

## ***READING MATERIAL Forest and wildlife***

\*\*\*\*\*Forests are the most important resource for life. They are home to Flora and Fauna, Avi-Fauna of earth. We share this planet with millions of other living beings...micro-organisms such as bacteria to huge animals like Elephant ,Blue Whale .We humans along with all living organisms form a complex web of Ecological System in which we are only a part and very much depended on the system for our existence. Forests are the Lungs of Earth.

Flora are nothing but plants.

Fauna are animals.

Avi-Fauna refers to birds.

India is one of the world's richest... in terms of its vast array of Biological diversity. Over 81,000 species of Fauna and 47,000 species of Flora are found in the country so far? Of the estimated 47,000 plants species, About 15,000 flowering species are Endemic(Indigenous) to India

Biodiversity is the variety and variability of life on Earth. Biodiversity is typically a measure of variation at the genetic, species, and ecosystem level.

Terrestrial biodiversity is usually greater near the equator, which is the result of the warm climate and high primary productivity. Biodiversity is not distributed evenly on Earth, and is richest in the tropics. These tropical forest ecosystems cover less than 10 percent of earth's surface, and contain about 90 percent of the world's species.

They supply us with oxygen and clean water. They cycle carbon and fix nutrients. They enable plants to grow and therefore to feed us, keep pest species and diseases in check and help protect against flooding and regulate the climate. These benefits are known as ecosystem service

The Nilgiri Biosphere Reserve was the first biosphere reserve in India established in the year 1986. It is located in the Western Ghats and includes 2 of the 10 bio geographical provinces of India. Wide ranges of ecosystems and species diversity are found in this region. Thus, it was a natural choice for the premier biosphere reserve of the country.

The Nilgiri Biosphere Reserve was established mainly to fulfill the following objectives:

To conserve in situ genetic diversity of species

To restore degraded ecosystems to their natural conditions

To provide baseline data for ecological and environmental research and education

To function as an alternate model for sustainable development

The total area of the Nilgiri Biosphere Reserve is 5,520 sq. km. It is located in the Western Ghats between 76°- 77°15'E and 11°15' - 12°15'N. The Nilgiri Biosphere Reserve encompasses parts of Tamilnadu, Kerala and Karnataka. The annual rainfall of the reserve ranges from 500 mm to 7000 mm with temperature ranging from 0°C during winter to 41°C during summer.

The Nilgiri Biosphere Reserve falls under the bio geographic region of the Malabar rain forest.

The Mudumalai Wildlife Sanctuary, Wyanaad Wildlife Sanctuary Bandipur National Park, Nagarhole National Park,

Mukurthi National Park and Silent Valley are the protected areas present within this reserve.

Afforestation is the process of planting trees, or sowing seeds, in a barren land devoid of any trees to create a forest. The term should not be confused with reforestation, which is the process of specifically planting native trees into a forest that has decreasing numbers of trees.

Malabar Civet (*Viverra civettina*)

The most Endangered civet and possibly the most endangered mammal in India, The Malabar civet was last reported in Kerala (27 march 2020) on lockdown day. ( "nocturnal animal is freely walking during daytime at Meppayur Town, Kozhikode, Kerala, India. They are natural to this place. Just that less traffic makes them walk freely now. This one is following the Zebra crossing also.)

The Malabar grey hornbill (*Ocyrceros griseus*) is a hornbill endemic to the Western Ghats and associated hills of southern India. They have a large beak but lack the casque that is prominent in some other hornbill species. They are found mainly in dense forest and around rubber, arecanut or coffee plantations.

The Himalayan Yew is a medicinal plant found in various parts of Himachal Pradesh and Arunachal Pradesh in the Himalayan region. ...

*Taxus wallichiana*, the Himalayan yew, is a species of yew, native to the Himalaya and parts of south-east Asia. The species has a variety of uses in traditional medicine. It is currently classified as endangered by the IUCN.

The tree has medicinal use in Ayurveda and Tibetan medicine. *Taxus wallichiana* is also a source of the chemical precursors to the anticancer drug paclitaxel. *Taxus wallichiana* is used for making tea by the Bhotiya tribal community in the Garhwal Himalaya. The stem bark of this species, which is locally known as thuner, is collected for this purpose. This species is also used as fuel wood by the local communities. In Himachal it is known to be medicine for some types of cancer.

**Normal Species:** Species whose population levels are considered to be normal for their survival, such as cattle, sal, pine, rodents, etc.

**Endangered Species:** These are species which are in danger of extinction. The survival of such species is difficult if the negative factors that have led to a decline in their population continue to operate. The examples of such species are black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, sangai (brow antler deer in Manipur), etc.

#### Vanishing Forests

The dimensions of deforestation in India are staggering. The forest and tree cover in the country is estimated at 79.42 million hectare, which is 24.16 per cent of the total geographical area (dense forest 12.2 per cent; open forest 9.14 per cent; and mangrove 0.14 per cent). According to the State of Forest Report (2015), the dense forest cover has

increased by 3,775 sq km since 2013.

However, this apparent increase in the forest cover is due to conservation measures, management interventions and plantation, etc., by different agencies.

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Fig. 2.1

**Vulnerable Species:** These are species whose population has declined to levels from where it is likely to move into the endangered category in the near future if the negative factors continue to operate. The examples of such species are blue sheep, Asiatic elephant, Gangetic dolphin, etc.

**Rare Species:** Species with small population may move into the endangered or vulnerable category if the negative factors affecting them continue to operate. The examples of such species are the Himalayan brown bear, wild Asiatic buffalo, desert fox and hornbill, etc.

**Endemic Species:** These are species which are only found in some particular areas usually isolated by natural or geographical barriers. Examples of such species are the Andaman teal, Nicobar pigeon, Andaman wild pig, mithun in Arunachal Pradesh.

**Extinct Species:** These are species which are not found after searches of known or likely areas where they may occur. A species may be extinct from a local area, region,

country, continent or the entire earth.

Examples of such species are the Asiatic cheetah, pink head duck.

Asiatic Cheetah: where did they go?

The world's fastest land mammal, the cheetah (*Acinonyx jubantus*), is a unique and specialised member of the cat family and can move at the speed of 112 km./hr. The cheetah is often mistaken for a leopard. Its distinguishing marks are the long teardrop-shaped lines on each side of the nose from the corner of its eyes to its mouth. Prior to the 20th century, cheetahs were widely distributed throughout Africa and Asia. Today, the Asian cheetah is nearly extinct due to a decline of available habitat and prey. The species was declared extinct in India long back in 1952.