

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 873
TO BE ANSWERED ON 14.12.2018

Artificial Rain to Reduce Pollution Level

873. SHRI SUMEDHANAND SARSWATI:
SHRI AJAY MISRA TENI:
SHRIMATI SANTOSH AHLAWAT:
SHRI CHANDRA PRAKASH JOSHI:
SHRI BHARAT SINGH:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether the Government is planning to induce artificial rain to cure pollution level in Delhi, if so, the details thereof along with the details of the expenditure likely to be incurred for the purpose;
- (b) whether is it true that artificial rain can be as little as 25 to 30 minutes in light drizzle, if so, the details thereof;
- (c) the extent to which the artificial rain is likely to reduce the problem of pollution in Delhi;
- (d) the level of pollution in National Capital Region (NCR), Delhi in the month of November during the last five years; and
- (e) whether this year burning of biomass Pellets by the nearby States of Delhi is not a reason of pollution in the Capital and if so, the details thereof?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(DR. MAHESH SHARMA)

- (a) PAAC-EPC (Project Appraisal & Approval Committee - Environment Protection Charge) in its meeting on 13th November 2018 in-principle approved IIT, Kanpur project to induce artificial rain in Delhi at the cost of ₹ 20 lakhs plus institute overhead, GST and aircraft related expenses. The proposed experiment has not yet been conducted in Delhi.
- (b) & (c) The extent of artificial rain and its likely impact on reduction of pollution in Delhi can't be quantified precisely without actually carrying out the experiment. It has, however, been generally observed that rainfall results in lowering of the concentration of the pollutants in the atmosphere.

(d) Ambient air quality data under Continuous Ambient Air Quality Monitoring System (CAAQMS) for Delhi and National Capital Region (NCR) for the month of November during 2014-2018 is enclosed at **Annexure-I**.

(e) As per System of Air Quality & Weather Forecasting & Research (SAFAR)- Model, estimated share of stubble burning in total PM_{2.5} for Delhi during kharif season is attached at **Annexure-II**. The estimated % share of stubble burning in PM_{2.5} reached to a high of 36% on 26th October, 2018 and 33% on 5th November, 2018.

Annexure-I

CAAQMS data (PM_{2.5}, PM₁₀, SO₂ & NO₂) for the month of November during 2014-2018 in Delhi & NCR

Name of City	Name of Station	Month	Monthly Average			
			PM _{2.5} (in µg/m ³)	PM ₁₀ (in µg/m ³)	SO ₂ (in µg/m ³)	NO ₂ (in µg/m ³)
Delhi	Delhi	Nov 2014	176	394	10	63
		Nov 2015	221	512	22	64
		Nov 2016	252	536	19	97
		Nov 2017	275	426	28	62
		Nov 2018	202	348	17	60
Faridabad	Sec-16A Faridabad	Nov 2014	-	-	6	30
		Nov 2015	211	-	8	32
		Nov 2016	245	-	27	80
		Nov 2017	200	-	37	58
		Nov 2018	264	-	7	69
Gurugram	VikasSadan Gurugram	Nov 2014	-	149	3	39
		Nov 2015	84	188	5	13
		Nov 2016	162	-	5	11
		Nov 2017	211	-	8	23
		Nov 2018	140	-	11	53
Rohtak	MD University Rohtak	Nov 2016	73	-	3	15
		Nov 2017	196	-	6	15
		Nov 2018	81	-	16	23
Alwar	MotiDoongri	Nov 2017	101	236	13	52
		Nov 2018	44	106	15	72
Bhiwadi	RIICO Ind. Area III	Nov 2017	237	399	66	82
		Nov 2018	145	373	35	57
Ghaziabad	Vasundhara	Nov 2017	369	625	68	86
		Nov 2018	244	367	19	91
Noida	Noida , Sec- 62	Nov 2017	190	306	-	10
		Nov 2018	199	393	-	14
Noida	Noida , Sec-	Nov 2017	303	489	38	107

	125	Nov 2018	235	354	17	89
Baghpat	New Collectorate	Nov 2018	221	330	18	45
Bulandshahr	Yamunapur am	Nov 2018	224	326	19	50
Muzaffarnagar	New mandi	Nov 2018	200	309	20	58
Greater Noida	Greater Noida	Nov 2018	222	374	15	86

NOTE: "-" Inadequate data/data not available

Annexure II

