GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
STARRED QUESTION N0. 94
TO BE ANSWERED ON 22.11.2016

Pollution Index

 *94. SHRI SUNIL KUMAR SINGH:

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

(a)   the salient features of the National Air Quality Index (AQI) launched in the country;
(b)   the data compiled on the basis of the AQI in respect of metro cities indicating the category and likely health impacts;
(c)   the various efforts made/being made/ proposed to be made by the Government to reduce the rising air pollution in metro cities of the country; and
(d)   the outcome of the said efforts?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE

(SHRI ANIL MADHAV DAVE)

   (a) to (d): A statement is laid on the Table of the House.

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Statement referred to in reply to Lok Sabha Starred Question No. 94 due for reply on 22.11.2016 regarding 'Pollution Index' by SHRI SUNIL KUMAR SINGH, Hon'ble Member of Parliament

(a)   The National Air Quality Index (AQI) is the web-based system designed to provide AQI on real time basis considering eight pollutants i.e. Sulphur Dioxide, Nitrogen Dioxide, Lead, Ozone, PM_{10}, $PM_{2.5}$, Carbon Monoxide and Ammonia for short term (upto 24 hourly) norms as prescribed in the National Ambient Air Quality Standards (NAAQS-2009). It is an automated system that captures data from continuous monitoring stations without human intervention, and displays AQI based on running average values (e.g. AQI at 6 am on a day will incorporate data for 6 am on previous day to the current day). The AQI is being calculated on average of 24 hours for the criteria pollutants. There are six AQI categories, namely Good, Satisfactory, Moderately Polluted, Poor, Very Poor, and Severe. Each of these categories is decided based on ambient concentration values of air pollutants and their likely health impacts. At present, 32 cities are connected to the web-based system of National AQI.

The AQI values and corresponding ambient concentrations (health breakpoints) is enclosed at Annexure I.

(b)   The average AQI values for the period of November, 2015 to October, 2016 for 32 cities is enclosed at Annexure II. The associated health impacts of AQI is enclosed at Annexure III.

(c) & (d) The major steps taken by Government to reduce the rising air pollution in metro cities of the country *inter alia* include notification of National Ambient Air Quality Standards; formulation of environmental regulations / statutes; setting up of monitoring network for assessment of ambient air quality; introduction of cleaner / alternate fuels like gaseous fuel (CNG, LPG etc.), ethanol blending; promotion of cleaner production processes; launching of National Air Quality index; universalization of BS-IV by 2017; leapfrogging from BS-IV to BS-VI fuel standards by 1st April, 2020; comprehensive amendments to various Waste Management Rules and notification of Construction and Demolition Waste Management Rules; banning of burning of leaves, biomass, municipal solid waste; promotion of public transport and network of metro, e-rickshaws, promotion of car pooling, Pollution Under Control Certificate, lane discipline, vehicle maintenance; regular co-ordination meetings at official and ministerial level with Delhi and other State Governments within the NCR; issuance of directions under Section 18(1)(b) of Air (Prevention and Control of Pollution) Act, 1981 and under Section 5 of Environment (Protection) Act, 1986; installation of on-line continuous (24x7) monitoring devices by major industries; collection of Environmental Protection Charge on more than 2000 CC diesel vehicles; and ban on bursting of sound emitting crackers between 10 PM to 6 AM etc.

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ANNEXURE REFERRED TO IN REPLY TO PARA (a) OF THE LOK SABHA STARRED QUESTION NO. 94 DUE FOR REPLY ON 22.11.2016 REGARDING POLLUTION INDEX BY SHRI SUNIL KUMAR SINGH, HON'BLE MEMBER OF PARLIAMENT

AQI Category, Pollutants and Health Breakpoints								
AQI Category (Range)	PM_{10} 24-hr	$PM_{2.5}$ 24-hr	NO_2 24-hr	O_3 8-hr	CO 8-hr (mg/m^3)	SO_2 24-hr	NH_3 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5 –1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430 +	250+	400+	748+*	34+	1600+	1800+	3.5+

*One hourly monitoring (for mathematical calculations only), Concentrations of all the parameters except CO in $\mu g/m^3$.

Annexure II

ANNEXURE REFERRED TO IN REPLY TO PARA (b) OF THE LOK SABHA STARRED QUESTION NO. 94 DUE FOR REPLY ON 22.11.2016 REGARDING POLLUTION INDEX BY SHRI SUNIL KUMAR SINGH, HON'BLE MEMBER OF PARLIAMENT

AVERAGE AQI OF CITIES FROM NOVEMBER 2015 TO OCTOBER 2016

Sr. No.	Cities	AVERAGE AQI
1	Delhi	246
2	Faridabad	226
3	Varanasi	223
4	Lucknow	221
5	Jaipur	216
6	Kanpur	215
7	Patna	208
8	Muzzaffarpur	200
9	Agra	199
10	Jodhpur	189
11	Gurgaon	176
12	Gaya	149
13	Pune	144
14	Solapur	119
15	Chandrapur	113
16	Chennai	111
17	Aurangabad	99
18	Navi Mumbai	95
19	Ahmedabad	92
20	Mumbai	89
21	Vishakapatnam	89
22	Bengaluru	87
23	Hyderabad	86
24	Panchkula	86
25	Nagpur	85
26	Thane	73
27	Haldia	72
28	Tirupati	71
29	Rohtak	69
30	Howrah	66
31	Nashik	55
32	Durgapur	47

ANNEXURE REFERRED TO IN REPLY TO PARA (b) OF THE LOK SABHA STARRED QUESTION NO. 94 DUE FOR REPLY ON 22.11.2016 REGARDING POLLUTION INDEX BY SHRI SUNIL KUMAR SINGH, HON'BLE MEMBER OF PARLIAMENT

AQI	Associated Health Impacts
Good (0–50)	Minimal Impact
Satisfactory (51–100)	May cause minor breathing discomfort to sensitive people
Moderate (101–200)	May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults
Poor (201–300)	May cause breathing discomfort to people on prolonged exposure and discomfort to people with heart disease with short exposure
Very Poor (301–400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases
Severe (401-500)	May cause respiratory effects even on healthy people and serious health impacts on people with lung/heart diseases. The health impacts may be experienced even during light physical activity

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