important are;

1. Maintenance of ecosystems
2. Protection of water resources
3. Soil formation and protection
4. Nutrient storage and recycling
5. Pollution breakdown and absorption etc.

Biological resources: These are genetic resources, organisms or part thereof, populations, or any other biotic component of ecosystems that have actual or potential value or use to humanity. Biodiversity provides biological resources, such as;

1. Food
2. Medicinal resources and drugs (foxglove, contaminated rye, cinchona)
3. Wood products (lumber, hardwoods)
4. Ornamental plants (Tulips, Holly trees and shrubs, Roses)

## 5. Breeding stock and population reservoir

Social benefits: This is the total benefits society gets from the conservation of biodiversity.

The social benefits are;

1. Recreation and tourism
2. Research
3. Education and monitoring

Haven divided the importance of biodiversity conservation into three categories it is necessary to explain how it relates to national development. Biodiversity conservation creates stability in the national economy through the production of food, creation of job opportunities, foreign trade, foreign relations between countries, tourist centres, production of drugs for diseases etc. We humans cannot survive without biodiversity, a nation cannot survive without biodiversity so there is need for biodiversity conservation.

The importance of biodiversity conservation is stated above, we know now that it is important to conserve biodiversity but they are challenges to biodiversity conservation, they are;

1. Climate change: Climate change alters regional climates, making many species specifically adapted to those regions struggle to survive. As the climate changes species will move into other regions that are favourable to them, thereby altering the ecosystems already present there. Changes in climate throughout our planet's history have, of course, altered life on Earth in the long run — ecosystems have come and gone and species routinely go extinct. For example, rising ocean temperatures and diminishing Arctic sea ice affects marine biodiversity and can shift vegetation zones, having global implications. Climate is a major factor in the distribution of species across the globe.

2. Habitat loss: One of the greatest threats or challenge biodiversity specifically plants and animal species throughout the world is Habitat loss. The loss of habitat has far-reaching impacts on the planet's ability to sustain life. When an ecosystem has been dramatically changed by human activities, such as oil and gas exploration, commercial development, industrialization etc. It may no longer be able to provide the food, water, cover, and places needed by biodiversity to survive. Every day there are fewer places left that wildlife can call home. Habitat loss is primarily, though not always, human-caused. The clearing of land for farming, grazing, mining, drilling, and urbanization impact the 80 per cent of global species

who call the forest home. Approximately 15 billion trees are cut down each year. According to a study about tree density published in *Nature*, the number of trees worldwide has decreased by 46 per cent since the start of civilization. In addition to the loss of habitat, deforestation reduces the ability of forests to provide the critical benefit of absorbing carbon, which helps to mitigate the effects of climate change.

3. Overexploitation: Over-harvesting, over-hunting and over-fishing have contributed immensely to the loss of biodiversity. Poaching and other forms of hunting for-profit purpose have increased the risk of extinction. Hunting is practised throughout the world, but hunting practices, particularly in equatorial Africa and parts of Asia, are believed to threaten several species with extinction. With the commercialization of the practice of harvesting, fishing and hunting and human population growth has increased the need for these foods, this has increased the harvest rate to a level of unsustainability and it is a threat to biodiversity conservation.

4. Exotic or Invasive species: The introduction of exotic/invasive species into an ecosystem is another major challenge to biodiversity conservation and its use in development. For example in Bangladesh, some plant and animal species have been introduced from different countries. These exotic species have hampered endemic species both in their population dynamics and in the position of their trophic levels. Some species, however, possess preadaptation that can make them successful in an ecosystem which they are newly introduced into. These exotic species often undergo dramatic population increases in their new habitat and reset the ecological conditions in the new environment, threatening the species that exist there. For this reason, exotic species are also called invasive species. Exotic species can threaten other species through competition for resources, predation, or disease.

Biodiversity conservation is important to mankind and national development. The government have to create a favourable habitat for biodiversity, build seed banks, make laws, avoid importation of invasive species, organize public awareness campaigns to educate people on the importance, challenges and how the citizens can help in conserving biodiversity for a sustainable benefit to mankind and national development.

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