



# Biodiversity, Economic Development and Poverty Alleviation

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**T**he promotion of nature conservation and environmental protection as the basis for sustainable and equitable development to suits India's specific ecological, social and economic milieu. It has basically five broad components :-

1. Promoting India's ecological security.
2. Conserving biological diversity.
3. Ensuring sustainable use of the natural resource base.
4. Minimizing pollution and wasteful consumption.
5. Promoting sustainable life styles.

Development thinking has evolved into a broad spectrum realization that it must move beyond economic growth to include important social basis with reduced poverty, improved quality of life and enhanced opportunities for better education and health. "Sustainable development is a process in which exploitation of resources, the direction of investments, the orientation of technological development and institutional changes are all made consistent with future as well as present needs".

Sustainable development secures ecosystem as well as biodiversity. Human life present and future generation will be protected and conserved. "Economic development is seen as a purely economic process where as by its very nature, it must give rise to the most dramatic social, ecological and cognitive transformation." Country needs, economic development, not economic growth to reduce poverty.

Biotic resources as well as land, Air, Water, Mountains, rivers and oceans are so beautiful gift of nature which has great importance for our existence and development. They are natural resource of our

economic progress. Our planet support between 3-30 million species of plants and animals that includes. Algae, Fungi, Prokaryotes, Bacteria and Eukaryotes such as protozoan's, out of this, total 1.4 million species have been identified and only 1% species have been studied for their ecological relationship and their role in ecosystem. Biodiversity found on the earth is the result of 3.5 million years of evolution. Until the emergence of humans, earth supported biodiversity more in that period than any other period of geological history.

India shares 2% biodiversity of the world. It also shares 6.5% fauna and 7% flora of the world, 18% human population and 17% livestock population of the world. India is one of the 12 mega diversity countries of the world. It can be divided into 20 bio geographic zone of 25 biotic provinces, which represents all the major ecosystems of the world. According to Botanical and Zoological Survey of India, country has 47,000 species of plants and 81,000 species of animals. India can be divided into eight Floral zones of which about 33% of Indian flora are endemic.

The fauna of India is equally rich and diverse in nature. It comprises 372 mammals, 1228 birds, 428 reptiles, 204 amphibians, 2446 fishes, 57245 insects, 5042 molluscs and several other species of vertebrates. State of U.P. comprises 500 species of birds, 56 species of mammals, 47 species of reptiles, 19 species of amphibians and 79 species of fishes.

## Biodiversity and economic progress

It is no exaggeration to say that biodiversity is just as important as oxygen and water for sustaining



life. Any sphere of life, be it health, food, clothing, aesthetics, Industry, sports or recreation each one is linked to either the wild or domesticated component of biodiversity. Plants are very useful from economic point of view as well as life support. Cereals, grains, fruits, vegetables and other forest produce are prime part of our food. It is accounted that one tree in his 50 years of life provides benefits of 20-40 lacs. Fuel, Fodder, Rubber, Resin, Lac, Timber, Fruit Flower, roots and other medicinal useful resource are derived from forest. Several small scale Industries running from forest raw material produce like paper, silk warm, toy and bidi Industry. At present, about 10 crore people directly or indirectly dependent on forests. Forests are major resource of timber and fuel with prime fodder resource of animals. It almost feeds 6 crore cattles and 15 crore other animals. Indian herbs and roots are in heavy demand of France, England, Japan, Switzerland for export like Sinchona bark, Cenna leaves, opium, Esabgoal, Chirayata, Kulanjana and Kutchla. Country earns huge amount of foreign money from export. Black Musali, Mulethi, Sadabahar, Brahmi, Sarpagandha, Ashwagandha and Zinseng are other major resources from forest to be used for medicinal purposes. They are of great trade value.

Indian forests are major resource of revenue. They provide revenue about 1000 crore to centre and state govt. Value of forest is decided by biomass of forest. One medium size tree provides 50 tonne biomass in 50 yrs. In India wood Biomass is about 419 crore cubic meter. Which costs about Rs. 6,60,000 crore. Animal based industries like dairy, poultry, Piggery, Fishery are well developed are major tool to eradicate rural poverty. Several Industries are associated with these and provide employment to crores of people.

Microorganisms too have been widely used in the manufacture of Medicines. More than 3000 antibiotics have been extracted from microorganisms. A large number of wild plant and animals species that exist, could be potential food sources for the future. A large number of human tribals are inhabiting remote areas or forests, look to wildlife for most of their proteins. This is estimated that 30000 plant species have edible parts. About 90% of food in global scenario comes from only 20 plant species.

The value of biodiversity is particularly apparent in agriculture for generations of people who have raised wide range of crops and livestock to stabilize and increase production. Examples clearly show the importance of genetic diversity or the gene pools for promoting and ensuring high agriculture Industries also use wide variety of plants and animals products thus benefit from a rich diversity of species. As many as 2000 plant species through out the world are known for their economic importance. Building, furniture and paper making industries use more than one hundred different species. Thus no sphere of life is untouched by Biodiversity.

Biodiversity is very important for human survival and sustenance. Above all this, biodiversity also plays important role in maintaining the ecological balance. Biodiversity should be saved for posterity, in depth study of biodiversity to explore its potential; using it sustainably and equitably. Deforestation results in water shortage's, loss of habitat for wild life and fodder for livestock. This results in loss of animals, in response fertility of soil lowers down. Depletion of Biodiversity directly affects our agriculture due to effect on water cycle and fertility of soil. Biodiversity is certainly directly related with development and economic progress of society as well as country. Sustainable development promotes the idea of sustainable use of biological resources with sustainable livelihood life styles.

- ◆ Indian forests are major source of revenue. Government gets around 1000 crore per year.
- ◆ One medium size tree accounts for 50 tonnes of biomass in 50 years and provides environmental services or benefits of Rs. 15.75 lac in whole life.
- ◆ Animal biomass accounts 2.4 crore tonnes.
- ◆ Animal husbandry provides economy about 15% and forests by 3%.
- ◆ Animals either wild or domestic are equally important for our existence, sustenance and progress of the country.
- ◆ India shares 40% of total known biodiversity of the world.



### Biodiversity as a tool to eradicate poverty

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their needs. Biodiversity (as well as environment) and development are inexorably interlinked. Development cannot subsist upon deteriorating environmental resources and environment, in turn, cannot be protected if development does not take into account the environmental problems. Economic Development of the society is a major tool to reduce poverty in the country. If society is poor, it will more depend on the natural resources. Poor and hungry are often forced to destroy their immediate environment for survival. Biodiversity conservation is actually strengthening of biotic natural resources that generate economy ultimately may be a weapon for development or to increase economy that symbolize development of the society as well as a country and will reduce poverty.

Poverty alleviation is directly linked with development and sustainable development based on ecology harmony or sustainable use are of biotic resources, promotes the idea of biodiversity conservation. Poverty is a socio-economic term. It has five components :

1. Material Resource 2. Health 3. Security 4. Freedom of choices 5. Social relation.

Concept of poverty on monetary basis only is outdated and outclassed. 'Marshall Sablins' a well known Anthropologist regard poverty as an "invention of civilization". Concept and definition of

poverty according to sociologist "someone who is deprived of social support." A hint is towards model of economic or sustainable development. It denotes the idea of "Spaceship economy" which says that the earth, like a spaceship is a closed system. Spaceship economy is a sustainable economy promotes recycling, conservation, use of renewable resources, products durability, clean and healthy environment. Sustainable development has many objections but raising 'percapita income' is only main objective among other ones. Poverty is more in rural people than urban. Now a days we can also define poverty as "exclusion of people from social political and urban rights."

#### **Biodiversity → economic progress → poverty reduction**

In India for every 5 persons, 1 person lives below poverty line. It shares largest majority of world's poor population. Country which is among 12 mega biodiversity centuries of the world which has 16 major forest type, 20 biogeographic zones and 25 biotic provinces is a poor country or under developed, it is strange, as it is said by some one that "rich biotic resource is a symbol of wealthy or progressive nation." In nut shell country needs 3E (Economics, Ecology and Equity) directives that can drive India to be a developed nation with hidden base of poverty eradication. 'Economic development' can eradicate poverty through rural development programmes like NAREGA, JGSY, SGSY and other areas are Agriculture, animal husbandry, social forestry, minor forest produce, fisheries, fuel and fodder, small scale and cottage Industry.

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