

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. **368**
TO BE ANSWERED ON MONDAY, NOVEMBER 26, 2012

CAUSES OF SMOG IN NORTHERN INDIA

368. SHRI H.K. DUA:

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) whether Government has studied the cause of the recent smog which enveloped many parts of Northern India, particularly Delhi, for several days in early November;
- (b) what are the findings of the expert studies and whether the smog has been caused by natural factors or it was a man-made phenomenon;
- (c) the steps Government proposes to take so that this kind of smog does not occur again; and
- (d) whether Government has studied the side-effects of the smog on the health of the people in Delhi and other affected areas?

ANSWER

MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI S. JAIPAL REDDY)

- (a) Yes Sir.
- (b) As per our scientific analysis, the recent "Extreme Pollution Episode" lasted for 12 days (October 26 -November 8, 2012) was due to short range transport of smoke from Punjab /Haryana as indicated by satellite imagery which got directed towards Delhi region due to favourable northerly winds as determined from back trajectory analysis and air quality forecasting model. Local meteorological conditions in and around Delhi were highly stable that prevents the dispersion of suspended particulate matter (SPM) viz. smoke particles in this case. Once supportive wind regime changed, the pollution came back to pre-episode level. It was hence caused by a mix of man-made activities associated with field level biomass burning supported by a favourable upwind natural phenomenon.
- (c) The period being the harvesting season of kharif-2012, the open burning of the biomass residue in the paddy fields of rural Punjab/Haryana, options for taking any steps are limited as this typically happens in the backdrop of unfavorable stable atmospheric conditions that traps SPM in the boundary layer above the ground. Incrementally, diesel operated urban transport also adds to the air pollution that reduces the visibility further. Government is already undertaking possible steps for discouraging diesel run public transport and encouraging utilization of CNG widely apart from imposing emission norms (Bharat IV now for new vehicles getting registered).
- (d) Increased frequency of respiratory related asthmatic troubles to the vulnerable segment of the society (elderly and children) is the well known impact for which reduced exposure can minimize the adverse effects during the periods of smog.
