

# Impact of Climate Change

Dr. Brijesh Kumar Rathi\*

Assistant Professor (Botany), Government Women (PG) College, Kandhla, Shamli

**Abstract – Various risks posed by climate change are significant, distributed throughout the world and hard to reverse. Climate changes threatens the essential component of health, drinking water, fresh air and nutritious food items and has the capability to destroy decades of progress achieved in global health. It also poses new challenges to the control of various infectious diseases and gradually increasing the pressure on the natural, social and economic systems that support and sustain health. Climate change continuously increasing the frequency and intensity of heat waves, droughts, flood and cyclones in various part of the globe and altering the transmission of air-borne, water-borne and vector-borne infectious diseases, resulting in negative impacts on human health. People living on small islands, low-lying areas and those in the under developed countries are most affected and at higher risk.**

**Earth's temperature has increased by 1.20C and if the rate of carbon emission remains the same, then anytime between 2030 and 2050, the temperature is expected to increase by 1.50C. Between 2030 and 2050, climate change is expected to cause numerous additional deaths per year, from malnutrition, malaria, diarrhoea and heat stroke alone. Scientists clearly believe that if the temperature of the earth gets above 20C, then a severe form of climate change will be seen and the weather changes will be at the peak. Such conditions and other health outcomes will be increasingly affected by accelerating climate change through its adverse effects on food production, water availability and the population and transmission cycle of various vectors and pathogens.**

-----X-----

The deterioration of air quality, especially due to ozone depletion, increases the prevalence and occurrence of asthma and other respiratory infections, the number of patients in hospital and school dropout. Greater frequency and intensity of heat waves will increase mortality rate and the incidence of heat stress. Globally, people at greatest risk include the children's, the elderly and the medically weak. Countries and areas where under nutrition is widespread, education is poor and infrastructures is weak will face most difficult situation while fighting to climate change and related health hazards. Climate change is expected to have major health impacts on Indian health sector, increasing malnutrition and related health disorders such as child stunting specially the poor are likely to be affected most severely. Since the last few years India is experiencing a warming climate. Unusual and unprecedented spells of hot weather are expected to occur far more frequently and cover much larger areas. The frequency of heavy rainfall has also increased. Increasing world's average temperatures will make India's summer monsoon highly unusual and unpredictable. At 4°C warming, an extremely wet monsoon which occur rarely may have the chances to occur frequently.

According to world bank report a sudden change in the weather could trigger major changes in the monsoon which results in more frequent droughts as well as

flood in most of the parts of India. India's northwest coast and south eastern coastal region could see higher than average rainfall. Extreme heat will cause significant loss to various crop by the year 2040. Words growing population will need more water supply for agricultural and domestic purposes but due to increasing environmental pollution and worsening effect of climate changes most of the country of the world facing the crises of water scarcity specially for drinking and irrigation.

Various glaciers in Himalaya and Karakoram range have the source of moisture from westerly winter winds and summer monsoon. Glacier where source of moisture is westerly winter winds are still stable or slightly advanced but those where source of moisture is summer monsoon have been reported to be retreating. Over 2<sup>0</sup>C rise in average temperature will affect the river which arise from the glacier specially Sindhu and Brahmaputra because melting glacier and snow will affect water level and flow of these rivers. Ganga is not much affected from melting glacier as it is mostly rain-feed and receive most of its water from monsoon, however negative impact of climate change on monsoon and environmental pollution have also affected the flow of Ganga and quality of its water.

Any change in the level and flows of these rivers could not only affect irrigation, but also the source of livelihood of the people living on the basin of these rivers. Various cities like Mumbai, Kolkata, Chennai etc. located on coastal area will face the challenges posed by climate change such as increase in sea level and flow of sea water. Due to the closer to the equator the Indian sub-continent would face high risk of rises in sea level comparison to higher latitude. Sea-level rise will increase the intrusion of salt water in the coastal area impacting agriculture, quality of drinking water and increase the cases of water born disease as the bacteria of water born disease live longer in saline water.

Various reports indicate the negative impact of rising temperature on wheat production and issues related with scarcity of water, rise in temperature and increase in sea level will significantly decrease the production of various crops. In this situation it will be very difficult to feed the growing population and it will further aggravate the crises of food security. Wheat and rice will be badly affected by climate change as both the crop are affected by temperature and water scarcity.

Hydropower and thermal power are the two important source of electricity generation in India and both depend on constant water supply. Impact related to climate change have badly affected the functional capacity and efficiency of both kind of power generation plant, hydro and thermal power plants require a regular supply of fresh water. Alteration in the flow of important river and frequently occurring drought and flood have also impacted the capability of hydropower plants and increase the risk of damage due to landslides and other natural disasters. An increase in variability of monsoon rainfall is expected to increase water shortages in some areas.

Despite the various research, wide media coverage, increasing awareness, pressure from various local and global environmental groups and international agreements the issues pertaining to climate change and global warming are still unresolved. To address the challenges posed by climate change, governments, society and individuals will all need to come forward to rethink the way we live, work, consume, produce and govern. All the stakeholders involved in the causes and remedy of climate change must come together to take a collective step and personnel commitment needs to be taken to fight the menace of climate change. Most global environmental agreements such as the United Nations Framework Convention on Climate Change, Paris Agreement, Kyoto Protocol, the Convention on Biological Diversity have focused on the measure to combat with climate change and global warming. All countries must take all necessary steps to achieve the goals set out in the Paris Agreement and other international convention. development of various tools, proper guidance, sufficient information and training schedule for raising awareness of the links between climate changes and its impact on health, agriculture etc. is the need of the hour.

As we started to take the leap of development, so there was a phase of tussle with nature. Dense forests were cut down for the expansion of agricultural land, construction of factories, basic infrastructure and along with technological development, new equipment was invented. Greenhouse gases released by these factories and equipment's have warm the atmosphere. Forest and trees are the good source of carbon sink and they absorb the sufficient amount of greenhouse gases like CO<sub>2</sub>. In order to confine the global rising temperature at 1.5<sup>0</sup>C more and more forest need to planted and it will require a sound planning and management. In addition, biological or eco-friendly alternatives to equipment's emitting greenhouse gases have to be considered and adopted. It is necessary to consider aspects related to climate change before preparing an action plan related to transportation, energy and building construction etc.

## REFERENCES:

- (1) WHO Health, environment and climate change, SEVENTY-SECOND WORLD HEALTH ASSEMBLY, A72/15 Provisional agenda item 11.6 18 April 2019.
- (2) WHO health and Climate change, SIXTY-FIRST WORLD HEALTH ASSEMBLY A61/14 Provisional agenda item 11.11 20 March 2008.
- (3) India: environmental issues, EPRS | European Parliamentary Research Service Author: Enrico D'Ambrogio Members' Research Service PE 637.920 – April 2019.
- (4) The World Bank, Feature Story, India: Climate Change Impacts, June 19, 2013.
- (5) <https://w.kcwiki.moe/roblox-vr/impact-of-global-warming-on-agriculture-and-food-security.html>

---

## Corresponding Author

**Dr. Brijesh Kumar Rathi\***

Assistant Professor (Botany), Government Women (PG) College, Kandhla, Shamli