



Biodiversity: Utility and Scenario

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The closer man is to nature, the more will be the natural balance and the positive effect on human life, in ancient times man was associated with nature, and did not harm nature. But due to gradually increasing population and natural imbalance and modernity Due to natural imbalance and increasing human need, man went away from nature, exploiting the natural resources of his benefit, Whose damage is being done to nature, animals, plants, humans, and due to the imbalance in nature, the effect of floods, volcanic eruptions and green gases is increasing, the ozone layer is being damaged, and all kinds of diseases and disasters are coming. Insects play an important role in biodiversity, growing of crops and many other natural activities. Every year thousands of insects are disappearing from the world's insect kingdoms due to natural imbalances, scientists are expressing concern about it. After the Industrial Revolution, forests have been cut indiscriminately for the establishment of human industries, which has had a negative impact on the nature and the fauna living in those forests and the biodiversity of that area.

Bioersivity International Establishment

With the increase in population, humans are needing more food for food supply, due to which the natural structure of the land is being disturbed by using indiscriminate insecticides inside the land, which will have adverse effect on human life in future. There is every possibility of In view of all these concerns, the international community in Italy in 1974, Bioersivity International was established as the International Board for Plant Genetic Resources, to coordinate an international plant genetic resource program. emergency collection missions, and the creation and expansion of national, regional and international genebanks, In the concerned institute, there was talk of conservation of biodiversity related forests, animals, birds, seeds and trees at different places in the whole world and on the basis of biodiversity, the whole world community is divided into different parts. We celebrate 22 May as Biodiversity Day for the awareness of biodiversity.

Biodiversity in India

India is also a good center of biodiversity and due to all types of weather, different types of biodiversity are found in different places in India from east to west and north to south. It can be considered an example in many ways, especially the way this country provides food to the population of 1 billion 300 million people on a sustainable basis, it is an example, but the challenge is that the land, soil and water resources and the richness of the country. How can this achievement be sustained without destroying diversity or creating a haze of pollution in cities like Delhi?

Flora and Fauna in India

India has an abundant and varied flora and fauna with a wide range of climatic conditions. 7-8 percent of the world's flora and fauna are found in India. About 45,000 species of plants are found in India, which is about 7 percent of the total population of the world. About 1336 species of plants are in danger of extinction. About 15,000 species of flowers are found in India, which is about 6 percent of the total population of the world. Of these, about 1,500 flower species are endangered. 91,000 animal species are found in India, which is about 6.5 percent of the total population of the world. These include 60,000 insect species, 2,456 fish species, 1,230 bird species, 372 mammals, 440 reptiles and 200 amphibians, with the highest concentration in the Western Ghats and 500 mollusks. India has 400 sheep, 27 cattle and 22 goats. Some species of animals of Asia are found in India which are among the rare species globally such as Bengali fox, Asiatic cheetah, marbled cat, Asiatic lion, Indian elephant, Asiatic wild ass, Indian rhinoceros, Makhor, Gaur, wild Asiatic water buffalo etc. are found.

Biogeographic Regions and Provinces of India

Biogeographers have classified India into ten biogeographic regions each with characteristics, climate, soil and biodiversity. It is divided into 25 biogeographical regions based on geography, climate and vegetation types and the mammalian, bird, reptile, amphibian, insect and other invertebrate communities that inhabit them.

1. Trans-Himalaya: There are three provinces in this region – the mountains of Ladakh, the Tibetan Plateau, the Trans-Himalayan region near Sikkim.
2. Himalaya: There are four provinces of this region – North-West Himalaya, Western Himalaya, Central Himalaya and Eastern Himalaya.
3. Indian desert consists of one province of this region – Thar and Kutch region of Gujarat and Rajasthan
4. Semi-Arid Region: This region consists of three provinces – Punjab, Gujarat and Rajasthan.
5. Western Ghats: There are two provinces of this region - the plains of Malabar and the hills of the Western Ghats.

Acts related to Biodiversity and Environment in India

In India, the National Biodiversity Authority (NBA) was formed in 2003 by the Central Government under the Biodiversity Act of 2002. It is a legislative body and has its headquarters in Chennai. The oldest dates from the Fisheries Act 1897 to the National Green Tribunal Act (NBA). NGT) As of 2010, 36 laws and acts related to forest, environment, agriculture, marine life, wildlife protection, tea, coffee, mining, pollution etc. come under the purview of biodiversity. The Government of India has enacted the Biodiversity Act in the year 2002 at the central level. Under this, the state governments were asked to prepare rules according to their rare species. National Biodiversity Authority was established in Chennai in the year 2003 to implement this act at the national level, under this act, preparing its law and implementing it in the states, state level Biodiversity Board was constituted to implement this law. In the Government of Rajasthan, this responsibility was given to the State Forest Department. The State Biodiversity Act was approved by the State Government in the year 2010 and Biodiversity Board was formed and the control of this Board was handed over to the Environment Department of the Government of Rajasthan in the year 2011. Granted, since the year 2017 a senior officer of the Indian Forest Service has been posted on representative deputation by the State Government on the post of Chairman of the Board. Subject experts and officers of related departments have been kept as members in the Board. In order to decentralize the work of biodiversity management, a provision has been made to constitute Biodiversity Management Committee at the level of all Gram Panchayat Panchayat Samiti and Zilla Parishads at the village level. Similarly, there is a provision to constitute

committees in the bodies working in urban areas such as municipalities, municipal corporations and authorities.

The following Acts have been made by the Government of India under environmental protection.

1. Wildlife Protection Act, 1972
2. The Water (Prevention and Control of Pollution) Act, 1974 and 1977
3. Air (Pollution and Control) Act, 1981
4. Forest Conservation Act, 1980
5. Environment (Protection) Act 1986
6. Bio-diversity Conservation Act, 2002
7. National Water Policy, 2002
8. National Environment Policy, 2004
9. Forest Rights Act, 2006
10. National Green Tribunal 2010

Current Scenario of Biodiversity in India

India is one of the few countries in the world whose constitution has a special mention of the environment. India has made extensive environmental laws, even after having all the environmental bills, the environmental situation in India remains very serious. Drains, rivers and lakes are full of industrial waste. The Yamuna river in Delhi has become a drain. Erosion in the forest area is increasing continuously, the result of which we get to see clearly in the recent severe floods in Bihar. There is also a need to ensure the participation of the general public in the efforts to protect the environment.

The judiciary has also played an important role in environmental protection. Due to its efforts, clean environment has become an important part of the fundamental right. The closure and transfer of polluted units in Delhi, use of CNG, saving the Taj Mahal from pollution, making the environment an essential part of the educational curriculum and promoting the importance of the environment through the medium of communication etc. are one of the commendable efforts of the judiciary. There is a glimpse. Public interest litigations have encouraged the participation of NGOs, civil society and common man towards environmental protection. It is the result of its efforts that today environment is the first issue in the list of government and policy makers and they have become serious about environmental protection.

Why is Biodiversity Conservation Needed?

In the next 20-30 years, more than one million species of plants and animals should become extinct from the earth. The root cause of this is the environmental changes being made by humans. This rate, that is, the extinction of 100 species per day, is 1,000 times higher than the estimated rate of extinction. The list of endangered, endangered and threatened species includes both animals and plants. 10 percent of the plant species in temperate regions and 11 percent of the world's 9,000 bird species are at risk of extinction to some degree. As we humans reduce biological diversity, so do we need to adapt to a changing environment Reduce the ability of organisms. Changes in the method and pattern of agriculture are also harming biodiversity. Earlier, different types of crops were grown in sequence, so that the capacity of the land, the insect resistance of the crops was maintained. Now The use of excessive chemical fertilizers and the use of pesticides is destroying the micro-organisms of the agricultural sector. Which is harming not only agriculture but also the environment. Similarly, planting of lonely trees is being done for commercial use in forest areas. , Eucalyptus, exotic acacia is being planted in many natural places. Somewhere other forests are being cut for commercial use and only teak tika oak, Valet trees are being planted.

Diversity degradation and eventually species extinction The reason for the problem is that the introduction of new species in place of the local species that have been growing there for centuries is also an attack on biodiversity and harming it, similarly the arrival of foreign plants is harming the local plants. Due to the introduction of new agricultural seeds in the country by the Green Revolution, the indigenous plants have suffered a lot. Similarly, foreign species of cow, sheep, pig, chicken are becoming a threat to the native species. Indigenous species are eco-friendly, on the other hand Crossbreeds of foreign breeds, although producing higher yields, pose a threat to local biodiversity. Most of the crops grown today are developed for a particular geographical area. The productivity of these breeds may not be the same as the climate changes or new diseases appear. Therefore, it becomes even more necessary to preserve biological diversity, because without it we will not be able to develop varieties of crops adapted to the new conditions.

Utility in Agriculture

Along with all this, it is also being emphasized that by selecting field wise crops in the agricultural field, emphasis should be laid on re-growing the old natural ancient seeds growing in the same area, so that they can conserve biodiversity. To maintain the biodiversity in the agricultural sector, a joint program between Bioversity Italy and Agriculture University Jodhpur on the conservation of crops, due to being local, and the resistance to various diseases, insect moths, is present inside the crop. running in. In which there has been talk of sowing crops while conserving different natural biodiversity at different places inside Rajasthan. Under this, bio-diversity related projects in the college, while reducing the vulnerability by ensuring the conservation of biodiversity in the agricultural sector, bring the conservation and use of agricultural biodiversity into the mainstream of agriculture; In this, the cultivation of the seeds of ancient indigenous breeds growing in Rajasthan is being done, first of all by selecting indigenous breeds and making a list of them by making a list of different crops is being run. Trial is sown in the plot. And according to their environment, the progress report is prepared from sowing the seeds to harvesting, after that the crop which proves to be good according to its test, is given to the farmers for sowing. Farmers grow crops at selected locations in their fields, and prepare progress reports from sowing seeds to harvesting. The farmers distribute the crop among themselves to the farmers, and seed banks are established in the village area to produce good seeds, in this way the seed produced by the farmer is a source of biodiversity. Due to its adaptability, it is less prone to diseases and insect pests, production is good and the cost is also low and it is free from seed production and any kind of chemical, after which health-related human beings get health related diseases. Biodiversity based farming is being done by the Agriculture University of Jodhpur with the farmers in Jaisalmer, Barmer and Jodhpur districts with the cooperation of various institutions, so that we can better our future. The crop that brothers grow in their nearby area, you must have seen that if we use hybrid seed, it gives good production in the first year, but in the second year its production is reduced to half. Therefore, farmers, brothers, while preserving the natural breed, preserve and produce seeds of indigenous breeds growing around them according to their area, and prepare their progress report, which seed crop is good according to your biodiversity area, the same crop seed So that all farmers can get good positive biodiversity related good positive results as well as get good production at low cost and the crop can remain disease and insect pest and pesticide free, thereby reducing various types of expenses due to pesticide etc. The expenses can be reduced and the income can also increase with natural balance. Along with this, farmers can also do animal husbandry poultry farming for natural manure in their fields along with crop, so that farmers can get additional income and production as well as farm. Good natural organic manure will also be available for this.

Benefits of Biodiversity

1. Biodiversity is an integral part of nature and it plays an important role in protecting the environment and operating the ecosystem. It has an important role in producing oxygen, reducing carbon dioxide, maintaining the water cycle, protecting the soil and operating various cycles.
2. Agriculture, forestry, fisheries, stable natural water bodies, fertile soils, balanced climate and many other macro ecosystems depend on the conservation of biodiversity.
3. The production of food depends on the variety of edible plants for biodiversity, the process of pollination, insecticides, nutrients and protection and protection from diseases.
4. Both medicinal plants and the drugs produced depend on biodiversity.
5. Due to the decrease in biodiversity, more diseases have been transmitted to humans and an increase in the expenditure on health has been observed.
6. Biodiversity is important for recycling of nutrition, soil formation, cycling of water and air, water balance etc.
7. It also contributes directly or indirectly in the fulfillment of many human needs like food, clothing, housing, energy, medicine, etc.
8. Natural places with biodiversity provide aesthetics and are also useful as entertainment places.

