

# Diversity

Biodiversity is the natural variety found in living systems and individuals. The term can refer to different levels of organization. Genetic diversity is the variation in genetic characteristics of a species. Species diversity refers to the number and types of different species that inhabit an area or ecosystem. Ecosystem diversity is the variety of habitat types or ecosystems found within a landscape.

- Biodiversity indicates health of an ecosystem.
- Greater diversity = greater system complexity = greater resilience to external shocks; loss of some species is not catastrophic for entire system.
- Genetic diversity within a species may mean it is more adaptable to change.
- Greater diversity = species' populations tend towards (dynamic) stability; relative population levels are maintained within "safe" boundaries.
- Greater diversity = ecosystem services function more effectively, e.g:
  - Climate regulation
  - Water purification
  - Nutrient cycling

