CAUSES AND CONSEQUENCES OF HEATWAVE

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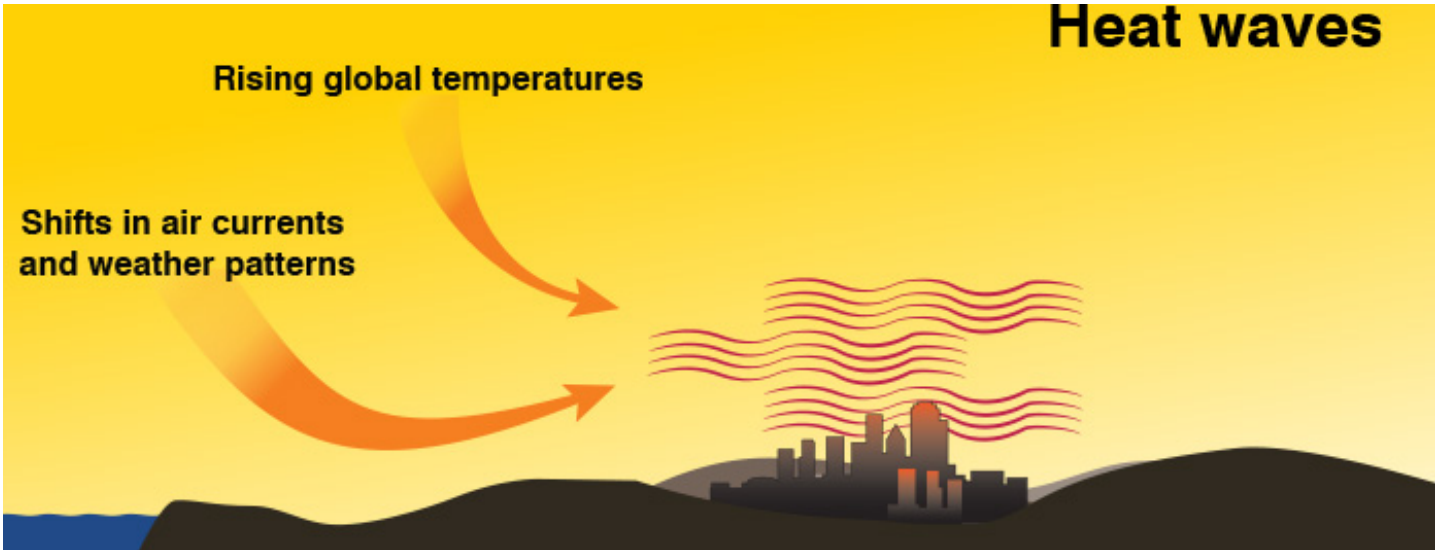
The 21st-century witnesses the abnormal increase of atmospheric temperature due to the overexploitation of the environment through deforestation, high consumption of fossil fuel, etc. The heatwave has great potential and is more dangerous as compared to another natural phenomena like hurricanes, lightning, and tornadoes. In this article, we are given a short note on the concept, definition, causes, and impact of heatwaves.

The variation of temperature and light is equally important because without heat and light the Earth would be a lifeless ball of ice-coated rocks. Earth is the only planet that uses the Sun's light as useful as a source of energy. It has a suitable climate for the existence of all forms of life because of the moderate amount of carbon dioxide, which is the driving factor for the survival of life forms.

A heatwave is a hot weather phenomenon that is accompanied by a high temperature and high humidity that causes a prolonged period of abnormally hot weather. It can be measured by comparing the usual weather in the area relative to normal temperatures for the season.

Rapid rises in heat gain due to exposure to hotter than average conditions compromises the body's ability to regulate temperature and can result in a cascade of illnesses, including heat cramps, heat exhaustion, heatstroke, and hyperthermia.

According to the World Meteorological Organization, the term 'heat wave' refers to the situation when the daily maximum temperature of more than five consecutive days exceeds the average maximum temperature by 5 °C. A heatwave is formed when static high pressure is generated in the upper atmosphere over a region for several days up to several weeks. This static high pressure generates a hot mass of air, which is stagnant for many days and a week, which resulted in the trapping of more heat that also reduces the convection currents.



Source: Google, Scotdir.com

IMPACT OF HEAT WAVE

● If the body temperature of a living creature is lower than external temperature or atmospheric temperature, then it is very often to get heatstroke, and heat cramps. During this situation, the body is not able to regulate and maintain the optimal temperature.

Under this condition static hot mass of air trapped all the pollutants and harmful chemicals below the layer of the hot air which decreases the air quality that causes airborne diseases.

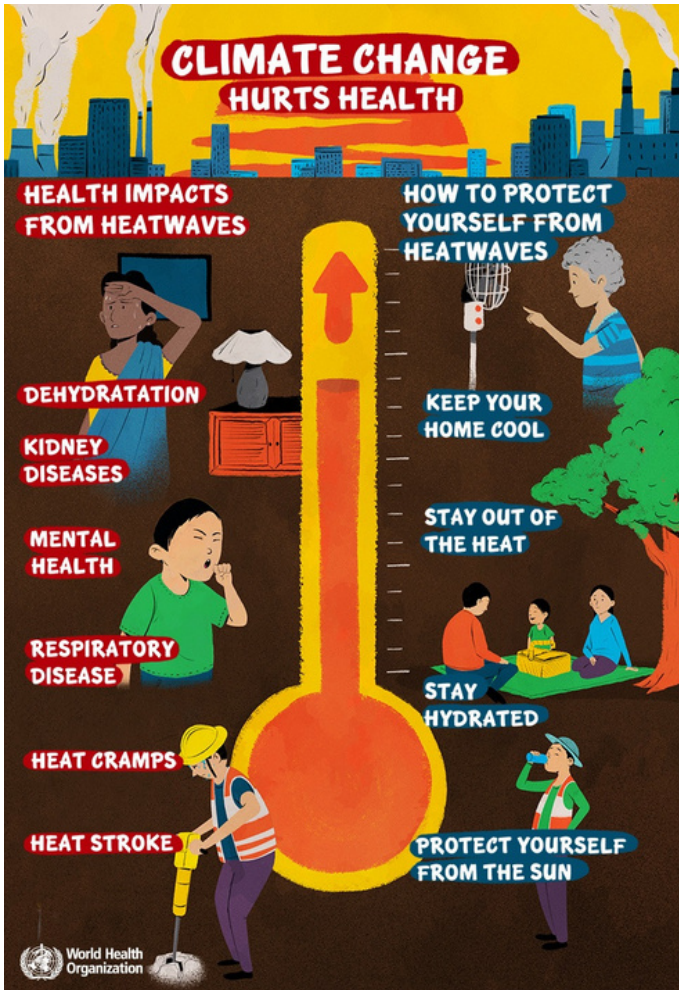
● The abnormal hot temperature causes a drought-like situation. It drains the vegetation's moisture content, which causes bushfires and forest fires. The excessive hotness of the atmosphere also affects the infrastructure.
For example- Hot atmospheric temperatures can crack the roads, and burst the waterlines, Rapid rises in heat gain due to exposure to hotter than average conditions compromise the body's ability to regulate temperature and can result in a cascade of illnesses, including heat cramps, heat exhaustion, heatstroke, and hyperthermia.

● Deaths and hospitalizations from the heart can occur extremely rapidly (same day), or have a lagged effect (several days later) and result in accelerating death or illness in the already frail, particularly observed in the first days of heatwaves.

Even small differences from seasonal average temperatures are associated with increased illness and death.

● Temperature extremes can also worsen chronic conditions, including cardiovascular, respiratory, and cerebrovascular disease and diabetes-related conditions and led to the explosion of a transformer. Aircraft performance decreases at high temperatures.

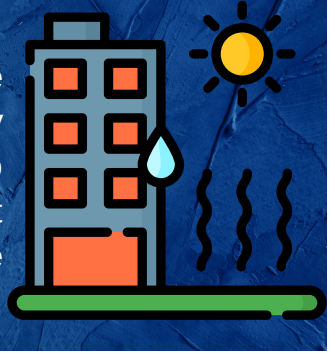
● The high temperature can damage the ground surface of the airport.



source: who.int

FACTS

A heat wave is a period of abnormally hot weather generally lasting more than two days. Heat waves can occur with or without high humidity. They have potential to cover a large area, exposing a high number of people to hazardous heat. A heat wave is a period of unusually hot weather that typically lasts two or more days. To be considered a heat wave, the temperatures have to be outside the historical averages for a given area.



- The excessive heat stresses the vehicle cooling systems which could hurt ground operations, etc.
- The excessive hotness of atmosphere reduces the human productivity and performance. It will also increase the stress level that endorses the conflict.
- Heat also has important indirect health effects. Heat conditions can alter human behavior, the transmission of diseases, health service delivery, air quality, and critical social infrastructures such as energy, transport, and water.