

Exploration of Sustainable Wildlife Habitat Conservation for Preventing Future Pandemics

Onyeizugbe, Uzoamaka Rita¹; Ihekwoaba, Ebelechukwu Nwaoma²; Danjuma, David³

^{1&3}Department of Environmental Management, Nnamdi Azikiwe University, Awka

²Department of Environmental Health Nnamdi Azikiwe University Awka

DOI: <https://doi.org/10.51584/IJRIAS.2024.908003>

Received: 27 June 2024; Accepted: 17 July 2024; Published: 26 August 2024

ABSTRACT

This paper explored wildlife habitat conservation as a tool for containing animal to human transmission of virus. Available statistics shows that infectious viral diseases known to have troubled man have always been transmitted to humans through animals, hence the need for this paper. The objectives of this paper are: to review the origin of COVID-19 pandemic; to discuss wildlife conservation as a tool for containing animal to human spread of virus diseases. Observation and review of related literature were the methods used. This paper reveals that COVID-19 originated in an animal market located in Wuhan, Hubei Province of China through human interaction with pangolin which is primary carriers of the virus. This transmission was attributed to illegal poaching of pangolin that is already endangered species. Wildlife habitat conservation was further identified as a tool for preventing future pandemics. Human encroachment upon wildlife habitat has resulted to several infectious diseases that have killed many persons. Some suggestions were made to enhance wildlife conservation, they include, stopping all wildlife trade by permanently closing markets where wildlife are sold; rigorous enforcement of laws, regulation and international treaties on wildlife and enactment of new effective policies as well; provision of sustainably produced poultry, fish, invertebrates and plant protein as source of protein instead of seeking wildlife; good funding and support should be provided for agencies in-charge of protecting wildlife; education and awareness should also be created in order to motivate people to voluntarily renege from wildlife poaching. There is need for government and wildlife conservation agencies to step up efforts at conserving wildlife through implementation of these recommendations.

Key Words: Sustainability, Wildlife Habitat, Conservation, Prevention, and Pandemic

INTRODUCTION

In the past, animal pathogens have periodically infected humans with various infectious diseases such as Ebola virus disease, Marburg, Anthrax, Tularemia, West Nile fever and recently COVID-19. These animal pathogens are usually wildlife that have not established themselves among human population (WHO 2020). The expanding trade in wildlife is unarguably among the risk factors for emergence of zoonotic diseases (Hilderink and Winter, 2021). Despite various policies on Wildlife Conservation, human interaction with wildlife still abound. The recent COVID-19 pandemic underlines that wildlife policies are deficient and an immediate review of wildlife habitat conservation is imperative.

COVID-19 pandemic has changed the world within a few months. Thousands of lives have been lost, businesses shot down, jobs lost and everyone lives in fear of contracting the virus (Cable Network News 2020). The rapid spread capacity of the virus led to total lock-down and movement restrictions in many nations of the world (Cable Network News, 2020). This resulted to economic hardship which has destabilised many lives and thrown many nations into economic recession (British Broadcasting Cooperation 2020). Countries have recorded travel restrictions that have never been experienced since World War II (Aljazeera Cable News 2020). A lot of people

became stalked in foreign lands. Virtually every sector was affected by the pandemic ranging from agriculture, education, judicial system, religious organisations, security, banking sector, small and medium enterprise, employment, aviation, health, transportation among others (British Broadcasting Corporation 2020).

The COVID-19 outbreak has posed enormous economic, health, social and environmental challenge to the entire human race. It has severely disrupted global economy. The adverse effect of COVID-19 outbreak is still on-going with the economy of several Nations still struggling to recover from the COVID-19 impact. However, there are other positive sides to the pandemic which are, family bonding due to the lock down (amongst couples, parents and children, siblings); global peace (many nations where occupied with the struggle to manage and prevent spreading of COVID-19 which includes sharing ideas and supporting each other with medical equipment and finance, thus did not think of their grudges against one another); healing of the earth and Ozone layer.

This paper is of the opinion that wildlife conservation is a sure way to preventing future pandemics and will review the origin of COVID-19 Pandemic; discuss wildlife habitat conservation as a tool for containing animal to human spread of virus. Observation and review of related literature were the methods used for this paper.

A Review of the Origin of COVID-19

In December 2019, a new infectious respiratory disease emerged in Wuhan, Hubei Province, China and was named by World Health Organisation (WHO) as COVID-19 (Corona Virus Disease 2019). The disease has spread across many regions of the world. WHO declared it a pandemic on March 11th 2020. It is imperative to note that COVID-19 just emerged and research is still on going to ascertain the entire nature of the virus. However, according to Shen Yongi and Xiao Lihua ,2020, COVID-19 originated from pangolin. They noted that Pangolins are the primary carriers from where it was transmitted into humans and evolved in people through interactions. Pangolins are of high demand due to their meat and alleged medicinal properties of their scales (International Union for Conservation of Nature 2020). Though pangolin was not listed on the inventory of items being sold in Wuhan China, this omission could be deliberate as it is illegal to sell pangolin.

COVID-19 must have gotten to humans through contact with an animal that is a carrier of the virus. Historically, many infectious diseases that affect man have been linked to an animal transmission, for example, HIV from monkeys, Ebola from chimpanzee and bats, Tuberculosis from cattle, Flu from birds. According to WHO report 2020, 75% of all new infectious diseases are Zoonotic (from animal to human transmission). Humans in a bid to meet their selfish desire encroach upon natural biodiversity thereby bringing an upset or turmoil in the whole balance of nature, just like human encroachment upon wildlife is the major cause of this pandemic as has been the case in several other environmental problems being faced by man. Therefore, the relationship between man and his environment (especially biodiversity) has a great role to play in preventing future pandemics.

Shen Yongyi and Xiao Lihua 2020 of South China Agricultural University in Guangzhou established that they might have identified the pangolin as the source of COVID-19. The two researchers used genomic sequencing to compare the DNA of the new COVID-19 in humans with that in animals and found a 99% match with pangolin. This is an interesting observation. How then did the strain of COVID-19 in pangolin get into humans? Did it fly from pangolin into humans? It must have been contracted through human dealings on pangolin

Selling of Pangolin is illegal in China and attracts 10 years jail term. This explains the reason it was not listed in the inventory of items sold in Wuhan sea food and animal market in China even when an eye witness confirmed sales of the animal the market (Shen Yongi and Xiao Lihua 2020). However, the animal is a victim of illegal trafficking- it is described as the most poached and trafficked mammal in the world by researchers. They are endangered species. Evidence points to the fact that illegal interaction between humans and pangolin through poaching and trafficking resulted to the severe pandemic that has changed the entire normal way of life in the whole world.

Wildlife Conservation as a Tool for Containing Animal to Human Spread of Virus

Human lifestyle and relationship with nature undermines the ecosystem, well-being of man and general balance of nature. The World Health Organization 2020 attributes 23% of all deaths to unhealthy environment. Human undue interference with natural environment has continued to put man at risk and increased vulnerability to diseases and environmental hazard and disaster.

A close observation of the origin of COVID-19 according to Shengi and Xiao 2020 shows that human encroachment upon the lives of pangolin resulted to COVID-19 that killed several humans, affected social life and world economy adversely.

God created the World and every species of living thing and non-living thing playing its role for maintenance of life on earth, trouble started when humans began to encroach or exploit other species of life. One example is the COVID-19 pandemic that is ravaging the world still. COVID-19 are meant to exist in pangolin without causing any harm (it must be playing a role in normal body function of pangolin), trouble started when humans started to traffic and deal with pangolin despite bans placed on the trade of the animal, it was transmitted to man and began to spread as a disease from one man to another thereby causing harm and deaths to humans because the human body is not the natural abode for the virus. This situation would have been prevented if humans were not illegally poaching pangolin. This point to the fact that conservation of wildlife is a sure way to prevent future pandemic. Conservation of wildlife is imperative if diseases like COVID-19 must be prevented. There is need to publicize this 'thought' by creating awareness, if people begin to understand this and other dangers of associating with wildlife, everyone will begin to voluntarily renege from interfering in the lives of wild animals and other biological life. Trafficking already endangered pangolin adds no value to human life rather its detriments are rather costly. Whoever that must have contracted the virus first in the process of dealing pangolin can equally survive without dealing on the animal. There are several friendly alternatives that would have been an option. Now, that singular act has thrown the whole world into struggling to save life of its citizens. The pandemic has affected the economy, and normal way of life of many nations that infectious disease experts are of the opinion that life can no longer return to normal again except there is total eradication of the COVID-19 through vaccination of every human being on earth. The question now remains, would it not have been better if humans remained in their domain of existence instead of interfering in the domain of wildlife thereby contracting the deadly virus that has resulted to lock-down in many nations and threatening human life world over

According to Hanson, (1997) 'Many of the problems facing people are a result of human modification of natural conditions'. Hanson further stated that 'To mitigate future damages, the solution was not to continue modifying natural conditions, but rather to modify human way of life with regards to natural conditions.

In other words, much of the problems facing man in today's world are a result of human trying to satisfy his wants by interfering with biodiversity which eventually backfires with so many negative side effects as the case may be. Humans should begin to adjust their lives to accommodate nature without intruding. People trade on pangolin because of its meat and medicinal value, one can equally let pangolin be and consume other sustainably produced poultry or fish for meat and also find alternative to its medicinal value like medicinal herbs. This singular act would have saved the world from this pandemic that has destabilised the world and killed thousands of people.

In other words, the relationship between people and their environment has a key role to play in preventing future pandemics. This relationship can be controlled by promoting wildlife/biodiversity conservation. The foundation of this paper is that it would be necessary for humans to adjust their activities on wildlife and biodiversity at large if vulnerability to diseases and pandemics are to be reduced. This adjustment can be achieved if wildlife conservation is taken seriously. Ignorance, quest to satisfy selfish desires has led humans to over exploitation of wildlife and biodiversity, this act resulted to 2020 pandemic and the only sure way to prevent future pandemics is through adequate wildlife conservation. This has been illustrated in fig. 1 with the four stages categorized as input, through put, output and preventive measures.

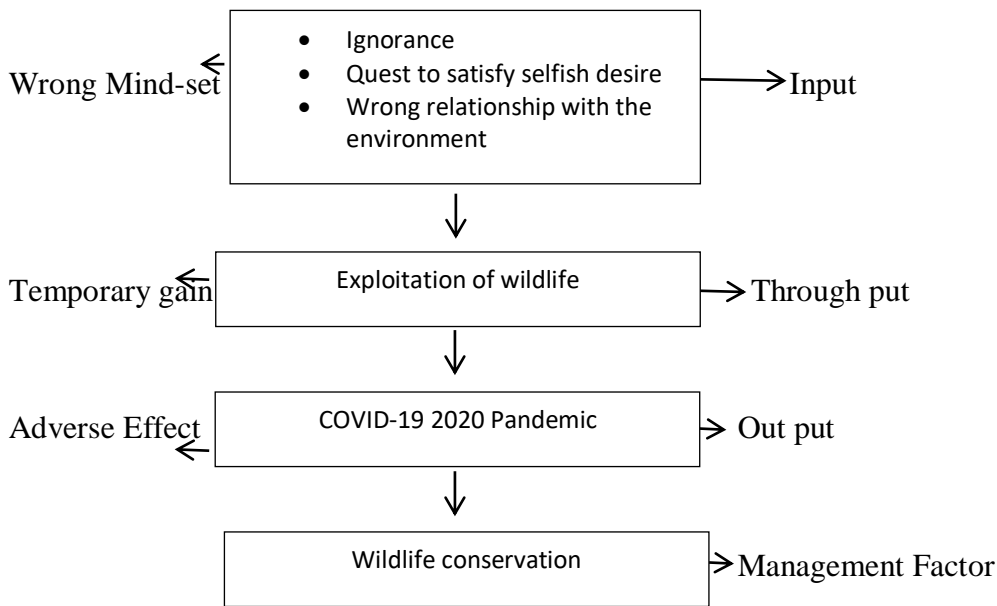


Figure 1: Humans as a key player in COVID-19 Pandemics and preventing future occurrence

By altering natural wildlife habitats, humans have reduced the natural buffer zone that was supposed to separate man from wildlife and created opportunities for diseases like COVID-19 to spill over from wild animals to humans. Diseases originating in one country can breakout in another country within space of hours.

CONCLUSION

If there is no serious and immediate behaviour change through wildlife conservation practise, pandemics will occur frequently and spread more rapidly leaving greater economic, social and environmental impact including loss of lives.

COVID-19 has shown that the way we relate to wildlife matters a lot. Man is one out of the estimated 8 million species on earth and is a key player in an intricate, delicately balanced web of life. Damage to one part of the web upsets the balance and affects the whole system. Therefore COVID-19 pandemic is an opportunity to plan a better recovery and build a better future. It's time to rethink human relationship with nature critically and for everyone to make decisions that put nature in the centre. Protecting and promoting the world's ecosystem and all their biodiversity is a key to building a better future.

RECOMMENDATIONS

To effectively conserve wildlife and reduce the risk of future pandemics such as COVID-19 significantly,

1. All commercial trade in wildlife must be stopped. Governments across the globe have to close down all such markets that commercially trade on wildlife permanently.
2. Rigorous enforcement of existing laws, regulation and international treaties that deal with wildlife trade and market is critical and necessary. New and effective policies on protected species, illegal practices and wildlife trafficking from a conservation perspective are vital now.
3. There is need to make sustainably produced poultry, fish, invertebrates, and plant protein accessible and affordable to families, this will ensure that families have a reliable source of protein rich food; this will reduce seeking for wildlife thereby reducing the risk of exposure to novel zoonotic pathogens
4. Government should properly provide resource (staff, budgets, equipment and technology) for relevant agencies and hold them accountable to take effective actions to end wildlife trade to the same extent as done with drug trafficking. Wildlife crime should no longer be considered as a low-priority by enforcement and judicial agencies. A new paradigm is important if we are to avoid pandemic in the future.

5. There is need to create massive awareness on the dangers of interfering with wildlife habitat. When a society begins to understand the dangers of intruding upon wildlife habitat and nature, they will begin to voluntarily renege from doing so, having fully understood that the action is for their own safety.
6. In view of the positive effects of the total lock down which is healing of the earth and ozone layer, this paper is also recommending total one month lock down once every year world over, it can be called “holidays for all” to enable the earth rejuvenate.
7. To ensure that pandemics do not happen in the future, conservation of wildlife is key. Protecting wildlife habitats, restoring ecosystem integrity are vital to pursuing prevention of zoonotic diseases like COVID-19.

REFERENCE

1. Aljazeera English(2020). Fact Based In-depth News Aljazeera [Online] Available at <<http://www.aljazeera.com/>> Accessed on 29 June 2020.
2. Bhimraj A, Morgan R. L., Hirsch Shumaker A. (2023). Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. June 2023. Accessed online on 10th July 2024
3. British Broadcasting Cooperation (2020). Update on COVID-19 BBC World News bbc.com/news. <https://www.bbc.co.uk> 26th July 2020
4. Cable News Network (2020). COVID-19 Update-CNN.com”CNN. Cable News Network, n.d.web 23 July 2020.
5. Hanson, S. (1997). Ten Geographic Ideas that Changed the World. New Brunswick, Newjersey Rutgers University Press.
6. Hilderint, M. H., Winter J. I.. The Role of Wildlife Trade and Conservation Initiatives in the Emergence of Zoonotic Diseases. In Science Direct. Volume 7, Issue 7, July 2021
7. International Union for Conservation of Nature (2020). The Geneva Environment Dialogue- Special COVID-19 Series. Accessed On-line at www.genevaenvironmentnetwork.org on 29th May 2020.
8. Shen Yongyi and Xiao Lihua (2020). Isolation and Characterization of 2019- nCoV -Like Corona-Virus from Malayan Pangolin. bioRxiv Pre-printer Server for Biology, South China Agricultural University China.
9. World Health Organisation (2020). Global Research on COVID-19. Accessed on-line at <https://www.who.net> on 29th May 2020.
10. World Health Organisation (2023). Clinical Management of COVID-19: Living Guideline, 18th August 2023. Accessed online at <https://www.who.net> on 10th July 2024
11. World Health Organisation (2023). Therapeutics and COVID-19: Living Guideline. November 2023. Accessed online at <https://www.who.net> on 10th July 2024