

NEED OF ECOLOGICAL BALANCE FOR THE WIDESPREAD BIODIVERSITY

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Abstract

The ecological equilibrium is a stable state between all plants and animals in an ecosystem and destabilization of this stable state is ecological imbalance that in turn exerts serious threats to widespread existence of biodiversity. An ecosystem constitutes a system of abiotic and biotic components together. An ecosystem requires three forms of diversity in order to sustain this system: biological, genetic and functional. The ecological equilibrium is maintained by the cyclic transfer of resources to the biosphere from the abiotic ecosystem and then back to the abiotic environment and preserving the balance of interaction within food webs. In the ecosystem, all these mechanisms must be maintained and any interaction with these cycles disrupts the ecological equilibrium and affects it. In order to preserve the rich and varied diversity of animals, plants and microbial life, which is necessary for the mutual survival and existence of all living beings, including humans, ecological equilibrium is currently a requirement.

Keywords: *Ecological Balance; Flora; Fauna; BiologicalDiversity; Ecosystem; Eco-Friendly; Survival.*

I. INTRODUCTION

Biodiversity is generally defined at three levels: genetics, organisms and ecosystems, all of which work together to establish a unique path to life on Earth[1]. Genetic diversity is the diversity within a population of the fundamental units of genetic knowledge (genes) which are transmitted from one generation to the next. Genetic diversity results in differences, so the basis of speciation is the underlying source of biodiversity and the amount of genetic variation[2]. The diversity of species relates to the variety of species within an area. It is the variability found within the population of a species or between different species of a group. The species is the true basic unit used for the classification of organisms, and its diversity is the level of biodiversity definition that is most widely used. The diversity of ecosystems is the diversity of environments, and the various types of life within them. On three levels,

diversity occurs at the level of culture and environment. Alpha diversity (within group diversity) is first, beta diversity (diversity between communities) is second, and gamma diversity is third (diversity of the habitats over the total landscape or geographical area)[3]. Richard (2015) has suggested that genetic variation plays an important role in a species' survival and adaptability[4]. Thus, there is a tremendous opportunity for various levels of biodiversity: habitats, animals and genetics, and a decrease in biodiversity would result in significant economic, ecological and socio-cultural losses. If we want our human race to thrive, then because biodiversity has meaning for life, we must preserve all biodiversity.

II. IMPORTANCE OF BIODIVERSITY

The living organisms on earth are very complex, have various characteristics and are essential to the provision of food, shelter, clothing, medicines, etc. for human life. Productive value, consumption value, social value, aesthetic value, legal value, ethical value, economic value, ecosystem service value and so on are important for widespread biodiversity. In addition, biodiversity also has scientific and evolutionary significance, with each species providing scientists with certain hints as to how life has evolved and will continue to evolve on earth. Biodiversity helps scientists understand the roles of life and the role of each species in ecosystem maintenance. Biodiversity's ethical importance is based on the 'Live and Let Live' principle.

Ecological equilibrium is 'a state of dynamic equilibrium within a population of species' and all around us is the world[5]. Indeed, the world consists of matter and energy and is 'nature'. A system of abiotic (non-living) and biotic (living) parts is formed by the interaction of matter and energy. Plants (flora), animals (fauna) and microbes are the biotic elements[6]. An ecosystem constitutes a system of abiotic and biotic components together. An ecosystem requires three forms of diversity in order to sustain this system: biological, genetic and functional. Biological diversity refers to the species' richness in a specific area; genetic diversity refers to a specific species' way of adapting to changing conditions, while functional diversity is equal to the biophysical processes that take place in the area[7]. The variety of life on Earth comprising millions of plants, animals, microorganisms and the genes they produce refers to biodiversity or biological diversity.

It literally means the appearance in their natural habitats of a large range of plant and animal species. Biodiversity is defined by the Convention on Biological Diversity (Glowka et al, 1994) as the heterogeneity between living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes to which they belong, including diversity within species, between species and between ecosystems[8]. A number of researchers such as Kaushik et al, (2008), Odum (1971), Wilson (1988), Nair (1992), Subba Rao (2001), Vermact et al, (2015, 2016a, 2016b, 2017a, 2017b and 2017c), Prakash et of, (2015, 2016a, 2016b and 2017), Verma (2016a, 2016b, 2016c, 2016d, 2017a, 2017b, 2017c and 2017d) etc. have already detailed and defined the biodiversity from time to time[9][10]. In the present debate, the author is seeking to fill this void by addressing the need for widespread biodiversity to provide an ecological balance.

III. BASIC TYPES OF BIODIVERSITY

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Importance of Biodiversity

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Conserving Biodiversity

There is a rich diversity of animals, plants and microbial life in the living world, which tends to be well adapted to the climate. For the shared survival and life of living beings, this complex nature must be preserved[12]. Biodiversity is depleted by habitat loss and destruction, resource exploitation, unprecedented climate change, deforestation, pollution, etc. Diseases, changing agriculture, poaching of wild life, etc. Because all the benefits of biodiversity are derived from human beings, they should therefore take careful care of the protection of biodiversity in all its forms and the good health and safety of the future generation[2][13]. Biodiversity protection means the proper management by human beings of the biosphere in such a way that it offers maximum benefits for the present generation and also enhances its ability to meet the needs of future generations. Saving habitats and

ecosystems rather than attempting to preserve a single species is the best way to protect biodiversity. Biological conservation: Today, diversity has become a worldwide issue[14]. There are essentially two primary biodiversity conservation approaches: in-situ conservation (within the conservation of biodiversity, Habitat) and conservation ex-situ (outside habitat).

Benefits of Ecological Balance

In a population of organisms in which genetic, species and ecosystem diversity remains relatively constant, ecological balance is 'a state of dynamic equilibrium'. Ecological imbalance is triggered when a natural or human-induced disruption disrupts an ecosystem's natural equilibrium [13]. The ecological equilibrium, in fact, actualizes all organisms' survival. The ecological equilibrium preserves the entire biota, which in turn provides the requisite balanced environment for survival on earth. The ecological imbalance, on the other hand, causes irreparable loss and destruction of natural ecosystems, unprecedented climate change, global warming, pollution, etc. The main consequences caused by ecological balance destruction are the greenhouse effect, ozone layer loss and acid rain.

IV. CONCLUSION

Today, the planet has assumed the shape of a 'global village' due to the metaphoric shrinkage of the geo- political boundaries of nation-states by the use of Information and Communications Technologies. Although, from an ecological point of view, increased and indiscriminate misuse of natural resources by humans in an irresponsible way produces an imbalance in nature. Living things play a key role in preserving ecological equilibrium because, relative to other living species, they have the highest thinking ability. Humans should recognize that the nature of ecological balance represents the sufficient food to all living organisms and their stability. Since this equilibrium is crucial since it ensures the environment's life, existence and stability, it should therefore be maintained at any expense. Because all the benefits of ecological balance and biodiversity are derived from human beings and their anthropogenic activities are largely responsible for ecological imbalance and biodiversity loss, they should therefore take proper care to maintain ecological balance and preserve biodiversity in all its forms. Eco-friendly and sustainable positive efforts would certainly provide future generations with good health, equitable and sustainable growth as well as protection. A stable and beneficial ecological equilibrium would represent harmonious interactions between species and the environment. Ecological balance means the proper management by human beings of the biosphere in such a way that it gives the present generation full benefits and also enhances its ability to meet the needs of future generations. To preserve ecological balance in a complex equilibrium state, humans must establish an eco-friendly approach

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