

# Review article

## BIODIVERSITY CONSERVATION FOR SUSTAINABLE DEVELOPMENT

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### **Introduction:-**

Life exists in many forms. Plants range from grass to giant trees and animals from tiny worms to Elephants and Blue whales. Life may be represented in forms that can be both benign and malignant. It is this wide range that makes up biodiversity which can be defined as variation among living organisms. The term Biodiversity has become day to day word in recent past. The term was first coined by Walter G. Rossen in 1985. Earlier the word biological diversity was used. Thus biodiversity is the abbreviated word for biological diversity.

### **Present Status India's Biodiversity:-**

India has a rich and varied heritage of biodiversity, encompassing a wide spectrum of habitats from tropical rainforests to alpine vegetation and from temperate forests to coastal wetlands. India figured with two hotspots- the Western Ghats and the Eastern Himalayas in an identification of 18 biodiversity hot spots carried out in the eighties. Recently Norman Myers pointed out 25 hotspots. In the revised classification, the 2 hotspots that extend into India are the Western Ghats / Srilanka and the Indo-Burma region. In addition, India has 26 recognized endemic centers that are home to nearly a third of all the flowering plants identified and described to date.

Of the estimated 5-50 million species of the world's biota, only 1.7 million have been described to date and the distribution is highly uneven. About 70% of the World's total land area, the tropics alone have 5 millions. India contributes significantly to this latitudinal biodiversity.

India has two major realms called the Palaerctic and the Indo Malayan, and three biomass namely the tropical humid forests, the tropical dry/deciduous forests, and the warm/semi-deserts. India has 10 biogeographic regions including the Trans Himalayan, the Himalayan, the Indian desert, the semi-arid zones, the Western Ghats, the Deccan Peninsula, the Gangetic plain, North-East India, and the islands and coasts. India has 5 world heritage sites, 12 biosphere Reserves, and 6 Ramsar Wetlands. Amongst the protected areas, India has 88 national parks and 490 sanctuaries.

India's record in agro-bio-diversity is equally impressive. There are 167 crop species and wild relatives. India is considered to be the centre of origin of 30,000-50,000 varieties of rice, Mango, Pigeon-pea, Tumeric, Ginger, Sugarcane etc. and ranks seventh in terms of contribution to world agriculture. (Fig.1)



(Fig1:- Conservation of Biodiversity for Sustainable development)

### **Process of Extinction:-**

Of the world's rich diversity of flowering plants, nearly one tenth is dangerously threatened or on the verge of extinction. When a plant species disappear, the existence of animal species dependent on it is seriously threatened. It is the port of the process of Evolution. However interference by human species has hastened this process.

### **Community Based Conservation:-**

This can be defined as conservation of biological diversity based on the involvement of local people in decision making. This excludes conservation attempts by official or private agencies which either have no participation of local people or participation only in the form of labour. It includes range of situation from one extreme in which official or private agencies predominantly retain control but consult with local communities in planning or implementation to other extreme in which communities are completely in control.

**Why Local People or local Community ?**

It is abundantly clear from the experience of all Govt. agencies that on their own they cannot efficiently. Conserve the biodiversity because of following reasons.

Govt. agencies tend to be rigid in application of rules.

- 1) Always lack in human, financial and technological Resources.
- 2) Corruption among employees undermines conservation efforts.

**Involvement of local people:-**

- a. Reduce the cost involved in conservation.
- b. Long tradition of Resource use
- c. Protest against degradation
- d. Chipko movement
- e. Appiko movement
- f. Sacred Grooves

**Chipko Movement:-**

“Chipko” is a Hindi word which means to hug or embrace. In 1970, twenty villages of Garwal Dist of UP were devastated by flash flood in Alakanand river. This flood occurred due to deforestation and was an eye opener for the villagers. They started protested against the tree felling under the leadership of Chandi Prasad Bhat. Whenever the forest contractors tried to cut the tree, people protested by hugging the tree. This movement became very successful and it was popularized all over the world by Sundarlal Bahuguna. Chipko movement advocates slogan of planting five Fs-Food, fodder, fuel, fiber, and fertilizers trees to make communities self sufficient in all their basic needs.

**Appiko Movement:-**

Influenced by Chipko , similar type of people movement was organized in Karnataka to save the forest.

**Sacred Grooves:-**

They are the small patches of native vegetation type traditionally protected by the local people.

Example: Devarakadus / Kans – Karnataka  
 Karvus – Kerala  
 Deorai- MP  
 Orans- Rajasthan

Mawflong- Assam and Meghalaya  
Koikadu- Tamil Nadu

### **Conclusion:**

The idea of biodiversity conservation rests on several fundamental arguments including nostalgia and human benefits and needs. The innate desire we all have is our children to experience the great pleasure and curious excitation that biodiversity has given us. Moreover we were not bequeathed this earth and its biodiversity. We must return it to our future generation in the manner in which we have received.

### **References:**

- Grimm, N.B. et al. (2008): Global change and the ecology of cities. *Science* 319, 756–760
- Krishnamurthy, V.K. (2009): *An advanced text book on Biodiversity: Principles and Practices*, Oxford and IBH Publishing Co. Pvt. Ltd., 1-250
- Kailash, C.M. and Singru (2014): *Biodiversity conservation and sustainable livelihood in Kondhpur Village*, Gyan Publishing House, 1-376
- Manforedo MJ, Teel TL, Dietsch AM (2016): Implication of human value shift and persistence for biodiversity conservation, *Conser.Biol.* 30(2), 287-296
- Miller, J.R. (2005): Biodiversity conservation and the extinction of experience. *Trends Ecol. Evol.* 20, 430–434
- Negi, S.S. (2014): *Biodiversity and its Conservation in India*, Indus Publishing, 1-341
- “What is Biodiversity”: *United Nations Environmental Programm*, World conservation monitoring system  
[http://en.wikipedia.org/wiki/ Bodiversity](http://en.wikipedia.org/wiki/Bodiversity)