

Geographical Analysis of Corona Virus COVID 19 – A Biological Disaster

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COVID 19 is a Biological Disaster that occurred at the end of 2019 and is considered to be one of the catastrophic in the history of the earth since human life evolved. It is believed that the earth formed around 4.6 billion years ago, like other planets in the solar system. Since then many forms of life have evolved and were destroyed during the earth's history.

Outbreak: Coronaviruses are a huge family of viruses that lead to severe illness as well as respiratory problems in humans. The recently revealed coronavirus causes COVID-19/ SARS-CoV2 which is also related to Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) that belong to the family of the coronavirus. Last December 2019, corona virus led to a widespread outbreak in Wuhan, China, infecting large number of people and spreading at great speeds within weeks which led to a blow-out across the globe posing a great threat. The deadly virus puts billions of people into lockdown and has been declared as a pandemic by the World Health Organization (WHO).

Diffusion: The deadly virus that has proved to be originated from Wuhan, China started spreading around the planet and putting millions of people at risk. All the countries of the world are well connected with airlines directly or indirectly. Airlines are one of the main transport systems through which tourism, education, health and information technology have been well developed. None of the countries in the world are self-sufficient and independent in production, transportation and distribution, however they rely on each other for goods and services as most of the activities happen either through airlines or through sea routes. To this day the means of airline transportation and sea routes have caused widespread infection of the coronavirus disease all over the earth and have created unprecedented damage to human life. As people travel across the world for many activities through airlines and sea routes they have transmitted the virus.

Geographical area covered: The virus has spread throughout the world that includes, Asia, Europe, North America, South America, Africa, Oceania and many other island countries in the Pacific, Atlantic and Indian Oceans. The virus has already spread to more

than 100 countries globally. Hence, it can be termed as a Global Biological Disaster (GBD).

Confirmed, dead and recovered cases: According to the latest world report released, the virus has claimed 0.56 million fatalities. Around 12.62 million confirmed cases registered so far. Around 7.33 million recovered as on 11th July 2020 around the globe. In India, the virus has killed more than 22,000 people. The confirmed cases registered in India are 8 lakhs, out of which around 5 lakhs recovered as on 11th July 2020. The ten world's topmost affected outbreaks noticed in the USA, Brazil, India, Russia, Peru, Chile, Spain, Mexico, UK, and Iran. World's 70 per cent of confirmed and dead cases have been registered from these countries alone. The rest of the countries in the world share remaining 30 per cent of fatalities and confirmed cases.

Lockdown Experience in India: Whole world has faced lockdown affecting large population and economy. Four lockdown including one curfew has been experienced by 1.35 billion people in India, which has been divided into 28 states and 8 Union Territories. The exact loss of the lockdown will be known once it completes.

Counter-urbanization: The data of population shifting from large cities exhibit that the large masses of labour class supported in metropolitan cities in the world and India have moved back to their respective countryside resulting increase in rural population and decrease in urban population. In India, Mumbai, Delhi, Chennai, Bangalore and Hyderabad have shown sharp decrease in population. This would affect largely on economy of cities as labour class are backbone to major work like construction, cleaning, package and transportation works.

Vulnerable Zones & Social Groups: The virus diffuses seriously in socially deprived areas, heavily populated regions, megacities as well as slum areas due to congestion and poverty. The countries of African Continent, South American Continent and South Asian Continent are more likely to diffuse virus due to poverty, low literacy and high density of mobility. Moreover the virus poses a serious threat to children and elderly people with underlying conditions

like diabetes, cardiovascular diseases, and respiratory diseases like asthma and bronchitis.

Earth's Climate Effect: The countries nearer to the equatorial areas in both the Northern and Southern hemispheres have said to have less effect from spreading of the virus. The countries situated in temperate regions (neither cold nor warm) have more chances of the virus being spread. However, the hemisphere facing the sun experiences summer while the hemisphere facing away experiences winter. During the outbreak, Wuhan, China, that lies in Northern Hemisphere was experiencing winter which helped the virus to thrive faster and diffuse globally, transmitting from one person to another. Mega and metropolitan cities that lie in temperate regions are well connected with each other by airlines. For Example, Wuhan, London, New York, Toronto, San Francisco, Tehran, Delhi, Kolkata, Tokyo, Rome, Paris, Moscow, Ankara, Geneva, Frankfurt, Osaka, Seoul, Karachi, Mexico City, etc. were also experiencing cold season which enhanced the spread of the virus. The equatorial region is least affected due to high temperature prevailing, henceforth, the diffusion of the virus has slowed down causing least fatality cases.

Mass extinctions: The earth has experienced geological hazards since its origin. Fossil studies indicate that there have been mass extinctions, where many kinds of living species were wiped out very quickly. The end of Cretaceous extinction involved dinosaurs, pterosaurs (flying reptiles) and the end of Permian extinction was even more drastic. Fossil evidence suggests that almost four-fifths of life-forms were wiped out. Similar situations have appeared in the beginning of 2020 but the human thought has improved drastically over the period of time. If there had not been any new approaches of lock down, social distancing, frequent hygienic procedures involved in containing the virus, there would have been a slight probability of a mass extinction and there would be dawn of new era on the earth. Although humans have seen natural and cultural disasters like, earthquakes, landslides, avalanches, cyclones, tsunamis, gas emission, nuclear explosions, etc., the geographical areas covered by such natural and cultural disasters were very limited and was not pandemic in nature. However, the corona virus has become a Global Biological Disaster and has spread to all the countries of the world through modern transportation system.

Lessons learnt: The corona virus has already affected and caused huge damage to life and economy, at the same time the virus has taught us many lessons to correct us from the dangers in days to come. Neglecting agriculture and over concentrating towards industries including IT & BT is a great lesson. Over-urbanization and concentration of large economy and industries in cities has incurred a great penalty. Major cities of the world have decreed a total lockdown and the normal lifestyle of the cities have taken a

toll due to the pandemic. Hence, we need to focus more on rural areas and their infrastructure and agriculture development to get more opportunities for villagers to regulate the migration of the rural unemployed population moving towards cities in search of opportunities. The steady and slow growth of agriculture can compensate the loss caused due to this Global Biological Disaster.

Future course of action: The disasters whether physical, cultural or biological have been happening since the evolution of the earth and will continue in the future. We cannot stop them from happening; however we can control them with our past experiences and knowledge that we acquire. We continue to live with them with proper designing, plans and strategies and by creating awareness in the community. We need to rejuvenate the deteriorated air, water, and soil. Remote Sensing technologies and Geographical Information Systems can be used to understand its direction of diffuse, to create vulnerable zones and to construct latest maps showing the effect of the virus. There is an urgent need for environmental improvements to lead a peaceful life. By channelizing natural systems we can escape from the dangers of natural, cultural and biological hazards that are going to happen in the future. The present Global Biological Disaster is unprecedented and similar ones might arise, due to which sufficient relief funds are to be kept aside to face such threats. The present disaster has to be placed at the top of the list in national or global hazards. More inventions, research should be taken up to understand the cause and effect. Preparedness and response of the global disaster needs to be studied thoroughly. For this, more Under Graduate and Post Graduate courses are to be offered by the colleges and universities to study them comprehensively and to manage them most effectively. Hence, leading countries have to come together to fight against the global hazard collectively and prepare plans and strategies for disasters and make the earth a better place to live.

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