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INTRODUCTION

We read two articles authored by Mahato et al. 2020 [1] and Kumar S. 2020 [2] with great interest, which depict the status of air quality in metropolitan cities across India. The study conducted by Mahato et al. 2020 [1] principally deals with the air quality assessment in New Delhi, whereas Kumar [2] has evaluated the same in major cities like Mumbai, Ahmedabad, Kolkata, Hyderabad and Chennai. In the wake of COVID-19 pandemic, the Government of India had commenced 4 phase confinement across all the states. This continued from 25th March to 31st May 2020, during which the dramatic reduction in air pollution level has been reported due to diminished usage of vehicles and closed factories [3,4,5].

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Effect of COVID-19 on Air Pollution: The Indian Scenario

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I. INTRODUCTION

We read two articles authored by Mahato et al. 2020 [1] and Kumar S. 2020 [2] with great interest, which depict the status of air quality in metropolitan cities across India. The study conducted by Mahato et al. 2020 [1] principally deals with the air quality assessment in New Delhi, whereas Kumar [2] has evaluated the same in major cities like Mumbai, Ahmedabad, Kolkata, Hyderabad and Chennai. In the wake of COVID-19 pandemic, the Government of India had commenced 4 phase confinement across all the states. This continued from 25th March to 31st May 2020, during which the dramatic reduction in air pollution level has been reported due to diminished usage of vehicles and closed factories [3,4,5].

Mahato et al. [1] evaluated the concentrations of particulate matter (PM) and other gasses like CO and NO₂ (an indicator of PM_{2.5}) before and after lockdown in New Delhi. Later, it was revealed that PM₁₀ and PM_{2.5} concentrations were reduced by 50% compared to pre-lockdown conditions. Similarly, pollutants like CO (35% reduction) and NO₂ (52.68% reduction) have been decreased. The study also reported 40%-50% recovery in air quality just after 4 days of lockdown initiation. The National Air Quality Index (NAQI) has observed 31%-54% reduction around New Delhi [1]. Owing to lower power demand in manufacturing, use of fossil fuels or sources of

renewable energy has been drastically reduced. In addition, Kumar S has reported effects of confinement on air quality in other major cities. In this study, steep decreases in aerosol concentration and PM₁₀, PM_{2.5} and NO₂ were reported in Kolkata, Mumbai, Chennai, Ahmedabad, and Hyderabad. The concentration in aerosols (AOD) and NO₂ got reduced by 60% and 45% in these cities. In a key finding, he has revealed that meteorological factors like temperature and humidity do not play any role in the reduction of viral load. He has also stated the Government restrictions could only be able to reduce the effects in the absence of specific treatment options [2].

Further reduction in the level of air pollutants can lead to the reduction in several respiratory and cardiovascular problems being reported. India has been experiencing this problem since time immemorial, despite implementing several laws regarding the emission control from automobiles, factories and religious festivals [2,6]. Although several studies have reported the adverse effects and suggestions on health due to the air pollution, there have been no implementations of any restrictions on controlled usage of automobiles and running the industries [7,8]. But due to the inevitable confinement situation, the air quality has been improved substantially, supporting these studies. However, in their studies Mahato et al. 2020 [1] and Kumar S. 2020 [2] have focussed on urban population, which has been the main source of air pollution. But it remains unknown that the contribution from rural areas has also been significant. Surveillance on rural and suburban areas also needs to be conducted. Also, other major pollutants like SO₂ and CO need to be monitored [9,10,11]. Though it appears to be less compared to urban regions, factors like usage of firewood, charcoal, shifting cultivation, and forest

fires ubiquitously lead to the air pollution in rural areas. Despite the promotion of pollution free measures like biogas production, air quality has been depleting in rural regions, which could be a major threat in future [12,13]. We conclude that, COVID-19 resultant lockdown has brought us a reminder of our detrimental activities on nature and their results on mankind and has shown us the path which can lead to a clear and better environment [14,15,16,17].

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