

BIODIVERSITY AND ITS CONSERVATION

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Paper Received: 05.11.2019 / **Paper Accepted:** 15.12.2019 / **Paper Published:** 21.12.2019

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Abstract

This paper explains about appropriate working of specific network or environment the species decent variety is exceptionally fundamental. In a network the endurance of all species are interrelated to the presence of other living beings. Environment assorted variety alludes to varieties in the biological networks in which species live, the biological system wherein networks exist and connections among these levels. Environment assorted variety is reflected in different biogeographic zones, for example, lakes, deserts, coasts, estuaries and so forth.

Keywords: Biodiversity, Conservation, Hereditary.

Introduction

Biodiversity or Biological assorted variety alludes to the assortment and inconstancy among qualities, species and ecosystems. There are three degrees of biodiversity to be specific hereditary assorted variety, species decent variety and environment decent variety. Hereditary decent variety is the hereditary variety inside species, both among geographically isolated populaces and among people inside single populace. This hereditary decent variety is the aftereffect of various methods of adjustment in various habitats, which gives living beings and ecosystems ability to recover after change has happened. Species decent variety indicates the assortment of species on earth from cell infections to single celled microorganisms like microscopic organisms, mycoplasmas, actinomycetes and so on to multicellular plants and animals. For appropriate working of specific network or environment the species decent variety is exceptionally fundamental. In a network the endurance of all species are interrelated to the presence of other living beings. Environment assorted variety alludes to varieties in the biological networks in which species live, the biological system wherein networks exist and connections among these levels. Environment assorted variety is reflected in different biogeographic zones, for example, lakes, deserts, coasts, estuaries and so forth.

Biodiversity is one of the words in the territory of biological and environmental sciences that doesn't fit an especially one of a kind importance. Adom (2018) agrees that there is no concurred meaning of the word. Inferable from this, the word 'biodiversity', as indicated by Science for Environment Policy (2015), is doled out various implications in accordance with the setting of its use in biological system appraisals and natural

administrations. Numerous conservationists and biological researchers regularly embrace a working definition to suit their inclinations and the thought with respect to the word they need to spread. For example, this scientist has embraced a straightforward working definition for biodiversity in this postulation. In his view, biodiversity alludes to the various types of greenery (plants) and fauna (animals) in various types of habitats (Attuquayefio and Fobil, 2005).

Significance of Biodiversity

- Biodiversity plays a crucial role in the life of man. Biodiversity fulfils the need of food, fodder, fuel, timber and medicines.
- Biodiversity helps in increasing the agricultural production and also in developing disease resistant varieties.
- Biodiversity plays an important role in protecting the water resources. The natural vegetation cover in water catchment helps in maintaining hydrological cycles, regulating and stabilizing water runoff and acts as buffer against natural disasters like flood and drought.
- Biological diversity plays important role in nutrient recycling. It is the sink and source of nutrients.
- Biodiversity helps in elimination of environmental pollution. Breakdown of the pollutants and its absorption is a feature of many plants. The plant *Vinca rosea* (Sadabahaar) has the ability to degrade Trinitrotoluene (TNT) like explosive.
- Biodiversity provides stability to the ecosystem and maintains the ecological balance.

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Biodiversity of India

With 2.4 percent of the world's territory, India contributes 8 percent to the world assorted variety. It has, in this way, been assigned as one of the 12 super decent variety locales of the world. India is perceived as a nation extraordinarily wealthy in biodiversity on account of its tropical area, differed physical highlights and atmosphere (Bradley et al, 2012).

Aside from the high biological decent variety in Indian wild plants there is additionally extraordinary assorted variety of developed harvests. The conventional cultivar incorporates 30,000 to 50,000 assortments of rice and various grains, vegetables and organic products. The most elevated decent variety of cultivars is gathered in high precipitation territories of the Western Ghats, Eastern Ghats, Northern Himalayas and the North-Eastern slopes (Huber et al, 2002).

India has contributed 167 types of developed plants alongside their 320 types of wild family members and land races and a few residential animals. Rice, sugarcane, jute, jackfruit, ginger, turmeric, dark pepper, bamboos, camel, within and water bison have started in India.

India is very wealthy in Ecosystem decent variety also. As per Wildlife Institute of India the nation has 10 biographic zones:

- I. Trans-Himalayas
- II. Himalayas
- III. Desert
- IV. Semi-parched
- V. Western Ghats
- VI. Deccan
- VII. Gangetic Plain
- VIII. North-East India
- IX. Islands; and
- X. Coasts

The North-East, the Western Ghats, Western and North-Western Himalayas are wealthy in endemism. In any event 200 endemic species are found in the Andaman and Nicobar islands.

Problem areas are the locales of high biodiversity with huge danger to verdure because of high biotic weight. Of the 18 biodiversity problem areas of the world 2 have a place with India. Western Ghats and Eastern-Himalayas are the problem areas of biodiversity in India.

The Andaman and Nicobar islands are incredibly wealthy in species, and numerous subspecies of various animals and winged creatures have developed here.

A significant extent of land and water proficient and reptile species, particularly winds, is moved in Western Ghats, which are additionally natural surroundings for 1,500 endemic plant species. The Coral reefs around the Andaman and Nicobar Islands, the Lakshadweep islands and the Gulf zones of Gujarat and Tamil Nadu are biologically various ecosystems and are frequently called 'tropical downpour woodland' of the sea (May, 2002).

Causes of Loss of Biodiversity

The fundamental causes of biodiversity loss include:

1. Unsustainably high rates of human population growth and natural resource consumption.
2. Introduction of exotic species associated with agriculture, forestry and fisheries.
3. Economic systems and policies that fail to value the environment and its resources.
4. Inequity in ownership and access to natural resources, including the benefits from use and conservation of biodiversity.
5. Inadequate knowledge and inefficient use of information.
6. Legal and institutional systems that promote unsustainable exploitation.

Conservation of Biodiversity

Conservation of biodiversity refers to planning and management of biological resources in a way so as to secure their wide use and continuous supply, maintaining their quality, value and diversity (Meltzer, 2007).

The World Conservation Strategy has suggested the following steps for biodiversity conservation:

1. Efforts should be made to preserve the species that are endangered.
2. Prevention of extinction requires sound planning and management.
3. Varieties of food crops, forage plants, timber trees, livestock, animals and their wild relatives should be preserved.
4. Each country should identify habitats of wild relatives and ensure their protection.
5. Habitats where species feed, breed, nurse their young's and rest should be safeguarded and protected.
6. International trade in wild plants and animals is regulated.

For the conservation of biodiversity the immediate task will be to devise and enforce time bound programme for saving plant and animal species as well as habitats of biological resources. Action plan for conservation therefore must be directed to:

- I. Inventorization of biological resources in different parts of the country including the island ecosystems.

- II. Conservation of biodiversity through a network of protected areas including National Parks, Sanctuaries, and Biosphere reserves, Gene Banks, Wetlands, Coral reefs etc.
- III. Restoration of degraded habitats to their natural state.
- IV. Reduction of anthropogenic pressure by cultivating the species elsewhere.
- V. Rehabilitation of the threatened and endangered species.
- VI. Protection and sustainable use of genetic resources/germplasm through appropriate laws and practices.
- VII. Conservation of microbes which help in reclamation and rehabilitation of wastelands and revival of biological potential of land.
- VIII. Control of over-exploitation through Convention on International Trade in Endangered Species (CITES) and other agencies.
- IX. Rehabilitation of tribals displaced owing to creation of protected areas.
- X. Protection of domesticated plant and animal species in order to conserve indigenous genetic diversity.
- XI. Multiplication and breeding of threatened species through modern techniques of tissue culture and biotechnology.
- XII. Maintenance of corridors between different nature reserves for the possible migration of species in response to climate, or any other disturbing factor.
- XIII. Restriction on the introduction of exotic species without adequate investigation.
- XIV. Support for protecting traditional indigenous knowledge and skills for conservation.
- XV. Discouragement of monoculture plantations.

There are two main categories of biodiversity conservation: Ex situ conservation and In situ conservation:

1. Ex situ conservation: This is conservation outside their living spaces by propagating test population in hereditary assets focuses, zoos, professional flowerbeds, culture assortment and so forth or as genetic supplies, and gamete stockpiling for fish; germplasm banks for seeds, dust, semen, ova, cells and so on. In this sort of conservation, plants are kept up more effectively than creatures. Seed banks, professional flowerbeds, dust stockpiling, tissue culture and hereditary engineering have been assuming significant job.
2. In situ conservation: This is the conservation of hereditary resources through their support inside regular or even human caused biological system in which they to happen. This sort incorporates an

arrangement of secured regions of various classifications, dealt with various goals to carry advantage to the general public. Exacting Nature Reserve/Wilderness Area, National Parks, National Monuments/Natural Landmark, Habitat/Species Management Area, Protected Landscapes and Seascapes, Managed Resource Protected Area, Wildlife asylums and Biosphere Reserves have a place with this sort of conservation (Yucel, 2015).

Conclusion

In a biodiversity rich developing country like India the fast growing human population has put tremendous pressure on biological resources. Hence unsustainable use of the biological resources has resulted in the loss of biological diversity of the country. Besides this, introduction of exotics have also substantially contributed to the loss of biological wealth of the country. Therefore, conservation of biodiversity is the need of the hour not only for the fulfilment of food, fodder, fuel, timber and medicinal requirements but also for the enhanced agricultural production, ecological balance, mitigation of environmental pollution and natural calamities.

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