

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 2979
TO BE ANSWERED ON WEDNESDAY, 3RD AUGUST, 2022**

WEATHER PATTERNS AND POLLUTION

2979. DR. (PROF.) KIRIT PREMJI BHAI SOLANKI:
SHRI VINAYAK RAUT:
SHRI ARVIND GANPAT SAWANT:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has studied the correlation between changing local weather patterns and pollution;
- (b) if so, the details of the assumptions regarding the effects they have on one another in-terms of the severity;
- (c) if not, the reasons therefor;
- (d) the details of the extreme weather conditions observed by the Government which could affect the pollution level recorded in India wherein specific observation for any region or State is included;
- (e) if so, the details thereof; and
- (f) if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a) Yes Sir. A number of studies confirm strong correlation between changing local weather patterns and pollution in Urban and Rural areas of the country.
- (b) Local weather plays an important role on pollution. Stagnant weather conditions (calm wind and lower mixing height) are unfavourable for dispersion of the pollution. Air pollution is causing the global weather to change, and weather pattern causes the air quality to change. Because of global warming, more extreme weather such as extreme rainfall events, heat waves etc. are increasing, which can impact air quality. Heat waves cause an increase in ground-level ozone pollution because the chemical reactions that create ozone in the atmosphere occur more in hot temperatures. In winter, the pollution levels are very high due to low temperatures and stable atmospheric conditions.
- (c) Does not arise.
- (d) - (e) The extreme weather conditions especially during winter season such as low temperature, calm wind, low mixing height and low ventilation coefficient cause significant increase in level of pollution in India specially in the Indo-Gangetic plains. During severe heatwave conditions, significant increase in ground-level ozone pollution has been observed. Dry, hazy air during summer season increases particulate pollution.
- (f) Does not arise.
