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NEWS AND NOTES

Hailstorms in Shillong

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After a lot of scientific study and research, we came to know, billions of years ago, Earth was not at all the way it is today. The age of Earth is approx. 4.6 billon years (according to radioactive dating) and during this period it has gone through several stages, several changes, and among all the changes climate change has played a big role. Climate change is a long term change in the temperature of a particular place. The changes may be natural but since 1800s, human activities have been the main driver of climate change. Global warming is one of the top most impact of climate change, with increasing global surface temperature the possibility of more droughts and increased intensity of storms likely occurs. As more water vapour is evaporated in the atmosphere it leads to development of more powerful storms and hailstorms, so due to global warming many storms are taking place now a days, Approximately, after 20 years, a major climatic change took place in the Northeastern state of India, Meghalaya. The place faced a major hailstorm approx. after two decades.

Firstly let's have a look as to why hailstorm occurs?

Hailstorms are formed when raindrops are carried upward by thunderstorm updrafts into extremely cold areas of the atmosphere and freezes. The hail falls when the thunderstorm updrafts can no longer support the weight of the hailstone, which occurs because the hailstones becomes large enough.

The massive hailstorm realised over Shillong, Meghalaya and nearby areas around 1pm on 22nd December 2021. Shillong dressed in white for Pre-Christmas, 2021! The hailstorm wasn't alone, it was accompanied by thunderstorm and heavy rainfall as the temperature dropped to 6°C. The streets of Meghalaya was covered in white due to the hailstorm. The thunderstorm and hailstorm sparked joy as some people are seen displaying their creativity by making snowman. But the hailstorm brought trouble too, along with the happiness, causing massive traffic jam, vehicles remained stuck on the roads for hours, as the streets were covered with snow.

As a result, parts of Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura witnessed rainfall accompanied with thunderstorm and lightning.

Many people of Meghalaya said that their dream of witnessing a snow fall came true this year.

This rare meteorological event once again ignited the on-going debate on climate change. Some environmentalists are saying that it's a wakeup call. Yes, to some extent the things are rapidly rolling in that precarious direction. The annual average rainfall in northeast, particularly in Assam is drastically declining over the years, with the serious consequence in tea production. However, experts on climate phenomena have a altogether different view on the Shillong hailstorm. The opposite phases of El Nino and La Nina, commonly known as El-Nino-southern oscillation (ENSO) cycle, perhaps might be responsible for such dramatic weather events. While El Nino describes the unusual warming phase in the surface waters in the eastern tropical pacific ocean, the La Nina is a pattern lasting over one to three years describe the unusual cooling of the tropical eastern pacific. During winters, both these phenomena tend to peak in the northern hemisphere. According to Dr. Sanjay O'Neil Shaw, the Deputy Director General of Meteorology at the Regional Meteorological Centre at Guwahati, there are some El Nino years and then some La Nina years which affect long-term weather systems. Every year winter days shift a little, which is not at all unusual. The western disturbances accompanied with cyclonic circulation over NE region, promote cloudiness and rainfall resulting in snowfall at higher attitudes of Arunachal Pradesh and hailstorms in Shillong. The hailstorm in Shillong is not first of the kind in the region, but it doesn't happen every year. According to Shillong based IMD Scientist Rakesh Kumar such events were reported 6-7 times over the last decade in the winter months.

Effect of Hailstorm in the main city of Shillong.

Effect of Hailstorm in the main city of Shillong (Road blocked)