

ENVIRONMENTAL STUDIES

LECTURE-20

Biodiversity in India

India is one of the most diverse nations in the world. It ranks ninth in terms of plant species richness. Two of the world's 25 biodiversity hotspots are found in India. It is the origin of important crop species such as pigeon pea, eggplant, cucumber, cotton and sesame. India is also a centre of various domesticated species such as millets, cereals, legumes, vegetables, medicinal and aromatic crops, etc.

India is equally diverse in its faunal wealth. There are about 91000 animal species found here.

However, diversity is depleting at a drastic rate and various programmes on biodiversity conservation are being launched to conserve nature.

Biogeographical Regions Of India

There are ten biogeographic regions in India.

The division of India according to biogeographic characteristics is defined as Biogeographical regions of India. There are ten biogeographic zones in India, including-Trans-Himalayan Region, the Himalayan Zone, Indian Desert Zone, Semi-Arid Region, Western Ghats, Deccan Plateau, Gangetic Plain, North East Region, Coastal Region and Andaman and Nicobar islands.

Biodiversity Hotspots -

2 Main Qualifying Criteria

According to Conservation International, a region must fulfill the following two criteria to qualify as a hotspot:

1. The region should have at least 1500 species of vascular plants i.e., it should have a high degree of endemism.
2. It must contain 30% (or less) of its original habitat, i.e. it must be threatened.

Following the criteria must for an area to be declared as Biodiversity Hotspot, there are major four biodiversity hotspots in India:

1. The Himalayas

2. Indo-Burma Region
3. The Western Ghats
4. Sundaland

The Himalayas

Considered the highest in the world, the Himalayas (overall) comprises North-East India, Bhutan, Central and Eastern parts of Nepal. This region (NE Himalayas) holds a record of having 163 endangered species which includes the Wild Asian Water Buffalo, One-horned Rhino; and as many as 10,000 plant species, of which 3160 are endemic. This mountain range covers nearly 750,000 km².

Indo - Burma Region

The Indo-Burma Region is stretched over a distance of 2,373,000 km². In the last 12 years, 6 large mammal species have been discovered in this region: the Large-antlered Muntjac, the Annamite Muntjac, the Grey-shanked Douc, the Annamite Striped Rabbit, the Leaf Deer, and the Saola.

This hotspot is also known for the endemic freshwater turtle species, most of which are threatened with extinction, due to over-harvesting and extensive habitat loss. There are also 1,300 different bird species, including the threatened White-eared Night-heron, the Grey-crowned Crocias, and the Orange-necked Partridge.

The Western Ghats

The Western Ghats are present along the western edge of peninsular India and covers most of the deciduous forests and rain forests. As per UNESCO, it is home to at least 325 globally threatened flora, fauna, bird, amphibian, reptile and fish species. Originally, the vegetation in this region was spread over 190,000 km² but has been now reduced to 43,000 km². The region is also known for the globally threatened flora and fauna represented by 229 plant species, 31 mammal species, 15 bird species, 43 amphibian species, 5 reptile species and 1 fish species. UNESCO mentions that "Of the total 325 globally threatened species in the Western Ghats, 129 are classified as Vulnerable, 145 as Endangered and 51 as Critically Endangered."

Knowing in detail about the Western Ghats will be helpful for the aspirants for the Geography preparation.

Sundar land

The Sundar land hotspot lies in South-East Asia and covers Singapore, Thailand, Indonesia, Brunei, and Malaysia. In the year 2013, the Sundaland was declared as a World Biosphere Reserve by the United Nations. This

region is famous for its rich terrestrial and marine ecosystem. Sundarland is one of the biologically richest hotspots in the world which comprises 25,000 species of vascular plants, of which 15,000 are found only in this region.

Biodiversity in India – Flora, and Fauna

India is famous for its rich flora and fauna. India houses over 500 species of mammals, more than 200 species of birds, and 30,000 different species of insects. The Zoological Survey of India which is headquartered in Kolkata is responsible for surveying the faunal resources of India.

India has a diverse climate, topology, and habitat are known to have the richest flora in the world with over 18000 species of flowering plants. These plant species constitute 6-7% of the world’s plant species. There are 8 main floristic regions in India- the Western and the Eastern Himalayas, Indus and Ganges, Assam, the Deccan, Malabar, and the Andaman Islands which is home to 3000 Indian plant species. The forests in India cover ranges from the tropical rainforest including Andaman, Western Ghats, and northeast India to the coniferous forests of the Himalayas. The deciduous forests can be found in the eastern, central, and southern parts of India.

Endangered Species of India

According to the International Union for Conservation of Nature, “India accounts for 7-8% of all recorded species, including over 45,000 species of plants and 91,000 species of animals. But with the rapid loss of biodiversity, many species are becoming extinct or at risk of becoming critically endangered. The species that are at risk of extinction due to the sudden decrease in their population and habitat are known as endangered species.

The top 5 endangered species (Flora and Fauna) in India are listed in the table below:

Top 5 Endangered Species of India	
Endangered Animal Species	Endangered Plant Species
The Royal Bengal Tiger	Ebony tree
The Great Asiatic Lion	Indian Mallow
The Snow Leopard	Malabar Lily

Nilgiri Tahr	Assam Catkin Yew
Indian Rhino	Milkwort

SWETA SAXENA