

## **BRIEF NOTE ON IMPACT OF LOCKDOWN DUE TO COVID-19 PANDEMIC** **ON AMBIENT AIR QUALITY OF RAJASTHAN**

In order to combat with the threatening spread of COVID-19 pandemic, nation-wide lockdown in the state of Rajasthan was imposed from 22<sup>nd</sup> to 31<sup>st</sup> March, 2020 by the Hon'ble Chief Minister of Rajasthan. As a result of stringent travel restrictions and shutting down of non-essential activities including those of air polluting sectors, air quality improvement has been noted in many towns and cities across the State. The major sectors contributing to air pollution are transport, industries, power plants, construction activities, biomass & refuse burning, road dust re-suspension and residential activities.

Rajasthan State Pollution Control Board through its network of 10 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) in the state at Jaipur, Alwar, Ajmer, Bhiwadi, Jodhpur, Kota, Pali & Udaipur is carrying out ambient air quality monitoring in the state. A brief analysis of data generated from these stations regarding Air Quality Index (AQI) and prominent pollutants such as PM<sub>10</sub>, PM<sub>2.5</sub> and Nitrogen Dioxide was carried out to gauge the impact of lockdown on the air quality of the state. For the study, data from 15.03.2020 to 21.03.2020 was used for pre-lockdown period and from 22.03.2020 to 7.04.2020 for post-lockdown period. The major findings of the study are:

- The lockdown has tremendously helped in improving ambient air quality in the state. The Air Quality Index (AQI) at all the stations has now become “Satisfactory” which was earlier ranging from poor to satisfactory. The percentage decrease in AQI at these CAAQMS stations has ranged between 21% (Shashtri Nagar, Jaipur) to 68 % (Bhiwadi- RIICO Ind. Area III).
- Maximum improvement in AQI has been observed at Bhiwadi due to closure of industrial activities and subsequent reduction in vehicular traffic and re-suspension of road dust. In terms of individual pollutants also, Bhiwadi has noticed very high reduction of around 70% in the concentration of PM<sub>10</sub>, PM<sub>2.5</sub> and Oxide of Nitrogen due to lock down.
- Other cities where the dominant source of air pollution is vehicular pollution and road dust re-suspension have also witnessed significant decrease in the major pollutants ranging from 27% to 73%.
- Reduction of PM<sub>2.5</sub> is more pronounced in the later part of lockdown which may be due to effective enforcement of the lockdown assisted by rise in ambient temperatures at most of the places resulting in better dispersion of pollutants.