

- The communities with more species are more stable
- A stable community not show too much variation in productivity from year to year.
- Rich biodiversity is essential for ecosystem health and survival of human race
- Tilman: Increased diversity contributed to higher productivity

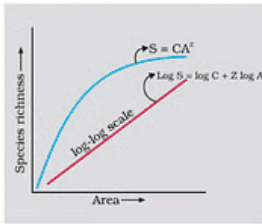
Diversity at the ecosystem level

Diversity at the species level.
Eg. - Western Ghats have greater amphibian species than Eastern Ghats.

Diversity shown by a single species at genetic level. E.g.: Rauwolfia vomitoria shows genetic variation in chemical reserpine.

The diversity of biological organisation ranging from cellular macromolecules to biomes.

- Species diversity decreases from the equator towards the poles.
- Tropics (latitudinal range of 23.5 N to 23.5 S) have more species than temperature or polar areas.



- Habitat loss and fragmentation
- Over-exploitation
- Alien-species invasions
- Co-extinctions

Causes of loss of Biodiversity

$$\log S = \log C + Z \log A$$

Species area Relationship

BIODIVERSITY AND CONSERVATION

Conservation of Biodiversity

- Zoological Parks
- Botanical gardens
- Gene bank
- Genetic resource centres

- National Park
- Sanctuary
- Biosphere Reserves
- Sacred Forests
- Hotspots

Moral duty to take care for biodiversity

- Provides oxygen
- Pollination
- Aesthetic Pleasure

More than 25% of the drugs are derived from plants

