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Analyzing the Environmental Perspective of COVID-19

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Abstract

Due to the unusual tragedy Corona Virus, the globe has recently undergone alteration. A shockingly high number of lives have been sadly lost as a result of the pandemic. The entire world was placed under a severe lockdown because the governments had previously adopted the required social isolation and quarantine measures to prevent pandemics. The lockdown already in place brought about changes in our lives that had a wide range of effects on our surroundings. According to several investigations and research, Covid-19 has both direct and indirect effects on the environment and the climate. Surgical gloves, sanitizer, and transmission mask prevention devices were employed. It has caused an enormous amount of medical waste to be produced and released into the environment. Lockdowns have been implemented for millions of individuals in order to.

Keywords: Covid-19 pandemic, environment, climate, regulations

Introduction

Covid-19 Global Pandemic

The outbreak of corona virus disease-2019 (COVID-19) first emerged at the end of December 2019, from the seafood market in Wuhan City of China, and declared as an international public health emergency in a couple of weeks by the World Health Organization (WHO, 2020a). It is an infectious disease caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) (Islam *et al*., 2020; Nghiem *et al*., 2020; Wang *et al*., 2020) [1]. Genomic analysis revealed that SARS-CoV-2 is associated with SARS viruses, and bats could be the possible primary source (Chakraborty and Maity, 2020). Although the intermediate source of origin and transfer to humans is not clearly known, the rapid human to human transmission capability of this virus has been established (Hui *et al*., 2020). The transmission of the virus mainly occurred through person-to-person via direct contact or droplets produced by coughing, sneezing and talking (Islam *et al*., 2020; Li *et al*., 2020; Wang *et al*., 2020) [12].

Usually, the symptoms of COVID-19 infection include fever, chills, cough, sore throat, breathing difficulty, fatigue, nausea, vomiting, and diarrhea (Huang *et al*., 2020; Wang *et al*., 2020) [15, 14]. Severe cases can lead to cardiac injury, respiratory failure, acute respiratory distress syndrome, and even death (Holshue, 2020; Wang *et al*., 2020) [15]. Older people along with other underlying medical conditions are at a high risk of mortality (Chen, 2020) [14]. National and international authorities and experts suggest the use of non-pharmaceutical measures like wearing face masks and hand gloves, washing hands with soap, frequent use of antiseptic solution and maintaining social distance (Hui *et al*., 2020; Sajed and Amgain, 2020; WHO, 2020b). To control the spread of the virus and reduce the death rate, government of most of the affected countries initiated to restrict the movement of people. It is found that India restricted the movement of the largest number of people (approximately 1.3 billion) as a preventive measure of COVID-19, which started from March 24, 2020 (Somani *et al*., 2020). Except emergency services (e.g., medical, fire, police, food supply etc.), all other organizations including educational institutions are being closed to encourage people to stay at home. All the public transport services (e.g., bus, truck, train, airplanes etc.) were suspended, with exceptions of the transportation of essential goods and emergency services (Tripathi, 2020). In Italy, the most extensive travel restrictions are placed after the Second World War (Cellini *et al*., 2020). In London, the typically bustling pubs, bars and theatres have been closed, and people have been advised to stay at home. As of April 7, 2020, World Economic Forum reported, nearly 3 billion people are faced with some form of lockdown globally, and movement is being restricted by respective governments to control the COVID-19 infection (WEF, 2020). Overall, the pandemic has caused huge global socio-economic disruption, which directly or indirectly affected the environment like improvement of air and water quality, reduction of noise and restoration of ecology (Chakraborty and Maity, 2020; Somani *et al*., 2020; Saadat *et al*., 2020). Moreover, the increased use of personal protective equipment (PPE) (e.g., face mask, hand gloves, gowns, goggles, face shield etc.), and their haphazard disposal creates environmental burden (Fadare and Okoffo, 2020; Nghiem *et al*., 2020; Singh *et al*., 2020). In these

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circumstances, this study intended to explore the positive and negative environmental consequences of the COVID-19 pandemic, and propose possible strategies as future guideline for environmental sustainability.

Unpredictable Environmental Aspects of COVID-19

People all across the world hurried home when WHO labeled the rapid spread of COVID-19 a pandemic. For instance, Wuhan city in China, which has more than 11 million residents and has been the epicenter of the pandemic, has been shown to have produced 200 tons of clinical trash on a single day, February 24, 2020, which is four times as much as the city's only dedicated facility can incinerate each day. As a result, managing medical waste may become a significant problem very soon. Corona virus decontamination services have already been used by medical health organizations and waste management corporations; governments must act quickly to identify solutions. In the interim, it is everyone's responsibility to dispose of their face masks and other medical waste in accordance with the rules. In the end, only by mutual understanding and willingness will the world be able to defeat this disease. Cleaners, trash collectors, and some other people who must spend a lot of time in public locations are among those who are more at risk of suffering negative consequences from contact with medical wastes. All over the world governments stopped students to go to schools and universities, and a lot of employees were being asked to work from home, only those who are maintaining the cleanliness of cities have to go to their jobs daily, that made them among the most vulnerable groups and one that is highly susceptible to the virus from respiratory shed droplets on the masks. They may also be infected by other pathogens existing in the discarded pieces of garbage, for instance meningitis and Hepatitis B. The masks are made up of plastic based materials that are liquid-resistant and are long lasting after they are discarded, ending up in ocean or landfill. The surgical masks should not be worn longer than one day, discarding them and empty bottles of hand sanitizer along with solid tissue papers are ending up to a huge trail of medical waste in the environment. For instance, in Hong Kong, where COVID-19 infection started in late January/2020 the medical wastes have already polluted the environment. Recently, an environmental NGO Ocean Asia in Soko islands took a survey, according to it, in Hong Kong a large amount of discarded single-use masks washed up to a 100-meter stretch of beach. Gary Stokes the director of the Ocean Asia NGO, who has been monitoring the ocean surface trash, his team has seen a few masks over the years, but now they were spotted all along the high tide line and seashore with new deposits coming with each current. While this recent COVID-19 outbreak, the general public had started wearing surgical masks in order to take precautionary measures. The amount of waste produced will be significant if 7 million individuals suddenly start using one or more masks, single-use gloves, and hand sanitizers every day. Such medical wastes have far-reaching negative effects. When these are left out in the open, both on land and in the ocean, they may be mistaken for food by animals and result in their demise.

Socio Economic Environmental Aspects of COVID-19

Not everyone is impacted by COVID-19 in the same manner. Different socioeconomic classes are impacted by this epidemic in various ways for a number of reasons. It is difficult to comprehend the effects and foresee how this pandemic would affect various socioeconomic groups differently, and reliable data is the key to doing so. These socioeconomic determinants include household size, homeownership status, urban versus rural locations, education level, and lifestyle. They also include population density. Sometimes, a local household inside a single block, regardless of socioeconomic status, can have a profound impact on someone's life. As a result, it can be really unpleasant that sometimes your neighbors are the ones who are suffering the most from COVID-19's impacts (Messner, 2020). The majority of nations are currently experimenting with various strategies to block the disease's spread and to ensure that only a select group of people contract the illness. Based on an analysis of New York demonstrating that impoverished neighborhoods had been severely affected, it was suggested that those with lower socioeconomic level would be more at risk from the spread of the COVID-19. Because COVID-19 transmits through respiratory droplets, it would spread more quickly in settings where there were more people in close proximity, more contacts, and less hygienic conditions. There are various things that make getting the virus more likely.

i). **Population Density:** Close contact among people is very high in urban areas rather than rural areas.

ii). **Household Size:** A large household has a greater probability of bringing the virus inside, while a single person living alone must catch the infection outside the home. Due of the high percentage of households with just one person, social-distancing laws were not enforced very seriously in Sweden. While in Italy, the corona virus appears to have spread more rapidly as a result of the multigenerational housing.

iii). **Social Distancing Level:** social distancing is very effective to stop the spread of the disease, but several reasons that various groups showed dissimilar levels of social distancing:

- Working from home reduced social contact, but was only be available to some people focused in jobs linked to higher socioeconomic status.
- Stay at home regulations proved to be more than a challenge for those who live in smaller and crowded houses or without outside space.
- Some groups were not obedient to social distancing regulations at all.
- Not all who are infected by the COVID-19 reacted severely to it. There were some factors that contribute to the risk of COVID-19 but they were probably felt differently by different socioeconomic groups (Lipsitch *et al*., 2020)
- People who have had medical problems of diabetes, chronic respiratory disease, cardiovascular disease, or even high blood pressure and cancer were at higher risk from corona virus (Giannis *et al*., 2020; Fang *et al*., 2020; Zheng *et al*., 2020).
- WHO has warned the smokers that they might be highly at risk because to the obvious effects of smoking on the lungs and smoking is common in lower socioeconomic groups.
- Different socioeconomic groups did not have access to the same level of healthcare services. This would particularly common in countries like US where the huge number of uninsured population is concentrated in certain industries not to universal health care system.

Therefore, some socioeconomic groups were more likely at risk compared to others. So, logically higher numbers of

deaths were expected from certain parts of society. The post pandemic population looked more different compared to the start point of this outbreak.

Green & Clean Environment-Covid-19

- The world transformed only a few months later. COVID-19 has caused thousands of deaths and hundreds of thousands of infections. The lives of those who are not afflicted have been completely altered by this virus. The largest travel restrictions since the Second World War were being imposed in Italy. The usual crowded clubs, theaters, and other public areas in London were closed, and people were advised to stay at home. Around the world, the planes were being canceled. The majority of people were working remotely, staying at home, and engaging in social distance. Everything was being done to stop the corona virus's spread and lower the death rate. All these adjustments, nevertheless, produced some unanticipated side effects. The abrupt decrease in carbon emissions was brought on by the shutdown of all industries, transportation networks, and other bossiness. Due to actions taken to stop the spread of viruses, air pollution levels in New York have decreased by over 50% since this time last year. As factories were shuttered, individuals were instructed to stay at home, and coal use fell by 40% at China's largest power plants during the latter three months of 2019, data on emissions showed a 25% fall in China at the beginning of the year. In more than 330 cities across China, the amount of clean air was up 11.4% from this time last year, according to the ministry of Ecology and Environment. Satellite photos in Europe reveal a decrease in nitrogen dioxide (NO2) emission over northern Italy, Spain, and the UK. (Ficetola and Rubolini, 2020).
- As a result of the widespread job losses and business closures to stop the virus' spread, this epidemic also put millions of people's subsistence in danger. Stock markets fell and economic activity had come to a halt, along with the reduction in carbon emissions. Instead, it was unquestionably a decarbonized, sustainable economy, which many have been advocating for years. This kind of outbreak, which is killing people, should not be viewed as a means of bringing about environmental change. When the epidemic eventually abates, carbon and pollution emissions will resume as if this period of pristine skies never existed.
- Corona virus was shown to have yet another unanticipated environmental effect in Venice, Italy. The waters in Venice's canals are cleaner than in the past as the corona virus reduced the amount of tourists visiting the city.
- The obvious decrease in coal consumption is one of the other repercussions of the corona virus on the environment. This helped China's air quality to improve. Additionally, there were fewer airborne contaminants including CO2, CO, and nitrous oxides. With so many individuals working from home these days, it is expected that household energy consumption would increase quickly. According to the predicted data, this has increased in the US by between 6 and 8%. Due to the decline in demand, this pandemic would ultimately result in energy savings and could also have an impact on lowering the consumption of polluting fuels in power plants.

Conclusion

Covid-19 pandemic spreads swiftly, and as a result, 6,196,243 individuals have passed away worldwide as a direct result. Many believe there is a silver lining, though, and that the virus's spread has reduced air and water pollution and perhaps even saved lives. However, this pandemic that is claiming lives should not be viewed as a means of bringing about a change for the better in the environment. First off, it's uncertain how long this emission decline will last. To contain the current outbreak, broad measures to lower COVID-19 transmission from person to person are needed. Children, healthcare professionals, and senior citizens are among the most vulnerable populations that have special care and labor applied to save them. For those working in medicine, healthcare, public health, and researchers interested in the corona virus, there are already written guidelines available. A poor immune system that allows viral infections to spread quickly may be the reason why the majority of deaths associated with the corona virus outbreak occurred in elderly individuals. Corona virus epidemiological changes must be monitored while taking into account the likely modes of transmission, subclinical infections, as well as the adaptability, development, and dissemination of the virus among people and potential intermediary animals and reservoirs. There are still some uncertainties that need to be taken into account. The facts of how many persons were tested, how many of them were positive, and whether this range is consistent or changeable are what matter most. However, the Covid situation in China continues to deteriorate in 2022. After 2020, China's COVID crisis is at its worst due to the Omicron epidemic. In several cities, the Zero Covid policy has resulted in lockdowns. According to historical mistakes made by nations worldwide, everything must be handled with extreme caution.

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