

HEAT WAVE

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Climate change and global warming are often used interchangeably to discuss the present scenario of the world's health. Also, we often used the term 'weather' and 'climate' in our daily language. weather refers to atmospheric conditions that occur locally over a short period – from minutes to days. and on the other hand, the climate is the term that is used for specifying the long-term scenario (for 25-30 years), regional or even the global average of temperature, humidity, and rainfall patterns over seasons, years, or decades.

GLOBAL WARMING :

Global warming is the long-term heating of the earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in the earth's atmosphere. this term is referred to as "climate change".

Due to this many natural processes, which have been overwhelmed by human activities, can also contribute to climate change, including internal variability (e.g., cyclical ocean patterns like El Niño, La Niña, and the Pacific Decadal Oscillation) and external forcings (e.g., volcanic activity, changes in the Sun's energy output, variations in Earth's orbit). Due to this global warming, the result is an increase in extreme weather events such as heat waves, droughts, floods, cyclones, and wildfires. some severe heat waves occurring within the last few decades made heat waves a hot topic in climate change research, with 'hot' having a dual meaning: high temperature and high scientific activity.

In general, a heat wave is a period of excessively hot weather, which may be accompanied by high humidity. since the heat waves vary according to the region, there is no universal definition, but only definitions relative to the usual weather in the area and relative to normal temperatures for the season. The World Metrological Organization (WMO) defines a heat wave as 5 or more consecutive days of prolonged heat in which the daily maximum temperature is higher than the average maximum temperature by 5°C (9 ° F or more).

Currently, the world has suffered from a series of intense heat waves since the beginning of the twenty-first century. According to the world health organization (WHO) and various national reports, the extreme 2003 heat wave causes about 70,000 excess deaths, primarily in France and Italy. The 2010 heat wave in Russia causes extensive crop loss, numerous wildfires, and about 55,000 excess deaths(many in the city of Moscow). India has been suffering under record-breaking heat for the last couple of months, the April of 2022 was the hottest over the past 122 years, from 1901 to 2022 according to government officials. The average maximum temperature was 35.30°C coming just behind 35.42°C in 2010 and 35.32°C in 2016.



REASONS :

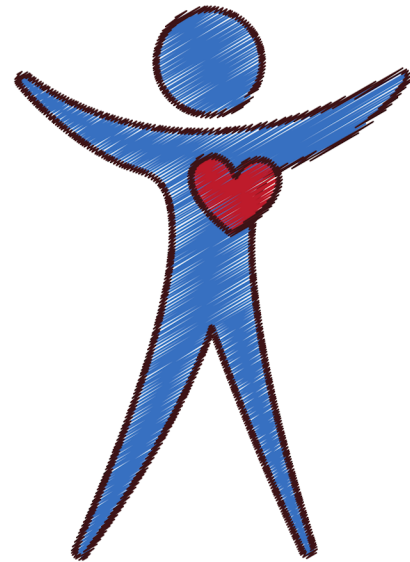
Heat waves typically occur when high-pressure systems become stationary and the winds on their rear side continuously pump hot and humid air north-eastward, resulting in extreme weather conditions. The more intense and more frequently occurring heat waves cannot be explained solely by natural climate variations and without human-made climate change. Scientists discuss a weakening of the polar jet stream caused by global warming as a possible reason for an increased probability of the occurrence of stationary weather, resulting in heavy rainfalls or heat waves. This jet stream is one of the most important factors for the weather in the middle latitude regions of North America, Europe, and Asia.

CONSEQUENCES OF HEAT WAVES:

Due to the heat waves, many things were affected,

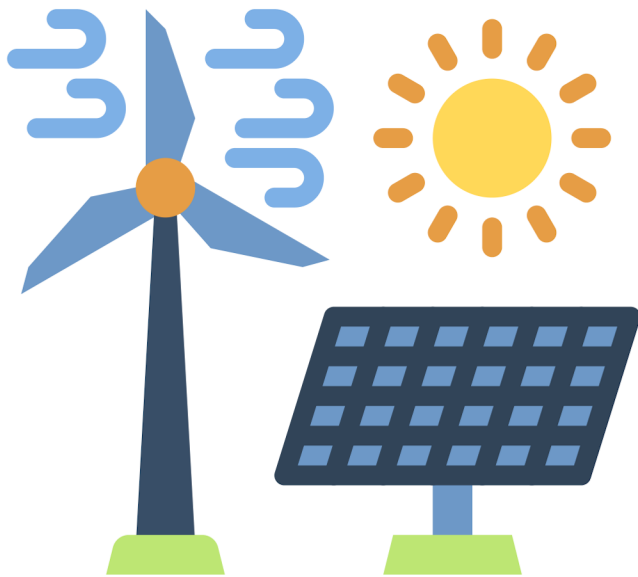
1. Human health :

Extreme heat is one of the leading causes of weather-related deaths in the world, killing millions of people every year. Heat stress occurs in the human body when the body is unable to cool itself effectively. Normally the body can cool down through sweating, but when the humidity is high, sweat will not evaporate effectively and quickly, potentially leading to heat stroke.



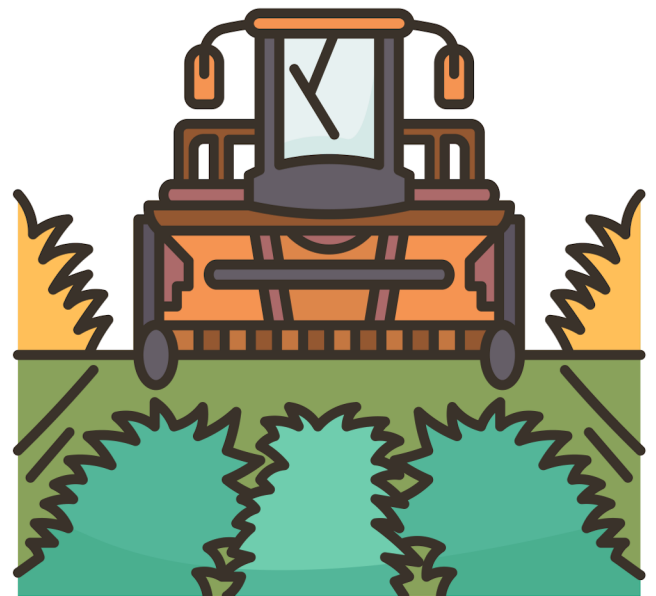
3. Energy :

Warmer temperatures affect many aspects of the global energy system, including production, transmission, and demand. While higher summer temperatures increase electricity demand for cooling, at the same time, they can lower the ability of transmission lines to carry power, possibly leading to electricity reliability issues like rolling blackouts during heat waves.



2. Agriculture :

High temperatures can damage agriculture. plant growth is negatively impacted by the high daytime temperature and some crops required cool night temperatures. Heat waves also increased the chances of livestock experiencing heat stress, especially when nighttime temperatures remain high and animals are unable to cool off. Heat-stressed cattle can experience declines in milk production, slower growth, and reduced conception rates.



Do's & Don'ts :

Heat Wave conditions can result in physiological strain, which could even result in death.

To minimize the impact during the heat wave and to prevent serious ailment or death because of heat stroke, you can take the following measures:

- Avoid going out in the sun, especially between 12.00 noon and 3.00 p.m.
- Drink sufficient water as often as possible, even if not thirsty.
- Wear lightweight, light-colored, loose, and porous cotton clothes. Use protective goggles, an umbrella/hat, shoes, or chappals while going out in sun.
- Avoid strenuous activities when the outside temperature is high. Avoid working outside between 12 noon and 3 p.m.
- While traveling, carry water with you.
- Avoid alcohol, tea, coffee, and carbonated soft drinks, which dehydrate the body.
- Avoid high-protein food and do not eat stale food.
- If you work outside, use a hat or an umbrella, and also use a damp cloth on your head, neck, face, and limbs
- Do not leave children or pets in parked vehicles
- If you feel faint or ill, see a doctor immediately.
- Use ORS, homemade drinks like lassi, Torani (rice water), lemon water, buttermilk, etc. which helps to rehydrate the body.
- Keep animals in shade and give them plenty of water to drink.
- Keep your home cool, use curtains, shutters, or sunshades and open windows at night.
- Use fans, and damp clothing and take bath in cold water frequently.

How to prevent the impact of heat waves :

Generally, the basic things that we can prevent are planting trees and also measures to prevent global warming and climate change.