GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**
**UNSTARRED QUESTION No. 519**
TO BE ANSWERED ON 07.12.2023

**Rising Air Quality Index in different cities**

519. SHRI PRAMOD TIWARI

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

(a) whether Government is aware of the rising Air Quality Index in different cities of the country causing severe damage to the environment, if so, the details thereof and the reasons thereof;
(b) the action being taken by Government to cater to this issue causing major health problems to the people of these cities; and
(c) whether Government has any policy to prevent the hazardous chemicals and pollutants being released from different sources, including industries, and if so, the details thereof?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ASHWINI KUMAR CHOUBEY)

**(a)to (c):**

Air Quality Index (AQI) is calculated based on pollution levels of 8 parameters namely, Particulate Matter 10, Particulate Matter 2.5, Nitrogen Dioxide, Sulphur Dioxide, Carbon Monoxide, Ozone, Ammonia and Lead. AQI is monitored in 265 cities/towns in the country. Details of AQI of 265 cities for the month of October, 2023 are provided in **Annexure I**

National Clean Air Programme (NCAP) has been launched in January, 2019 which is a long-term, time-bound national level strategy for prevention, control and abatement of air pollution. Under NCAP, it has been envisaged to achieve targets of 20 to 30% reduction in Particulate Matter concentrations by 2024 in 131 cities of 24 States/UTs with respect to base year 2017. Subsequently, the target has been revised to achieve up to 40% reduction or achieve National Ambient Air Quality Standards (NAAQS) in terms PM concentrations by 2025-26.

Under NCAP, an amount of Rs. 19,711 crores have been earmarked to 131 cities during the period FY 2019-20 till FY 2025-26 out of which 49 Million Plus Cities/Urban Agglomerations are funded under XVth Finance Commission air quality grant. So far, an amount of Rs. 9,635 crores were released to 131 cities to implement City Action Plans in their respective cities.

To control hazardous chemical and pollutants generated from various industrial sources, Ministry has notified standards for emissions and discharge of pollutants including industries under Environment Protection Rules, 1986. Industry specific standards have been notified for

80 industrial sectors. Disposal standards for leachates generated from sanitary landfills and discharge standards for sewage have been notified. SPCBs and PCCs in States and Union Territories, respectively have been mandated to ensure the compliance of these standards.

Industrial Pollution is regulated through Consent to Establish/ Consent to Operate issued and monitored by the concerned State Pollution Control Boards/ Pollution Control Committees (SPCBs/PCCs). Central Pollution Control Board or concerned SPCBs/PCCs impose Environmental Compensation and/ or legal action as mandated under Environment (Protection) Act, 1986.

Further, steps taken by the Government for prevention and control of pollution are enclosed as **Annexure II**

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**Annexure I**

**State-wise details of Air Quality Index of 265 Cities**

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 1 | Andhra Pradesh | Amaravati | 93 |
| 2 | | Anatapur | 85 |
| 3 | | Chittor | 120 |
| 4 | | Kadapa | 65 |
| 5 | | Rajahmundry | 96 |
| 6 | | Tirupati | 70 |
| 7 | | Vijayawada | 72 |
| 8 | | Visakhapatnam | 148 |
| 9 | Arunachal Pradesh | Naharlagun | 23 |
| 10 | Assam | Byrnihat | 199 |
| 11 | | Guwahati | 85 |
| 12 | | Nagaon | 83 |
| 13 | | Nalbari | 95 |
| 14 | | Silcher | 34 |
| 15 | | Sivasagar | 31 |
| 16 | Bihar | Araria | 117 |
| 17 | | Arrah | 126 |
| 18 | | Aurangabad | 90 |
| 19 | | Begusarai | 156 |
| 20 | | Bettiah | 120 |
| 21 | | Bhagalpur | 118 |
| 22 | | Bihar Sharif | 48 |
| 23 | | Chhapra | 90 |
| 24 | | Gaya | 85 |
| 25 | | Hajipur | 120 |
| 26 | | Katihar | 156 |
| 27 | | Kishanganj | 107 |
| 28 | | Manguraha | 59 |
| 29 | | Motihari | 145 |
| 30 | | Munger | 99 |
| 31 | | Muzaffarpur | 130 |
| 32 | | Patna | 134 |
| 33 | | Purnia | 191 |
| 34 | | Rajgir | 110 |
| 35 | | Saharsa | 98 |
| 36 | | Samastipur | 120 |
| 37 | | Sasaram | 69 |
| 38 | | Siwan | 137 |

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 39 | Chandigarh (UT) | Chandigarh | 121 |
| 40 | Chattisgarh | Bilaspur | 99 |
| 41 | | Durg-Bhillainagar | 79 |
| 42 | Chattisgarh | Korba | 47 |
| 43 | | Kunjemura | 115 |
| 44 | | Milupara | 66 |
| 45 | | Raipur | 95 |
| 46 | | Tumidih | 71 |
| 47 | Delhi (UT) | Delhi | 219 |
| 48 | Gujarat | Ahmedabad | 123 |
| 49 | | Ankleshwar | 135 |
| 50 | | Gandhinagar | 115 |
| 51 | | Nandesari | 22 |
| 52 | | Surat | 146 |
| 53 | | Vapi | 193 |
| 54 | | Vatva | 142 |
| 55 | Haryana | Ambala | 114 |
| 56 | | Bahadurgarh | 231 |
| 57 | | Ballabgarh | 156 |
| 58 | | Bhiwani | 155 |
| 59 | | Charkhi Dadri | 134 |
| 60 | | Dharuhera | 182 |
| 61 | | Faridabad | 212 |
| 62 | | Fatehabad | 147 |
| 63 | | Gurgaon | 184 |
| 64 | | Hissar | 121 |
| 65 | | Jind | 191 |
| 66 | | Kaithal | 197 |
| 67 | | Karnal | 174 |
| 68 | | Kurukshetra | 181 |
| 69 | | Mandikhera | 87 |
| 70 | | Manesar | 179 |
| 71 | | Narnaul | 131 |
| 72 | | Palwal | 70 |
| 73 | | Panchukula | 91 |
| 74 | | Panipat | 108 |
| 75 | | Rohtak | 170 |
| 76 | | Sirsa | 101 |
| 77 | | Sonepat | 246 |
| 78 | | Yamuna Nagar | 148 |

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 79 | Himachal Pradesh | Baddi | 145 |
| 80 | Jammu & Kashmir (UT) | Srinagar | 121 |
| 81 | Jharkhand | Dhanbad | 186 |
| 82 | Karnataka | Bangalore | 84 |
| 83 | | Devanagere | 79 |
| 84 | Karnataka | Gulbarga / Kalaburgi | 76 |
| 85 | | Hubli-Dharwad | 79 |
| 86 | | Bagalkote | 45 |
| 87 | | Belgaum | 75 |
| 88 | | Bidar | 85 |
| 89 | | Vijayapura | 39 |
| 90 | | Chamarajanagar | 42 |
| 91 | | Chikkaballapur | 85 |
| 92 | | Chikkamagaluru | 56 |
| 93 | | Gadag | 49 |
| 94 | | Hassan | 84 |
| 95 | | Haveri | 82 |
| 96 | | Kolar | 100 |
| 97 | | Koppal | 85 |
| 98 | | Madikeri | 47 |
| 99 | | Mangalore | 78 |
| 100 | | Mysore | 58 |
| 101 | | Raichur | 106 |
| 102 | | Ramanagara | 75 |
| 103 | | Shimaga | 55 |
| 104 | | Tumkuru | 81 |
| 105 | | Udupi | 83 |
| 106 | | Yadgir | 73 |
| 107 | Kerala | Eloor | 121 |
| 108 | | Kannur | 70 |
| 109 | | Kochi | 80 |
| 110 | | Kollam | 80 |
| 111 | | Thiruvanantapuram | 43 |
| 112 | | Thrissur | 58 |
| 113 | Madhya Pradesh | Damoh | 152 |
| 114 | | Katni | 145 |
| 115 | | Maihar | 62 |
| 116 | | Mandideep | 161 |
| 117 | | Pithampur | 121 |

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 118 | | Ratlam | 122 |
| 119 | | Satna | 177 |
| 120 | | Singrauli | 93 |
| 121 | | Bhopal | 119 |
| 122 | | Dewas | 132 |
| 123 | | Gwalior | 149 |
| 124 | | Indore | 136 |
| 125 | Madhya Pradesh | Jabalpur | 121 |
| 126 | | Sagar | 121 |
| 127 | | Ujjain | 129 |
| 128 | | Ahmednagar | 134 |
| 129 | | Belapur | 120 |
| 130 | | Boisar | 130 |
| 131 | | Bhiwandi | 123 |
| 132 | | Dhule | 128 |
| 133 | | Dombivali / Kalyan | 141 |
| 134 | | Mahad | 111 |
| 135 | | Malegao | 111 |
| 136 | | Mira-Bhayander | 176 |
| 137 | | Nanded | 151 |
| 138 | | Parbhani | 134 |
| 139 | | Pimpri-Chinchwad | 142 |
| 140 | | Akola | 169 |
| 141 | | Amravati | 122 |
| 142 | Maharashtra | Aurangabad | 117 |
| 143 | | Badlapur | 163 |
| 144 | | Chandrapur | 109 |
| 145 | | Jalgaon | 120 |
| 146 | | Jalna | 134 |
| 147 | | Kolhapur | 124 |
| 148 | | Latur | 87 |
| 149 | | Mumbai | 145 |
| 150 | | Nagpur | 125 |
| 151 | | Nashik | 115 |
| 152 | | Navi Mumbai | 173 |
| 153 | | Pune | 142 |
| 154 | | Sangli | 98 |
| 155 | | Solapur | 120 |
| 156 | | Thane | 140 |
| 157 | | Ulhasnagar | 168 |
| 158 | | Vasai-virar | 168 |

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 159 | Meghalaya | Shillong | 46 |
| 160 | Manipur | Imphal | 75 |
| 161 | Mizoram | Aizwal | 39 |
| 162 | Nagaland | Kohima | 53 |
| 163 | Odisha | Angul | 188 |
| 164 | | Baripada | 117 |
| 165 | | Bileipada | 135 |
| 166 | | Brajrajnagar | 60 |
| 167 | | Balasore | 117 |
| 168 | Odisha | Bhubaneswar | 190 |
| 169 | | Byasanagar | 121 |
| 170 | | Barbil | 131 |
| 171 | | Keonjhar | 101 |
| 172 | | Nayagarh | 87 |
| 173 | | Rairangpur | 116 |
| 174 | | Rourkela | 87 |
| 175 | | Suakati | 118 |
| 176 | | Talcher | 74 |
| 177 | | Tensa | 84 |
| 178 | Pondicherry (UT) | Pondicherry | 61 |
| 179 | Punjab | Amritsar | 105 |
| 180 | | Bhatinda | 139 |
| 181 | | Gobindgarh | 126 |
| 182 | | Jalandhar | 109 |
| 183 | | Khanna | 95 |
| 184 | | Ludhiana | 115 |
| 185 | | Patiala | 107 |
| 186 | | Rupnagar | 140 |
| 187 | Rajasthan | Ajmer | 89 |
| 188 | | Alwar | 88 |
| 189 | | Banswara | 107 |
| 190 | | Baran | 138 |
| 191 | | Barmer | 96 |
| 192 | | Bharatpur | 186 |
| 193 | | Bhilwara | 108 |
| 194 | | Bhiwadi | 208 |
| 195 | | Bikaner | 160 |
| 196 | | Bundi | 163 |
| 197 | | Churu | 106 |
| 198 | | Chittorgargh | 135 |
| 199 | | Dausa | 153 |

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 200 | | Dholpur | 133 |
| 201 | | Dungerpur | 94 |
| 202 | | Hanumangarh | 213 |
| 203 | | Jaipur | 138 |
| 204 | | Jaisalmer | 129 |
| 205 | | Jalor | 140 |
| 206 | | Jhalawar | 121 |
| 207 | | Jhunjhunu | 140 |
| 208 | | Jodhpur | 122 |
| 209 | | Karauli | 67 |
| 210 | | Kota | 146 |
| 211 | | Nagaur | 133 |
| 212 | | Pali | 82 |
| 213 | | Pratapgarh | 112 |
| 214 | | Rajsamand | 84 |
| 215 | Rajasthan | Sawai madhopur | 103 |
| 216 | | Sirohi | 96 |
| 217 | | Sikar | 124 |
| 218 | | Sri Ganganagar | 181 |
| 219 | | Tonk | 147 |
| 220 | | Udaipur | 99 |
| 221 | Sikkim | Gangtok | 57 |
| 222 | | Ariyalur | 45 |
| 223 | | Chengalpattu | 78 |
| 224 | | Chennai | 80 |
| 225 | | Cuddalore | 55 |
| 226 | | Gummidipoondi | 129 |
| 227 | Tamilnadu | Hosur | 87 |
| 228 | | Kanchipuram | 54 |
| 229 | | Ooty | 56 |
| 230 | | Palkalaiperur | 33 |
| 231 | | Ramanathapuram | 42 |
| 232 | | Salem | 73 |
| 233 | | Thoothukudi | 50 |
| 234 | | Tirupur | 87 |
| 235 | Telangana | Hyderabad | 90 |
| 236 | Tripura | Agartala | 151 |
| 237 | | Agra | 108 |
| 238 | | Baghpat | 170 |
| 239 | Uttar Pradesh | Bareilly | 96 |
| 240 | | Bulandshahr | 155 |
| 241 | | Firozabad | 105 |

| S.No. | State / Union Territory | City / town | Avg AQI for the month of October 2023 |
|---|---|---|---|
| 242 | | Ghaziabad | 195 |
| 243 | | Gorakhpur | 110 |
| 244 | | Greater Noida | 258 |
| 245 | | Hapur | 176 |
| 246 | | Jhansi | 119 |
| 247 | | Kanpur | 119 |
| 248 | | Khurja | 130 |
| 249 | | Lucknow | 119 |
| 250 | | Meerut | 198 |
| 251 | | Moradabad | 118 |
| 252 | | Muzaffarnagar | 227 |
| 253 | | Noida | 202 |
| 254 | Uttar Pradesh | Prayagraj | 136 |
| 255 | | Varanasi | 60 |
| 256 | | Vrindavan | 96 |
| 257 | Uttarakhand | Dehradun | 92 |
| 258 | | Kashipur | 123 |
| 259 | | Rishikesh | 48 |
| 260 | West Bengal | Durgapur | 82 |
| 261 | | Haldia | 86 |
| 262 | | Kolkata | 102 |
| 263 | | Asansol | 121 |
| 264 | | Howrah | 104 |
| 265 | | Silliguri | 54 |

**Annexure II**

**Steps taken by the Government to prevent the hazardous chemicals and pollutants being released from different sources, including industries**

**I. Vehicular Emissions:**

(i) Leapfrogging from BS-IV to BS-VI norms for fuel and vehicles since April, 2018 in NCT of Delhi and from 1st April, 2020 for rest of the country.
(ii) Network of metro rails for public transport are enhanced and more cities are covered.
(iii) Development of Expressways and Highways are also reducing the fuel consumption and pollution.
(iv) Eastern Peripheral Expressway & Western Peripheral Expressway has been operationalized to divert non destined traffic from Delhi.
(v) Ban on all diesel vehicles older than 10 years and all petrol vehicles older than 15 years, in Delhi and NCR. (Hon'ble SC order dated 29.10.2018).
(vi) Environment protection charges (EPC) have been imposed on diesel vehicles with engine capacity of 2000cc and above in Delhi NCR.
(vii) Introduction of cleaner/alternate fuels like CNG, LPG, ethanol blending in petrol.
(viii) Permit requirement for electric vehicles has been exempted.
(ix) Promotion of public transport and improvements in roads and building of more bridges to ease congestion on roads.
(x) RFID (radio-frequency identity) system implemented by South Delhi Municipal Corporation (SDMC) for collection of toll and Environment Compensation Charges from commercial vehicles entering Delhi.
(xi) Introduction of BS VI compliant vehicles across the country since April, 2020.
(xii) Sustainable Alternative Towards Affordable Transportation (SATAT) has been launched as an initiative to set up Compressed Bio-Gas (CBG) production plants and make CBG available in the market for use in automotive fuels.
(xiii) Subsidy on e-vehicles under Faster Adoption and Manufacture of (Hybrid &) Electric Vehicles in India (FAME -II India) scheme of Ministry of Heavy Industries is provided.
(xiv) Installation of Vapour Recovery System (VRS) in new and existing petrol pumps
(xv) selling gasoline >100kl per month in million plus cities and those selling >300kl per month in cities with population between 1 lakh to 1 million.

**II. Industrial Emissions:**

(i) Notification regarding $SO_2$ and $NO_x$ emission standards have been issued for Thermal Power Plants
(ii) Ban on use of pet coke and furnace oil as fuel in NCR States since October 24, 2017 and ban on use of imported pet coke in the country since July 26, 2018, with exception for use in permitted processes (processes in cement plants, lime kilns and calcium carbide manufacturing units).
(iii) Shifting of industrial units to PNG.
(iv) Installation of online continuous emission monitoring devices in highly polluting industries.
(v) Brick kilns shifting to zig-zag technology or vertical shaft or use Piped Natural Gas as fuel in brick making to reduce pollution.

(vi) System and Procedure for Emission Compliance Testing of Retro-fit Emission
(vii) Control Devices (RECD) for Diesel Power Generating Set Engines up to Gross
(viii) Mechanical Power 800 kW developed.
(ix) Development of low carbon strategies across sectors such as phasing out older coal-based power plants, compliance of standards, City Gas Distribution (CGD) network, emphasis on improved power reliability in urban areas, etc.
(x) Developing an eco-system for processing biomass/agriculture residue as fuel in industrial applications in Delhi-NCR.
(xi) Uniform and affordable PNG pricing policy for aggravating use PNG as fuel in industrial applications in Delhi-NCR.

**III. Air Pollution due to dust and burning of waste:**

(i) Notification of eight waste management rules covering solid waste, plastic waste, e-waste, waste tyres, bio-medical waste, C&D waste, hazardous waste and battery waste.
(ii) Setting up infrastructure such as waste processing plants.
(iii) Extended Producer Responsibility (EPR) for plastic and e-waste management has been mandated on producers.
(iv) Ban on burning of biomass/garbage.
(v) Bio-mining of three dumpsites at Bhalswa, Okhla and Ghazipur is being carried out.
(vi) Under Central Sector Scheme on 'Promotion of Agricultural Mechanization for in-situ management of Crop Residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi', agricultural machines and equipment for in-situ crop residue management are promoted with 50% subsidy to the individual farmers and 80% subsidy for establishment of Custom Hiring Centers.
(vii) The Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) on 17.09.2021 directed the coal-based Thermal Power plants situated up to a radius of 300 Km of Delhi to co-fire biomass-based Pellets, Torrefied Pellets/Briquettes (with focus on paddy straw) with Coal (up to 5-10%).
(viii) Guidelines prepared for providing one-time financial assistance for establishment of paddy straw based pelletisation and torrefaction plants, under which individuals/entrepreneurs / companies, interested in setting up pelletisation and torrefaction plants, using only paddy straw generated in the NCT of Delhi, States of Punjab & Haryana, and NCR districts of Rajasthan & Uttar Pradesh can submit an application for obtaining a one-time grant on capital investment.
(ix) Guidelines issued for supporting Municipal Corporations of the states of Punjab, Haryana, NCT of Delhi and NCR districts of Uttar Pradesh and Rajasthan, for establishing paddy straw based briquetting plants, for use of paddy straw based briquettes for cremation purpose only.
(x) Daily monitoring of Active Fire Events (AFEs) is done during stubble burning period and reports are shared with Commission on Air Quality Management in National Capital Region and Adjoining areas for suitable action.

**IV. Monitoring of Ambient Air Quality:**

(i) Expansion of air quality monitoring network in the country under National Air Monitoring Programme (NAMP).
(ii) Initiated pilot projects to assess alternate ambient monitoring technologies such as satellite-based monitoring.

**V. National Clean Air Programme:**

(i) With the prime objective of abating Air Pollution, the Ministry, in 2019 launched a National Clean Air Programme (NCAP) as a National-level Strategy outlining the actions for reducing the levels of air pollution at city and regional scales in India.

(ii) Activities in these cities include strengthening of ambient air quality network, source apportionment studies, dust mitigation measures, composting units, infrastructure for non-motorized transport, shifting to clean energy in unorganized sectors, etc.

(iii) The NCAP focuses on multi-sectoral sources of pollution including power plants, industries, vehicles, open burning of waste, construction & demolition activities, etc.; inter-Ministerial coordination for convergence of actions and interventions; and partnership with Institutes of National repute and International Agencies as Knowledge Partners

(iv) Public Grievances and Response System (PGRS) is developed under NCAP.

(v) Emergency Response System (ERS) has been prepared in NCAP cities.

(vi) Air quality monitoring cell has been constituted across the country in NCAP Cities.

(vii) PRANA a portal for monitoring implementation of NCAP has been launched.

(viii) Introduction of new modules within PRANA

- Mission LiFE Module
- Ranking Module
- State Action Plan Module
- IoR &NKN Module
- International Agencies Module

**VI. Other Steps:**

(i) Public Complaints regarding air pollution issues in Delhi NCR are taken through 'Sameer App', 'Emails' (Aircomplaints.cpcb@gov.in) and 'Social Media Networks' (Facebook and Twitter).

(ii) Introduction of green crackers with low emission and noise levels. Green Crackers have 30% potential reduction of PM and gaseous emissions compared to conventional firework.