

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UN-STARRED QUESTION NO.4340**  
TO BE ANSWERED ON 13.12.2019

**Effects of Odd-Even Scheme**

4340. SHRI KAPIL MORESHWAR PATIL:  
MS. S. JOTHIMANI:

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

- (a) whether the Government/Central Pollution Control Board has made any assessment of the effects of implementation of Odd-Even Scheme on pollution levels in the National Capital Territory of Delhi;
- (b) if so, the details thereof;
- (c) whether the Government proposes to implement the said scheme in other metropolitan cities of the country;
- (d) if so, the details thereof; and
- (e) whether any research has been made in order to control pollution in the country and if so, the details thereof?

**ANSWER**

**MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**

**(SHRI BABUL SUPRIYO)**

- (a) to (d) The Odd-even scheme has been listed as an emergency (severe+) measure in Graded Response Action Plan, notified on January 12, 2017. The scheme has been implemented thrice by the Delhi Government till date, first during January 1-15, 2016, then from April 15-30 in 2016 and recently from November 4-15, 2019.

Central Pollution Control Board had conducted an assessment of the odd-even scheme implemented from 1st to 15th January, 2016 in Delhi. The report stated that while some reduction in air pollution is likely to happen due to odd-even scheme, a single factor or action cannot substantially reduce air pollution levels in Delhi.

During 2019, the data is compiled for odd-even period (12 days), pre odd-even period and post odd-even period for the same number of days and presented in below. The data does not show much variation in pollution levels during the odd-even period. The average concentration and range of concentration for pre odd-even period was higher with respect to odd-even period and the post odd-even period is lower than that of odd-even period.

<b>Concentration of Pollutants (<math>\mu\text{g}/\text{m}^3</math>) during Odd – Even period in Delhi</b>				
	<b>SO<sub>2</sub></b>	<b>NO<sub>2</sub></b>	<b>PM<sub>2.5</sub></b>	<b>PM<sub>10</sub></b>
<i>12 days Before Odd-Even Period - Oct 23 - Nov 03, 2019</i>				
Avg.	<b>14</b>	<b>58</b>	<b>275</b>	<b>428</b>
Min.	11	43	133	289
Max.	18	72	486	592
<i>Odd-Even period - Nov 04 - 15, 2019</i>				
Avg.	<b>14</b>	<b>57</b>	<b>252</b>	<b>380</b>
Min.	11	43	109	220
Max.	16	76	399	582
<i>12 days After Odd-Even Period - Nov 16 - 27, 2019</i>				
Avg.	<b>13</b>	<b>55</b>	<b>131</b>	<b>231</b>
Min.	11	34	64	127
Max.	18	89	214	362

(e) Several studies have been conducted to identify major air pollution sources and their contributions to ambient air pollution levels in the country. The recent study conducted by TERI and ARAI for Delhi-NCR reveals that Transport, Industries, Agriculture Burning, Residential, Dust [Soil, Road & Construction], etc are the main contributors to PM<sub>10</sub> and PM<sub>2.5</sub> concentrations in summer and winter seasons along with meteorological conditions like wind speed, maximum mixing heights, temperature etc. Further, the Central Government has launched National Clean Air Programme (NCAP) in 102 non-attainment cities to tackle the air pollution problem across the country in a comprehensive manner. The objectives inter alia include augmentation and evolving of effective ambient air quality monitoring network across the country (manual and real time stations), source apportionment studies, city specific clean air action plans, sectoral interventions etc. Further, ambient air quality is monitored at 793 locations covering 344 cities/towns in 28 States and 7 Union Territories across the country under National Air Quality Monitoring Programme (NAMQP). In addition, there are installed 205 online Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in 114 cities including Delhi-NCR, across the country. The Central Government have constituted a high level Expert committee to examine, from time to time, various technological options to control air pollution. Various Projects have been examined to assess mitigation measures of air pollution in Delhi NCR which inter-alia includes Deployment and Evaluation of Wind Augmentation & Purification Units (WAYU), effectiveness of dust suppressant for control of dust generated from roads and construction sites.

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