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Biodiversity and Conservation

Biodiversity:

1. Biodiversity can be defined as the occurrence of different types of genes, gene pools, species, habitats and ecosystem in a given region.

(i) The term biodiversity was given by a socio biologist Edward Wilson to describe the combined diversity at all the levels of biological organisation.

(ii) There are more than 20,000 species of ants, 3,00,000 species of beetles, 28,000 species of fishes and nearly 20,000 species of orchids.

(iii) Biodiversity can be divided into following three levels:

(a) Genetic diversity is the diversity at the genetic level.

- It enables a population to adapt to its environment.
- India has more than 50,000 genetically different strains of rice and 1,000 varieties of mango.

Example, Genetic variation in the medicinal plant *Rauwolfia vomitoria* growing in different Himalayan ranges might be in terms of the potency and concentration of the active chemical (reserpine) that the plant produces.

(b) Species diversity is diversity at the species level. For example, the Western Ghats have a greater amphibian species diversity than the Eastern Ghats.

(c) Ecological diversity is the diversity at ecosystem level. For example, India with its deserts, rain forests, mangroves, coral reefs, wetlands, estuaries and alpine meadows has a greater ecosystem diversity.

2. Global species diversity means total species present on the earth.

(i) According to IUCN (2004) the total number of plant and animal species is slightly more than 1.5 million.

(ii) For many taxonomic groups, species inventories are more complete in temperate than in tropical countries.

(iii) A more conservative and scientifically sound estimate by Robert May, places the global species diversity at about 7 million.

(iv) More than 70% of all the species recorded are animals, while plants comprise no more than 22% of the total.

(v) Among animals, insects are most species rich-taxonomic group, making about 70% of the total. It means, out of every 10 animals, 7 are insects on the earth.