

Biotic component

Biotic components are the living things that shape an ecosystem.

Biotic components usually include:

- Producers, i.e. autotrophs: e.g. plants, convert the energy [from photosynthesis (the transfer of sunlight, water and carbon dioxide into energy), or other sources such as hydrothermal vents] into food.
- Consumers, i.e. heterotrophs: e.g. animals, depend upon producers (occasionally other consumers) for food.
- Decomposers, i.e. detritivores: e.g. fungi and bacteria, break down chemicals from producers and consumers (usually not living) into simpler form which can be reused.

A **biotic factor** is any living component that affects the population of another organism, or the environment. This includes animals that consume the organism, and the living food that the organism consumes. Biotic factors also include human influence, pathogens, and disease outbreaks. Each biotic factor needs energy to do work and food for proper growth.

All species are influenced by biotic factors in one way or another. For example, if the number of predators will increase, the whole food web will be affected as the population number of organisms that are lower in the food web will decrease due to predation. Similarly, when organisms have more food to eat, they will grow quicker and will be more likely to reproduce, so the population size will increase. Pathogens and disease outbreaks, however, are most likely to cause a decrease in population size. Humans make the most sudden changes in an environment (e.g. building cities and factories, disposing of waste into the water). These changes are most likely to cause a decrease in the population of any species due to the sudden appearance of pollutants.

Biotic components are contrasted to **abiotic components**, which are non-living components that influence population size and the environment. Examples of abiotic factors are: temperature, light intensity, moisture and water levels, air currents, carbon dioxide levels and the pH of water and soil. An additional abiotic factor include minerals as they are nonliving and make up the composition of the soil. ^[1]

The factors mentioned above may either cause an increase or a decrease in population size, depending on the organism. For example, rainfall may encourage the growth of new plants, but too much of it may cause flooding, which may drastically decrease the population size.

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See also

- Biotic stress
- Ecology
- Ecosystem engineer
- Mutualism (biology)

References

Notes

1. "Abiotic vs Biotic - Difference and Comparison | Diffen" (http://www.diffen.com/difference/Abiotic_vs_Biotic). Retrieved 2017-05-04.

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