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Explained: What's Contributing To Record-Breaking Heat In Kashmir



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From climate change to environmental degradation, several factors are responsible for the intense heat.

Kashmir, popular for its pleasant weather, witnessed a record-breaking heatwave recently. Though rainfall on Monday (July 7) brought some respite from the scorching heat across the Valley. However, experts are analysing factors that are contributing to the rise in temperature in the region.

"Overall temperatures have been rising worldwide, and in India, we are seeing increases in both maximum and minimum temperatures and increases in temperatures across seasons," Suruchi Bhadwal, Senior Fellow and Director, Climate Change and Air Quality Impacts, Vulnerability and Adaptation Expert at The Energy and Resources Institute (TERI), told NDTV. "Kashmir is experiencing the same trend."

"Intergovernmental Panel on Climate Change (IPCC) has placed it on record that Kashmir is heating up twice as fast as the global average," Mr Ramakrishnan M, MD Agriculture & Climate Practice Primus Partners, told NDTV.

Satellite images from the Indian Space Research Organisation (ISRO) indicate that glaciers feeding rivers in J&K (such as Jhelum) seem to have shrunk by an average of 15%. "With less snow cover, sunlight is absorbed (instead of being reflected), and this aggravates the heating of the land," Mr Ramakrishnan explained.

Impact Of Heatwave Kashmir's Ecosystem

The heatwave has severe implications for Kashmir's ecosystem:

- **Water Scarcity:** The Jhelum River, Kashmir's lifeline, has dried up significantly, affecting agriculture, horticulture, and tourism.

- **Food Security:** Paddy fields are drying up, and apple production is likely to be impacted due to water scarcity.
- **Health Concerns:** The heatwave poses serious health risks, particularly for students and staff in schools without proper ventilation or cooling mechanisms.

How Does Urbanisation Contribute To The "Urban Heat Island" Effect?

Cities like Srinagar within Kashmir have both open spaces and habited locations. Ms Bhadwal said, "Localised effects could be due to deforestation and increased population densities. The UHI is largely prevalent in cities like Delhi, Mumbai, Chennai and Kolkata - highly urbanised, concretised."

What Are The Impacts Of Climate Change On Kashmir's Agriculture?

From climate change to environmental degradation, several factors are responsible for the intense heat. A prolonged dry spell has also led to a 50% rainfall deficit, triggering the heatwave and impacting agriculture. In the Kashmir region, all crops, including maize, saffron and apple, are sensitive to a rise in temperatures.

The increasing temperatures are an unfortunate side-effect of massive construction activities in the state, and resultant reduction of forest cover, eventually causing untimely rains and unpredictable hailstorms.

"The statistics on average rainfall tend to hide the problems of untimely rain. Any farmer will tell you that the entire annual rainfall needed across the year, if received either in one day or received all through the year (both of which would be reported as same "average" rainfall) can totally wreak havoc on farming," Mr Ramakrishnan added. "Apple farmers in Kashmir are reeling under water stress."

Thousands of hectares of apple production may be wiped out due to the heat wave. In addition, pest infestations and fungal diseases are also on the rise, Mr Ramakrishnan highlighted. "Total input costs - due to higher irrigation costs as well as the cost of dealing with pests and diseases - are going for the apple farmers while the market prices remain unpredictable."

While apple farmers get a lot of media attention, lesser known is the plight of the paddy farmers in J&K areas such as Anantnag. "As such paddy is water-intensive, and with lesser rainfall and more heat, this production is also getting severely impacted," Mr Ramakrishnan said.

Saffron's woes have been recorded earlier. Saffron production, as per government data, has dropped from 8 MT in FY 2010-11 to 2.6 MT in FY 2023-24. The farmers are experimenting with indoor farming, and its results are yet to be seen.

Mr Ramakrishnan suggested measures that can be taken to mitigate the effects:

- Climate-resilient-agricultural practices need to be followed more aggressively.
- R&D spending towards more climate-resilient varieties needs to go up.
- Anti-hail-nets have to be promoted for apple growers.
- Insurance coverage needs to go deeper and broader.
- Indoor farming may need heavy support from the government (in terms of subsidies as well as education and promotion) to make agriculture a more sustainable source of income.

- Above all, afforestation efforts have to multiply manifold to create a long-term positive impact. If the forest cover keeps shrinking, our problems will keep aggravating every year.