

Impact of Climate Change on Biological Aspects of life

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Abstract

Climate change refers to change in the average weather condition such as rainfall and temperature over a long period of time. There are various evidences of global climate change in recent time which includes rise in global temperature, warming of ocean, shrinking of ice sheets, glacial retreat, decrease in snow cover, rise in sea level and extreme events etc. Climate change is a continuous process since ancient time but recent century has witnessed the rapid increase in climate change. There are natural as well as anthropogenic reasons of climate change. Natural reasons includes sun spot activity, volcanic eruptions etc and anthropogenic reason includes mainly green house gas emission due to man made activities. The rapid industrialisation in 20th century has increased the green house gas emission that has impacted the global climate

Keywords: Ocean Acidification, Coral Bleaching, Rapid Industrialisation, Altitudinal Shift, Seabed Heating, Ozone Depletion.

Introduction

Climate change is one of the major reason reason for 6th mass extinction on the earth. Thus the adverse impact of the climate change can be seen on the biological aspects of the life of both flora as well as fauna.

Climate change affects the eco system of the individual species, their population, communities at global level. it can be seen in terms of increase the resilience of species, migration of species, extinction of species etc.

Climate change impact on biological aspect of human being: Climate change has increased the incidents of vector borne disease, faster mutation of viruses, affects the food security, rise in the pollution levels and increase in extreme events etc. All such kind of incidents have affected the birth rate, fertility rate, death rate as well as overall health of the human being. It can be seen by various cyclonic events like Amphan, covid 19 cases, increase in death cases due to various pollutions, increase in the incidences of non communicable diseases.

Climate change impact on biological aspects animals and wildlife: Climate change is one of the major reason for habitat destruction and habitat shrinkage of the wild animals that affect the individual animal, their population and communities due to major impact on ecosystem of that area. There is melting of the ice in polar region that lead to shrinkage of habitat for polar bear. It will adversely affect its population in long term. Climate change has affected the ecosystem, food habits, population, birth and death of the the wild as well as domestic animals. there are increase in the incidents of disease in the animals like bird flu, extinction of species like cheetah due to habitat destruction.

Climate change impacts on biological aspects of flora:- climate change lead to the latitudinal as well as altitudinal shift in the flora. latitudinal as well as altitudinal shift are due to presence of favourable conditions for the species due to climate change. It can be seen in case of shifting of coral reefs in temperate regions from tropical regions due to ocean warming. There are increase in the cases of fire that affect the local ecology and create the ground for the secondary succession. climate change has affected the biodiversity of the area example rise of the sea level due to climate change affect the coastal fauna.

We have seen the impact of climate change on the terrestrial ecosystem but climate change has also affected the biological aspect of the flora and fauna of oceans. climate change lead to increase in the ocean acidification, affect the life cycle of coral Reefs, cycle of nutrients from top to bottom, reduction the COD and increases the BOD . All these will lead to reducing the

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productivity of the species and play a major role in extinction of the species in the ocean.warming of the ocean due to climate change lead to reduction in photo plankton, zoo plankton and coral bleaching. It has adversely affected the food chain of the ocean that will lead to extinction of species. Thus the climate change has disrupted the match between organism and their local environment. It has affected the survival as well as reproduction of species that affected the population of species across all geographical regions.Although climate change has adversely impacted the biological aspects of all flora and fauna but it has contributed in development of the adaption habits, evolution of new species, resilience towards climate change, primary as well as secondary succession.

Aim of the Study

The rapid efforts and effects of climate change has been impacting severely and with respect to that to have learnt the various manifestations of climate change and making sure to spread the word positively of its impacts and importance.

Conclusion

Climate change has impacted the biological aspects of all flora and fauna in all aspects since birth to death. Climate change per se is not dangerous but the rapid climate change due to anthropogenic reasons and industrialisation has adversely affect the biological aspects of all flora and fauna over a period of time in all geographical aspects.

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