

Forest and wildlife resources.

CLASS X

Importance of Biodiversity

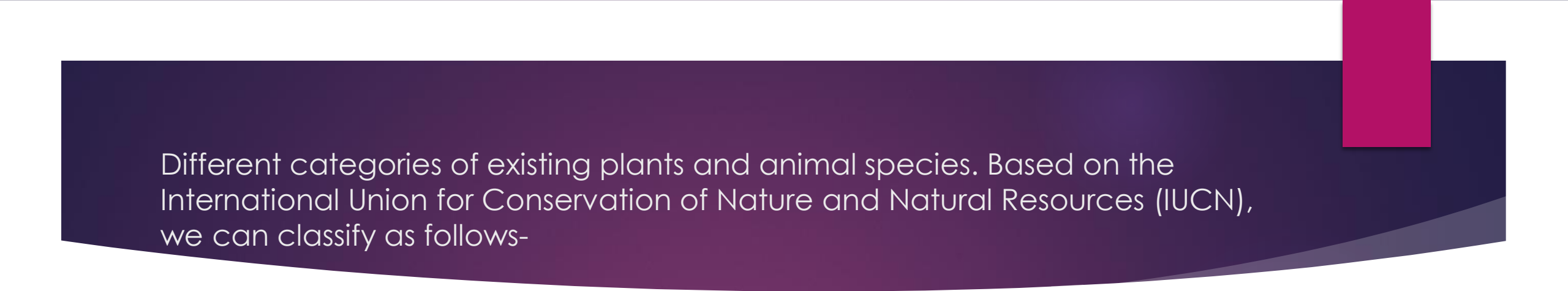
- ▶ We share this planet with millions of other living beings, starting from micro-organisms and bacteria, lichens to banyan trees, elephants and blue whales.
- ▶ This entire habitat that we live in has immense biodiversity.
- ▶ We humans along with all living organisms form a complex web of ecological system in which we are only a part and very much dependent on this system for our own existence.



Biodiversity in India.

- ▶ India is one of the world's richest countries in terms of its vast array of biological diversity, and has nearly 8 per cent of the total number of species in the world (estimated to be 1.6 million). This is possibly twice or thrice the number yet to be discovered.
- ▶ These diverse flora and fauna are so well integrated in our daily life that we take these for granted. But, lately, they are under great stress mainly due to insensitivity to our environment.
- ▶ Some estimates suggest that at least 10 per cent of India's recorded wild flora and 20 per cent of its mammals are on the threatened list. Many of these would now be categorised as 'critical', that is on the verge of extinction like the cheetah, pink-headed duck, mountain quail,.





Different categories of existing plants and animal species. Based on the International Union for Conservation of Nature and Natural Resources (IUCN), we can classify as follows-

- ▶ Normal Species
- ▶ Endangered Species
- ▶ Vulnerable Species
- ▶ Rare Species
- ▶ Endemic Species
- ▶ Extinct Species

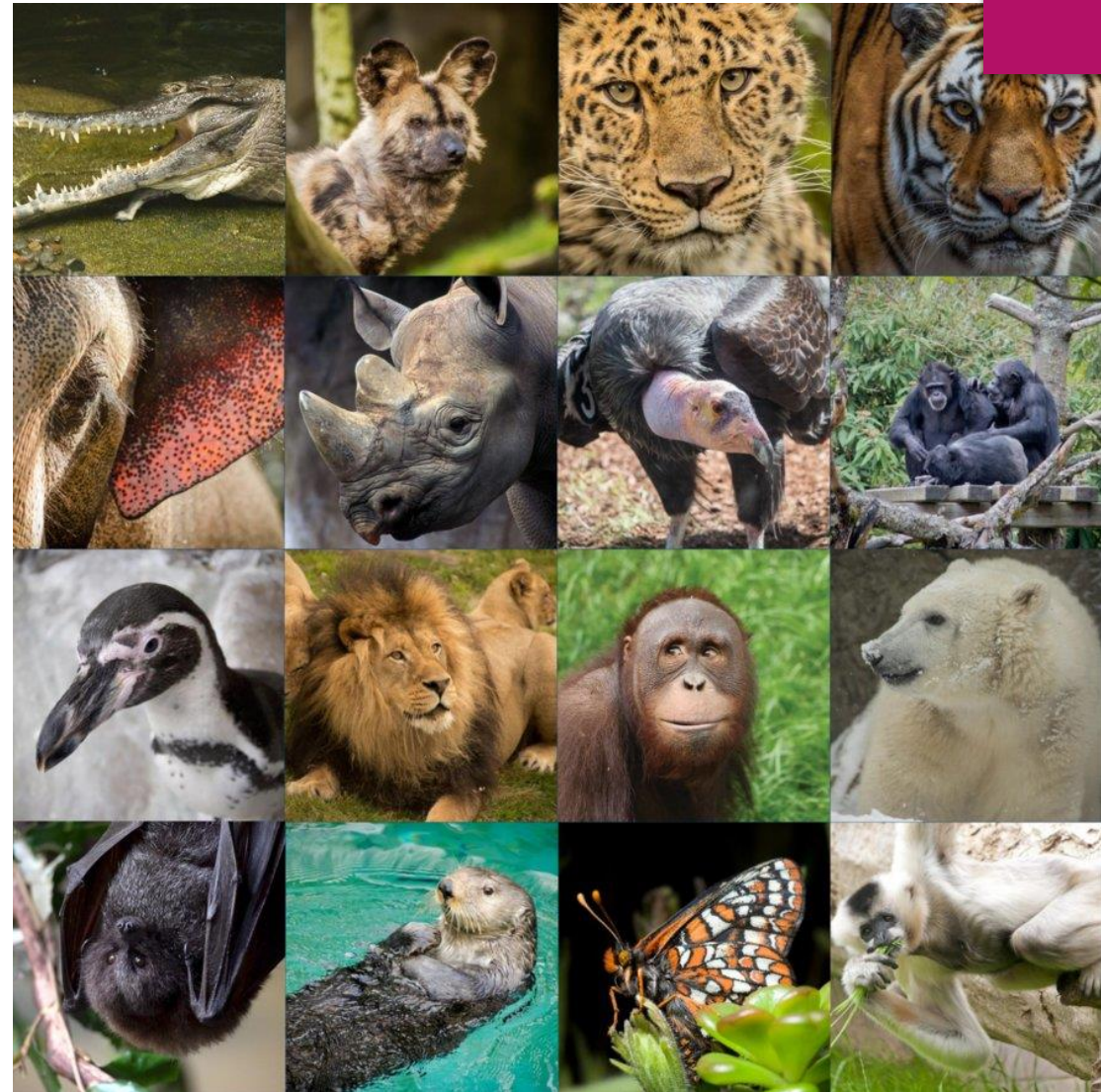


NORMAL SPECIES

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

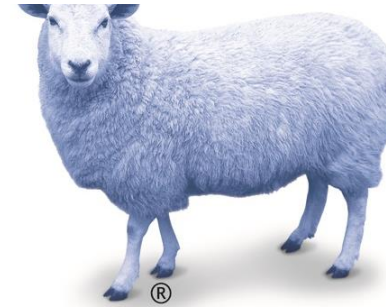
Endangered Species

- ▶ 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



Vulnerable Species

- ▶ 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



Blue Sheep®



Rare Species

- ▶ 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

- ▶ 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, mithun in Arunchal Pradesh



Extinct Species

- ▶ 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

- ▶ 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



What are the negative factors that cause such fearful depletion of the flora and fauna?

DURING COLONIAL PERIOD -

expansion of the railways,

agriculture,

commercial and scientific forestry

and mining activities

What are the negative factors that cause such fearful depletion of the flora and fauna?

- ▶ AFTER INDEPENDENCE -
- ▶ agricultural expansion continues to be one of the major causes of depletion of forest resources. Between 1951 and 1980, according to the Forest Survey of India, over 26,200 sq. km. of forest area was converted into agricultural land all over India.
- ▶ Substantial parts of the tribal belts, especially in the northeastern and central India, have been deforested or degraded by shifting cultivation (jhum), a type of 'slash and burn' agriculture.
- ▶ Large-scale development projects have also contributed significantly to the loss of forests. Since 1951, over 5,000 sq km of forest was cleared for river valley projects. Clearing of forests is still continuing with projects like the Narmada Sagar Project in Madhya Pradesh, which would inundate 40,000 hectares of forest
- ▶ . Mining is another important factor behind deforestation. The Buxa Tiger Reserve in West Bengal is seriously threatened by the ongoing dolomite mining. It has disturbed the natural habitat of many species and blocked the migration route of several others, including the great Indian elephant

Conservation of Forest and Wildlife in India (Government)

- ▶ In the 1960s and 1970s, conservationists demanded a national wildlife protection programme.
- ▶ The Indian Wildlife (Protection) Act was implemented in 1972, with various provisions for protecting habitats.
- ▶ An all-India list of protected species was also published. The thrust of the programme was towards protecting the remaining population of certain endangered species by banning hunting, giving legal protection to their habitats, and restricting trade in wildlife.
- ▶ Subsequently, central and many state governments established national parks and wildlife sanctuaries. The central government also announced several projects for protecting specific animals, which were gravely threatened, including the tiger, the one horned rhinoceros, the Kashmir stag or hangul, three types of crocodiles – fresh water crocodile, saltwater crocodile and the Gharial, the Asiatic lion, and others.

Conservation of Forest and Wildlife in India(community)

- ▶ . In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act.
- ▶ In many areas, villagers themselves are protecting habitats and explicitly rejecting government involvement. The inhabitants of five villages in the Alwar district of Rajasthan have declared 1,200 hectares of forest as the Bhairodev Dakav 'Sonchuri', declaring their own set of rules and regulations which do not allow hunting, and are protecting the wildlife against any outside encroachments.
- ▶ Nature worship is an age old tribal belief based on the premise that all creations of nature have to be protected. Such beliefs have preserved several virgin forests in pristine form called Sacred Groves.

Conservation of Forest and Wildlife in India(community)

- ▶ The famous Chipko movement in the Himalayas has not only successfully resisted deforestation in several areas but has also shown that community afforestation with indigenous species
- ▶ Attempts to revive the traditional conservation methods or developing new methods of ecological farming are now widespread. Farmers and citizen's groups like the Beej Bachao Andolan in Tehri and Navdanya have shown that adequate levels of diversified crop production without the use of synthetic chemicals are possible and economically viable.
- ▶ In India joint forest management (JFM) programme furnishes a good example for involving local communities in the management and restoration of degraded forests.