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CLIMATE CHANGE: IT`S EFFECT ON PLANTS LIFE & IT`S BIODIVERSITY

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Abstract—*Climate change and its impact on our vegetations and its biodiversity usually refers to the number and type of organisms present on earth. All the organisms have a unique role in ecosystem. The flow of energy in ecosystem starts with the absorption and storage of sunlight by autotrophic plants. The flow of energy is same throughout the planet but geographical differences create changes in this flow. These changes are responsible for the differences in the structure function and behavior of organism connected with it. Plants are also main source of various essential and commercial products such as food, fiber, fuel, medicine etc. They are also essential for the maintenance of sustainable life on our planet and responsible for oxygen production and CO2 sequestration in marine as well as terrestrial ecosystem, reduce the rate of precipitation from the basic tropic level in energy and provide continuous supply of natural resources. These benefits are due in to the availability of variety of plants which grow in different climate. Thus plants diversity plays a key role in our life in all aspect.*

Climate change due to natural disaster and anthropogenic activity result in the loss of plant biodiversity. Thus situation alarm us to conserve the plant biodiversity on urgent basis.

Keywords: *Biodiversity, Sustainable, Anthropogenic, Sequestration, Precipitation, Natural Resources*

1. INTRODUCTION

Climate change is a change in the statistical distribution of weather patterns. When that change last for an extended period of time (i.e. decades to million yrs) climate change may refer to a change in average weather conditions or in the time variation of weather around longer term average conditions (i.e. more or fewer extreme weather events).

Climate change is caused by factors such as biotic processes variations in solar radiation received by earth, plate tectonics and volcanic eruptions .Certain human activities have also been identified as significant causes of recent climate change.

Climate change are causing a huge loss to all sort of life such as vegetations, human life, animals, forests ,wildlife and our natural resources. Now a day climate change is threatening the health of vegetation around the world. As temperature rise weather patterns and the availability of water also change, altering the ability of trees to survive.

2. CLIMATE CHANGE & ROLE OF PLANTS

Due to change in climate, plants play an important role in improving the quality of environment. They also contribute to the economic development of the country by providing goods and service to the people and industry. There are the treasure home for valuable rare herbs and medicinal plants. They also provide us food, medicinal herbs and many commercially valuable products which are countless.

3. HOW CLIMATE EFFECT ON PLANTS LIFE?

Climate is different from place to place , depending on latitude distance to the sea, vegetation, presence or absence of mountains or other geographical factors, varies also in time ,season to season & year to year. Sun plays a significant role in the climate of any geographical area.

The incoming and outgoing energy either increase or decrease the temperature of the area. Which is responsible for climate change for affected area. This increase in temperature is due to the trapping of outgoing light by the green house gasses has increased due to human activities such as excessive use of fossil fuels , loss of many plants due to deforestation.

The major effect of climate change on plants is modification in the basic structure & function to adopt this change. Lack of light promotes the floor plants to become an epiphytes .So that they may reach up to level where sufficient light may be absorb by chlorophyll.

Large number of mesophylls cells make the plant part thick which help in the storage of water. Thick outer wall of plants parts reduce the loss of water by reducing g the contact of water directly with the environment .Not only at morphology & structure level the modifications are also found at physiological level. Ultra violet radiation like UV-B damages plants by damaging their DNA content. These radiations also damage the photosynthetic apparatus by bleaching the constitutive pigments & denaturing of concerned enzymes. The temperature imbalance also leads to the development of proteins. Such as heat shock proteins and antifreezes proteins . Which helps in the maintenance of physiological conditions at optimum level so that stress may be available.

The consequence of changed environmental conditions is the loss of plants biodiversity in affected area. Harsh conditions promote the shifting of vegetations from high altitude to low altitude. Complete eradications are generally noticed in the area of human induced climate change. Such as due to acidic rain near to industrial area, destruction of plantation for real estate developments .etc. Its also affect the percentage of plant productivity.

4. CONSERVATION OF PLANT BIODIVERSITY

Conservation means to stop the careless use of natural resources and preserve them for the further generations. Conservation of plants is crucial to maintain the existence of life on the earth. Several species of plant have become extinct and many are endangered .It has been found that about 30,000 of the world flowering plants are on losing way. Tropical forest are the most threatened among forests. About 40% of the tropical forests of the world are already destroyed and it is estimated that remaining world be extinct by the end of century .A large number of seed plants species of the planet are under threat due to increased habitat pressures which has led to genetic wipeouts.

Methods for the conservation of biodiversity :-

There are many ways by which we can contributes:- Such as by naturally protect our vegetations.

- National Parks
- Wildlife sanctuaries
- Bio sphere Reserve.

5. CONCLUSION

Abrupt changes in climatic components resulted in an environment which is not suitable for the plant to survive. Due to these changes, plants either develop some adaptation to survive or tend to shift its position. But sometimes these changes are so harsh that the concerned vegetation die in its habitat .Major climatic changes such as rise in temperature are destroying the plant biodiversity that is resulted in the loss of genetic pool of important plants.

But more than these methods there is also a need to understand the reasons behind the climate change. Increase in the urbanization led to us to a world where people have to direct touch with nature. The major population which is affected with this consequence of urbanization is the young generation who woke up in this artificial world .Due to such consequence , there is no sensitivity of urban people towards the conservation of nature.

Educational visit of school children to botanical gardens must be compulsory in every year. Students must be engaged in such activities towards protection of our environment. A good impact is the area of public awareness has been noticed in the recent years due to strong protest made by some biodiversity conservation related agencies.

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