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• Ecosystem • Forest • Animal • Environmental Issue • Actions



THE RAINFOREST

A forest is made up of a high density of trees that has a large canopy cover and supports a large number of life forms. The forest's ecosystem is complex; it is home to many living organisms on earth, including us. Forests can be found in different parts of the world with varying climates and conditions. The one that we have in Malaysia is the rainforest. Why is it called a rainforest? It is called a rainforest because rainforests receive high rainfall every year and it is characterized by its tall trees and dense jungles.

The rainforest is known as the lungs of the planet. It has the biggest role in neutralizing the world's climate. Can you imagine if the earth loses its forests? What will happen to us if that happens? According to the Food and Agricultural Organization (FAO), Malaysia is covered with 62.3% (20,456,000 hectares) of forested area. Meanwhile, 18.7% (3,820,000 hectares) of the forested area is being classified as primary forests whereas 1,807,000 hectares are planted forests, for example, plantations. A planted forest includes agricultural areas where the trees are planted to generate income to support living costs, mostly in a developing country.

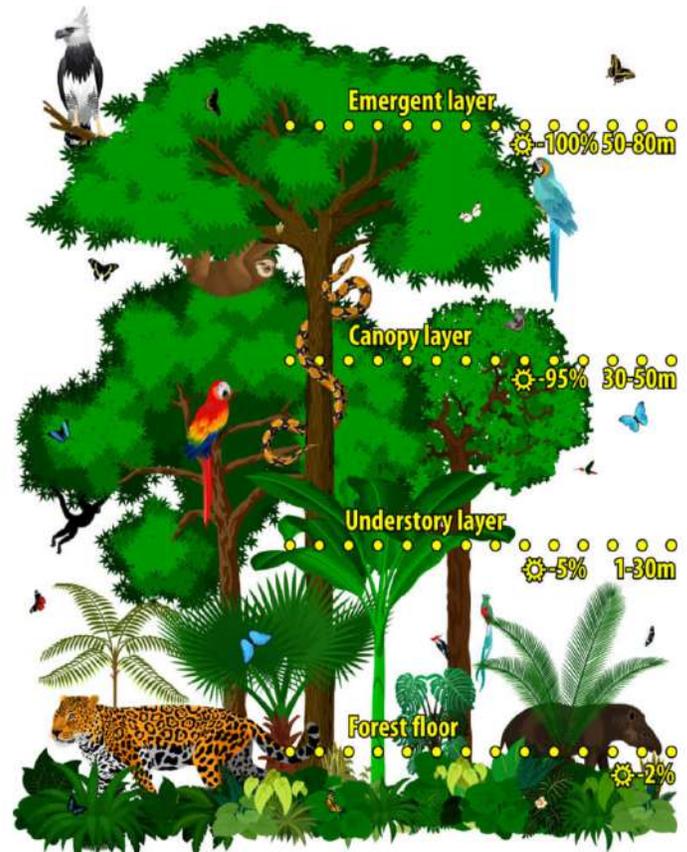


Now, let us talk about the forest in Borneo, the third-largest island in the world. Borneo consists of three different countries which are Malaysia (Sabah, Sarawak, and WP Labuan), Indonesia (Kalimantan) and Brunei. The forests on the island of Borneo are known to be some of the most biodiverse on the planet. A recent study by Butler 2020, states that the rainforests in Borneo is home to 15,000 plant species and more than 1,400 amphibians, birds, fish, mammals, reptiles as well as unknown species.

A rainforest has four layers; the bottom is known as the forest floor, going up to the understory, the canopy layer, and the highest layer is called the emergent. Each layer has its own characteristics and is home to different animals and plants.

The forest floor is believed to have no plant growth due to the lack of sunlight. At this layer, things will decompose very quickly. For example, a leaf that usually takes a year to decompose will be fully broken down in only 6 weeks. Living organisms living on the forest floor include different fungus as well as insects, such as beetles, ants and termites.

In the understory layer, that receives minimal sunlight, plants have bigger leaves as an adaptation to survive. Many plants in the understory layer rarely grow to 12 feet.

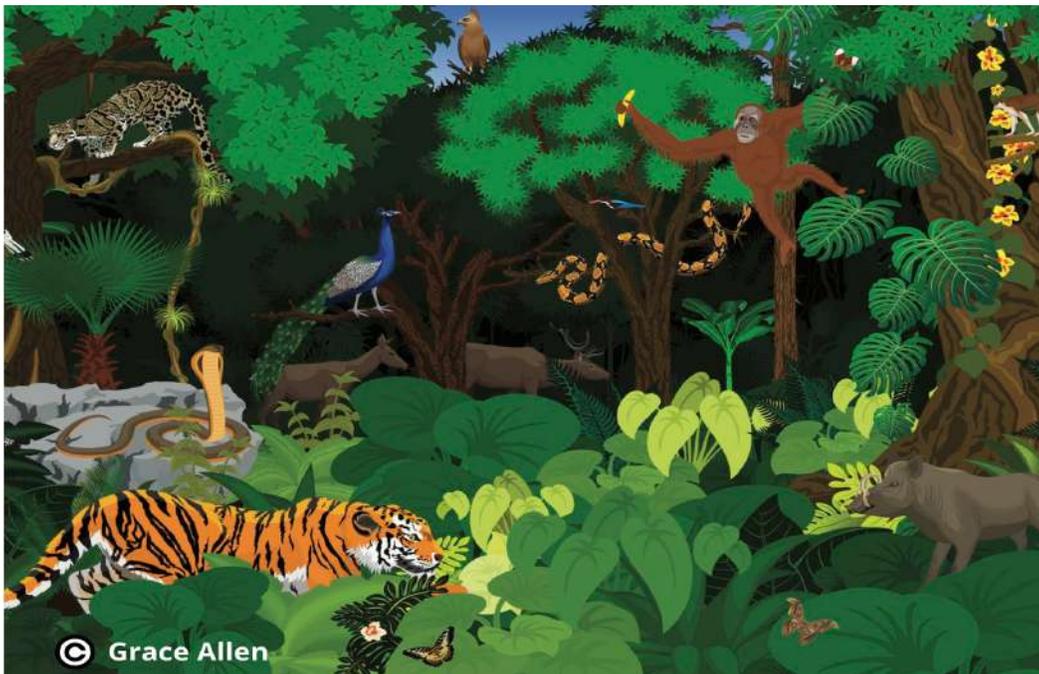


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This layer has the highest concentration of insects. Examples of plants found in this layer include shrubs, saplings, young trees, palms, and vines. Mammals such as leopards and bats; reptiles such as snakes and lizards; and amphibians such frogs and toads are commonly found in this layer.

The rainforest's primary layer is the canopy layer, and it forms a roof over the two layers below. The canopy trees generally have oval-shaped and straightforward leaves. The leaves and branches of the trees are intertwined. The canopy is a layer of vegetation with a thickness of roughly six meters or 20 feet. The canopy layer is known to be home to 90% of animals in the rainforest because the food in this layer is abundant. Those animals include mammals, reptiles, birds, and amphibians.

The highest layer in the rainforest is the emergent layer, where the tallest trees are as high as 20 feet above the forest floor with the tree trunk up to 16 feet tall. The sunlight in this layer is abundant, and most of the trees are broad-leaved and hardwood. The animals primarily found in this layer include birds of prey, mammals like monkeys and bats, and a few butterfly species.



A rainforest can be divided into two categories, primary forests and secondary forests. The primary rainforest is a pristine forest, which means it is an untouched forest that exists in its original condition. A primary rainforest has no human interference, for example, deforestation and logging activities. The vegetation in the primary rainforest is dense and has incomplete layers of the rainforest. It is considered to be the most biodiverse class of forests.

On the other hand, the secondary rainforest is an area that has been disturbed by human activities like timber harvesting, mining, anthropogenic fires or road constructions. The secondary rainforest has lost its high values due to the uncontrolled demand for agricultural activities. It has less diversity, only tiny trees with incomplete layers of the rainforest can be found here.



Protection of the rainforest is significant to all living organisms. A primary rainforest can take decades or centuries to be regenerated. The regeneration could be impacted by the type and magnitude of disturbances. The rainforest will not be the same, if the seed dispersal is disrupted or if there isn't a suitable environment for trees to provide new seeds. Without the rainforest, all the forest ecosystems will be disrupted, impacting the food chain and food web for the living organisms' survivability. A small effort, such as planting a tree in the rainforests, helps to reduce the amount of carbon released into the atmosphere. Practicing a green lifestyle by reducing the papers used also helps to reduce the amount of carbon released into the atmosphere. Hence, we need to raise awareness among the public to protect our rainforests!