

“Corona Pandemic: 2019-20” - A Blessing in Disguise

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ABSTRACT

Novel coronavirus 2019 or Covid-19 has murdered more than 154350 and infected more than 2256844 people across the world. Due to its infectious nature, national lockdowns can be seen in many countries. This lockdown has proved coronavirus a blessing in disguise. reduction in air pollution has been noticed in many cities as NO₂ and PM 2.5 levels has dropped. Water quality of Yamuna, Ganga, Venice and many other rivers has upgraded as pollution level has depleted. Wildlife can be seen on empty streets of the previously crowded cities. Decline in CO₂ emissions and seismic noise under the earth crust has been reported by the experts. Although the world economy has dropped to its lower level, world ecology has jumped indeed. There is need to divert the industries towards renewal energy as an alternative to declined economy. One to two weeks national lockdowns twice or thrice a year could be an option for the upcoming governments of the countries to let our earth breath freely for some time.

Keywords: Novel Corona Virus 2019, Ecology, Pandemic, Lockdown, Pollution

INTRODUCTION

Novel corona virus 2019, one of the deadly pandemics of 21st century has warned us that we need to take a break from our greedy busy schedule and consider the reprobation and retroaction of ever-expanding scientific research and development. If we go too far with our desires and ambitions against the laws of nature, the nature will pull us even more far from the development. We all have seen the havoc and casualties caused by it but neither of us has ever analysed its positive arms. Let us have a look towards some of the evidences around us emerged during the

lockdown against corona virus which would definitely snatch away the attention of everyone from this deadly environment towards the peace.

Reduction in air pollution:

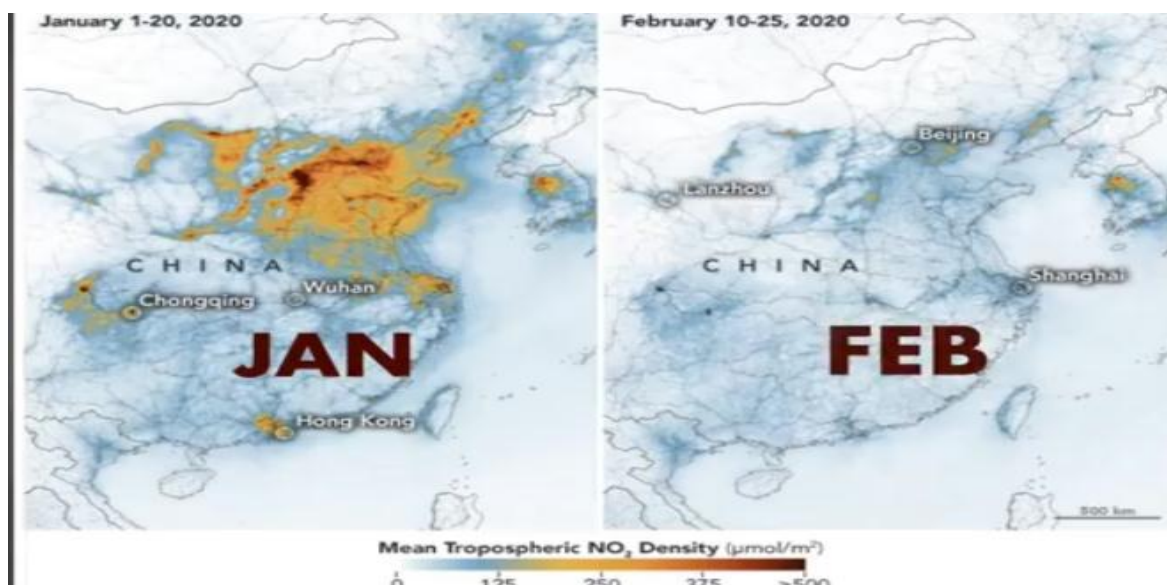
The lockdown against corona virus has brought the daily ugly life to a rest that the air quality, water quality and the wildlife has reappeared in its form which it is used to be 2-3 decades back. The air has cleaned itself that the Himalayan peaks are now visible from 140 km away highways of Jalandhar in Punjab with naked eyes.

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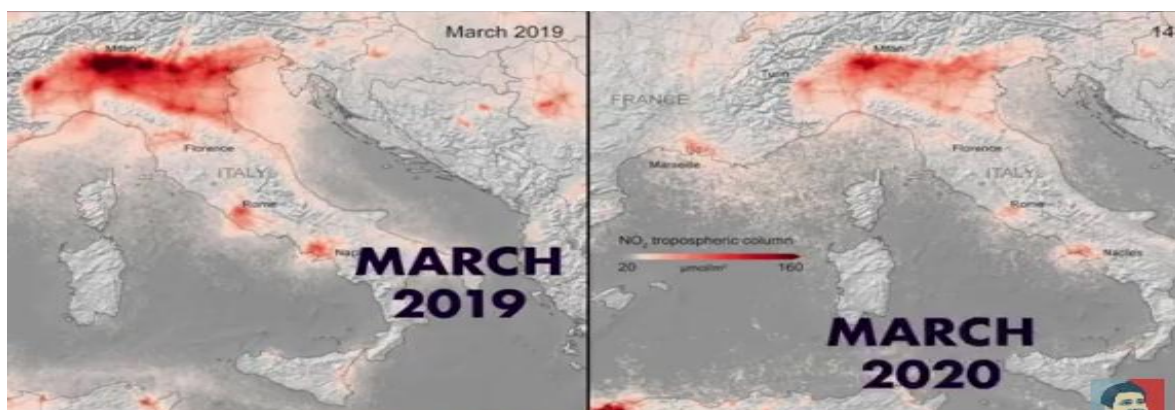
The residents of Jalandhar stated that it happened first in last 20-30 years. The residents of Jalandhar were left "amazed" by the sight of the Dhauladhar mountain range, a part of the Himalayan range in Himachal Pradesh. Sharing the pictures of the "first-ever view" from Jalandhar, its residents thanked the ongoing lockdown for cleaning the air to make it possible (Anonymous 1). Such news reports are pouring in from all around the world. Air and water pollution levels has fallen.

It is so because the Nitrogen dioxide (NO₂), a toxic gas emitted from engines of cars, buses, trucks and factories has been reduced in its concentration in last two months. According to WHO, if NO₂ is more than 200 micrograms per cubic metre in concentration it causes inflammation in wind pipe leading to problems like asthma.

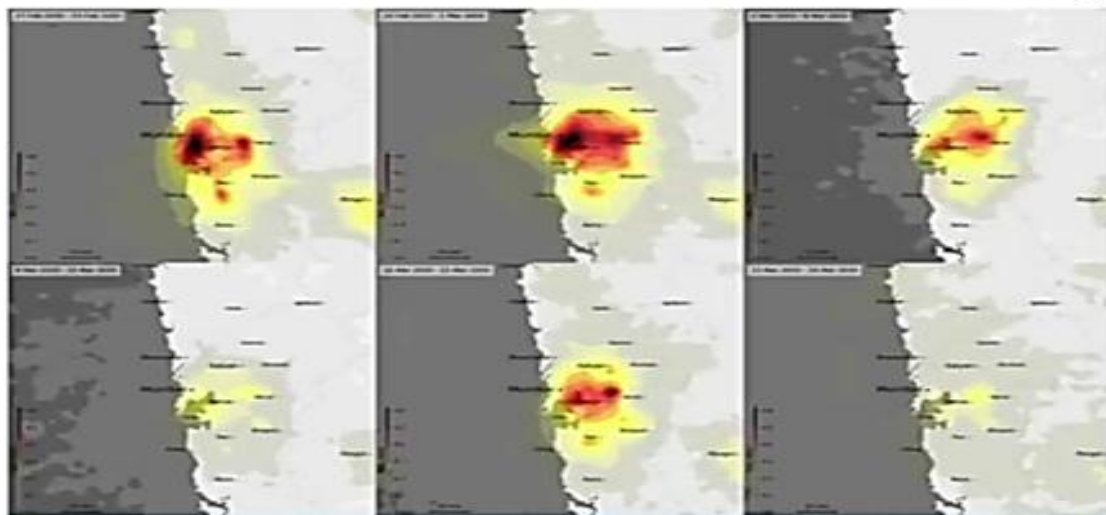
Lockdown 2020 has reduced running vehicles on roads and shut down factories. Hence, concentration of has NO₂ fallen drastically in the environment. The level of pollution has reduced from the month of January 2020 to February 2020 in China. Same happened to appear in European cities like Spain, UK and Italy (Anonymous 2). Similar change has been witnessed in Indian cities of Delhi, Mumbai, Bangalore, Chennai and Hyderabad in 2020 as compared to the year 2019. From a survey of CPCB, Substantial improvement in air quality of Delhi NCR is noted during the lockdown period- PM10 and PM2.5 levels were reduced by about 35 to 40% in Delhi as the major contributing sources to PM & NO_x emissions (prominent pollutants in Delhi NCR) have been restricted (Anonymous 3).



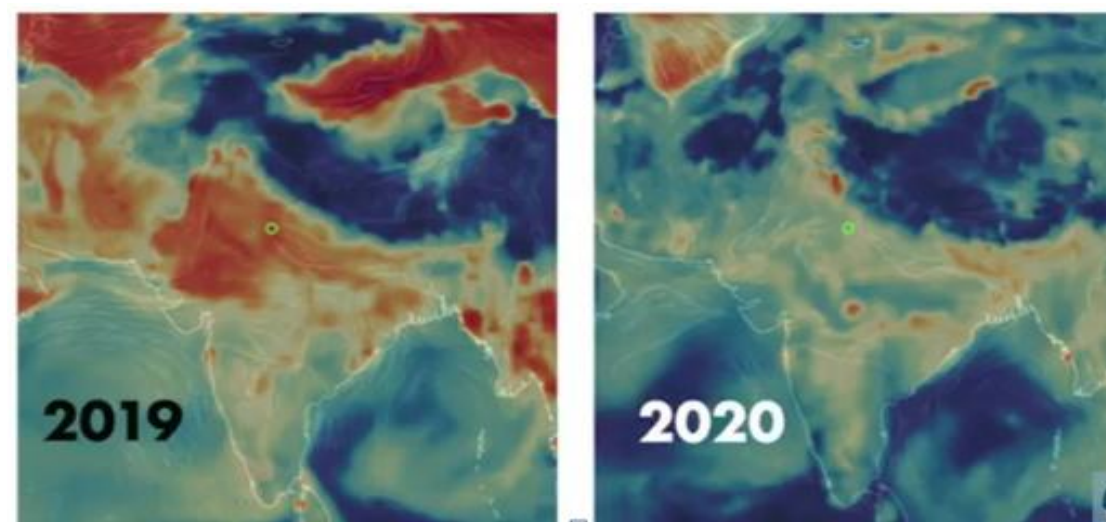
Pollution level in China in January and February 2020



Pollution level in Europe in March 2019 & March 2020



Weekly NO₂ levels around Mumbai between 17th Feb 2020 to 29th March 2020



Instantaneous PM_{2.5} levels over India on 7th April 2019 and 2020

Particulate matter 2.5 or PM 2.5, one of the most harmful forms of air pollution, included in the category of group one carcinogen is much smaller than it can travel from our lungs to blood stream directly leading to respiratory problems, heart attacks and premature deaths. It is so deadly that WHO has estimated that every year more than 4 million people are killed due to PM 2.5 worldwide causing heart diseases, strokes, lung cancer, chronic lung diseases and respiratory infections. Lockdown 2020 has reduced PM 2.5 levels across the world. It has reduced to a significant amount due to which clear blue skies and twinkling stars are clearly visible in different cities.

A scientist from the Stanford University, Professor Marshall Burke, has collected data from US government sensors in
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4 Chinese cities on PM 2.5 levels and compared it to the mortality rates. He concluded that more than 77000 lives have been saved due to the decrease in air pollution in just a month in these four cities of China due to lockdown enforced through coronavirus. “Two months of pollution reduction has saved lives of 4000 kids under 5 and 73000 adults over 70 in China”, declared by the G-Feed, a blog maintained by seven scientists working on Global Food, Environment and Economic Dynamics. Similarly, James Lee of University of York/Defra reported that particulate matter (PM_{2.5}) pollution is down sharply in London, Cardiff and Bristol since the coronavirus shutdown (Anonymous 4).

Reduction in water pollution:

Raghav Chadda, the Delhi Jal Board Vice Chairman said in the news that due to lockdown the stoppage of the industrial waste drained in Yamuna by industrial factories, has caused a positive impact on the water quality of the Yamuna river. Himanshu Takkar, environmental activist and water expert, coordinator of South Asia Network on Dams, Rivers, People (SANDRP) addressed that although this improvement is temporary respite, Yamuna river quality has improved. According to the Central Pollution Control Board (CPCB), out of 36 monitoring units placed at various water quality of the Ganga, around 27 points was suitable for bathing and propagation of wildlife and fisheries. As the river enters U.P., it becomes unfit for bathing and remains same through the whole course to Bay of Bengal. Dr. P.K. Mishra, Professor, IIT BHU stated that an improvement of 40-50% has been seen in the water quality of the Ganga river due to lockdown and lockdown of one week a year should be done. According to Vikrant Tongad, environmentalist, improvement has been seen around Ganga in Kanpur. Same has been reported around Mathura in Ganga by Bhim Singh Rawat, environmentalist and associate coordinator of SANDRP. "Hence, it's a very good time for CPCB to study level of pollution coming from industries", suggested environmentalist Manoj Misra (Anonymous 5). The major cause of water pollution in India is toxic industrial waste discharged into the rivers. As industries shut down due to the lockdown, water became more cleaner than before. It depicts the future clearly that if the government constructs sewage treatment plants in the right manner with strong regulations for the companies and industries to treat their waste themselves, our present rivers can go back to the centuries back status. Even the Venice canal cleaned due to lockdown as no boats or traffic is there in the river. More fishes are visible to Venetians in the water of Venice river during the lockdown (Anonymous 6).

Wildlife:

Lockdown has affected the wildlife and animals as animals and birds which were never

seen on the busy crowded streets of cities for years are reappearing on deserted streets nowadays (Anonymous 7). A plant charity is predicting a boost for wild flowers because some councils have stopped mowing verges and parks during the Covid-19 crisis. A plant charity is predicting a boost for wild flowers because some councils have stopped mowing verges and parks during the Covid-19 crisis. Experts stress that nature can be beneficial for our mental health (Anonymous 8).

Climate change:

CO₂ responsible for the climate change is sourced from the transportation which has declined due to lockdown. Experts are predicting that this is the biggest decline in CO₂ emission after the world war second. Approximately a decline of 5% has been seen.

Reduced seismic noise of Earth:

Scientists at the British Geological Survey (BGS) have reported a change in the Earth's seismic noise and vibrations amid the coronavirus lockdown. Due to the enforcement of lockdown measures around the world to tackle the novel coronavirus pandemic, the Earth's crust has shown reduced levels of vibrations. The UK findings have come two weeks after seismologists at the Royal Observatory in Belgium observed a 30-50% fall in levels of ambient seismic noise since schools and businesses were closed in mid-March (Anonymous 9). Seismologists across Europe have been looking at the effects of the Coronavirus lockdown on seismic activity after a study in Brussels reported a drop in ambient seismic noise. Seismologists around the world have now begun a collaborative effort to study the fall in seismic noise levels. In geology, seismic noise refers to the relatively persistent vibration of the ground due to a multitude of causes. It is the unwanted component of signals recorded by a seismometer, the scientific instrument that records ground motions such as those caused by earthquakes, volcanic eruptions and explosions. This noise includes vibrations caused due to human activity like transport and manufacturing and makes it difficult for scientists to study seismic data that is more

valuable. The seismic noise vibrations caused by human activity are of high frequency (between 1-100 Hz) and travel through the Earth's surface layers (Anonymous 10). Usually, to measure seismic activity accurately and reduce the effect of seismic noise, geologists place their detectors 100 metres below the Earth's surface. However, since the lockdown, researchers have said that they were able to study natural vibrations even from surface readings, owing to lesser seismic noise. Seismologists compared the average daytime noise levels at seismic stations in the UK in the two week period since the start of the Covid-19 lockdown with the average noise levels for the beginning of the year. The results show reductions in noise levels at most of the stations of between 10-50%. Scientists say the reduction in seismic noise may help them to see signals from earthquakes that are normally buried in the noise. In theory, this reduction in noise should help scientists to detect more earthquakes in the UK, in Europe and all around the world, according to Dr. Baptie (Anonymous 11).

Dropping economy, flourishing environment:

Corona virus has taught us why economy and environment are always seen inversely proportional to one another. Carbon emissions dropped during the financial crisis of 2008. The financial crisis of 2007–08, also known as the global financial crisis (GFC), was a severe worldwide economic crisis. It is considered by many economists to have been the most serious financial crisis since the Great Depression of the 1930s. The crisis was nonetheless followed by a global economic downturn, the Great Recession. Another drop was noticed in the Asian financial crisis. The Asian financial crisis was a period of financial crisis that gripped much of East Asia and Southeast Asia beginning in July 1997 and raised fears of a worldwide economic meltdown due to financial contagion. Similarly a drop was noticed when the USSR dissolved. First oil crisis of 1973 and second crisis of 1979 also dropped the carbon emission level. Whenever the economy

crashed, carbon emissions dropped producing good for the environment. Therefore, an inverse relation between economy and environment is seen always. It happens because our economy is extremely inter-linked with the fossil fuels (Anonymous 12). Fossil fuels like coal, oil, petroleum and other non-renewable forms of energy are the primary sources of energy today which runs the transportation sector, manufacturing industry and generating electricity across the world. This is the rationale that when the transport industry screeches to a halt, carbon emissions descends. When electricity demand falls, carbon emissions plunge and hence, when the lockdown will be retracted, the world will become normal again with increase in carbon emissions which fell by around 25% in the months of February and March 2020 in China when lockdown was enforced. But by the end of March with lifting up of lockdown, their NO₂ levels reached back to place.

Opportunity in lockdown:

This lockdown has presented an opportunity before us. As a lot of industries shut down due to lockdown leading to job losses and economic crisis, government can use this opportunity to push the renewable energy industry. When the government would transfer money to industries for revival with economy, the focus should be more on renewable energy reducing use of fossil fuels so that renewable energy would get a new lease of opportunity.

CONCLUSION

The above mention effects and environmental changes are temporary for the short terms as the entire situation will revert on withdrawing the lockdown. Here comes the citizen which can stop this. It is on us now that we should pressurise the government for good cause. It's our duty to make government realize that it's the high time to go hand in hand with ecology. And if doesn't happens the nature will turn back with the same disgusting face in another face of some pandemic, disaster or biological weapons. It's our life, our nature and off course our government to manipulate accordingly.

REFERENCES

- Anonymous 1. Jalandhar residents get view of Himalayan range. IndiaTV. E-paper. 3 April 2020. <https://www.india tvnews.com>
- Anonymous 2. Damian Carrington and James Lee. Coronavirus UK lockdown causes bug drop in air pollution. The Guardian. E-paper. 27 March 2020. <https://www.theguardian.com>
- Anonymous 3. Anubhuti Vishnoi. Lockdown clears up India's air. The Economic Times. E-paper. 2 April 2020. <https://www.economictimes.com>
- Anonymous 4. Hannah Ellis Peterson, Rebecca Ratcliff and Lily Kuo. 'It's positively' Alpine!: Disbelief in big cities as air pollution falls. The Guardian. E-Paper. 11 April 2020. <https://www.theguardian.com>
- Anonymous 5. Lockdown: Health of river Ganga improves. The Economic Times. E-paper. 2 April 2020. <https://www.economictimes.com>
- Anonymous 6. Water Pollution- Venice canals clearer after coronavirus lockdown. BBC News. E-paper. 18 March 2020. <https://www.bbc.com>
- Anonymous 7. Victoria Gill. Coronavirus: The wildlife species enjoying lockdown. BBC News. E-paper. 14 April 2020. <https://www.bbc.com>
- Anonymous 8. Roger Harrabin. Coronavirus: Lockdown could boost wild flowers'. BBC News. E-paper. 9 April 2020. <https://www.bbc.com>
- Anonymous 9. Scientists report drop in Earth's movement amid coronavirus lockdown. British Geological Survey. Press Release. 9 April 2020. <http://www.bgs.ac.uk>
- Anonymous 10. 8:00 AM – Daily Current Affairs 2020 by Bhunesh Sir. 14 April 2020. wifistudy. <https://www.youtube.com>
- Anonymous 11. Explained: How coronavirus lockdown reduced Earth's seismic noise levels. The Indian Express. E-paper. 17 April 2020. <https://www.indianexpress.com>
- Anonymous 12. Positive Impact of Coronavirus Lockdown. Explained by Dhruv Rathee. 9 April 2020. <https://www.youtube.com>