



Biological Diversity

Introduction | Importance | Threats | Conservation



KHAN SIR



What is
biodiversity

Extent

Value

Threats

Hotspots

UN Convention on
Biological
Diversity

India's efforts

Biological
Diversity Act,
2002

The totality of genes, species, and ecosystems of a region. It has three components.

- **Genetic diversity:** The diversity of genes within a species. There is a genetic variability among the populations and the individuals of the same species

- **Species diversity:** The diversity among species

- **Ecosystem diversity:** The diversity of the ecological complexes of which the species are part.



What is
biodiversity

Extent

Value

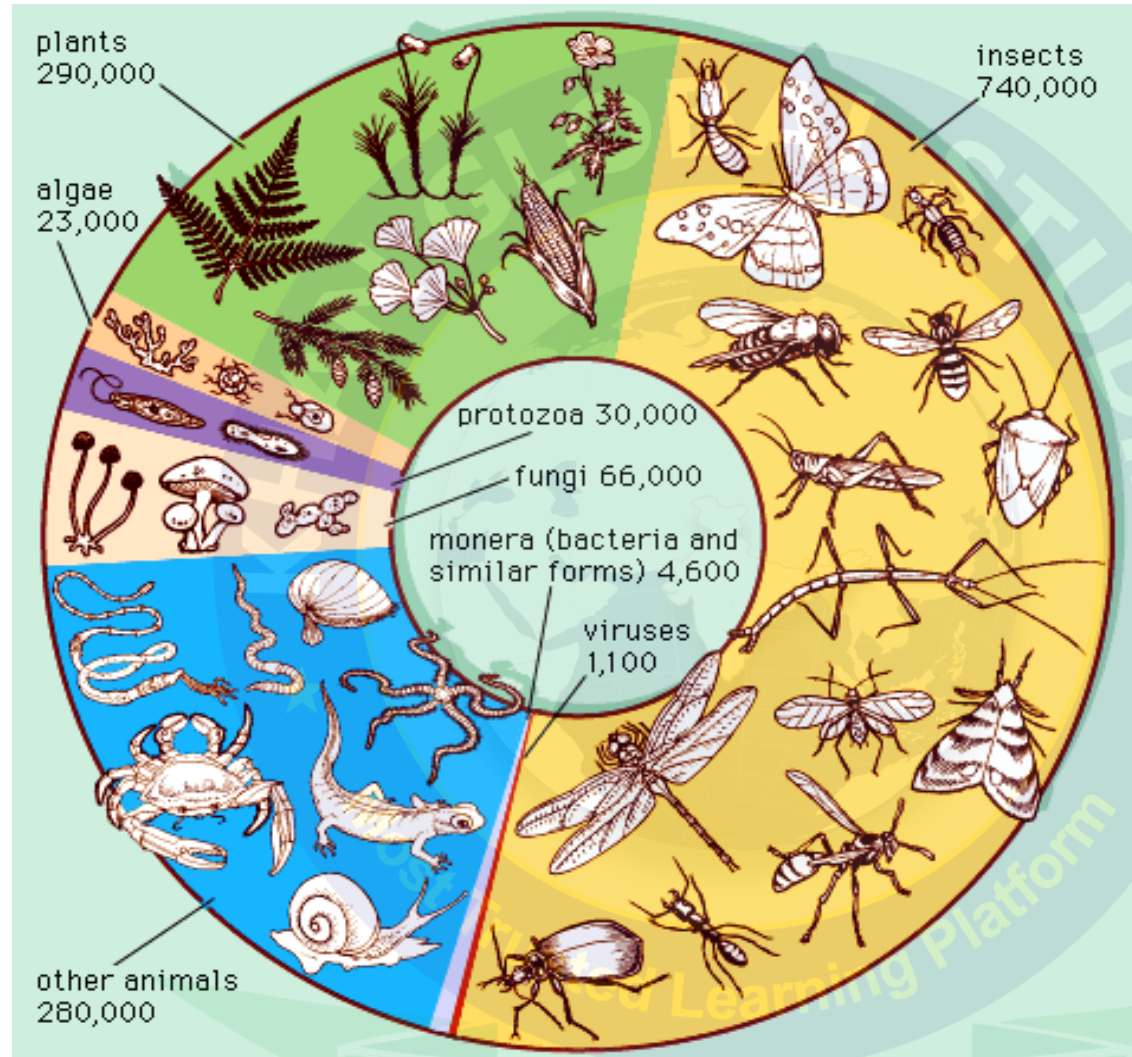
Threats

Hotspots

UN Convention on
Biological
Diversity

India's efforts

Biological
Diversity Act,
2002



KHAN SIR



What is
biodiversity

Extent

Value

Threats

Hotspots

UN Convention on
Biological
Diversity

India's efforts

Biological
Diversity Act,
2002

1. **Ecological Services** (such as Purification of air and water, Stabilization and moderation of the Earth's climate, Moderation of floods, droughts, temperature extremes and the forces of wind, Detoxification and decomposition of wastes, Generation and renewal of soil fertility, including nutrient cycling, Pollination of crops etc.)
2. **Provision of food**
3. **Provision of industrial raw materials and building materials**
4. **Medical value** as source of drugs, genes, vaccines, testing systems etc.
5. **Maintenance of genetic resources** as key inputs to crop varieties and livestock breeds, medicines, and other products
6. **Cultural and aesthetic benefits**

What is
biodiversity

Extent

Value

Threats

Hotspots

UN Convention on
Biological
Diversity

India's efforts

Biological
Diversity Act,
2002

Factors causing threat to biodiversity

1. Destruction of natural habitats of species for making land available for human settlements, urban centres, industries and mines, agriculture etc.
2. Ecosystem fragmentation and degradation due to various types of pollution
3. Overharvesting of biological resources and targeted elimination in some cases
4. Introduction of exotic and invasive species in various ecosystems
5. Disturbances in ecosystem dynamics due to climate change

KHAN SIR

Value of biodiversity

(1) Ecosystem Services

- ✓ CO₂ Capture
- ✓ O₂ release
- ✓ Soil stability
- ✓ Soil fertility
- ✓ temp. modulation etc.

(2) Food

(3) Raw material

For industries

For construction

(4) Medical Importance

Source of medicines

Source of vaccines

Drug Testing

(5) Genetic repository

(6) Cultural & Aesthetic Value

Use of genes of wild sp. for crop or cattle improvement

