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DIFFERENCE BETWEEN BIOTIC AND ABIOTIC FACTORS

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INTRODUCTION

An ecosystem is a biological Association in which living organisms and the physical environment interact with each other. It can be considered a complex network that interacts a lot with each other. It includes all living things, their interaction and all inanimate beings around. This is the basis for energy flow and biogeochemical cycles. Each organism in an ecosystem has its own position and plays an important role for the existence of an ecosystem. The ecosystem has two main components, called the biotic component and the abiotic component. They are also known as the biotic factor and the abiotic factor. The biotic factor of an ecosystem includes all living organisms while the abiotic factor includes all living things in an ecosystem. This is the main difference between biotic and abiotic factors.

The word biotic means a living organism. Hence, the biotic factors of an ecosystem represent all living organisms in an ecosystem. It includes plants, animals, birds, fungi, bacteria, protozoa, etc. All these organisms work together in the ecosystem. These living organisms are largely dependent on the abiotic factors of the ecosystem. The small biotic unit of the ecosystem is species. The success or failure of a species depends on the adaptation, competition, and resources available in the ecosystem of that species. Different species in the community interact with each other for resources in the environment. When resources are limited, only competent species remain in the environment, and they are selected by natural selection.

The abiotic factor is a key component of the ecosystem. It contains all the creatures that exist in the ecosystem. Non-living physical and chemical elements belong to the abiotic component. Abiotic factors include sunlight, oxygen, hydrogen, nitrogen, phosphorus, temperature, water, soil, minerals, other gases, salinity, humidity, wind, etc. Abiotic factors come from the atmosphere, lithosphere and hydrosphere. Abiotic factors are an important part of an ecosystem because the biotic factor of an ecosystem depends on the abiotic factor in general. However, the abiotic factor does not depend on the biotic factor. This provides the basis for the interaction between living organisms of the ecosystem. If a single abiotic factor is limited in an ecosystem, it affects ecosystem stability and species. For example, when removed in a body of water (ecosystem), all aquatic organisms are affected.

Biotic factors are living organisms of the ecosystem. Abiotic factors are non-living components of an ecosystem.

Examples

Biotic factors include plants, bacteria, fungi, birds, worms, animals, etc. Abiotic factors include sunlight, water, air, chemical elements, minerals, soil, temperature, etc.

Dependency

Biotic factors depend on abiotic factors. Abiotic factors do not depend on biotic factors.

Adaptations

Biotic factors adapt to the environment. Abiotic factors do not change or adapt to the environment.

Conclusion-biotic and abiotic factors

An ecosystem can be described as all the living and living components of a particular geographic area. All living organisms present in an ecosystem are known as biotic factors, and all non-living components are seen as abiotic factors. This is the main difference between

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abiotic and biotic factors. The abiotic and biotic factors of the ecosystem are related to each other. The biotic factor depends on the abiotic factor of the ecosystem. The ecosystem remains stable when the abiotic and biotic components are balanced.

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