

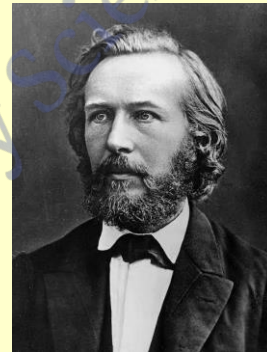


WHAT ARE THE IMPACTS OF NATURAL DISASTERS ON ECOLOGICAL BALANCE?

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- **Do you know what is “Ecology”?**

Ecology means the study of environment. In 1869 **Ernst Haeckel** defined ecology as - “Relation of animal to its organic as well as inorganic environment”. Each and every living beings on earth (e.g. plants, animals, microorganisms, even the viruses) are connected directly or indirectly with each other with an invisible thread. These living organisms also are depending on the abiotic components (e.g. soil, water, air) in our environment. The relation between the biotic or living and the abiotic or non-living components on earth is called the **ecosystem**.



- **What are natural disasters?**

Natural disasters are those inevitable devils which hazards our beautiful ecosystem. In spite of being advance in science and technology, we can not control disasters. We are completely helpless in front of natural disasters.



We are going to be aware of some natural disasters. These disasters may come in the form of drought, drying the environment; in the form of devastating storms, earthquakes, flooding, tsunami, landslides, forest fires and so on.



Drought

• Why Natural Disasters occur?

Common natural disasters occur due to some natural phenomena. The main causes of are -- (1) **Climatologic disbalance**, (2) **meteorological disbalance** (the word something related to water) and (3) **phenomena**. Human beings are also some natural disasters indirectly.



Forest Fire



to some natural disasters **Hydro-** "hydro" means **Geophysical** responsible for

- i) Firstly, come to **disbalance**. This phenomenon can cause drought, temperature hike, forest fire. Desert regions and some African countries naturally have high temperatures because of their positions on the earth. Other countries may have affected by those natural disasters. Deforestation provokes these disasters. Trees help in purifying the air, bring rain. Absence of adequate number of trees may cause drought, temperature-hike. Harmful gases (e.g. CO₂, CO, CFC etc.) from cars, factories, refrigerators affect the ozone layer and allow powerful radioactive rays of the sun to come into our earth.



climatologic

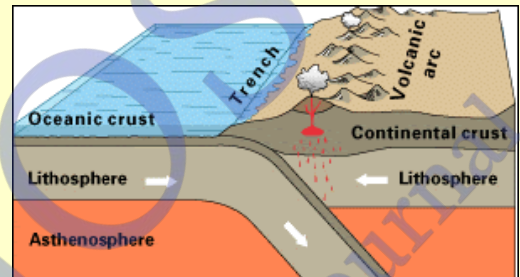
- ii) **Hydro-meteorological** phenomena generate several storms, flooding etc. Devastating storms like Typhon, Tornado, Hurricane etc are generated in the



ocean and affect the coastal regions the most. Over-raining may cause flooding. Trees hold the soil with its roots. That is why deforestation causes landslide, soil-erosion during flooding.



- iii) Earthquake, Tsunami, Volcanic eruption are caused for **geophysical disbalance**. When tectonic plates beneath the soil layers are displaced earthquake occurs. The magma of the earth core comes out through the volcanos. Earthquake and the volcanic eruption under the sea and ocean cause Tsunami. Japan and some other islands are prone to earthquake, volcanic eruption.



Disasters with biological origin also have impacts on the environment. Human beings have faced multiple epidemic diseases several times. Many unknown viruses, bacteria and protozoa which were unknown to the people earth, caused frightening pandemic diseases. Flu, Cholerae, Plague, Pox etc are those diseases. Now a days Corona virus is spreading an alarmingly. Biological disasters are not regular, its occurring very often. Its effect is not same to everyone and everywhere, it largely depends on the climate.

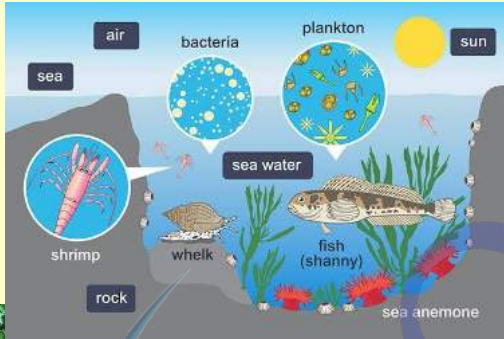
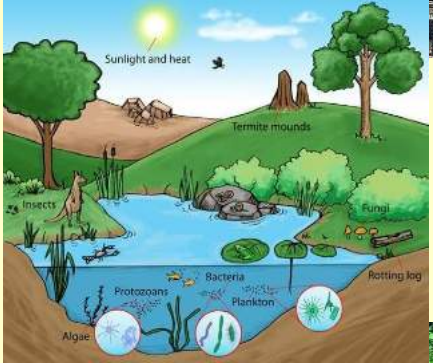


● **How our ecosystem works?**

The "**producer**" of energy in our environment is the green plant. Green plants convert the solar power to chemical power in a process called "**Photosynthesis**". Herbivores (like cow, rabbit, deer, insect etc.) eat the green plants. These animals are called the "**primary consumers**". Those which eat the primary consumers are called the "**secondary consumers**" (like tiger, leopard, frog etc). These consumers are eaten by "**tertiary consumers**" (like snake, hawk etc). There is also a role of "**decomposers**" (like bacteria, fungi etc) which decompose the dead plants and animals into soil. Chemical energy is transferred from green plants to the consumers. Thus, all the living organisms are balanced in our ecosystem. If any type of the participants is absent, ecological



balance is lost. Natural disasters disturb the ecological balance. Many animal and plant are harmed by drought, flood, earthquake, storms, tsunami etc.



● **Harmful impacts of natural disasters**

- a) Extreme levels of drought and temperature hike kill the plants. Thus, the amount of the producers in the ecology decreases. This situation harms the other animals, they have to face shortage of their foods. Several animals die. Some animals move to another place in search of water and food.



- b) In case of flooding and tsunami trees fall on the road, fishes and other marine animals and plants die creating a huge loss in the ecosystem. Human and the other animal on the land are also harmed and killed.



- c) In Flooding conditions soil is submerged in water. Thus, plants die because of the excess of water in their body. Mites, earthworms, fungi and some bacteria can not adequately decompose the dead organisms ruining the quality of soil. Crops and other plants can not grow during and after some times of flooding and



endoscopes. Aerial creatures are also harmed, they lose their shelter and food. Moreover, our ecology is disturbed.

- d) Because of earthquake society is harmed the most.

Buildings, architectures, roads are destroyed. Humans and many other animals succumb. Volcanic Eruptions and forest fires destroy numerous plants and animals. The ecosystem of those areas is completely destroyed. Loss of enormous plants creates a lack of oxygen in the air and harmful gases harms the remaining living creatures. The areas where volcanic eruptions are common, have less biodiversity.



- e) Forest Fires destroy the ecosystem of a large area which may harm the whole world. Brazilian Amazon rainforest, which is known as the lung of the earth, is rich of numerous species of plants and animals (especially red bellied panda, bull sharks, pink river dolphin etc.). Fire in the rainforest had a harmful impact on our ecosystem. Endemic species are affected the most in any kind of natural disasters. Endemic species means those plants or animals which inhabit a specific area on earth, e.g. Pink river dolphins are endemic in Amazon rainforest, they are not found in any other place in the earth. If endemic species face natural disasters, they can completely come to an extinction. This can be a huge loss.



- f) Biological disasters also have harmful effects on our ecology. Diseases like Bird flu, Swain flu had killed countless poultry birds. Diseases like Chicken pox, Small pox, Cholerae, Malaria had killed myriad people.

● **What can we do?**

Any kind of members in our ecology is the same important as the others. Absence of any member can disbalance the ecosystem of that place. We can not live alone in our environment. Natural disasters are also the part of our environment, we can not neglect it. Our nature has a creative side as well as a destructive side because every creation has a destruction. Though we are developed and developing more in modern science and technology we do not have the power to obstruct natural disasters. But we can have the forecast knowledge of some natural disasters (like Storms, Rain etc.) so that we can be



prepared to face those disasters. From the Neanderthal men of stone period to men of today's earth, all are frightened from disasters of nature. We all are completely helpless in front of natural disasters.

