

Impact of Loss of Biodiversity and its conservation

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ABSTRACT: One of the today most pressing environmental issues is the conservation of biodiversity. Many factors are threatening the world biological heritage. The challenge is for nation, government agencies organisation and individual to protect and enhance biodiversity while continuing to meet people need for natural resource.

The challenge exists from local to global scales. If not met, future generation will live in biologically impoverished world and perhaps one that is less Capable of producing desired resources as well.

Introduction: Extinction, the elimination of species, is a normal process in nature, species die out and are replace by other, generally by their own descendants, as a part of evolutionary change. The rate of extension, in undisturbed ecosystem, is esteemed to be about one hundred species per decade. In the last many decades, however human impact on population and ecosystem have accelerated that rate, causing hundreds of species, subspaces and variety to become extinct every year. And if, present trend continue, millions of kind of plants, animals and microbes may be destroyed in the next few decades.

The cause of extinction is broadly grouped in to five risk categories: - Population risk, Environmental risk, natural catastrophe, genetic risk and human action.

Population risk: Random variations in population rates {i.e. birth rate and death rate} can cause a species low abundance to become extinct. It is a risk especially to species that consist of only a single popuation in one habitat. For example : blue whales As they swim over the vast area of ocean, and if in one year most whale were unsuccessfully finding a mate then birth could be dangerously low.

Environmental risk means variation in the physical or biological environment, including variation in predictor, symbotic and competitor species. In case of pieces that are sufficiently rare and isolated, such normal environment variation can lead to their extension

Natural catastrophe. A Natural catastrophe is a sudden change in the environment (Not due to human action) It includes fire, storms, flood, earthquake, volcano eruption, change in ocean currents etc. Such a natural catastrops may cause the local extinction of most form of life there,

Genetic Risk. Detrimental change in genetic characterises in a small population of a species, due to reduced genetic variation, make the species more vulnerable to extension because it lacks the variety once present or because a mutation that lead to poor health become fixed in population.

Endangered and Endemic Species of India: According to Red data book of ICUN { The international union of conservation of Nature }, India ranked second in terms of number of threatened mammals, while sixth in terms of countries with the most threatened birds. The number of threatened species of India by taxonomic group according to IUCN given below:

Threatened species of India by taxonomic group

Taxonomic group	Number of threatened species
Mammals	86
Birds	70
Reptiles	25
Amphibians	3
Fish	13
Other Invertebrates	21
Plants	244
Total	462

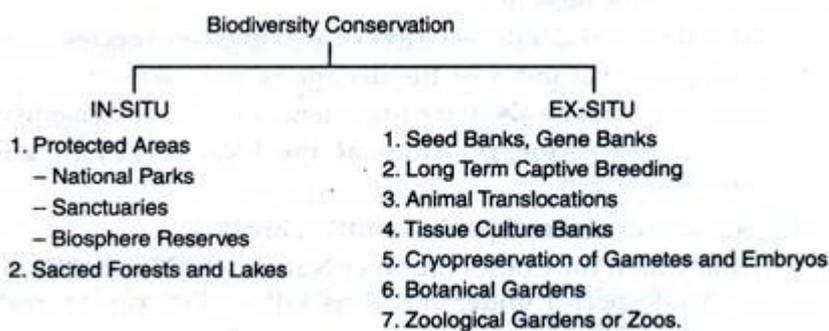
Conservation of biodiversity:

In order to retain the capabilities of life supporting systems it is essential to save and maintain species and ecosystem ultimately for survival of human race. Efforts have been made to save biodiversity both by exsitu and insitu conservation

To preserve the diversity of species or the range of genetic material founding the organism on the planet.

To ensure sustainable utilisation of species and ecosystem which support millions of rural communities as well as the major industries all over the world?

The wild life conservation effort are mostly centred on protecting plants and animal life in protected habitats such as botanical garden, zoos, sanctuaries, national parks, biosphere reserve Etc. The two basic approaches to the wildlife conservation in protected habitats are Insitu conservation and Exsitu conservation.



Insitu conservation is the best strategy for the long term protection of biodiversity. Large pockets/area of protected zones is essential for not only conserving vast number of species of

living organism but also provide opportunities to evolve. In situ conservation applies only to wild fauna and flora and not to domesticated animals.

Extinction, the elimination of species, is a normal process in nature; species die out and are replaced by others, generally by their own descendants as a part of evolutionary change. Humans have caused extinctions over a long time, not just in recent decades. The earliest human activity caused extinction through hunting, with the invention of fire, humans began to change habitats over large areas with the development of agriculture and the rise of civilization and rapid deforestation and other habitat changes took place.

In the twentieth century, with the introduction of industrial chemicals and emissions, pesticides, etc. into the environment, pollution has become an increasing cause of extinction.

Habitat loss and degradation are the major proximate cause of species extinction, affecting 89% of all threatened birds, 83% of mammals and 91% of all threatened plants assessed globally by IUCN.

Biodiversity conservation is gaining ground precisely because the issue is so vast that it can encompass the interest of so many countries. Four major steps have been taken to shape an international response to the loss of biodiversity, to support the action already underway at local, regional and national levels.

The International Biodiversity Strategy Programme, World Resource Institute, World Conservation Union, UNEP and more than 40 government and nongovernment organizations outlined the programme to stop the loss of biodiversity and mobilize its benefits to human needs sustainably and equitably.

The Convention on Biological Diversity, under the auspices of UNEP, more than 100 nations met during the Earth Summit at Brazil to establish a legal framework for government international support for biodiversity conservation.

The International Union for Conservation of Nature (IUCN 2000) maintains a Red List database at the World Conservation Monitoring Centre in which information on endangered species and conservation strategies are urgently needed for the protection of specimens and ecosystems. The following suggestions should be included in such a conservation policy.

The Protected Planet Report 2020 will review and update progress made globally towards achieving Aichi Target 11 of the Strategic Plan for Biodiversity 2011-2020. It will highlight the role of protected and conserved areas as a key strategy for biodiversity conservation.

Computer models for regular population and habitat viability assessment should be generated on the basis of newly identified threats and population status.

Use of GIS (Geographical Information System) and remote sensing can help in determining the rates, causes and scale of biodiversity loss. Information on deforestation and land use change can be integrated with data on the distribution of biodiversity and existing

information on climate, topography and soil etc. to obtain a comprehensive picture. GIS must, therefore, be utilised as a tool in policy and landscape level planning

International trade in wild plants and animals has to be tackled through better enforcement and effective implementation of legislative and administrative measures.

Specific measure and efforts should be made to preserve the endangered species on priority over vulnerable species and these in turn over rare one and rare species over the other categories, various variety of timber trees, food crops, livestock, animal for aquaculture, microbes etc. should be preserved

Each country should identify the critical habitat of the species i.e. the feeding, breeding, nursery and resting area etc.) and safeguard them

The country should determine the productive capacities of the exploited species and convince the industries and communities that are over exploiting their living resources to keep their utilisation at a sustainable level (1-6).

Conclusion It is too early to evaluate the overall impacts on threat of biodiversity and our ability to protect it, but some preliminary conclusions are possible. At this point, protected areas appear to be safe and, in many places, biodiversity is benefitting from reduced human activities. However, this may not be true everywhere, especially where enforcement has weakened but threats have not.

Finally, although we focus here on conservation, this is first and foremost a human tragedy, disrupting lives and killing far too many people. Society's priorities must be human health and the containment of the pandemic, but we also need to be thinking ahead to the resumption of conservation practice and education. There is an opportunity here to remind people of the links between healthy, resilient ecosystems and human well-being.

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