

Biodiversity and Its Conservation

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Introduction

Majority of the rural Indians even today, lack minimum basic requirements of living. They are far away from the access to productive assets and are unaware of need for conservation of natural resources and biodiversity, resulting in their rigorous exploitation and gradual exhaustion on long run [1]. These rural people migrate to cities in search of better livelihood and get excluded from the development process. Forest based industries are needed to be set up in an integrated way through intensification of resource management and development of scientific techniques of harvesting, value addition and efficient marketing system of forest products. Degraded land can be rehabilitated by including forestry into agricultural system through development and promoting social forestry, community forestry and agroforestry through community participatory programs. These practices will certainly contribute towards creating a sustainable and healthy ecosystem as well as rehabilitation of marginalized people and upliftment of their livelihood conditions [1]. Biodiversity is the degree of variation of life forms within a given ecosystem and is a measure of the health of an ecosystem. However, these are neither adequately protected nor properly managed and being irreversibly lost through extinction caused by the destruction of more and more natural habitats. Tribal's see forest as a source to meet their daily requirements and due to less knowledge, they exploit it without knowing the adverse consequences of it in long run [2].

It must not be taken for granted as it is a global resource that is vital for amplifying the productivity, resilience, and sustainable functioning of the complex agroecosystem. Unlike ordinary materials, natural resources are not immediately renewable. They can be restocked only with time and subjected to the constraints of biological processes. Consequently, harvesting these resources whether for commercial gain or otherwise involves a trade-off between present benefits and future cost. Maintaining biodiversity is essential for organic waste disposal, soil formation, biological nitrogen fixation, crop and livestock genetics, biological pest control, plant pollination, and pharmaceuticals [3]. Chemical pollutants and organic wastes are degraded by the plants and microbes and nutrients are recycled through the ecosystem. Viz., pollinators like bees and butterflies, provide noteworthy benefits to agricultural and natural ecosystems including added diversity and production of food crops. one-third of the world's food production depends directly or indirectly on insect pollination. About 130 of the crops grown in the United States are insect pollinated. Abrupt decline is seen in the populations of wild pollinators as they lack food source, nesting, and mating sites due to loss of habitat and its fragmentation. Forests supports livelihood by providing more than 86 million green jobs. An estimated 880 million people make their livings by collecting firewood or producing charcoal. 90% of the people living in extreme poverty, over 90 percent are dependent on forests for at least part of their livelihoods. Rural cash economies can be created by non-consumptive uses of forest biodiversity viz., recreation and tourism. Each year an estimated 8 billion visits are made to protected areas, many of which are forest covered [1].

Indigenous people depend on high degree of forest biodiversity for their livelihoods, although this relation is in flux as their linkages with national and global monetary economies grow. Areas in charge of local people (approximately 28% of the world's land surface) include some of the most undamaged forests and many hotspots of biodiversity [4].

Conservation

More than 50 crops in the IBPGR program include cereals, legumes, vegetables, oil seeds, fruits, some cash crop, and forage plants. Many if these are preserved ex-situ, however, this kind of conservation has very limited applicability to the forest plant. Ex-situ conservation leads inexorably and perhaps irrevocably to domestication. The record to date for ex-situ culture does not give grounds for optimism. Most endangered forest species can be best conserved as in-situ by careful planning and management. Ex-situ conservation is an ancillary to in-situ conservation, not an alternative to it. 'The Earth Summit' took place in Rio de Janeiro in 1992, was a historic Convention on Biological Diversity that avails all Nations to take necessary actions for conservation of biodiversity and sustainable utilization of its benefits. In a follow-up 190 countries pledged their commitment to achieve by 2010, that there would be a notable depletion in the rate of biodiversity loss throughout the world, regional and local levels at World Summit on Sustainable Development held in 2002 at Johannesburg, in South Africa [5].

Consequences

This deforestation is scattered and appeared either as total destruction in which the land under the legal definition of forests is encroached and occupied for non-forestry purposes, largely nonviable agriculture. This land is permanently lost to forestry. This land permanently lost forest and sooner or later it will be regularized in favour of encroachers under political compulsions. In several other cases, the land continues to have some scattered low value vegetation but is occasionally burnt and used mainly as grazing ground for the livestock. The other category of deforestation is caused due to firewood collection both for domestic use and for

sale in neighboring towns. Some of this wood may also be feeding some industries primarily for energy needs. For obvious reasons such areas lose their biodiversity. It is not only the species that are actually used either as fodder or fuel, but their associate species of flowering plants and micro flora also get eliminated. The exposures of site disturb moisture regimes, nutrient cycle, and ecological succession. Such areas are in turn, putting the continued supply of wood for rural energy at risk [6,7].

Conclusion

Interactions of biotic and abiotic are verbally discussed in Biodiversity Conservation but are really not understood. Objectives must be necessarily made clear otherwise biodiversity will remain a massive concept. Based on that purpose management system should be developed with clear objectives and suitable management system must be designed to meet desired objective. Availability of adequate research data on ecological succession and the human induced activities with their impacts are needed for successful implementation of objectives.

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