

A Study on the impact of Climate change

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Introduction :

Climate change spans the impact on physical environment, ecosystems and human societies due to ongoing human caused climate change. The future impact of climate change depends on how much nations reduce greenhouse gas emissions and adapt to climate change. Effects that scientists predicted in the past loss of sea ice, accelerated sea level rise and longer, more intense heat waves are now occurring. The changes in climate are not expected to be uniform across the Earth. In particular, land areas change more quickly than oceans, and northern high latitudes change more quickly than the tropics. There are three major ways in which global warming will make changes to regional climate: melting ice, changing the hydrological cycle (of evaporation and precipitation) and changing currents in the oceans.

A Complex Issue :

The impacts of climate change on different sectors of society are inter-related. Drought can harm food production and human health. Flooding can lead to disease spread and damages to ecosystems and infrastructure. Human health issues

can increase mortality, impact food availability, and limit worker productivity. Climate change impacts are seen throughout every aspect of the world we live in. However, climate change impacts are uneven across the country and the world even within a single community, climate change impacts can differ between neighborhoods or individuals. Long-standing socioeconomic inequities can make underserved groups, who often have the highest exposure to hazards and the fewest resources to respond, more vulnerable. Additionally, lowering emissions will lessen harmful impacts to human health, saving countless lives and billions of dollars in health-related expenses.

Changing Climate :

We see climate change affecting our planet from pole to pole. NOAA monitors global climate data and here are some of the changes NOAA has recorded. You can explore more at the [Global Climate Dashboard](#).

- Global temperatures rose about 1.8°F (1°C) from 1901 to 2020.
- Sea level rise has accelerated from 1.7 mm/year throughout most of the twentieth century to 3.2 mm/year since 1993.
- Glaciers are shrinking average thickness of 30 well-studied glaciers has decreased more than 60 feet since 1980.
- The area covered by sea ice in the Arctic at the end of summer has shrunk by about 40% since 1979.
- The amount of carbon dioxide in the atmosphere has risen by 25% since 1958, and by about 40% since the Industrial Revolution.
- Snow is melting earlier compared to long-term averages.

Water :

Changes to water resources can have a big impact on our world and our lives. Flooding is an increasing issue as our climate is changing. Compared to the beginning of the 20th century, there are both stronger and more frequent abnormally heavy precipitation events across most of the United States. Conversely, drought is also becoming more common, particularly in the Western United States. Humans are using more water, especially for agriculture. Much like we sweat more when it is

hot out, higher air temperatures cause plants to lose, or transpire, more water, meaning farmers must give them more water. Both highlight the need for more water in places where supplies are dwindling.

Food :

Our food supply depends on climate and weather conditions. Although farmers and researchers may be able to adapt some agricultural techniques and technologies or develop new ones, some changes will be difficult to manage. Increased temperatures, drought and water stress, diseases, and weather extremes create challenges for the farmers and ranchers who put food on our tables.

Human health :

Climate change is already impacting human health. Changes in weather and climate patterns can put lives at risk. Heat is one of the most deadly weather phenomena. As ocean temperatures rise, hurricanes are getting stronger and wetter, which can cause direct and indirect deaths. Dry conditions lead to more wildfires, which bring many health risks. Higher incidences of flooding can lead to the spread of waterborne diseases, injuries, and chemical hazards. As geographic ranges of mosquitoes and ticks expand, they can carry diseases to new locations.

The Environment :

Climate change will continue to have a significant impact on ecosystems and organisms, though they are not impacted equally. The Arctic is one of the ecosystems most vulnerable to the effects of climate change, as it is warming at least twice the rate of the global average and melting land ice sheets and glaciers contribute dramatically offsite link to sea level rise around the globe. Some living things are able to respond to climate change; some plants are blooming earlier and some species may expand their geographic range. But these changes are happening too fast for many other plants and animals as increasing temperatures and changing precipitation patterns stress ecosystems.

Conclusion :

The climate change is emergent issues to the world as the current situation of climate change continues in a similar manner then it will impact all forms of life

on the earth. The earth temperature will rise, the monsoon patterns will change, sea levels will rise, and storms, volcanic eruptions and natural disasters will occur frequently. The biological and ecological balance of the earth will get disturbed. The environment will get polluted and humans will not be able to get fresh air to breath and fresh water to drink. Life on earth will come to an end.

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