

MODULE 22 – BIODIVERSITY : AN INTRODUCTION

OBJECTIVES

By the end of the session the students will know: -

1. The meaning of the word biodiversity.
2. Approximate number of the species of plants and animals at the world Level as well as in India.
3. Types of Biodiversity.

SUMMARY

Biodiversity means the variety of plants animals and microbes occurring as an interacting system are a given habitat. In this program the verities of plants and animals at world level as well as the level of India has been mentioned. This reveals that amongst animals the species of angiosperms are maximum. Three types of biodiversity have also been described.

TRANSCRIPTION

1. Introduction

The Word Biodiversity was coined by walter G Rosen in 1986 It is defined as the variety of plants animals and microbes occurring as an interacting system in a given habitat. India has rich heritage of species and enormous verities of flora of fauna. Overall 8 percent of world's species are found in India. India occupies tenth rank as far as the richness of plant wealth is concerned. This wealth is distributed in the form of forests wel-lands granlands deserts marine areas coral reefs etc.

2. Species at world level

Number of species of plants & animals at world level is as under: -

S. no.	Groups	Number of speices
1	Algae	40,000
2	Fungi	80,000
3	Bryophytes	25,000
4	Gymnosperms	725
5	Angiosperms (Flowering Plants)	2,70,000
6	Virus	1600
7	Bacteria	4000
8	Protozoa	40,000
9	Nematodes & Worms	25,000
10	Insects	10,25,000
11	Crustaceans	4300

12	Mollusca	70,000
13	Amphibia	4800
14	Fishes	270000
15	Reptiles	7000
16	Birds	9700
17	Mammals	4650
18	Others	100000

3. Species at India level

Biodiversity includes different types of plants as well as animals. Richness of biodiversity of a country is decided on the basis of numbers of species found in that Country. There is no other parameter to measure biodiversity.

In India the picture of biodiversity becomes clear from this chart:-

S. no.	Species	Number
1	Plants	45000
2	Invertebrates	6800
3	Insects	67000
4	Molluscs	4000
5	Fishes	1693
6	Amplibians	2000
7	Reptiles	420
8	Birds	1200
9	Mammals	340

4. Classification

Biodiversity of a particular area is determined by the following:

- (A) Groups of plants and animals for end in a particular area their interaction amongst themselves as well as with the surroundings.
- (B) Number of species in that area.
- (C) Number of indigenous species.
- (D) Some particular species and its variability.
- (E) Number of individuals in a particular species.

5. Genetic biodiversity :-

External appearance of an organism depends upon chromosomes and genetic set up mutation and genetic recombination brings about diversity in character, this is called genetic diversity .Various species of cotton such as *Gossypium arboreum* *G herbaceum* *G barbadense* and *Bt cotton* are good examples of genetic diversity.

6. Species Diversity :-

Number of individuals of a particular

Species in a particular area or ecosystem is called species diversity. It gives an idea regarding richness of a particular plant or animal in any natural habitat. Species diversity is more in warmer parts of the world as compared to cooler parts. Scientists concerned with environmental science and conservation of nature are more concerned with species diversity.

7. Ecosystems diversity :-

Ecosystem is defined as interaction between the organism and environment. Grassland, forest, lake, desert, ocean are good examples of ecosystem. Each ecosystem has producers, consumers and decomposers. This chain controls the number of species and maintains biodiversity of a particular ecosystem.

GLOSSARY

Coral Reef: Hard rock like structure near sea shore built by algae & polyps.

Invertebrate: Animals without backbone.

Amphibian: Animals like frog which live on land as well as water.

Crustaceans: Hard shelled aquatic animal such as crab.

Mollusc: Animal with soft body & hard shell e.g. snail.

Reptiles: Cold blooded scaly animals like snake.

Species: A group of interbreeding animals of plants or animals.

Ecosystem: A balanced system showing interaction between the organism & the environment.

FAQ's

Q.1 Who introduced the word biodiversity?

Ans. G. Rosen in 1986.

Q.2 What is the definition of biodiversity?

Ans. Varieties of plants, animals and microbes found in nature are called biodiversity.

Q.3. What is the position of India in the world as regards the richness of biodiversity.

Ans :- Tenth position

Q.4 What is the percentage of plants & animals found in India?

Ans 8%

Q.5 Which group of animals is maximum in number at world level.

Ans Insects

Q.6 Amongst aquatic animals which group is the most common at world level?

Ans .Fishes

Q.7 Among plants which group has maximum species at world level ?

Ans Flowering plants or Angiosperms.

Q.8 Which plant group has minimum number of species at world level ?

Ans: Gymnosperms.