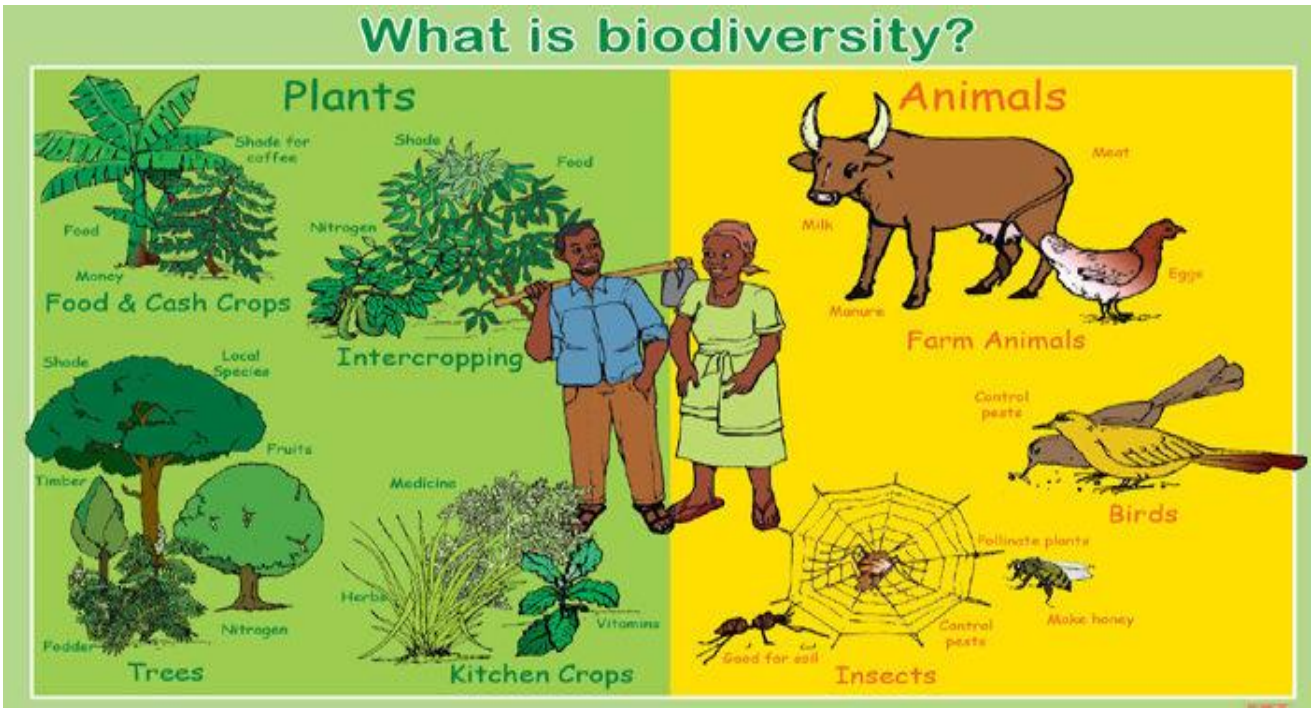
Chapter- 2

FOREST AND WILDLIFE

STUDY NOTES

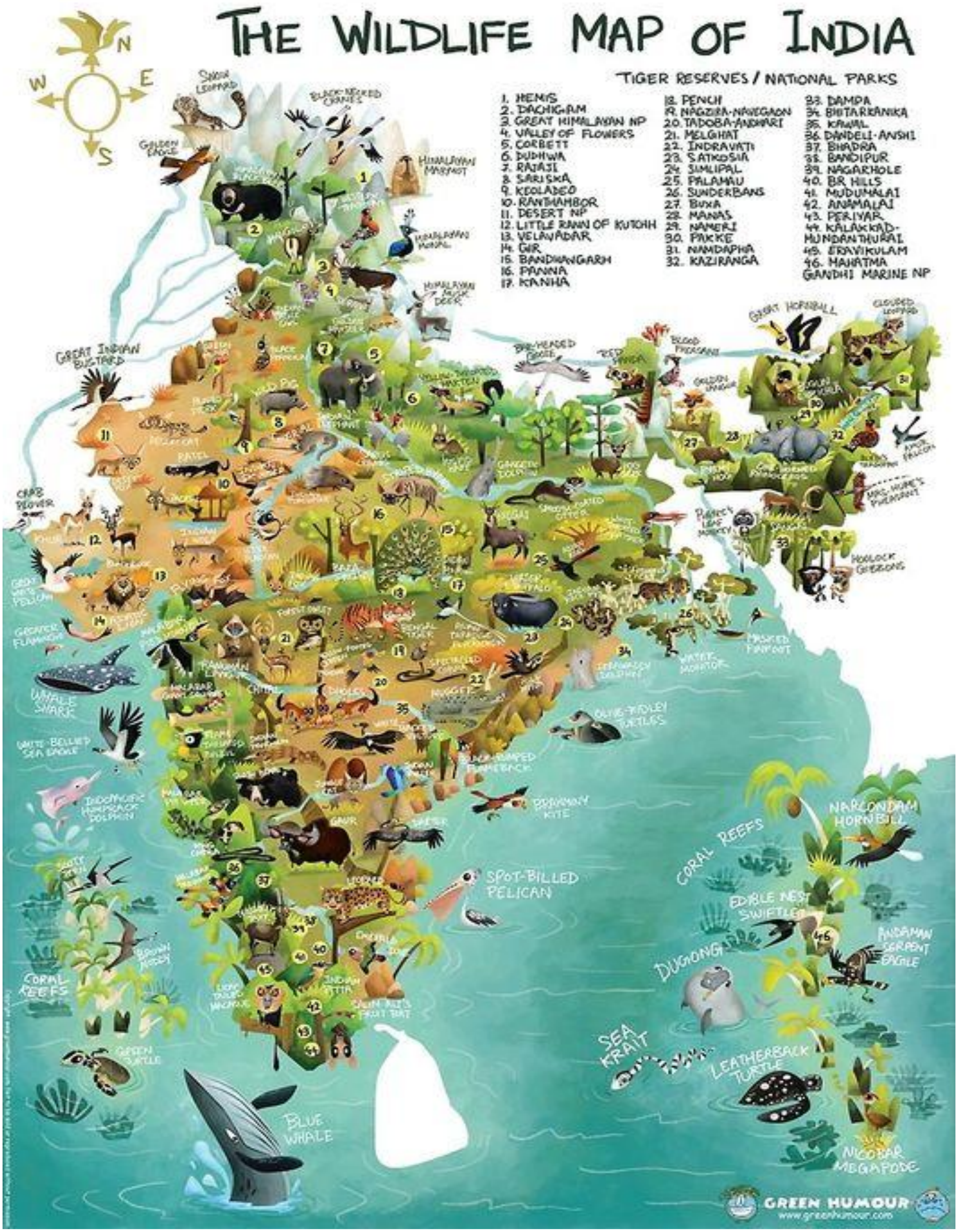
Biodiversity or Biological diversity

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.
- The plants, animals and micro-organisms **re-create** the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive.
- Forests play a key role in the **ecological system** as these are also the primary producers on which all other living beings depend.

- Biodiversity or Biological Diversity is immensely rich in wildlife and cultivated species, diverse in form and function but closely integrated in a system through multiple network of interdependencies.


THE WILDLIFE MAP OF INDIA
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TIGER RESERVES / NATIONAL PARKS
1. HEMIS
2. DACHIGAM
3. GREAT HIMALAYAN NP
4. VALLEY OF FLOWERS
5. CORBETT
6. DUDHWA
7. RAJAJI
8. SARISKA
9. KEOLADEO
10. RANTHAMBOR
11. DESERT NP
12. LITTLE RANN OF KUTCHH
13. VELAVADAR
14. GIR
15. BANDHAVGARH
16. PANNA
17. KANHA
18. PENCH
19. NAGZIRA-NAVEGAON
20. TADOBA-ANDHARI
21. MELGHAT
22. INDRAVATI
23. SATKOSIA
24. SIMLIPAL
25. PALAMAU
26. SUNDERBANS
27. BUXA
28. MANAS
29. NAMERI
30. PAKKE
31. NAMDAPHA
32. KAZIRANGA
33. DAMPA
34. BHITARKANIKA
35. KAWAL
36. DANDELI-ANSHI
37. BHADRA
38. BANDIPUR
39. NAGARHOLE
40. BR HILLS
41. MUDUMALAI
42. ANAMALAI
43. PERIYAR
44. KALAKKAD-MUNDANTHURAI
45. ERAVIKULAM
46. MAHATMA GANDHI MARINE NP
SNOW LEOPARD
BLACK NECKED CRANES
GOLDEN EAGLE
HIMALAYAN MARMOT
HIMALAYAN MONAL
HIMALAYAN MUSK DEER
GREAT HORNBILL
CLOUDED LEOPARD
GREAT INDIAN BUSTARD
BLOOD PHEASANT
RED PANDA
CRAB PLOVER
GREAT WHITE PELICAN
GREATER FLAMINGO
WHALE SHARK
WHITE-BELLIED SEA EAGLE
INDOPACIFIC HUMPBACK DOLPHIN
HOOLOCK GIBBONS
WATER MONITOR
OLIVE RIDLEY TURTLES
IRRAWADDY DOLPHIN
SPOT-BILLED PELICAN
BRAHMINY KITE
CORAL REEFS
NARCONDAM HORNBILL
EDIBLE NEST SWIFTLET
ANDAMAN SERPENT EAGLE
DUGONG
SEA KRAIT
LEATHERBACK TURTLE
NICOBAR MEGAPODE
BLUE WHALE
GREEN TURTLE
BROWN NODDY
CORAL REEFS
INDIAN PITTA
GAUR
LEOPARD
GREEN HUMOUR
www.greenhumour.com

Classification of Biodiversity (IUCN)

- The International Union for Conservation of Nature (IUCN)
- **Headquarters:** Gland, Switzerland
- **CEO:** Bruno Oberle (Swiss Biologist and Environmental Scientist) (13 JULY 2020- continuing)
- **Founder:** Julian Huxley
- **Founded:** 5 October 1948, France
- The International Union for Conservation of Nature and Natural Resources (IUCN) has classified plants and animals in order of existence.

India is one of the world's richest countries in terms of its vast array of biological diversity. Different varieties of forest and wildlife resources are found in India. Based on the International Union for Conservation of Nature and Natural Resources (IUCN), we can classify different categories of existing plants and animal species as follows:

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

2. **Endangered Species:** These species are in danger of extinction. For examples, species are black buck, crocodile, Indian wild ass, Indian rhino, lion tailed macaque, sangai (brow antler deer in Manipur), etc.

3. **Vulnerable Species:** These are species whose population has declined to levelsthat it is likely to move into the endangered category in the near future if it continues to decline in the same manner.
    1. Eg: Blue sheep, Asiatic elephant, Gangetic dolphin, etc.

4. **Rare Species:** Species with a 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.

5. **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.

6. **Extinct Species:** These species may be extinct from a local area, region, country, continentor the entire earth.
Eg: Asiatic cheetah, pink head duck.

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

1. Excessive consumption of natural resources for fulfilling human needs such as wood, barks, leaves, rubber, medicines, dyes, food, fuel, fodder, manure, etc.
2. The expansion of the railways, agriculture, commercial and scientific forestry and mining activities.
3. Large-scale development of projects and mining activities.
4. Unequal access, inequitable consumption of resources and differential sharing of responsibility for environmental well-being.

Conservation of Forest and Wildlife in India

Conservation preserves the ecological diversity and preserves the genetic diversity of plants and animals.

1. The Indian Wildlife (Protection) Act was implemented in 1972, for protecting habitats and an all India list of protected species was published.
2. The central government also announced several projects for protecting specific animals. Under the Wildlife Act of 1980 and 1986, several hundred butterflies, moths, beetles, and one dragonfly have been added to the list of protected species.
3. In 1991, for the first time plants were also added to the list, starting with six species.

Types and Distribution of Forest and Wildlife Resources

In India, forest and wildlife resources are owned and managed by the government through the Forest Department or other government departments. These are classified under the following categories.

Reserved Forests: More than half of the total forest land in India has been declared reserved forests. **Protected Forests:** Forest Department has declared one-third of the total forest area as protected forest.

Unclassed Forests: These are the forests and wastelands which belong to both government and private individuals and communities. North-eastern states and parts of Gujarat have a very high percentage of their forests as unclassed forests.

Reserved and protected forests are also referred to as **permanent forests,** which are maintained for the purpose of producing timber and other forest produce, and for protective reasons. Madhya Pradesh has the largest area under permanent forests.

Community and Conservation

Conservation of the forest and wildlife resources is very important. Here are a few steps were taken by common people:

1. In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act.
2. The inhabitants of five villages in the Alwar district of Rajasthan have declared 1,200 hectares of forest as the Bhairodev Dakav 'Sonchuri'. Villages came up with their own set of rules and regulations which do not allow hunting. They are also protecting the wildlife against any outside encroachments.

3. The famous Chipko movement in the Himalayas was one successful attempt to resist deforestation in several areas. The movement has also resulted in community afforestation.

4. 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.

Navdanya

5. India joint forest management (JFM) programme furnishes a good example for involving local communities in the management and restoration of degraded forests.

You can refer to following link for further clarity: -

Forest and wildlife: https://www.youtube.com/watch?v=Ku12UKqnx_k