What is ecosystem? What happens if ecosystem distrupted?

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Slovenský inštitút mládeže IUVENTA

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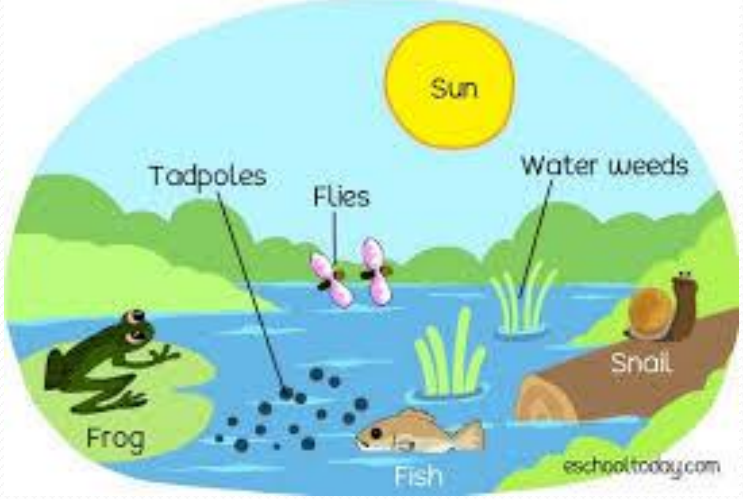
Ecosystem

- Ecosystem is formed by the mutual relations of living and non-living entities in a certain area.
- Ecosystem is a continuous ecological system.
- Our natural environment is also a part of the ecosystem.



- Belirli bir alanda bulunan canlıların ve cansız varlıkların karşılıklı ilişkileri ile ekosistem meydana gelir. Ekosistem, süreklilik arz eden ekolojik bir sistemdir.
- Doğal çevremiz de ekosistemin bir parçasıdır

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What is the natural environment?

- It is the environment that is not created by human hands and has come into being by naturally

- İnsan eliyle yaratılmamış, doğal yollarla oluşmuş çevredir.

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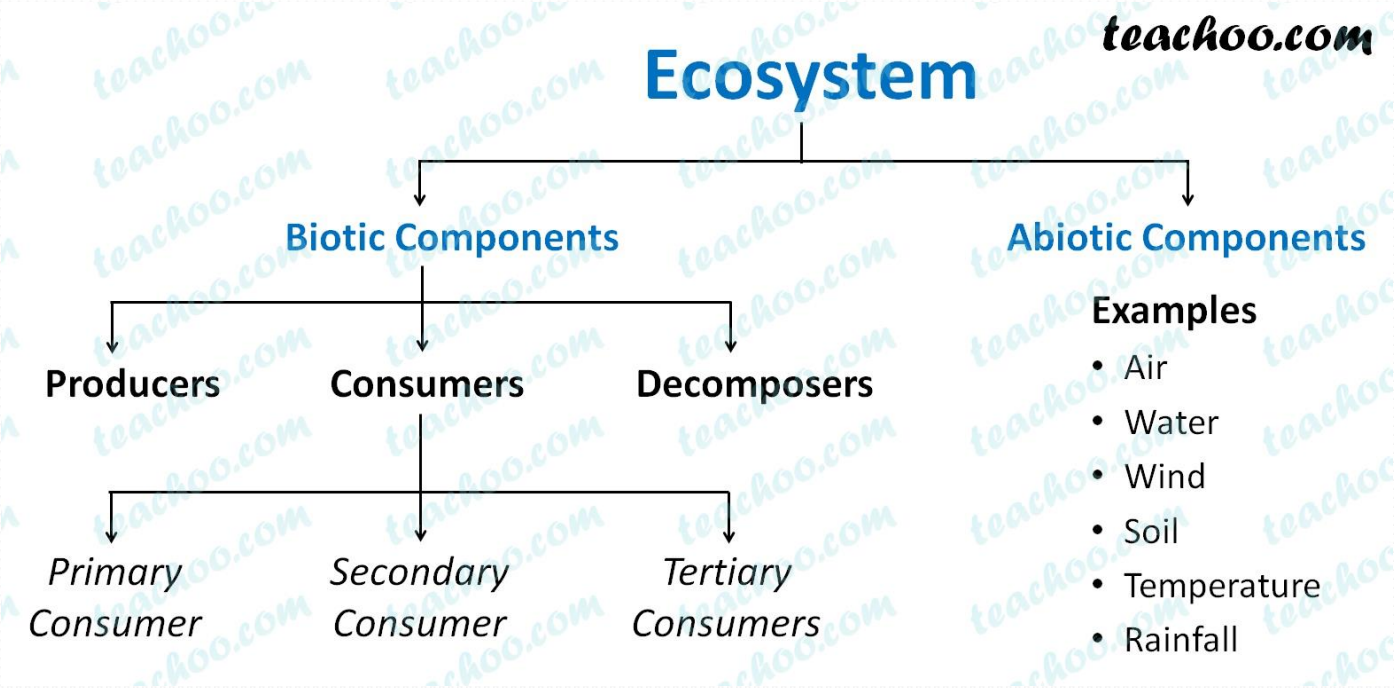
Components of ecosystem?

- The ecosystem happens from the combination of animals or plants with air, soil and sun.



- Ekosistem hayvanlar ya da bitkiler ile hava, toprak veya güneşin birbiri ile olan etkileşiminden doğar.

Structure of the Ecosystem

- An ecosystem's structure mainly refers to the description of both biotic and abiotic components in their organization's environment.
- In particular, it involves the distribution of energy in the environment. Furthermore, it includes various climatic conditions prevailing in that specific environment.
- Both biotic and abiotic components are interconnected and form an open system in which energy is transferred from one particular component to another.

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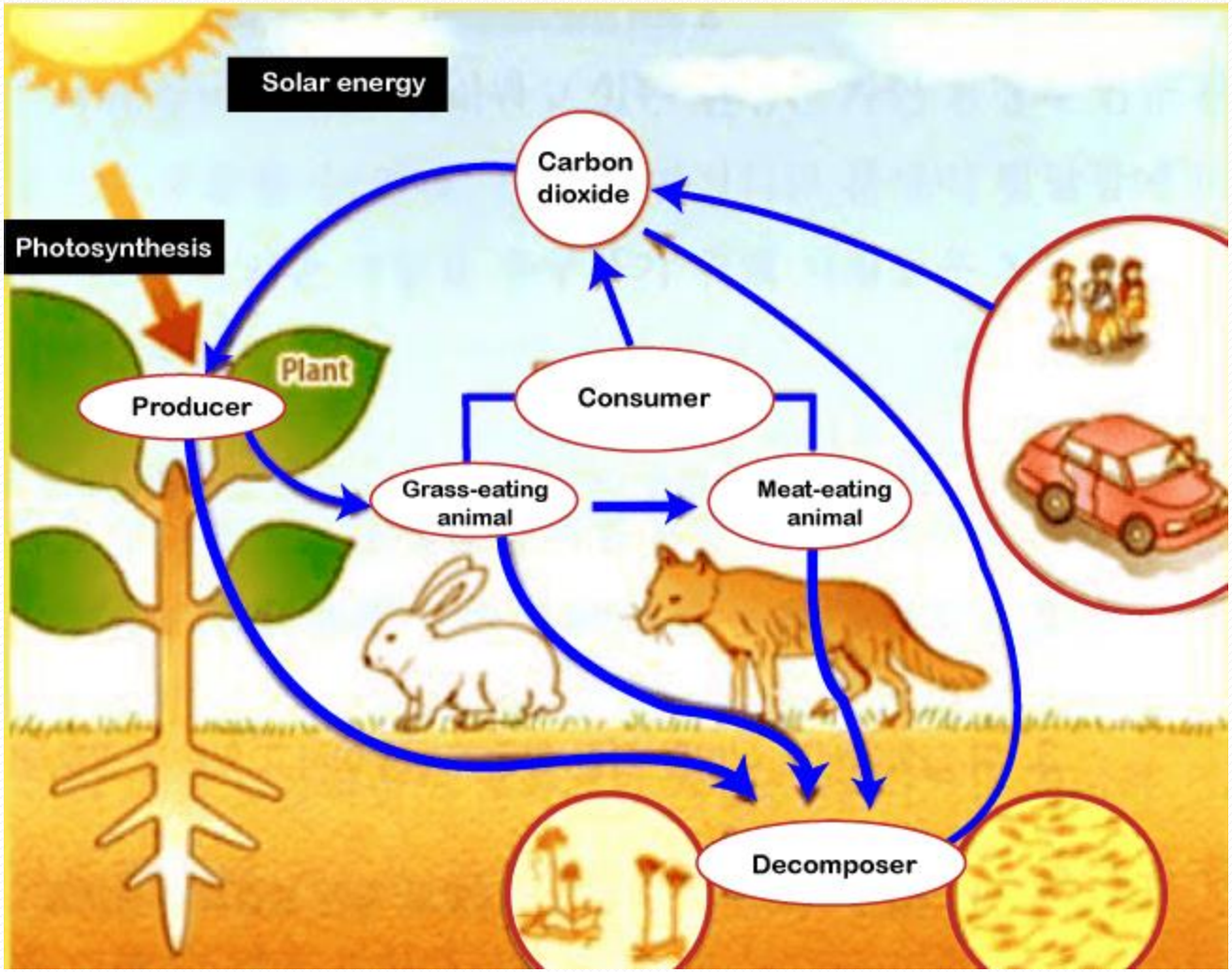
Structure of the Ecosystem



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Biotic (Living Components)

Biological components refer to all living organisms in the ecosystem.

These components typically include organisms such as **animals, plants, humans, and other** microorganisms.

Based on different nutrition, biological components are classified into the following **three categories**

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Biotic (Living Components)

1.Producers: Producers produce food for many other organisms. Plants and trees fall into the producer category.

2.Consumers: Consumers include organisms that depend on other organisms for their food needs. Consumers are divided into primary, secondary, tertiary, and quaternary consumers.

3.Decomposers: These include microbes such as fungi and bacteria. Decomposers obtain their food needs from dead and decaying organic matter. They participate in the recycling of nutrients.

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Abiotic (Non-living Components)

Refers to all nonliving elements and compounds in an ecosystem. Also, abiotic components are primary sources of energy and nutrients and provide the environment for the proper functioning of the ecosystem.

The sun is the primary source of energy for an ecosystem. Other examples of abiotic components are light, moisture, temperature, gas, water, air, minerals, soil, topography and various habitats.

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Types of ecosystems?

- There are different types of ecosystems based on different climates, habitats, and life forms.
- This means that ecosystems can typically be divided into hundreds and thousands of smaller systems. However, all such types generally fall into one of the following two categories:

- Aquatic Ecosystem
- Terrestrial Ecosystem

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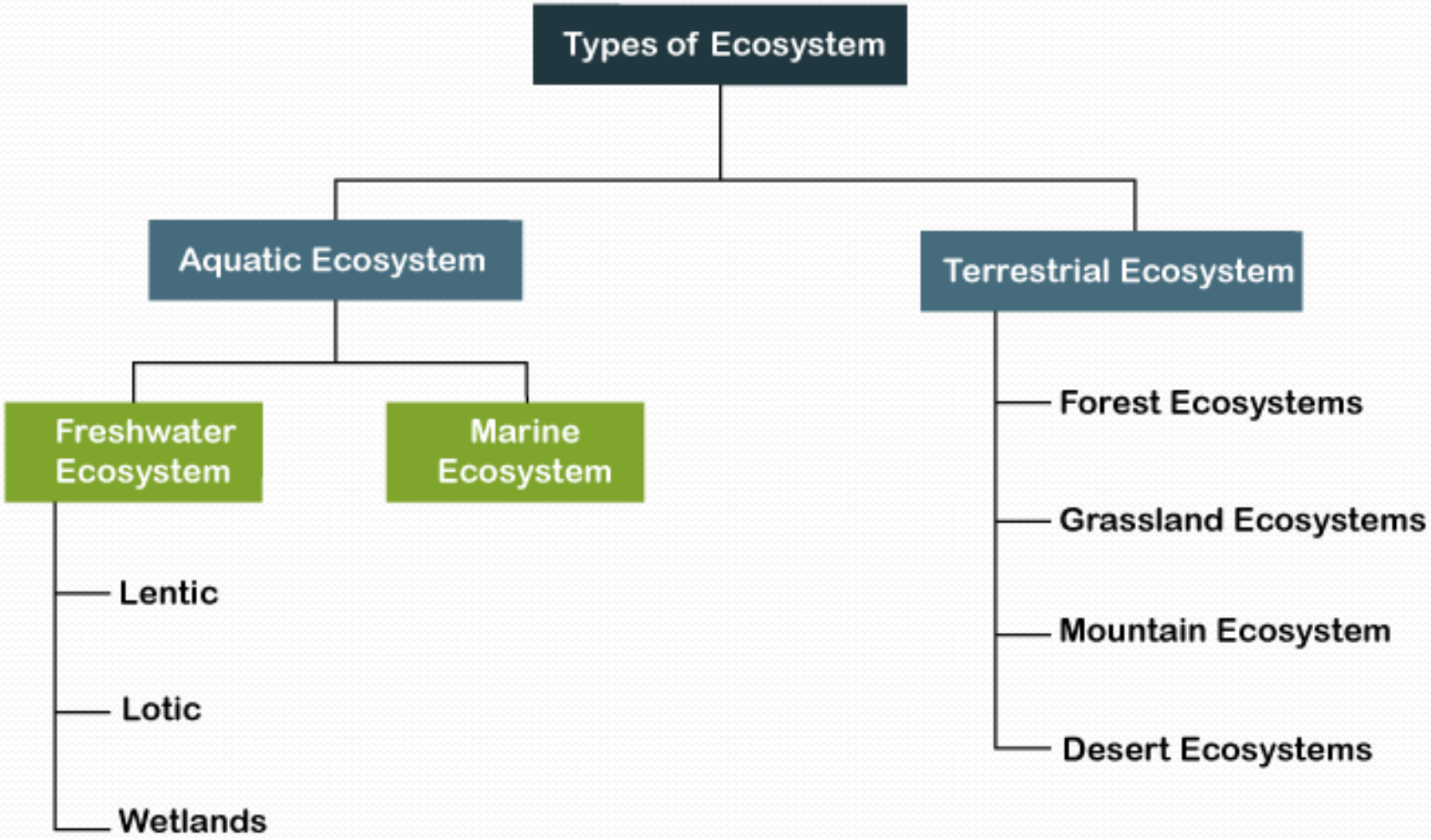
Types of ecosystems?



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Types of ecosystems?

- **A- Aquatic Ecosystem**

Aquatic ecosystems refer to all such ecosystems that are primarily located on or inside water bodies.

- **Freshwater Ecosystem**

The freshwater ecosystem is one of the essential ecosystems for humans and other organisms living on land. This is because this ecosystem is a source of drinking water.

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Types of ecosystems?

- **Aquatic Ecosystem**

Aquatic ecosystems refer to all such ecosystems that are primarily located on or inside water bodies.

- **Marine Ecosystem**

Marine ecosystems are usually characterized by the presence of salt content. These ecosystems have a higher salt content than the freshwater ecosystem.

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Types of ecosystems?

- **A- Terrestrial Ecosystem:**

Terrestrial ecosystem refers to all such ecosystems which are mainly located on land. Although the presence of water in these ecosystems is measured, they are entirely land-based and exist on land. More specifically, a low and sufficiently needed amount of water is located in terrestrial ecosystems. The low amount of water separates these ecosystems from aquatic ecosystems. Besides, terrestrial ecosystems typically have temperature fluctuations in both seasonal and diurnal climates. It is also a specific factor that makes these ecosystems different from aquatic ecosystems in similar environments

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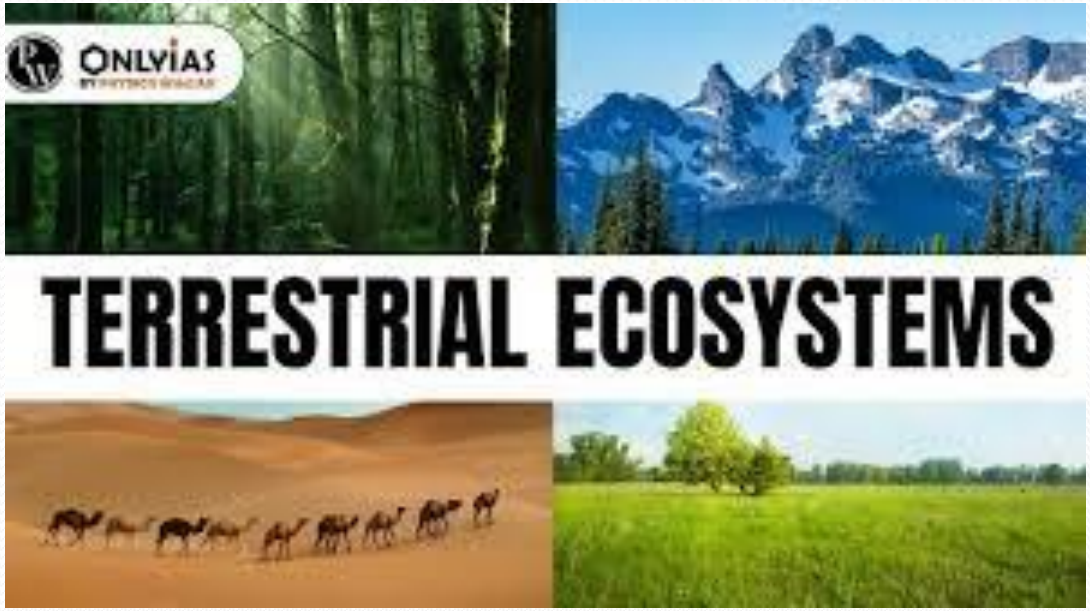
Types of ecosystems?

- **A- Terrestrial Ecosystem**

Terrestrial ecosystems are mainly classified into the following types:

- Forest Ecosystems
- Grassland Ecosystems
- Mountain Ecosystems
- Desert Ecosystems



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Functions of Ecosystem

- It helps to regulate all basic ecological processes, manages life systems, and ensures sustainability.
- It participates in maintaining an equilibrium structural process between different trophic levels of ecosystem components.
- It is responsible for cycling minerals through the biosphere.
- It maintains and regulates nutrient cycling between abiotic and biotic ecosystem components.
- Along with abiotic components, the ecosystem participates in the synthesis of organic components primarily responsible for transferring energy

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What are the environmental effects if the ecosystem is disrupted?

- A disruption in the ecosystem directly affects the structure and functioning of the environment. As some beings decrease, it causes other beings to decrease. Conversely, every living thing that multiplies means that the species increases.

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What are the environmental effects if the ecosystem is disrupted?

- Degradation of Ecosystem Functions: Ecosystems perform many important functions, such as air and water purification, soil fertility, carbon storage and pollination. When an ecosystem is degraded, these functions are affected, leading to environmental problems and loss of services.

- Degradation of Soil and Water Quality: Degraded ecosystems can often lead to soil erosion, water pollution and water scarcity. This is detrimental to both natural habitats and human uses such as agriculture and water supply.

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What are the environmental effects if the ecosystem is disrupted?

- Degradation negatively affects the natural functioning, biodiversity and functions of the ecosystem. Here are the possible consequences of ecosystem degradation:

- Decrease in Biodiversity: When an ecosystem is degraded, various plant and animal species lose their habitats and some species may become extinct. This leads to a decrease in biodiversity within the ecosystem and increases the risk of species extinction.

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What are the environmental effects if the ecosystem is disrupted?

- Increased Climate Change Impacts: The reduction in the carbon storage capacity of ecosystems can increase atmospheric carbon dioxide levels and accelerate climate change. The degradation of carbon-dense ecosystems, especially forests and swamps, increases the release of greenhouse gases into the atmosphere.

- Increased Natural Disasters: The degradation of ecosystems can increase the risk of natural disasters such as floods, erosion, and landslides. An intact ecosystem can mitigate the effects of such events, but when disrupted, these protective functions are reduced.

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What are the environmental effects if the ecosystem is disrupted?

- Economic and Social Impacts: Degraded ecosystems can affect economic activities such as agriculture, fishing, and tourism. They can also affect the quality of life and health of local communities.

- Changes in Ecosystem Dynamics: Ecosystem degradation can affect energy and nutrient flows within the ecosystem. This can disrupt species-to-species relationships and alter the balance within the ecosystem.

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Do you have any other ideas if the ecosystem is disrupted ?

THANKS FOR YOUR ATTENTION