CLASS-10TH
CHAPTER- 2 (GEOGRAPHY)

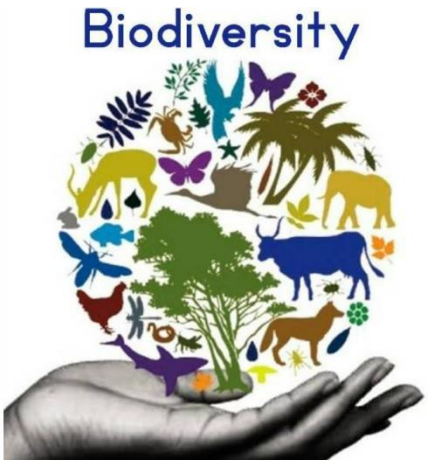
INTRODUCTION- This chapter covers how life has evolved on this planet Earth 🌎 & shaped its own environment. Humans are dependent on the ecological system for their existence as plants, animals and micro-organisms recreate-

A. The quality of the air we breathe
B. The water we drink
C. The soil that produces food for us

Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend.

TERMS –

1. BIODIVERSITY- Biodiversity is all the different kinds of life you'll find in one area—the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world. Each of these species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life.



2. The Himalayan yew/ Taxus wallachiana- It is a medicinal plant sound in Himachal Pradesh and Arunachal Pradesh. A chemical compound called taxol is extracted from this plant which has anti-cancer properties.

BIODIVERSITY IN INDIA

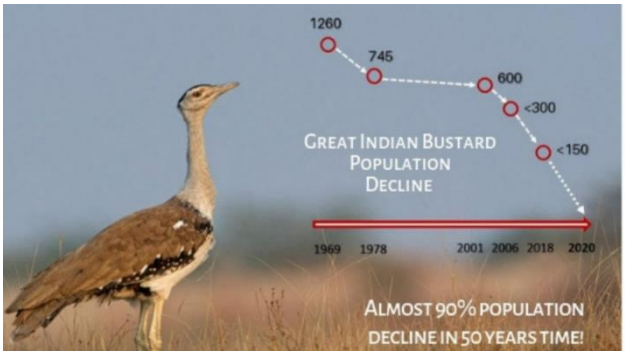
☆ **HIMALAYAS**- Home of a diverse range of flora & fauna

☆ **CHILIKA**- Wet land area is protected under the Ramsar convention

☆ **SUNDERBANS** - Largest mangrove forest in India

☆ **WESTERN GHATS** - Biodiversity Hotspot in India

☆ **THAR DESERT** - Only landscape having the only breeding population of great Indian Bustard (State bird of Rajasthan) , is on the verge of extinction.



FLORA & FAUNA IN INDIA

India, a megadiverse country with only 2.4% of the world's land area, accounts for 8% of all recorded species, including over 47,000 species of plants and 91,000 species of animals.

The forest cover in the country is 23.3 percent of the total geographical area.

CATEGORIES OF EXISTING PLANT & ANIMAL SPECIES:

Based on IUCN [International Union for Conservation of Nature & Natural Resources] -

1. NORMAL SPECIES- -those species whose population is normal for their survival Ex. cattle , sal , pine , rodents, etc.

2. ENDANGERED SPECIES- - In danger of extinction
- difficult to survive if negative factors will be continued
Ex. Black buck , Crocodile, Indian wild ass , Indian Rhino , lion tailed macaque, sangai (brow anter deer in Manipur), etc.

3. VULNERABLE SPECIES-- Species whose population has declined
- can be in endangered Species category in near future if situation will not improveEx. Blue sheep , Asiatic elephant, Gangetic dolphin , etc.

4. RARE SPECIES:
- Species with small population
- can be in endangered or vulnerable category if negative factors will continue to operate
Ex. Himalayan brown bear , wild Asiatic Buffalo, desert fox & hornbill, etc.

5. ENDEMIC SPECIES:
- Only found in some particular areas
- usually Isolated by natural or geographical barriers
Ex. Andaman teal, Nicolas pigeon, Andaman wild pig, mithun in Arunachal Pradesh

6. EXTINCT SPECIES:
- Those species which aren't found after searches in known & likely areas
- may be extinct from local area/County/earth
Ex. Asiatic cheetah, pink head duck

What are the negative factors that cause fearful depletion of flora and fauna?
1. Expansion of Agriculture
2. Expansion of Railways
3. Mining activities
4. Multipurpose projects
5. Urbanization
6. Industrialization
7. Over-grazing
8. Commercial Farming
9. Fuel-wood collection

- Between 1951-1980, according to Forest Survey of India, over 26,200 sq. km of forest Area was converted into agricultural land.

- Since 1951, over 5,000 Sq km of forest was cleared for Multipurpose projects
- Buxa Tiger Reserve in West Bengal is seriously threatened by the ongoing dolomite mining

FACTORS DECLINING INDIA's BIODIVERSITY

1. Habitat destruction
2. Hunting
3. Poaching
4. Over-exploitation of nature
5. Environmental pollution
6. Poisoning
7. Forest fires
8. Climate change

NOTE - WE ARE NOT JUST LOSSING FOREST & WILDLIFE, WE ARE ALSO LOSSING OUR CULTURAL DIVERSITY.

WHY DO WE NEED TO CONSERVE OUR FORESTS & WILDLIFE?

1. To preserve the ecological balance
2. To conserve our life support system- Water, air & soil
3. To preserve the genetic diversity of plants & animals for better growth of species & breeding
4. To maintain aquatic Biodiversity

☆ ALL ARE DEPENDENT UPON EACH OTHER

STEPS TAKEN TO CONSERVE FOREST & WILDLIFE:-

1. Adopted a forest policy in 1952 & further modified in 1988
2. Steps to expand forest cover
3. Emphasis on Sustainable Forest Management
4. Afforestation practices
5. Target to expand forest cover (33%)
6. In 1972 , WILDLIFE PROTECTION ACT was enacted to conserve & protect wildlife in India.
7. There are 104 national parks & 551 wildlife sanctuaries in our country as of 2019

TYPES OF FOREST & WILDLIFE RESOURCES:-

1. RESERVED FORESTS- More than half of the total forest land has been declared as reserved forest. These forest are regarded as most valuable as far as the conservation of forest and wildlife resources are concerned.

2. PROTECTED FORESTS- almost one third of the total forest range , as declared by Forest Department.

3. UNCLASSED FORESTS- It constitutes 5% of the India's forest land.

DISTRIBUTION OF FOREST & WILDLIFE RESOURCES:-

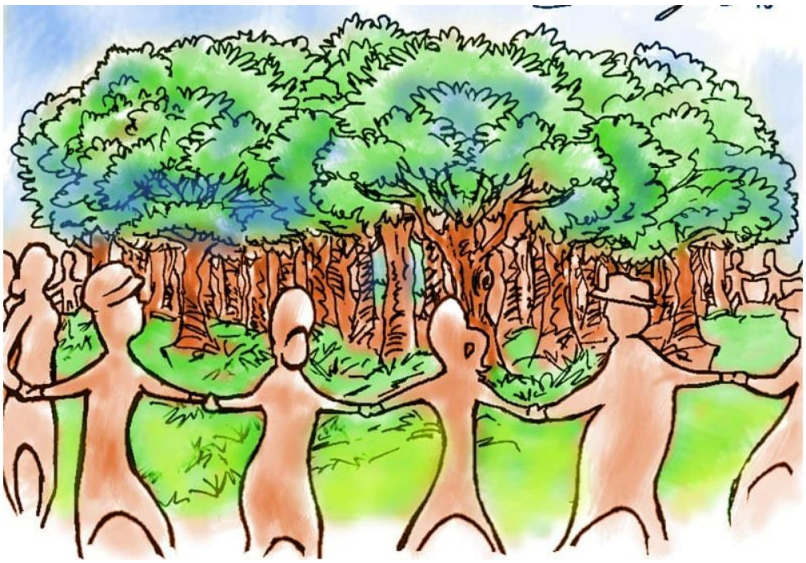
A. Permanent forests- MADHYA PRADESH has 75% of its total forest area under this category.

B. Reserved Forests- J & K , Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal, Maharashtra

C. Protected Forests- Bihar, Haryana, Punjab, Himachal Pradesh, Odisha & Rajasthan

D. Unclassed Forests- All north-eastern states & parts of Gujrat

COMMUNITY & CONSERVATION



¤ In the Sariska Tiger Reserve in Rajasthan, villages have fought against mining by citing the Wildlife Protection Act.

¤ The inhabitants of five villages in the Alwar district of Rajasthan have declared 1200 hectares of forest as Bhairodev Dakav Sonchuri declaring their own set of rules & regulations.

¤ Chipko Movement was started by villagers & conservationist Sunder Lal Bahuguna in March 1974 in Uttarakhand

¤ Farmers & citizen's groups like Beej Bachao Andolan in Tehri & Navdanya have shown that adequate levels of diversified crop production without the use of synthetic chemicals possible & economically viable

JFM [JOINT FOREST MANAGEMENT PROGRAM]

A. It is structured on the guidelines issued by the Ministry;

B. It involves the local communities in the management and the Restoration of the degraded forests;

C. Local Institutions undertake activities to protect the forest and management by the forest department.

LOCAL COMMUNITIES HAVE TO BE INVOLVED IN NATURAL RESOURCE MANAGEMENT because People centric / Environmental friendly/ Economically rewarded activities can make conservation possible