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***Short Communication***

# Corona (Covid-19) and Wildlife: Nature finds its own way for treatment and balancing

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## ABSTRACT

Nature is divine. Many times it has provided opportunity of improvement to the people, but due to high ambition people ignored it. Successors have crossed their limit over predecessors and started interfering in the peaceful habitat of wildlife. The nature has found its own way to regulate it. The present article based on secondary and primary research, which tried to focuses on the emerging pattern of natural balancing through Covid-19 pandemic and human interference in nature.

**Key Words:** Balancing, Corona(covid-19), Ecology, God, Nature, Truth, Turtle, Wildlife

## INTRODUCTION

Corona(Covid-19) virus has been trying to engulf the whole world leaving aside the wildlife and marine life and raised several questions for human beings.

(i) Have we ever thought about consequences of unwise decisions?

(ii) Do we have super natural power to control the natural disasters?

(iii) Do we seek of " who bothers?" like mentality?

These are some critical questions that every human being should answer.

Nature has its own rules and regulations to control the excessive amount of pollution and encroachment. In last four decades human dominancy to control the nature and scarce resources has been increased to multiple times in unlawful ways. The exploitation against nature and damage to ecological balance has developed tendency of selfishness among human beings which forced the divine nature to take harsh decisions in the form of Covid-19 to punish the human beings for their misdeeds.

People by heart never considered nature as "God" (truth) who created this beautiful world instead kept on wandering in search of manmade cultural God. Even cultural God also instructed the man to follow the nature and its rule. But who cares? Man is most dangerous animal on this earth. He will keep on hunting without caring nature and ecology, because of fear of not getting food for self and family and unlimited wants.

The question is "why?".

The answer lies in question itself. Man is selfish and therefore he could not accept the regime of nature (real truth). It is said "truth prevails" and due to this nature becomes one barrier on the way of vanity.

Recently many news and articles have tried to focus on the improving ecosystem of marine life, terrestrial life and air quality of some densely populated areas of the earth. Because of Corona pandemic and lockdown, many cities, towns, tourist destinations, recreation sites such as beaches, riverside and forests, are free from noise and irresponsible activities. Wildlife and marine life, both have been found enjoying their life freely without much disturbances. Some migratory birds have been seen returning to their old destinations after two hundred years in England.

By disrupting ecosystems, we have created the conditions that allow animal viruses to cross over into human populations, says Joachim Spangenberg, ecologist and vice-president of the Sustainable Europe Research Institute.

"We are creating this situation, not the animals," Spangenberg told DW news. Deforestation, habitat encroachment As people move further into the territories of wild animals to clear forests, raise livestock, hunt and extract resources, we are increasingly exposed to the pathogens that normally never leave these places and the bodies they inhabit.

"We're getting closer and closer to wild animals," says Yan Xiang, professor of virology at the University of Texas Health Science Center, "and that brings us into contact with these viruses."

As you increase human population density and increase encroachment onto natural habitats, not just by people but by our domesticated animals, you're increasing the rolls on the die," David Hayman, professor of infectious disease ecology at Massey University in New Zealand, told DW news.

But, as well as increasing the likelihood of transfer, ecosystem disruption also has an impact on how many viruses exist in the wild and how they behave.

In the last century, tropical forests, home to around two thirds of the world's living organisms, have been halved. This profound loss of habitat has ripple effects throughout the entire ecosystem, including on the "parts we tend to forget infections," said Hayman.

In some cases, scientists have observed that when animals at the top of the food chain disappear, the animals at the bottom of the food chain, like rats and mice that carry more pathogens, tend to fill that space.

"It's not just about how many species we have in an ecosystem," says Alice Latinne at the Wildlife Conservation Society, "it's about which species."

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"Each species plays a different role in the ecosystem and sometimes, if you just replace one species with another, this can have a huge impact in terms of disease risk. And sometimes we can't predict it," she told DW.

Habitat changes can also force animals and their pathogens to go elsewhere, including areas populated by people.

Latinne draws on the example of the emergence of Nipah virus in Malaysia in the late 1990s, where deforestation drove fruit bats from their forest habitat to mango trees on pig farms. Bats often carry pathogens that don't bother them, but in this case when the pigs came into contact with bat droppings and saliva, they became infected. The pigs then went on to infect farmers.

Evidence linking disruption of ecosystems to increased risk of novel infection transfer is why, Spangenberg says, experts talk about the importance of the "One Health" concept; the idea that the health of animals, the ecosystem and humans are all interlinked, and when one is out of balance, others follow suit.

Air quality levels in the world's major cities improved dramatically in March and April. Air quality improved largely because of a reduction in factory and road traffic emissions of carbon dioxide (CO2), nitrogen oxides (NOx) and related ozone (O3) formation, and particulate matter (PM).

### *Statement of problems*

But not all the environmental consequences of the crisis have been positive. Volumes of unrecyclable waste have risen; severe cuts in agricultural and fishery export levels have led to the generation of large quantities of organic waste; maintenance and monitoring of natural ecosystems have been temporarily halted; and tourism activity to natural areas has ceased.

Local waste problems have emerged as many municipalities have suspended their recycling activities over fears of virus propagation in recycling centres.

Food retailers have resumed using plastic bags at checkout points citing health concerns over consumers' reuse of paper bags. In addition, due to stay-at-home policies, many consumers have increased their consumption of take-away food delivered with single-use packaging.

All these developments have created acute challenges for the waste management industry at a time when they are operating with limited capacity due to the coronavirus crisis.

With the emergence of import restrictions in export markets and sharp declines in the availability of cargo transportation services, the coronavirus crisis has led to increased volumes of un-shippable agricultural and fishery commodities.

Many export-oriented producers produce volumes far too large for output to be absorbed in local markets, and thus organic waste levels have mounted substantially. produce are expected to rise sharply in the crisis and immediate post-crisis months.

Because this waste is left to decay, levels of methane (CH4) emissions, a greenhouse gas, from decaying At its deep root, COVID-19 is an environmental crisis, stemming from a collision between human and natural systems. We humans have been living far beyond the carrying capacity of the planet. This is how we got to today's crisis: deforestation, urban sprawl, and wildlife markets bringing humans so close to wildlife have made it easier for pathogens to jump from animals to people, then ricochet around the world through trade and travel.

Natural ecosystems and protected species are at risk during the coronavirus crisis. In many countries, environmental protection workers at national parks and land and marine conservation zones are required to stay at home in lockdown, leaving these areas unmonitored. Their absence has resulted in a rise of illegal deforestation, fishing and wildlife hunting.

The stoppage of ecotourism activity has also left natural ecosystems at risk of illegal harvesting and encroachment. In addition, as ecotourism is often a major economic mainstay in many destinations, rising unemployment caused by the crisis may lead many households to harvest resources from fragile ecosystems unsustainably as they seek alternative means to provide their households with food and income.

### *Corona virus (Covid-19)*

COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019 (WHO'2020). Million of people have been infected across the world and thousands of death have been occurred due covid-19 pandemic. It is one of the drastic reaction of nature as per Newton's third law.

## RESEARCH METHODOLOGY

The study has taken into account mostly reviews and opinions of various eminent professor, research scholars through literatures, news, interview and discussion published during the Covid-19 pandemic (Oct.'2019-Aug'2020). It also includes data from previously held conferences (Kumar, 2017) and tried to analyse it in context of Corona(Covid-19) pandemic period.

### *Literature review*

There were number of articles which have focused on the covid-19 and discussed about long term impacts on wildlife. But most of them have concentrated on the positive impact of outbreak in corona(covid-19) viral disease.

Paul *et al*. (2020), White-tailed eagles not seen in England for over 240 years have been spotted on the North York Moors after making a remarkable 300-mile trip. The bird, also known as the fish eagle, is the UK's largest bird of prey with a wingspan of up to 2.5 metres. It became extinct here early in the 20th century due to illegal killing. Forestry England and the Roy Dennis Wildlife Foundation are leading a project to reintroduce them, releasing a group on the Isle of Wight last year. They are GPS tracking four young birds making their first big trips. They mostly eat fish but also take birds, rabbits and hares.

Dan (2020) the Coronavirus pandemic, and the consequent blocking of activities that has been implemented in many countries around the world, continue to have positive effects on nature, animals and the air we breathe. It seems that this dramatic situation has brought, in the midst of so many sufferings and deprivations, also a period of "breathing" and well-being to the planet that hosts us and to so many creatures that are

often threatened by the presence of man. In eastern India, what has not been seen for a long time has happened along the coast of the state of Odisha. Sea turtles, animals notoriously vulnerable and threatened by pollution and human activities, took advantage of the quarantine to take back their spaces without being disturbed. Hundreds of thousands of olive tortoises (Olive Ridley, or Lepidochelys olivacea) who managed to reach the shore, on the beach of Rushikulya, to make their nests and lay their eggs. Everything happened in a safer and more protected way than the normal situation in which man, with his fishing and tourism activities, would certainly have disturbed this fascinating natural process. In general, in fact, such an event would attract crowds of tourists eager to attend, with obvious disturbance to the turtles. Besides, there often are the acts of poaching: unscrupulous people stealing eggs from the beach and then reselling them in local markets. This year the splendid sea turtles were able to nest in complete tranquility. Really good news for these animals, that hadn't even landed on Rushikulya beach last year. Nature, with man's less present, is winning the battle. Don't you think this should always be guaranteed to it?

Dan *et al.* (2020), wildlife is used globally on a daily basis, from medicinal plants and edible fungi, to wild meat in Europe, North America, Southern Africa and elsewhere. Wildlife trade enables people in many parts of the world to meet their basic needs and can provide livelihood benefits from harvesting or farming. The pandemic has led to some wildlife conservation organisations to call for blanket bans on wildlife trade on public health grounds. They include bans on commercial trade in wildlife for human consumption and the closure of these markets. More extreme calls from more than 200 organisations include ending the keeping, breeding, domestication and use of all wildlife, which also covers traditional medicine.

Eric (2020), The role of biodiversity in disease prevention has received increased attention of late. In a 2015 "state of knowledge review" of biodiversity and human health by the United Nations, scientists wrote that "an ecological approach to disease, rather than a simplistic 'one germ, one disease' approach, will provide a richer understanding of disease-related outcomes." Recent research has given more support to the idea that biodiversity protection in one part of the world can prevent novel diseases from emerging and leaping into another.

Lee, H. (Bloomberg'2020), there are four critical facets of pandemic prevention, according to Lee Hannah, senior scientist at Conservation International. Three of them make immediate sense against the backdrop of our current emergency: stockpile masks and respirators; have testing infrastructure ready; and ban the global wildlife trade, including the open animal markets where COVID-19 may have first infected people. His fourth recommendation is more grandiose: "Take care of nature."

Richard (2020), a disease ecologist at the Cary Institute of Ecosystem Studies. According to him "We are messing with natural systems in certain ways that can make them much more dangerous than they would otherwise be,", a. "And biodiversity loss is one of those. Climate change is another."

Katherine (2020), Finding the source of this virus will help ensure that another outbreak of this magnitude does not happen again, and many experts are investigating wildlife exploitation as a possible cause.There are also a number of experts who suggest that humanity's destruction of animal habitats is partly to blame. Back in 2008, a team led by chair of ecology and biodiversity at UCL Kate Jones found that 60% of the 335 diseases identified between 1960 and 2004 came from animals. Jones linked these zoonotic diseases to both environmental changes and human behaviors. Ecological disruption, urbanization and population growth were all driving factors bringing humans and livestock closer and closer to the types of wild animals that they had never been exposed to before.

Katie, W. (the conservation'2020), The current available evidence indicates COVID-19 was first transmitted in a wildlife market in Wuhan. The disease likely originated in pangolins, bats, or a combination of both and was then transmitted to humans.While various commentators have blamed pangolins, bats, or even our lack of "mastery" of wildlife, the real cause of this pandemic goes deeper—into the laws, cultures and institutions of most countries. At the root of the problem is a social phenomenon called "human-wildlife conflict." This is when the interests of humans and the needs of wildlife overlap in a negative way. Both the illegal wildlife trade and zoonotic diseases (that is, diseases transmitted from animals to humans) are aspects of human-wildlife conflict. This ubiquitous phenomenon is poorly addressed in both international and domestic laws. And this grave omission has led to disastrous effects on humanity, as COVID-19 has shown.

Many researchers say the coronavirus pandemic underscores the need for a more holistic "one health" approach, which views human, animal and environmental health as interconnected. "There needs to be a cultural shift from a community level up about how we treat animals, our understanding of the dangers and biosecurity risks that we're exposing ourselves to," said Jones,K. (2020), chair of ecology and biodiversity at University College London. "That means leaving ecosystems intact, not destroying them. It means thinking in a more long-term way." The next pandemic is already coming, unless humans change how we interact with wildlife.

"Pandemics as a whole are increasing in frequency," said Daszak, P (2020), a disease ecologist who is president of Eco Health Alliance, a public health organization that studies emerging diseases. "It's not a random act of God. It's caused by what we do to the environment. Bats have a superhero-like immune system that allows them to become "reservoirs to many pathogens that do not impact them but can have a tremendous impact on us if they're able to make the jump," said Thomas Gillespie, a disease ecologist at Emory University.

Shannon Schaller, the Senior Wildlife Biologist for CPW(Colorado Parks and Wildlife) northeast region said that essentially if a park, trail or open space is crowded with people, wildlife will go to a different area that is more quiet. Likewise, if an urban park or open space that used to be very busy is suddenly quiet, and it can provide food, water or shelter, then more and more wildlife will likely start utilizing the area. "As we slow down or even eliminate our activity in certain

areas and they feel the comfort of being able to hunt, eat or rest because we are not there, that's logical".

Helen, B. (The Environmental, BBC'2020), Feasting on exotic game has become a sign of status and wealth in some Asian countries. The desire for wildlife as food or medicine drives a trade in wild animals, some procured illegally, creating a breeding ground for disease and the chance for viruses to leap to humans. All eyes, therefore, are on the soon-to-be amended wildlife protection law - whether and how it would address those loopholes. Prof Pfeiffer, D.(2020), City University of Hong Kong says the real issue is demand. "The people who are providing them, whether that's farmed wild animals or animals from the wild, that's an important source of income for them. Pushing it underground, that's not the solution, so it needs to be a phased process." Prof Cunningham(2020) says if we're to stop another pandemic in the future, we must focus on causes as well as effects. At the root of the problem is the destruction of nature, bringing animals and humans into conflict. "Even in protected forests, the forests are still there, but the wildlife's gone from within them because they have ended up in markets," he says. ".And it's easy to finger point, but it's not just happening in China, it's happening in many other countries and even in the western world.

A rare yellow-coloured turtle was spotted by locals in Sujanpur village of Odisha, 196 kilometers away from capital Bhubaneswar. The turtle is unique and rare and wasn't seen in the area before (Acharya, B.2020, wildlife warden). According to Forest officer Nanda, S.(2020), the turtle was most probably an albino and a similar aberration was recorded few years ago in Sindh.

Ecological degradation increases the overall risk of zoonotic disease outbreaks originating from wildlife, illustrates a new Wildlife Conservation Society report.

The key "ingredients" that accentuate the risk of an emerging infectious disease spillover event are activities (e.g., land conversion, creation of new habitat edges, wildlife trade and consumption, agricultural intensification) in or linked to areas of high biodiversity that elevate contact rates between humans and certain wildlife species.

The Wildlife Conservation Society's Central Africa Team has issued a report on reducing the risk of future emerging infectious disease outbreaks by changing social norms around urban bushmeat consumption and stopping its commercial trade, which they say should be a priority for governments, the international community, and local populations across the region.
This would significantly reduce the risk of zoonotic disease transmission and the possibility of another global pandemic, while simultaneously allowing rural communities without alternatives to hunt for subsistence.

Poorly treated animals are stressed, and stressed animals are more likely to harbour new diseases because their immune systems are compromised. Which means these wet markets, where there are stressed animals in close contact with humans, are the perfect breeding ground for new diseases.

Mrema, M. E. (2020), the acting executive secretary of the UN Convention on Biological Diversity, said countries should move to prevent future pandemics by banning "wet markets" that sell live and dead animals for human consumption, but cautioned against unintended consequences.

Cramming stressed, sick animals into cages together is, in many ways, the "perfect setting" to incubate new pathogens, Spangenberg(2020) said, and "an excellent way to transfer diseases from one species to another." For that reason, many scientists, including Spangenberg, said the world needs, at the very least, to introduce strict regulations for live animal markets.
Nature conservation is not sufficiently integrated into health, development or security initiatives, or their financing. As the benefits of effective nature conservation extend well beyond wildlife and environment, and include health, development and security benefits, so too must the sources of financing.

Tanya Steele, the head of WWF UK, said the post-Brexit trade deals must protect nature: "We cannot be complicit in increasing the risk of the next pandemic.
The WWF report said 60-70% of the new diseases that have emerged in humans since 1990 came from wildlife. Over the same period, 178m hectares of forest have been cleared, equivalent to more than seven times the area of the UK.

***Challenges***

(i) Man- arrogant nature and vanity.
(ii) Dependency on wildlife trade as livelihood option.
(iii) Cultural barrier particularly in terms of ethnic food and indigenous method of treatment to a disease
(iv) Urbanisation due to global trade and shifting patterns.
v) International politics
vi) Desire for luxurious life and dominancy.
vii) Lack of coordination
viii) Poaching and poverty

***Opportunities***

(i) Responsible Wildlife Tourism and Nature based tourism
(ii) Ecotourism and eco-cultural tourism
(iii) Holistic and sustainable development
(iv) Nature and wildlife conservation from primary class
(v) Agri-tourism and alternate business model in village
(vi) Rigid rules and regulations for global wildlife trade
(vii) Nature and wildlife conservation Laws and obligations
(viii) Indigenous knowledge transfer and proper monitoring at local level
(ix) Participatory Forest Management and Developing Environmental Calendar to facilitate both Farming and non-farming activity.
(x) Cooperative based occupational framework for local people to control, monitor and increasing employment

***Recommendations***

For rural hunters, the report emphasizes that communication and reporting systems should be established, with training provided on how to minimize the risk of zoonotic disease transmission. Creating a rural hotline or similar can enable the reporting of animals found

dead in the forest, but an accompanying message must be disseminated to emphasize that 'if you find a carcass in the forest, never touch it, never move it, never bury it, but contact the local authorities and the veterinary service to determine the cause of death' (where such services and expertise are available).

Around the globe each day, there are new reports of cases of COVID-19 confirmed among Indigenous Peoples and Local Communities (IPLCs). Both are particularly vulnerable to health impacts, including COVID-19, because of inadequate access to healthcare and underlying health conditions such as diabetes, and respiratory disease. These are often a consequence of historical colonization and ongoing neglect by government agencies and changes in diets and lifeways associated with more frequent interaction with outsiders.

The dilemma is if they ban the wildlife trade outright and don't provide effective enforcement coupled with demand reduction campaigns, there is the risk of pushing the trade of live animal sales for consumption largely underground, where dangerous conditions for zoonotic transmission could potentially become even worse. Any restrictions or bans in the trade must be enforced effectively and coupled with demand reduction and awareness campaigns around the health risks associated with these behaviors.

China urgently needs to restructure its animal industries for global food safety. "Clean" meat" (meat grown from cells in a laboratory) offers hope – but more on that later.

New bans on high-risk wet markets, wildlife trade and consumption, and stricter regulations on others, will require a scaled up, cooperative and coordinated enforcement effort, including to infiltrate any banned markets or trade that goes underground, which ICCWC (the International Consortium on Combating Wildlife Crime) should support.

So-called "wet markets" selling produce, meat and live animals provide another incubator for the emergence of infectious disease.

Covid-19 has given us yet another reason to protect and preserve nature, we have seen the reverse take place. From the Greater Mekong, to the Amazon and Madagascar, alarming reports have emerged of increased poaching, illegal logging and forest fires, while many countries are engaging in hasty environmental rollbacks and cuts in funding for conservation. This all comes at a time when we need it most. We must embrace a just, healthy and green recovery and kickstart a wider transformation towards a model that values nature as the foundation for a healthy society.

## CONCLUSION

The new corona(covid-19) virus has emerged from the global wildlife trade and would might be able to end the global wildlife trade. It has taught a big lesson to the inhabitants of the earth and advise to control the high ambitions and give honour to the nature. Wildlife have also been given right to exist with full freedom by nature. They should not be treated as food and raw material of producing luxurious items for men. Playing dirty politics around wildlife and blaming each-other for natural calamities and disruptive ecological balance would not help in long term survival.

Government should develop listening ability and must listen to the voice of ecologists, biologists, naturalist, explorers and other conservationist. In hospitality " delay means denied", so suggestions, recommendations and policies need to be implemented on time to avoid any negative impact. Indigenous knowledge transfer is must to save the culture but it should be done in controlled way. Regular counselling of local community would be helpful in achieving the aim of wildlife conservation and natural harmony. Assuming solidarity in this fast moving globalized world is like fooling to yourself. But this world is interconnected. Experience this connectivity. This is the true world wide web (www). Any thought word, action by any one of us has an impact to the totality of universe. As for the law of transformation of energy, the sum total of energy in the universe is constant. It can neither be created nor destroyed and it can only be transformed from one state to another. This applies to all our thoughts, all our words and actions. Save nature and wildlife to safeguard yourself from landing into unwanted disasters.

### *Limitations*

Any generalized idea is not right due to variations in size, goal, changing perceptions and region and literatures followed.

### *Direction for further research*

The further research must direct itself for conducting such investigations. This will make the study more meaningful to find linkage more effectively.

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