

IMPACT OF CLIMATE CHANGE ON HUMAN'S HABITAT

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Abstract

The serious problem of climate change has arisen due to the combustion of fossil fuels and over-exploitation of natural resources. If climate change is not stopped in time, millions of people will be victims of disasters like starvation, water crisis and floods. This crisis will affect the whole world. However, the most impacted by climate change will be on poor countries. Along with this, such countries will suffer the most, which are least responsible for climate change. Backward and developing countries will be more prone to problems arising out of climate change.

Climate change is affecting more of the Arctic region, Africa and smaller islands. The North Pole (Arctic) is warming at twice the rate of the rest of the world. According to scientists, the ice of the North Pole will melt during the summer season in the next few years. According to another study, this can happen over the course of six years.

The increase in Earth's temperature has increased the rate of melting of glaciers and Polar Regions, resulting in an average rise of 27 cm in ocean water levels. According to climatologists, if the accumulation of greenhouse gases in the atmosphere continues, then the temperature of the earth will continue to increase, as a result of which the speed of melting of glaciers and Polar Regions will increase the risk of sinking of ocean coastlines and increase of oceans. The water level will submerge thousands of islands like the Maldives.

Apart from this, ocean ecosystems have also been affected due to the increasing amount of carbon dioxide. Today, the amount of acidity in the ocean water is increasing, due to which the organisms living in the oceans are being adversely affected. Apart from this, the capacity of the oceans to absorb carbon dioxide gas is also decreasing day by day. Pollution causes a lot of damage to the ecosystem and due to this there can be widespread upheaval on the earth. This research article discusses about impact of climate change on Humans habitat.

Keywords: Climate Change, Community, Health, Disease, Human's Habitat

Introduction

In many parts of the world, especially the continuous increase in temperature, it has started affecting various modes of physiological and biological systems in different ways. Human actions will definitely have a negative impact on the coming generation. (Rahman, H. A.

2009). The accumulation of greenhouse gases, especially carbon dioxide and methane, is increasing in the atmosphere. Since the 1850s, since temperature records began, the world's temperature has risen or warmed by about 0.7 °C per year, and most of the warming has occurred over the past three decades. It has been estimated that this carbon dioxide is present in the atmosphere for more than the last hundred years and the actions we are doing today will definitely have a negative impact on human health and the hopes of future generations.

The greatest concern that environment and people now have in common is the changing climate. Climate change is an obvious, unavoidable, and dangerous tragedy for the world that is having an impact on every aspect of our lives and the future. A changing climate is defined as a change in the climate that is directly or inadvertently attributed to human actions that alter the dimensions of the planetary atmosphere, as well as to the natural climatic changeability that has been seen over the years. (Dutta, A. and Chorsiya, V. 2013). The planet's atmospheric characteristics are referred to as its climate. The "average weather" that any region or province experiences can change, which is what is meant by "climate change." (Bhattacharjee, P. 2010)

A significant increase in severe weather events will push the population to prepare for and cope with the shift. As a result of human activity, which releases greenhouse gases that trap heat in the atmosphere, global climate change, which mostly results from ozone layer depletion, is being caused. Utilizing fossil fuels more frequently is a human activity. Earth's atmosphere and surface become warmer as greenhouse gas use increases. (Shahzad, U. 2015). Climate plays a significant role in determining the severity of equatorial illness and other health concerns to people. A sudden rise in temperature can cause death, whereas disruptions in the ecological system can have an indirect impact by causing infectious diseases. Increased air and water pollution will have an adverse effect on human health as the temperature rises. Climate extremes are bad for human health, livestock, crops, and water. This will eventually increase the population's overall stress from sickness. In actuality, climate changes will also have an impact on national development aspirations. (Gokceku, H. and Othman, D. 2018)

It has often been observed that the death rate due to the effects of climate change heat is higher in the cities having cold climate than the human health of the cities with warm climate. The main reason for this is that the population living in hot climate can tolerate temperature fluctuations to a great extent. The rate at which the death toll due to cold will decrease from place to place in the world, the number of people who die of heat will also increase at the same rate. (Bush et al 2011).

Climate change is altering how humans evolve. However, how people respond to the current climate change will determine how our next generation will fare. Only by preventing global warming would it be possible to stabilize the climate, defend against storms, floods, and drought, ensure the availability of food and clean water, and meet other requirements. According to research, there is a significant risk to human life and health if temperatures rise by more than 2 degrees from where they are now. Fossil fuel combustion and greenhouse gas emissions all increase the dangers to our lives and health. Utilizing antiquated technology and other risky practices should end completely in order to avert such risks.(Snow, M. and Snow, R. 2015).

Impact of Climate on Human's Habitat

Floods and Droughts: Populations living in developing countries are very likely to be victims of floods. There are many reasons for this. Their living in high-risk areas such as floodplains and coastal areas, weak public health infrastructure and a proportionate economic loss to the population. Health effects include increased physical injury and diarrheal diseases, especially in developing countries. The potential for malnutrition in these countries is also high. The cases of respiratory diseases are increasing due to the burden of population. Respiratory symptoms may arise due to the overproduction of clay sand.(Franchin, M. and Pier Mannuccio, P. 2015). Psychological imbalances such as anxiety and depression are on the rise in these countries. Due to which the environment of the house is getting destroyed and financially the public is also getting harmed. Cases of suicide are on the rise and cases of behavioral imbalance in children may also increase. This is a serious condition and needs to be diagnosed in time. The effect of drought on human health can also be seen in developing countries. Drought causes adverse effects on food production, survival and human health.(Nwoke, B., Nwoke, E. Ukpai, O.2009).

Infectious diseases: The incidence of infectious diseases can be affected due to increase in temperature, humidity, rainfall and sea level. Mosquitoes, lice and flies are very sensitive to subtle changes in temperature and humidity. But diseases caused by carriers also depend on many other interdependent factors. Although there has been an outbreak of infectious diseases in recent years, it is still not clear whether climate change has played a significant role in these. Other factors. Human and animal population dynamics, collapse of public health infrastructure, change in land use can be counted as contributing factors.(Ostberg et al 2013). The potential impacts and changes of climate change are clearly visible in diseases caused by vectors and rodents. The cases of malaria and dengue are increasing. It is very important to mention here that in most parts of the world, effective public health systems do not prevent

the spread of malaria and this disease remains within the climatic range of its distribution. (Goel, A. and Bhatt, R. 2012).

Effect on Rainfall

There will be more rain in the monsoon regions of the world as a result of climate change, which may cause issues including floods, landslides, and soil erosion. It will get worse for the water. The availability of fresh water will suffer significant consequences. In India, the Northeast and South-Western states will see higher rainfall than Central and Northern India, which will experience lower rainfall. Therefore, a lack of precipitation will cause a drought-like scenario in central and northern India, while an abundance of precipitation will cause flooding in northeastern and south-western regions. (Semenza, J. C., & Menne, B. 2009). Agriculture productivity will suffer in both scenarios. Droughts and floods will reduce the amount of clean water that is available for drinking and washing clothes. Both water pollution and drainage system damage will result. Climate change will also affect the distribution of water resources. The water bodies of high latitude countries and South-East Asia will be full of water while Central Asia will be short of water. Countries at low latitudes will face water scarcity. (Ahmad Khan, Z. 2012).

Impact on agriculture

Agriculture production will be impacted by climate change. While heat and moisture will enhance crop productivity in North and East Africa, the Middle East, India, Western Australia, and Mexico, crop productivity will decline in the United States. The area covered by paddy will expand as long as there is rainwater available. As a result of climate change in India, the productivity rate of crops like sugarcane, maize, jowar, bajra and ragi will increase while on the contrary, the yield of main crops like wheat, paddy and barley will decline. There will also be an unprecedented decline in potato production. (Kakaki, S. 2013). Due to increase in the rate of nitrogen fixation in pulse crops, due to increase in temperature, the yield of, gram, peas, lentil etc. will increase. The yield of oilseed crops like yellow mustard, brown mustard (Rye), sunflower, sesame, black sesame, linseed, barra (safflower) will decline while the yield of soybean and groundnut will increase. According to an estimate, if the current global warming rate continues, India's food grain production in rain-fed areas will decrease by 12.5 million tones. Due to increase in temperature by 0.50 Celsius in winter, the yield of wheat crop in the state of Punjab can be reduced by up to 10 percent. (Van Weelden, C., Towers, J. R., & Bosker, T. 2021).

The addition of more energy to the atmosphere will also change the global wind pattern. Changes in wind patterns will result in uneven distribution of rainfall. In future, there will be

more rainfall in the deserts whereas, on the contrary, there will be less rainfall in the areas of traditional agriculture. Such changes would lead to massive human migration that would affect the social, economic and political fabric of human society.

Due to increase in the frequency of natural calamities like floods, droughts and storms due to climate change, there will be a decline in food grain production. Decrease in local food production will lead to starvation and malnutrition with long-term health effects. The scarcity of food and water will create conflicts in the affected areas. (Hijmans, R. J. 2013).

Impact on biodiversity

The biodiversity will be affected by climate change as well. Every species must have time to adapt. It will perish as a result of adapting to an abrupt environmental change. The vegetation of the marshy areas found along seashores, which stabilize the coast and are also excellent locations for marine life migration, will be most affected by climate change. Swamp forests, also known as tidal forests, also serve to protect coastal areas from storm surges. The risk of ecological imbalance will increase as a result of biodiversity degradation. (Brierley, A. S., & Kingsford, M. J. 2009) Due to warming in the climate, there will be an increase in the incidence of fire in tropical forests, as a result of which there will be loss of biodiversity due to the destruction of forests. (Maleki, S., Rahdari, V., & Baghdadi, N. 2021).

Other Effects on Humans Habitat

In a tropical country like India, due to climate change, there will be an unprecedented increase in the population of weeds belonging to Poaceae, Cypressaceae, Fabaceae, Euphorbiaceae, Amaranthaceae, and Aslepidaceae families of flowering plants. As a result, the infestation of these weeds will increase which will adversely affect the productivity of the crops. To increase agricultural productivity, there will be an increase in dependence on chemical weedicides. (Brierley, A. S., & Kingsford, M. J. 2009).

Due to the rise in temperature, there will be an unprecedented increase in the rate of evaporation and transpiration, as a result of which there will be a shortage of water in the water bodies along with the soil water, which will affect the yield of crops due to lack of sufficient water. In a tropical country like India, due to the lack of water in the reservoirs, the cultivation of water chestnut will be adversely affected. Apart from this, fisheries and production will also be adversely affected. (Huang, W. S., & Pike, D. A. 2011).

Climate change will also have an impact on aquatic animals. Migration of freshwater fishes will be towards Polar Regions while the habitat of cold water fishes will be destroyed. As a result many fish species will become extinct. (Jones, L., Garbutt, A., Hansom, J., & Angus, S. 2013).

Global climate change will increase the frequency of sea storms resulting in loss of life and property in coastal areas. Apart from this, the frequency of El Nino will also increase, which will lead to drought conditions in the continents of Asia, Africa and Australia, while on the other hand there will be outbreaks of disasters like floods in North America. In both cases, agricultural productivity will be adversely affected.(He, Q., & Silliman, B. R. 2019).

Climate change will also have an impact on glaciers. Due to warming, glaciers will melt and die. According to a research, glaciers in the Himalayan region of India have decreased by 16 percent between 1962 and 2000. The process of glacial melting has accelerated in the Western Himalayas. Many small glaciers have already become extinct.(McMichael, A. J. 1999).

Conclusion:

The study has shown that there is a rapid daily change in the climate, which has a significant impact on the lives of people, animals, and plants. The main cause of climate change is actually the existence of humans; as the population increases daily, the environment is being destroyed. Humans are having a significant negative impact on nature as a result of using more fossil fuels, plastics, and disposals. The shortage of water has been caused by the clearing of forests for construction and increased land use. Over the past few decades, more people have died due to hot waves and wind, floods, storms, and drought.

The rapid decomposition of organic matter as a result of climate change will result in an increase in the rate of nutrient cycle resulting in disordered soil fertility, affecting agricultural yields. Carbon fixation in plants will increase due to the increase of carbon dioxide in the atmosphere. As a result the rate of absorption of nutrients from the soil will increase manifold. Due to which the fertility of the soil will be adversely affected. To maintain the fertility of the soil, the rate of use of chemical fertilizers will increase.

Climate change will also have an effect on flora and fauna. An unprecedented decline in the Solomon fish population has been recorded in the Pacific Ocean due to Local Ocean warming by 3 °C. Populations of polar bears in Hudson Bay have declined due to early spring melting due to increased warming.

The most impact of climate change will be on the social and economic sectors. The physical infrastructure of the economic sector will be most affected by climate change. Floods, droughts, landslides and sea level rise will result in large-scale human migration leading to overcrowding of safe places. In areas affected by heat, more energy will be required for refrigeration.

Thus it can be said that climate change is a serious global problem which will result in large scale upheavals all over the world. The islands in the world will cease to exist due to climate

change. Climate change will also have adverse effects on human health. There will be an increase in the frequency of natural calamities like drought, flood, cyclone, El Nino.

As a result of climate change, dependence on pesticides, weedicides and chemical fertilizers will increase for increasing the productivity of crops, which will not only pollute the environment but will also degrade the economic condition of the farmers in a developing country like India. In view of the ill effects of global climate change, the biggest need of the hour is to stop the emission of gases responsible for the greenhouse effect, so that the global warming can be effectively controlled and the world can be saved from the possible dangers of climate change.

Today, increasing human activities and fulfillment of needs, indiscriminate use of natural resources are the root cause of these problems. It is necessary to use them in proper and balanced quantity. Otherwise, the accident that will happen in future cannot be avoided. As we know, the climate stability of a place provides stability by encouraging agriculture, income, employment, water life, society and culture there. Therefore, as a responsible citizen, we all have to play our part in keeping the environmental ecosystem clean and sustainable as well as spread environmental awareness to the masses.

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