

## An Efficacy of Covid – 19 Pandemic: Recovery of Workplace Environment and Ecosystem

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### ABSTRACT

The Covid-19 pandemic started in late December 2019 and is still progressing globally. The easy spreading nature of the Covid-19 causative virus made most countries implement complete lockdown. The lockdown measure taken by most countries to combat the disease has not only assisted in decreasing the rate of spread but also the pollution of the workplace and of the environment as a whole. In the absence of most human and industrial activities that cause pollution, nature is on its way to purifying itself. Without human intervention, the pollution-free environment and its interaction with the ecosystem are bouncing back at a faster pace. The article explained the impact of lockdown measures on the reduction of environmental pollution in a global scenario.

**Key words:** COVID -19, Environmental Impact, Green House Gases, NO<sub>2</sub> Emission, Pandemic, Water Quality.

### Introduction

The novel Coronavirus Disease 2019 (COVID-19), the unexpected pandemic that originated in China has caused severe panic throughout the world.<sup>1</sup> Five months from its origin, almost every country of the globe had experienced the severity of the disease. As of the fourth week of April 2020, the covid-19 pandemic has become the reason for the loss of more than 191423 lives and infected 2737866 cases all over the world.<sup>2</sup> China was the first nation that ordered a lockdown in the mid of January.<sup>3</sup> Subsequently most of the countries adopted the same measure to prevent the spread of the virus which unknowingly affected the pollution positively.

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### Diminishment of Environmental Pollution

The measures are taken by various countries to contain coronavirus spread to save lives though caused the economic slowdown has impacted positively on the environment. Almost all the nations implemented a complete lockdown for more than three weeks which led to the closure of industries, public transportation systems, and all other related businesses which forms the major causes of pollution and exhaustion of fossil fuels. According to Environmental Protection Agency (EPA), Nitrogen dioxide (NO<sub>2</sub>) is a pollutant produced from the burning of fuel like that for heating, power generation, and combustion engines.<sup>4</sup>

### Air Pollution Scenario after lockdown

Across the globe, considerable and sudden reduction in the emission of greenhouse gases and other air pollutants could be evidenced.<sup>5</sup> This can be witnessed in New York's pollution reduction by 50% compared to the previous year.<sup>6</sup> In the UK, a similar fashion could be observed in the reduction of particulate matter emission. The space observation satellite of the European Space Agency (ESA) detected significantly



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lower levels of air pollutant NO<sub>2</sub> in northern Italy and China's Hubei province.<sup>7</sup> Northern Italy has undergone a 40% NO<sub>2</sub> emission reduction as seen from satellite images.<sup>8</sup> China's Wuhan, the epicenter of the pandemic now has a reduced level of NO<sub>2</sub> pollution as a result of strict quarantine. Earlier to the Covid-19 outbreak, premature death across the globe was estimated at 8.8 million a year. The pollution drop in these two months may have saved 4,000 children and 73,000 adults over the age of 70 in China. Lower levels of NO<sub>2</sub> could be observed in the cities and industrial clusters of Asia and Europe in comparison with the same period last year. European Environment Agency's (EEA) data confirm large decreases in air pollutant concentrations across European countries. South Korea with high NO<sub>2</sub> emission history due to coal-fired power plants is evidencing lower NO<sub>2</sub> levels. However, satellite data from the ESA over India show that there is a negligible reduction in NO<sub>2</sub> levels.<sup>9</sup>

China, the United States and India are the three largest carbon-emitting nations in the past three years. During the two weeks of the lockdown, China alone has reduced 100 million tons of carbon dioxide emissions. The carbon emission from the aviation industry is dramatically dropping throughout the globe.<sup>10</sup> Similar situation of lower carbon emission was observed even during epidemics well before the industrial age. Epidemics such as the Black Death in Europe in the 14th Century and smallpox in South America in the 16th Century both marked low atmospheric Carbon Dioxide (CO<sub>2</sub>) emission levels.

## Water Quality Enhancement after lockdown

The quality of water in the surface water also seems to be improving. The absence of boat traffic on the famous waterways of Venice shows clearer water compared to the usual murky canals and dolphins that appeared in the clear waterways of Italy.<sup>11</sup> Interestingly with the least human intervention, various popular cities spotted a few rare animals on the roadsides. In India, a Malabar civet, a critically endangered mammal crossed the streets of Kerala and long-horned Sambhar deer was found in the Chandigarh area.<sup>12</sup> In Thailand and Japan, monkeys and deers are found roaming in the streets that are devoid of tourists.<sup>13</sup>

## Conclusion

The environmental benefits from the slowing down of the economy through the lockdown of industries and aviation systems have seen improvement in the air and water quality with the replenishment of the ecosystems. Mother Earth seems to heal herself in some ways. Another lesson that could be learned is that it is possible to follow a lifestyle without adversely affecting the ecosystem.

After the subsidence of the pandemic, the situation may overturn again. The pollution may bounce back at a faster rate than before. The clear skies, pollution-free atmosphere and crystal clear water bodies can be witnessed in the future only when the behavioral changes taking place around the world now could carry over beyond the current coronavirus pandemic.

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