

## Biogeographical classification of India

India is a mega diversity country having different types of climate & topography in different parts of the country.

These variations have induced much variability in flora & fauna. India occupies 10<sup>th</sup> position among the plant rich countries of the world.

Biogeographers classified our country into ten biogeographical zones. Each of the zone has its own characteristic climate, soil & biodiversity.

### India's major biogeographic habitats

S.No	Biogeographic zone	Biotic province		Total area Biomass
1.	Trans-Himalayan Region	Upper Regions	5.7%	186200
2.	Himalayan Mountain	North-west Himalayas West Himalayas, Central Himalayas, East Himalayas	17%	6900 720000 123000 83000
3.	Desert (Arid area)	Kutch, Thar, Ladakh	6.9%	45000, 18000, 0
4.	Semi-Arid	Central India Gujarat - Rajasthan	15.6%	107600 404400
5.	Western Ghats	Malabar Coast Western Ghats Mountains	5.8%	59700 99300
6.	Deccan Peninsula	Deccan plateau South Central plateau Eastern " , Chhota Nagpur, central highlands	4.3%	378000, 341000 198000, 217000 287000
7.	Gangetic plain	Upper & lower gangetic plain	11%	206400, 15300

## Value of Biodiversity:

- \* Consumptive use value
- \* Productive use value
- \* Social values
- \* Ethical values
- \* Aesthetic value
- \* Option values

### Consumptive use value:

These are direct use values, where the biodiversity products are harvested and consumed directly

ex Food, drug, fuel

Food → A large number of wild plants are consumed by human beings as food

Nearly 80-90% our food crops have been domesticated only from the tropical wild plants. A large number of wild animals are also consumed as food

ex: *Ceropegia bulbosa*, *Codonopsis*, *Cicer microphyllum*, insects

Drugs → Around 70% of modern medicines are derived from plant → plant extracts, 20000 plant species are believed to be used medicinally, particularly in the traditional system of

Unani, Ayurveda & Sidha

ex:

Germany alone uses more than 2500 species of plants for medicinal purposes in Homeopathy & other systems of medicines

India - 3000 species of plants in Ayurveda, Homeopathy & Unani

Life saving drugs like quinine (Malaria), reserpine

(hypertension), penicillin (antibiotic) & morphine (pain kill) are all of plant origin

The peepal tree leaves, trunk & roots are used as effective medicines for curing diseases like fever, cough, stomach & skin diseases

From neem tree → 30 medicines have been prepared (eye irritations, skin eruptions)

Fuel: Firewoods are directly consumed by villagers, tribals

The fossil fuels like coal, petroleum & natural gas are also the products of fossilized biodiversity

Productive use values:

Biodiversity products have obtained a commercial value

These products are marketed & sold. These products may be derived from the animals & plants.

Silk - Silk worm, wool - sheep, Musk - Musk deer, Tusk - elephant, Leather - all animals

Wood - paper & pulp industry, Plywood industry

cotton - Textile industry, Fruits, vegetables - Food industry

Leather - leather industry, Pearl - pearls industry

Social values:

Social value of the biodiversity refers to the manner in which the bio resources are used to the society. These values are associated with the social life, religion & spiritual aspects of the people.

Ex: Holy plants (Tulsi, peepal, lotus)

Holy animals (Cow, peacock, snake)

Ethical values (or) Existence Value

It involves ethical issues like "all life must be preserved".

Ex:

River Ganga → Holy river

Vembu, Tulsi, Vengai

We <sup>are</sup> not deriving anything directly from kangaroo zebra or Giraffe, but we feel that these should exist in nature.

Aesthetic value

The beautiful nature of plants & animals insist us to protect the biodiversity. The most important aesthetic value of biodiversity is eco-tourism.

Ex:

✓ Eco-tourism: people from far place spend a lot of time & money to visit the beautiful areas, where they can enjoy the aesthetic value of biodiversity.

This type of tourism is known as ecotourism.

✓ The pleasant music of wild birds, colour of butterflies, colour of flowers, colour of peacocks are very important for their aesthetic value.

Option values:

The option values are the potentials of biodiversity that are presently unknown & need to be known. The optional values of biodiversity suggest that any species may be proved to be a valuable species after someday.

Ex: Medicinal plants & herbs play a very important role in our Indian economic growth.