

BIODIVERSITY AND ITS CONSERVATION

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Abstract

Biodiversity mainly indicates variability among organism and abundance and their living environment. In which include land, reservoir and ecological complexity. Ecosystem is a complex interaction between organisms, micro-organisms and their communities and abiotic environmental elements. Biodiversity conservation is the policy process of maintaining the species, genetic and ecosystem Biodiversity of different biological communities under natural conditions so as to ensure the supply of biological needs of human beings as well as to maintain biological diversity and biodiversity. The problem of biodiversity loss, there is a need to take effective steps for the conservation of biodiversity in time. Along with the supply of various human needs like food, medicine, various industrial products, there are a need to maintain the natural balance of biodiversity for environmental sustainability. In this context, the policy of conservation of biodiversity is being adopted at the national and global level.

Keywords

Ecological complexity, Ecosystem, Biodiversity conservation, Species, Environmental sustainability.

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The biodiversity is directly related to the quality of life. Biodiversity indicates variations and abundance and their living environment. Species diversity is indicated by morphological, physiological and genetic features. The relative percentage of Species a different life form in a given area indicates biological spectrum.

Some important characteristics of Biodiversity-

- The biodiversity is a broad term of natural diversity.
- In this biodiversity it includes many ecosystems.
- In this biodiversity, importance is given to the shapes, anatomy and genetic aspects of organism.
- The relation of biodiversity of the heterogeneity of living beings and their Environment are components the main components.
- Each organism has its own species.
- Biological disparity started with coming to Earth.
- Geological, physical and climate factors affect the anatomy of living beings from which species are formed.
- Each type of organism has its own limitations.
- Ecosystem is responsible for biodiversity.

Levels of Biodiversity

Biodiversity can be studied at four levels-

1. Individual or single
2. Population or genetic
3. Community
4. Ecosystem

Need of Biodiversity

Biodiversity has an important role in nature. This gives an understanding of the emergence and development of living beings on the Earth and the scientific basis of biological process is revealed. Many factors affect the heterogeneity of organism. Biodiversity is an important tool for assessing this process. Many factors influence biodiversity. Biodiversity is the understanding of the health and living of the living beings of a place.

Biodiversity has an important role in ecology. To make the land fertile, the environment can be conserved by using manure, water, moisture, waste materials from the climate. The inequalities of the situation are made useful by the waste materials from human society, food, medicines and industry. It is needed in poor areas-

- Accumulation and storage for maintaining ecological balance.
- Maintaining national heredity.
- To meet the basic needs of the people.
- To maintain internal relations with the trials and other people.

So that their needs can be met.

Works for conservation of biodiversity

There are two types of conservation of biodiversity-

1. Ex-Situ Conservation

Under this, the protection of wildlife and flora is separated from their natural habitat. In this, organisms are protected in man made artificial habitats.

For this, specimens of organisms are collected in gene processing centers, kept safely in gene banks, botanical and zoological gardens, tissue culture centers and nurtured. In this, suitable artificial conditions are created for the growth of organisms. Conservation of organisms in artificial or special conditions helps in maintaining biological diversity. At the same time, scientists and researchers can take

measures to protect and increase the number of organisms by conservation. By ex-situ conservation the organisms are kept safe under controlled conditions. Animals are preserved in zoos and flora in botanical gardens under the supervision of experts. So that the number of flora can be increased. The main objective of ex-situ conservation:

- To save endangered species from extinction.
- Maintaining Earth's biodiversity.
- To encourage activities related to the conservation of wildlife.
- To make scientific efforts to maintain the natural availability of wildlife.

Gene Bank: Gene bank store the genes of different species of wildlife. When there is a crisis in the existence of an organism, with the help of these genes, new organisms are created by artificial reproduction. For this, test tube baby technology and cloning technology are used. Two Panda creatures have been produced in China to save the endangered Panda creature by test tube baby technology. Organisms have also been generated by cloning technology. In this way, efforts are also being made to words conservation of biodiversity is an effective manner by Ex-Situ conservation.

2. In-Situ Conservation

In-situ conservation, the flora and fauna are preserved in their natural habitats. It maintains the natural growth conditions of various biological species. For this, areas of biological diversity are recognized as biosafe and protected areas and such human intervention is prohibited, which can threaten the existence of organisms. In order to maintain the compatibility of natural conditions for the development of organisms.

Under the In-Situ Conservation, the following words are done-

- Established of Biosphere reserve.
- Established of National park area.
- Established of Animal husbandry or sanctuaries.

Biosphere Reserve

These are multipurpose reserves of terrestrial, coastal, marine ecosystems through which Genetic diversity is maintained in the ecology. These are vary useful in maintaining the natural condition of animals and plants. Under this, the work of education, training, awareness, research such management process is adopted, so that the combined use of natural resources can be done. Biosphere reserve area means the least disturbed, least modified area by humans, which are specially demarcated to protect the wildlife. Its area is relatively more extensive, spread over 5670 sq. km. The program of biosphere reserve was started in 1971 under the man and Biosphere Program of UNESCO. At present there are 621 biosphere reserves in 117 countries in the world. India currently has 18 Biosphere reserves, of which 9 have been included in the 'World Net Work of Biosphere Reserve by UNESCO.

Structure of Biosphere

Biosphere reserve area is individual into three main parts-

1. Core zone
2. Buffer zone
3. Restoration zone

National Park

National park refers to an area dedicated to the protection of the environment, natural and historical objects and wildlife living in that environment. No one has any personal right in this. These are restricted areas for human intervention. There is no research and scientific research in this. It is established for the purpose of providing safe habitat for wildlife in natural areas only. This is a reserved area, in which deforestation, pastoralism, agriculture are restricted. Human settlement is not allowed here. In most of the parks, special protection is given to rare and endangered species.

Sanctuary

Wildlife sanctuary refers to an area that is determined the state government for the protection of nature and animals. It is forbidden to kill, hunt or capture any species of birds and mammals. Such can be done only under the control of the highest officer responsible for its management. But the residents here are given the freedom to collect fruits and pumpkins, to collect dry wood for fire wood. There are 515 sanctuaries in India. Its area is much wider than that of the national garden 0.61 to 7818 sq km.

Benefit and functions of Biodiversity

The following are the benefits and functions of biodiversity-

- Maintaining moral and ethical values.
- To maintain the environment with the help of climate and ecosystem.
- Worldwide change is reviewed with biodiversity and efforts are made to avoid hazards.
- The biosphere is protected and maintained.
- The role of regional climate of the world is determined.
- This gives indications of environmental change.
- Helps in protection from natural hazards, earthquakes, floods and other physical disasters.
- The internal and external values of nature are realized through biodiversity.
- Maintaining entertainment and aesthetic values .
- It is helpful in the use of sources of food, use of materials and education.
- To maintain the environment with the help of climate and ecosystem.
- Worldwide change is reviewed from biological inequality and efforts are made to avoid hazards.

Some schemes and institutions have been established for the conservation and maintenance of biodiversity at the world level-

- International Genetic Plant Resource Board (IBPGR)
- World Conservation Organization (IUCN)
- World Resource Institute (WRI)
- UNESCO's Human and Biosphere Program
- World Conservation Monitoring Center (WCMC)

Biodiversity in India

17% of India's area is covered by forests, in which 54 thousand sq. km are under the protection of wetlands. 60 thousand types of animals are found in it. There are 5 thousand types of milk giving animals, 1230 types of birds and 400 types of reptiles and 142 types of fish are found. There are many types of birds habitat-migration in the seasons of India. In winter, the birds of Siberia are seen on many water bodies in India. 45 thousand types of wild plants and trees grow in India. 75% of them are flowering plants and trees, there 425 types in the whole world. The extent of domestic biological diversity in India is vast. 166 types of crops cultivated in India. While 320 crops are cultivated in the world. Wild crops are also grown in India. There are 50 thousand types of rice, 27 types of cattle, 40 types of sheep and 22 types of goats are found in India.

Conclusion

Biodiversity is directly related to the quality of life. Biodiversity is more valuable and useful from the point of view cultural, economic entertainment and aesthetic experience in addition to scientific explanation. The protection and maintenance of biodiversity is more important in the components of the environment and its strengthening the relations of nations and from the point of view of human peace and the conservation and maintenance of biodiversity is more useful and beneficial for present and future generations.

References

1. Sharma, Sanjeev. Environment and ecological. Golden Peacock Publication: Mukherjee Nagar. Delhi.
2. Odum. (1959). Fundamentals of Ecology. Saunders. Philadelphia.

3. IUCN. (Repor 2009, 2012, 2015).
4. Sharma, P.D. (1990). Ecology and Environment. Rastogi Publishers: Meerut (U.P.).
5. Sapru, R.K. (1987). 'Environmental Management in India'. Ashish Publishing House.
6. Claphaun, W.B. (1973). 'Natural Ecosystem'. MacMillan: London.
7. Singh, S. (1995). 'Environmental Geography'. Prayag Pustak Bhawan: Allahabad.
8. Etherington, J.R. (1975). 'Environmental and Plant Ecology'. Wiley' New York.
9. Dassaman, R.D. (1976). 'Environmental Conservation'. Wiley, York.
10. Khoshoo, T.N. (1984). 'Environmental Concerns and Strategies'. Indian Environmental Society.
11. Saxena, A.B. (1986): 'Environmental Education'. National Psychological Corporation: Agra.
12. Verma, P.S., Agrawal, V.K. (1993). 'Environmental Biology (Principles of Ecology). S. Chand and Company: New Delhi.
13. <https://www.vedantu.com>.
14. <https://www.conserve-energy-future.com>.
15. <https://www.sciencedirect.com>.
16. <https://vikaspedia.in>.
17. <https://byjus.com>.
18. <https://www.epa.gov>.
19. <https://www.amnh.org>.
20. <https://www.springer.com>.