

Changes to Population Size of an Organism

The population size of an organism can either increase or decrease due to many reasons.

Factors That Lead To A Decrease In The Population Size

① An Increase In The Number Of Predators

When the number of predators increase, there is an increase in the demand for food. Hence, the population size of the prey will decrease.

② A Change In The Surroundings

When environmental conditions become unfavourable for members of the population to survive, its population size will decrease.

- changes in weather (drought, floods, typhoons, hurricanes, storms, heat waves etc.)
- changes caused by natural disasters (e.g. earthquakes, forest fires, landslides due to heavy rains, eruptions of nearby volcanoes etc.)
- changes caused by gradual climate change (e.g. global warming leading to the melting of the polar ice caps and raising of the world's temperatures in the future)
- changes caused by man (e.g. deforestation, deliberate starting of forest fires, pollution)

③ An Outbreak Of Disease

Diseases can affect the population size of an organism. If the organisms succumb to illnesses especially in an epidemic, the decrease in its population size is substantial.

Factors That Lead To An Increase In Population Size

① A Decrease In The Number Of Predators

When the number of predators decrease, the number of prey increases because there are fewer predators to eat them.

② Presence Of A New Population Of Prey

When another population of prey moves in, it gives the predators more choice in terms of its food as there is an increase in an overall food supply for them.

③ Changes In Weather Conditions

When the surroundings become more favourable for survival and reproduction, the population size of an organism increases.

④ An Increase In The Amount Of Food Available

Where there is the availability of food, the population size of an organism will naturally increase.

The food relationship in the real world is more complicated than what we see in a food chain.

Since many animals have more than one source of food, food chains can be interconnected to show how a group of organisms depend on each other to survive.