



Positive environmental effects of the coronavirus 2020 episode: a review

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Abstract

The outbreak of COVID-19 has made a global catastrophic situation that caused 1,039,406 deaths out of 35,347,404 infections, and it will also cause significant socio-economic losses with poverty increasing from 17.1 to 25.9%. Although the spreading rate of COVID-19 is very high on October 6, 2020, the death rate is still less than 2.94%. Nonetheless, this review article shows that the lockdown has induced numerous positive impacts on the environment and on energy consumption. For instance, the lockdown has decreased the electricity demand by 30% in Italy, India, Germany, and the USA, and by 12–20% in France, Germany, Spain, India, and the UK. Additionally, the expenditure of the fuel supply has been decreased by 4% in 2020 as compared to the previous years (2012–2019). In particular, The global demand for coal fuel has been reduced by 8% in March and April 2020 as compared to the same time in 2019. In terms of harmful emissions, the lockdowns reduced the emissions of nitrous oxides by 20–30% in China, Italy, France, Spain, and by 77.3% in São Paulo, Brazil. Similarly, the particulate matter level has been reduced from 5–15% in Western Europe, to 200% in New Delhi, India, which in turn has enhanced the air quality in a never-seen manner in recent times. In some places, such as New York, USA, CO₂ emission was also reduced by 5–10%. The water quality, in several polluted areas, has also been remarkably enhanced, for example, the dissolved oxygen content in the Ganga River, India, has increased by about 80%. Traffic congestion has also been reduced worldwide, and in some areas, it has been reduced by 50%, such as New York and Los Angeles, USA. Overall, while the COVID-19 pandemic has shrunk the global economy by 13–32%, the pandemic has also clearly benefited to other sectors, which must be considered as the spotlight for the permanent revival of the global ecosystem.

Keywords COVID-19 benefits · Environmental regeneration · Renewable energy · Air pollution · Surface water · Traffic congestion

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