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THE IMPACT OF COVID-19 ON THE ENVIRONMENT

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In early 2020, the world has been shocked with the new coronavirus (SARS-CoV2) which has generated an unprecedented impact in most countries of the world. The virus has affected all 213 countries, include countries in Asia, in Europe (mainly in Italy, Spain, France and UK), in Africa and America (mainly in the United States) spread to more than 2 million people, and caused around 130, 000 deaths until categorized as a pandemic by the World Health Organization (World Health Organization, 2020). Currently, there still no viable vaccine and therapy found to stop the virus from spreading except to follow the standard advice which is to avoid close contact with those infected, practise good hygiene and social distancing. In addition, most countries have opted to implement lockdown to stop the spread of COVID-19. This pandemic does not only affect the human health, but also triggers socio-economic and political crises as well as environmental degradation in the infected countries. On the other hand, the lockdown has also created a ground for renewal of the environment, especially with the closure of factories and the reduction of both private and public transportation vehicles used. COVID-19 has increased the air quality in many parts of the world with the lockdown imposed during the pandemic process. This is supported by Chakraborty and Maity (2020), who emphasized that the lockdown has both environmental and economic impact on countries. However, this paper attempt to discuss the impact of COVID-19 to environment in several places around the world conceptually.

Zambrano-Monserrate et.al (2020) found that social distancing adopted in few countries such as China, France, Germany, Italy, and Spain affected the country's main economic activities when power plants and industrial facilities halted their production as well as decreased in the use of vehicles led to reduction in the concentrations of Nitrogen Dioxide (NO_2). Meanwhile, air pollution has dramatically reduced in Europe since governments ordered citizens to stay at home to contain the spread of the new coronavirus. Similar result noticed in China, USA, Italy, Spain, France and several American countries have reported a NO2 reduction ranging between 20 and 30% (Muhammad et al. (2020), Wang and Su (2020) and Dutheil et al. (2020)). While, based on study from K. D Kanniah et.al (2020) found that the pollution level decreased in few countries like Cambodia, Indonesia, Laos, Myanmar, Thailand and Philippines especially in the industrial and urban areas. Additionally, the reduction in NO2 in some countries such as Brunei, Malaysia and Singapore was strongly linked with the countries' effort to restrict the movement of people within and across countries, control the industrial and business activities, as well as enacted aggressive measures, including border closures, prohibiting mass gathering, restricting religious activities and partial lockdowns enforced by the military. Additionally, the measure of social distancing caused many beaches around the world to get cleaned up resulted the reduction in waste generated by tourists who visit the beaches. Likewise, noise levels commonly generated by anthropogenic activities (for instances, industrial or commercial activities) have fallen significantly in some countries such as China, USA, Italy and Spain due to decreasing in the use of private and public transportation, as well as commercial activities (M.H. Shakil et al, 2020). This resulted to decreasing in the use of private and public transportation significantly plus commercial activities have stopped almost entirely. All these changes have caused the noise level to drop considerably in most cities in the world.

Nonetheless, the spreading of COVID-19 has also impacted the environment in negative side. Some cities in USA suspended recycling programs because authorities have been concerned about the risk of spreading the virus in recycling centers. Recycling is a common and effective way to prevent pollution, save energy, and converse natural resources (Varotto and Spagnolli, 2017; Ma et al., 2019). During the implementation of lockdown policy in most countries, consumers tend to increase their demand for online shopping for home delivery. Consequently,

it leads to increase on organic waste generated by household that can be harmful and potentially transmit diseases to others unless appropriately treated. There also has increase in inorganic waste when most of food purchased online is shipped packed. The increasing in waste also occurred for medical waste when hospital in Wuhan produced an average of 240 metric tons of medical waste per day during the outbreak, compared to their previous average of fewer than 50 tons. Meanwhile, there has been increase in garbage for personal protective equipment such as masks and gloves in USA (Calma, 2020).

For a significant decline in environmental degradation, the authorities have to ensure long-term structural change in the countries' economies. This result can be achieved through full support and commitment from all parties; government, firm and household as well. The authorities have to practise safe management of domestic waste. Other than that, the medical waste such as contaminated masks, gloves, used or expired medications, and other items can easily be mixed with domestic waste. Furthermore, these type of waste must be collected by specialized municipal operators or waste management operators (UN, 2020). In nutshell, it concluded that COVID-19 has both positive and negative impact on the environment. Decreasing greenhouse gas emissions (GHG) concentrations during a short period is not a sustainable way to clean up the environment. It will be more challenging to manage the environmental problem if countries neglect the impact of the epidemic on the environment.

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