ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov – Dec, 2021

ENVIRONMENTAL RELIEF DUE TO COVID-19 SITUATION

Ms. Gatha Sonawane

Assistant Professor,

K.B. College of Arts and Commerce for Women, Thane (East).

Abstract:

In the year 2019 a novel contagious disease, COVID-19 was identified. Due to its infectious nature, this disease in no time became a global Pandemic, hence, imposition of curfew/lockdown was the only feasible solution to break the chain of transmission and stop the spread of COVID-19. The imposition of lockdown negatively impacted the economic and social front, but it resulted in the slowdown of the anthropogenic activities, which offered some extra space for the restoration of the environment. As human emptied the streets, nature took the control, resulting in cleaner air and water, less noise pollution and relief for the wildlife. Human activities had been impacting the environment and degrading its quality. The economic, commercial and industrial activities were causing the pollution of air, water and soil, generation of plastic waste, threats to wildlife, etc. The anthropogenic activities were prominently responsible for disturbing the various environmental parameters but, the lockdown brought succour to this problem. This study focuses on the environmental relief observed after COVID-19 lockdown and how the environmental quality of India improved post-pandemic.

Key Words *Contagious, Pandemic, Anthropogenic, Environmental parameters, Post-Pandemic.*

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov - Dec, 2021

Graphical Abstract:

Peaceful wildlife

Waste reduction

Improved Air quality

Improved water quality

Introduction:

COVID-19 is caused by a new Corona Virus called SARS-CoV-2. In the year 2019 many cases of this disease were reported in Wuhan, China. In the name COVID-19, CO stands for 'Corona', VI stands for 'Virus' D stands for 'Disease' and as it was introduced for a first time in the year of 2019 it is called as 'Novel Corona Virus'. This deadly Zoonotic virus, is transmitted from person to person through respiratory droplets. After its first report the disease started spreading rapidly and within no time it was declared as Pandemic. As of May 25 2020, the total no of COVID-19 cases surpassed 5.5 million globally, with total deaths tolls more than 345,160. [(1)] To contain this Virus it was important to break the chain of transmission, hence to prevent its further outbreak and long

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov - Dec, 2021

term implications on health, several countries adopted lockdown/curfew and strict quarantine.

Fig1. An empty Street of Thane after the imposition of lockdown.

Source-Self captured

Although COVID-19 lockdown was the critical period for humanity but it appeared to be a respite for Mother Earth, as it helped restoring the nature's balance.

Due to relaxation of anthropogenic activities, even in thick of the situation nature reclaimed land and got reprieved. "The pandemic is bad. It's causing a lot of troubles for humankind," said Phil Yang, a geospatial scientist and professor of geographic information science at George Mason University "But on the other side, this experiment is helping us to be able to observe how human activities have been impacting the earth, the environment and climate change." [(2)]

Impact of COVID-19 lockdown On Water Quality:

To a great degree, the industrial, agricultural and domestic waste are responsible for the deterioration of water quality. According to News18 article of World Water Week, the five most polluted rivers in India are Ganga, Yamuna, Brahmaputra, Damodar and Bagmati. Roughly 1100 industrial establishments dump sewage waste and pollutants in the river Ganga.[(3)] The water bodies could not breathe due to the evident pollution from anthropogenic activities like untreated domestic waste disposal, industrial chemicals, fly ash, oil spills, tourism and religious activities, etc. The lockdown restricted all these activities, resulting in a remarkable transformation in the appearance of water bodies. The important water quality parameters like turbidity, DO, TDS, TSS, etc also improved. According to the Vice-Chairman of Delhi Jal Board, Raghav Chadha, the closure of industrial units in Delhi-NCR has resulted in an improvement in water quality.[(4)] Due to the worldwide pandemic lockdown, the waters flowing in the channels were cleaner than before.

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov - Dec, 2021

Fig2.No foamy deposit of toxins in river Yamuna was seen after lockdown

Source- www.planetcustodian.com

Impact of COVID-19 lockdown On Air Quality:

The industrial emission, vehicular exhaust, burning of garbage and agricultural activities are some of the major reasons for air quality deterioration. All these sources emits air pollutants like, Carbon dioxide (CO_2), Carbon Monoxide (CO), Nitrogen oxide (N_2O), Sulphur Dioxide (SO_2), Methane (CH_4), Ozone (O_3), **Polycyclic Aromatic Hydrocarbons (PAHs), Metallic Oxide,** Particulate Matter, Volatile Organic Compounds (VOCs), Lead, Benzene, dust, etc. Anthropogenic activities also effuse the primary Greenhouse Gases i.e., Carbon dioxide (CO_2), Water Vapor (H_2O), Methane (CH_4), Nitrous Oxide (N_2O) and Ozone (O_3) in the Earth's atmosphere. At current greenhouse gas emission rates, temperatures could increase by 2 °C (3.6 °F), which the United Nations 'Intergovernmental Panel on Climate Change (IPCC)' says is the upper limit to avoid "dangerous" levels, by 2050.[5] Lockdown halted the anthropogenic activities, which resulted in pruning of air pollutants. It improved the air quality index (AQI) and made a way for clear blue skies.

S K Satheesh, Professor at Centre for Atmospheric & Oceanic Sciences, Indian Institute of Science (IISc) Bangalore told PTI that there has been a 'large improvement' in the air quality due to reduced human activities during the lockdown.[6] Due to the reduction in operating of thermal power plant the SO_2 level decreased significantly, smog also dissipated due to the drop in atmospheric pollutants. A huge annual drop in CO_2 and particulate matter was recorded. In India there were about −51.84, −53.11, −17.97, −52.68, −30.35, 0.78 and −12.33% reduction in the concentration of PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO, O_3 and NH_3 respectively. [7] According to an analysis of the CPCB Air Quality Index data from the 74-day duration, the lockdown prompted by the COVID-19 outbreak helped to reduce the air pollution levels in Delhi, Mumbai, Kolkata and Bangalore.

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov - Dec, 2021

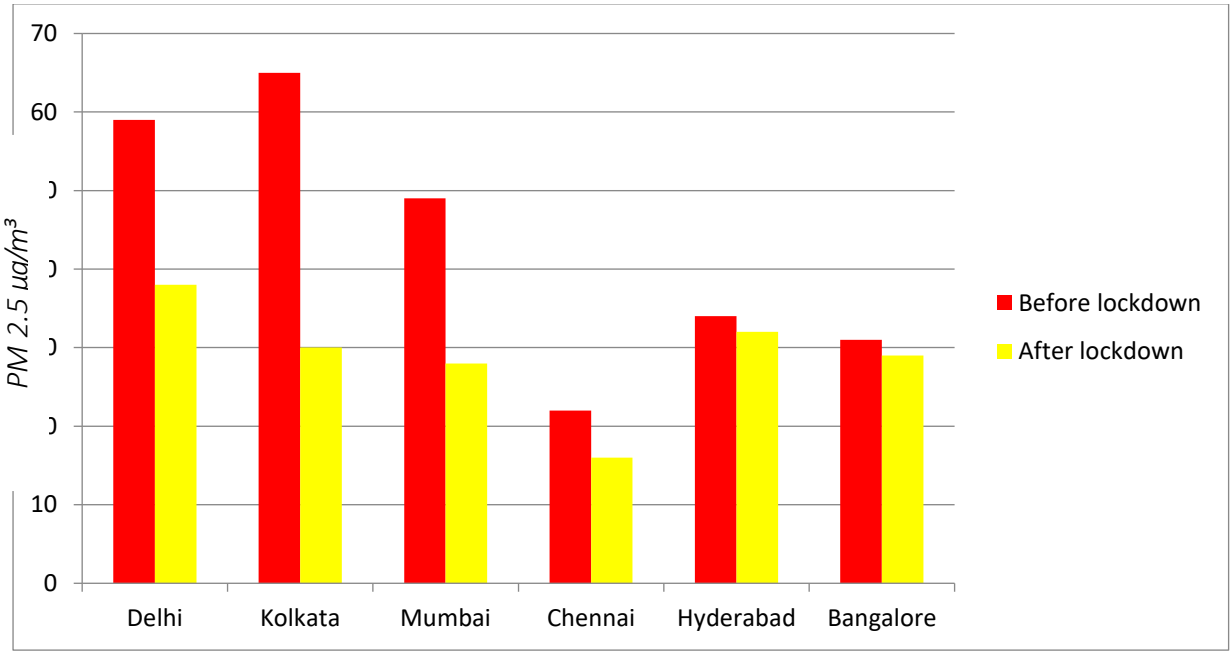

Fig3. The data shows drop in PM2.5 across six cities from March 25 2019 to June 8 2019 (after the lockdown)

Source-US Embassy and Central Pollution Control Board (smartairfilters.com)

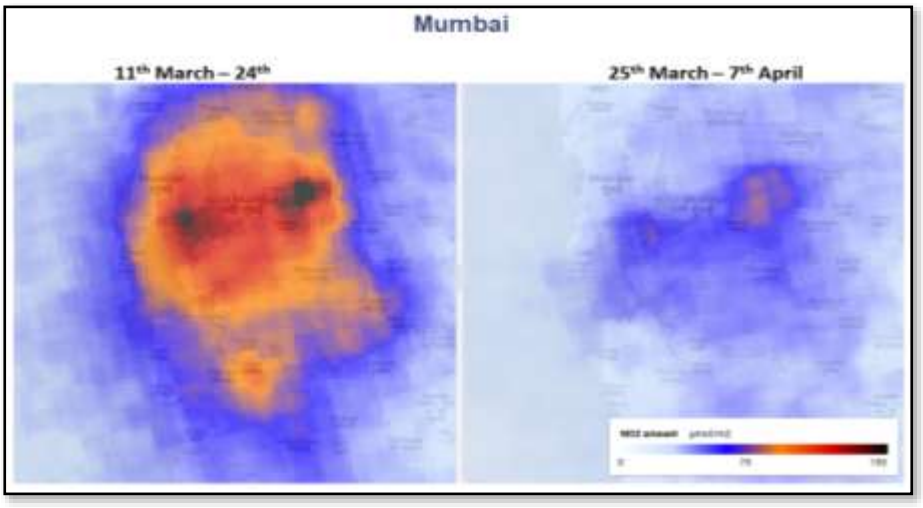

Fig4.The data shows drop in NO_2 level in Mumbai from March 25 2019 to April 7 2019 (after the lockdown).

Source- Sentinel-5P satellite data

Impact of COVID-19 lockdown on Noise pollution:

Noise is any **sound which is unwanted or unpleasant or distracting in nature. High noise levels can interferes with the quality of sleep and concentration. Industrial operation, transportation, construction and demolition activities, public gatherings, mining and domestic appliances are some of the prime sources of noise pollution in urban areas.** Several studies shows that vehicular noise is paramount source of noise pollution in India. Long term exposure of high noise level can cause irritation, annoyance, stress, mental disorders, hypertension, loss of

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov – Dec, 2021

concentration, sleeplessness, etc.[8] The exceeding Ambient Noise Levels at various locations were dwindled after the lockdown, when the high-volume operations and activities declined sharply. The malls, markets business units, educational institutes, stone quarrying and crushing areas were shut and the private and public gatherings were suspended. Owing to all these changes urban noise levels were tailed off.

Fig5.Traffic free streets of Mumbai after lockdown.

Source-Self captured

Impact of COVID-19 lockdown on Wildlife:

Urban wildlife is a broad term that includes animals such as the Small Indian Civet, mongoose, jackal, jungle cat, toddy cat, (Asian Palm Civet), squirrel in addition to a number of amphibians, reptiles and birds, which have learned to coexist with humans. [9]

COVID-19_lockdown maintained limited noise, less human threat and extra space, which assured wildlife everything is hunky-dory. The lockdown also toned-down the episode of road kills so, in this hiatus, wildlife started moving out from their habitat and occupied the streets at first chance. During this period negligible ships were traveling through waterways and the fishing, recreational, religious and tourism activities were limited, as a result even the **marine life was seen** coming closer to the edge of the water with reduced **risk of injuries and killing by the** navigation, commercial shipping **and** uncontrolled anglers

Some of the rare peek into the beauty of wildlife during lockdown:-

1) A Chital was seen crossing the Mysore-Mananthavadi highway in Nagarahole Tiger Reserve, Fig6

2) Critically endangered, Small Indian civet was sighted at Meppayur in Kozhikode, Fig7

3) Olive Ridley Turtles were seen nesting after 7 year, in Odisha's Rushikulya rookery and Gahirmatha Beach, Fig8

4) Navi Mumbai saw thousands of Flamingos settled along the creek, Fig9

Some of the other incidence of wildlife sightings during lockdown- an Asian Antelope was spotted walking freely at Noida, a spotted Deer and Sambhar were sighted several times around the Tirupati temple at Andhra Pradesh, One-horned rhino was spotted into Sonapur at Guwahati and Neelgai was spotted roaming freely outside a mall in Noida at Delhi. Many low-lying tropical areas, which were under threat from climate change and a rise in tourism, were also at comfort.

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov - Dec, 2021

Fig6.Source-downtoearth

Fig7.Source-International Business Times

Fig8.Source-EastMojo News Bureau

Fig9Source-lonelyplanet

It is a lesson in human-wildlife conflict that tells us how we have occupied their spaces — and how animals reclaim them the first chance they get. (10)

Fig7.Before and after picture taken at Thane city depicting, cleaner environment after COVID-19 lockdown

Source-Self captured

ISSN–2277- 8721

EIIRJ

Electronic International Interdisciplinary Research Journal

Volume-X, Issues-VI Nov – Dec, 2021

Methodology:

The overall approach of the study is to seek knowledge about environmental relief due to the COVID-19 lockdown. For this purpose data has been collected from secondary sources like books, journals, newspaper, magazines, reports and some of the articles from the internet.

Conclusion:

This study examined environmental relief due to COVID-19 situation. From the study it can be said that environmental quality improves with lesser anthropogenic activities. Therefore, we should minimize industrial emission, transportation, disturbing noise, removal of animals from the wild, use of non-biodegradable products, etc. The lockdown might have caused temporary positive impact on the environment, once the cityscapes are taken back by humans, this positive change can be lessened but it's a high time for every individual to learn from this. We should rethink and plan holistically for co-existence and better relationship with the nature. It should shape our future approach, our action should be devised in a way that it should not interfere with the nature's way of functioning. We should bear this in mind that we need nature, nature doesn't need us therefore, human-wildlife interaction needs to be improved.

References:

CoronaTracker 2020. http://www.who.int

Studies debunk 'nature is healing' narrative from 2020 lockdowns (mongabay.com)

World Water Week 2021: 5 Most Polluted Rivers In India (news18.com)

Frothy River Yamuna Now Looks Much Cleaner Due to Lockdown (planetcustodian.com)

Analysis: When might the world exceed 1.5C and 2C of global warming? - Carbon Brief

World Environment Day 2020: This Is How The Environment Is Healing During The COVID-19 Lockdown | World Environment Day 2020 (ndtv.com)

Impact of COVID-related lockdowns on environmental and climate change scenarios - PMC (nih.gov)

Ohrstrom E. Sleep disturbance, psycho-social and medical symptoms - a pilot survey among persons exposed to high levels of road traffic noise. *J. Sound Vib.* 1989;133(1):117–128.

Urban wildlife spotting during COVID 19 lockdown, Anusuya Menon, The Hindu, 02 April 2020.

Animals have come home.Covid-19 lockdown gives control back into nature's hands, Unnati Sharma, ThePrint, 4 April 2020.