

ILLEGAL WILDLIFE TRADE: A CONDUIT THROUGH WHICH CORONA VIRUS IS TRANSMITTED TO HUMAN

by Atty. Theresa M, Tenazas

The wildlife of the Philippines includes a significant number of endemic animal and plant species. Out of the country's 52,177 species, 67% of which are endemic ¹ and 418 of them are listed as threatened by the Red List of the International Union for the Conservation of Nature and Natural Resources as of year 2000.² However, populations are increasingly threatened by high levels of hunting for domestic and international wildlife trade and by habitat loss and destruction, deforestation, massive land conversion and climate change. While hunting animals from the wild are source of food for some communities in the Philippines as a cultural practice especially by the Indigenous Peoples for generations, the scale of this practice was relatively small and observed to be limited to subsistence consumption in the early years.

However, years passed and trend and behavior changed in the Philippines and around the world. Wildlife, both live and dead, began to be traded in markets and gained momentum in the 80's and years thereafter, when market for these wildlife species started its high demand but are no longer related to subsistence consumption. Nowadays, wildlife is not only sold for primarily for food, but also for traditional medicine, pets and ornaments and now to supply domestic and global demand. The illegal trade of wildlife, confiscation and seizure, enforcement and prosecution are being documented, reported and monitored, not only in the Philippines but globally, in order to subvert the supply chain of this illegal activity because today " the criminal market spans the planet which make wildlife trafficking a transnational organized crime", the **"4th largest transnational criminal activity in the world next to drugs trafficking, human trafficking and counterfeit goods trafficking"**³

As you are aware, the Covid-19 outbreak has caused pervasive panic and turmoil to all nations and their citizens, including the Philippines, which has **104.9 million**⁴, in regards to the risks to individual health, the considerable impact to the economy and public health and in finding a solution on how to control this emerging threat. The

¹ www.fao.org Philippines

² Wildlife of the Philippines, en.m wikipedia

³ WWF, TRAFFIC

⁴ 2017, World Bank

Philippines in its utmost objective to prevent the quick spread of COVID-19, resorted to lockdown of the entire island of Luzon on March 17, 2020.

This corona virus pandemic is not new to us. **“Looking back at recent history, several pandemics in the last twenty years showed clear links with virus reservoirs in wildlife populations. The SARS outbreak in 2002, which infected more than 8,000 people and resulted in 774 deaths in 37 countries, came from a novel betacoronavirus sourced from bats through masked palm civets as the intermediate host before reaching humans. The Middle East respiratory syndrome (MERS) outbreak in 2012, which infected 2,494 and cost 858 human lives, also came from another coronavirus passing through dromedary camels to humans¹. The very recent bout of African Swine Fever (ASF) sweeping through China, Vietnam and nine other countries, has caused severe economic losses and is attributed to wild African suids². By the end of 2019, all 63 provinces in Vietnam were affected by ASF with over five million pigs euthanized”⁵.**

The Philippines as well had its own outbreak of diseases transmitted by animals. “In 2008–09, evidence of Reston ebolavirus (RESTV) infection was found in domestic pigs and pig workers in the Philippines.⁶ The Philippine government, with the help Food and Agriculture Organization of the United Nations, assembled a multi-disciplinary and multi-institutional team to investigate Philippine bats as the possible reservoir of RESTV. The Team undertook surveillance of bat populations at multiple locations using **both serology and molecular assays⁷** and a **total of 464 bats from 21 species were sampled⁸** found **“both molecular and serologic evidence of RESTV infection in multiple bat species.”⁹** In the said Virology Journal published by Sarah Jane, et.al. it concluded that **“The findings suggest that ebolavirus infection is taxonomically widespread in Philippine bats, but the evident low prevalence and low viral load warrants expanded surveillance to elaborate the findings, and more broadly, to determine the taxonomic and geographic occurrence of ebolaviruses in bats in the region”.**

In 2009, the World Health Organization reported that” six (6) out of a total of 141 people have tested positive of Ebola Reston antibodies in the Philippines since testing

⁵ Open Letter by Vietnamese and International to the Prime Minister of Vietnam , February 2020 citing African Swine Fever. UN Food and Agriculture Organization, 2020. <http://www.fao.org/ag/againfo/programmes/en/empres/ASF/index.html>

⁶ Molecular evidence of Ebola Reston virus infection in Philippine bats, Virology Journal (2015) Sarah I. Jayme, et.al

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

began in December 2008 and all six people who were antibody positive reported occupational exposure to pigs”¹⁰.

Thereafter in 2014, another zoonotic disease outbreak known as Henipavirus hit the southern part of the Philippines. Based on scientific study, “Henipaviruses belong to a genus of recently emerging viruses within the family *Paramyxoviridae* and include 2 zoonotic members: Hendra virus (HeV) and Nipah virus (NiV). In this Journal entitled “Outbreak of Henipavirus Infection, Philippines” where it reported the investigation conducted by the Philippine government through Philippine Department of Health, Department of Agriculture, and the World Health Organization it mentioned that “**the natural reservoir of both viruses is pteropid bats, which harbor the viruses but do not show clinical illness . That “ Virus transmission from bats to domestic animals is thought to be through pasture or feed contaminated by bat urine, feces, or other excretions. “Although the source of the horse infections is unclear, on the basis of the known ecology of henipaviruses, the most likely source is fruit bats (family Pteropodidae)**”¹¹

The Journal went further reporting that “the most common route of virus transmission to humans was direct exposure to infected horses, contact with contaminated body fluids during slaughtering of sick horses, and/or consumption of undercooked meat from infected horses. **However, for at least 5 cases, clinical and epidemiologic evidence suggest direct human-to-human virus transmission.** No protective equipment was used by those who cared for case-patients in the home, and health care workers used gloves and a face mask but not eye protection. **The evidence of human-to-human transmission in this outbreak confirms the need for preventative measures in home care and health care settings”.**

In the recent global pandemonium about COVID-19, many research group have analyzed that wildlife trade can facilitate zoonotic disease transmission and represents a threat to human health. Now, after the outbreak of the novel corona virus in December 2019, the whole world is not only combatting illegal wildlife trade but also fighting against an epidemic, a virus known as **2019-nCoV or Novel Corona Virus** ¹² that “emerged in Wuhan, Hubei Province of China ”¹³ through its permitted, poorly regulated, open market selling of dead and live wildlife and their meat.

¹⁰ World Health Organization, 31 March 2009

¹¹ Ibid.

¹² <http://www.who.int> ,30 January 2020

¹³ **2019 Novel Coronavirus of Pneumonia in Wuhan, China: Emerging attack and Management strategies, Clinical and Translational Medicine, She et al.**

In a report published by the World Health Organization dated February 21, 2020, it was reported **that the most likely “ecological reservoir” of the novel coronavirus is bats**. While there are no existing data at the Biodiversity Management Bureau or available record of study or research directly linking human consumption, trade of wildlife and open market sale of wildlife and its raw meat have caused epidemic in the Philippines, there are already scientific and research studies that were made to prove that **“coronaviruses are a zoonotic disease, meaning, they are transmitted between animals and people which means that it can be transmitted from an animal host to humans which were posed by wildlife trade.”**¹⁴

Based on the 2016 scientific study, research and survey entitled **“ Wildlife Trade and Human Health in Lao PDR : An Assessment of the Zoonotic Disease Risk in Markets”** it concluded that **“the data presented on the volume and species of wildlife and biosafety found in markets in Lao PDR demonstrate that there are significant opportunities in certain markets for wildlife, and any zoonotic pathogens they carry, to come into contact with humans. The large number of individual wild animals from high risk taxa for carrying zoonoses, poor biosafety and potential for disease spread through the movement of regional or international market visitors are all risk factors for the occurrence of a disease emergence event similar to the public health catastrophes of SARS and EVD”**

However, based in the above study, it still depends on the nature of the pathogen carried by the wildlife and the scale of trade. Also, as per report of Wildlife Conservation Society, the **“increasing rate of wildlife trade, trafficking, and poaching tend to likely increase the spread of global epidemics.”**¹⁵ In its publication it mentioned that **“Emerging infectious diseases (EIDs) and particularly zoonotic ones are a significant and growing threat to global health, global economy and global security. Analyses of their trends suggest that their frequency and economic impact are on the rise”**. The conditions of so-called **“wet markets”** are ideal for incubating new diseases and bolster their transmission”¹⁶

Irrespective, it appears clear that transmission has occurred via close contact between humans and wildlife as part of ongoing illegal wildlife trade. The conditions of

¹⁴ **Wildlife Trade and Human Health in Lao PDR: An Assessment of the Zoonotic Disease Risk in Markets, Zoe F. Greateorex, et.,al**

¹⁵ **Covid 19: The Wildlife Trade and Human Disease, Wildlife Conservation Society**

¹⁶**Emerging Zoonoses and the Risk Posed by Wildlife Market, Wildlife Conservation Society, March 16, 2020**

these markets are ideal for incubating new diseases and bolster their transmission. They form one of the most detrimental bridges created by man over the natural barriers that previously separated humans and wild animals. Thus, **“Coming into close contact with wildlife – including their body parts and excreta – poses a risk of spillover of the pathogens they host, to which we humans might be susceptible.”**¹⁷

The universe of zoonotic agents is so vast.¹⁸ Some are identified in this millennial period but most of them are still unknown and unpredictable. As we are now faced with extremely huge problem of preventing its spread if not putting an end to NCoV-19, the Biodiversity Management Bureau firmly believes that limiting the chances of contact between human and wild animals is the most effective way to reduce the risk of emergence of new zoonotic diseases. This is coherent to both scientific and legal parameters why illegal trade should be punished with more stringent effect, in terms of imprisonment and fines.

“Limiting interaction between wildlife and humans through strong enforcement against illegal wildlife trade and wildlife markets is the most effective approach to mitigating future risk associated with transmission of disease between animals and humans.”¹⁹

The Philippine is regarded as one of one of the 17 mega-diversity countries in the world because of its exceptionally rich diverse and endemic species thus, in order to conserve and sustainably manage country’s biodiversity and to prevent species extinction, the DENR through the Biodiversity Management Bureau has long been enforcing Republic Act 9147 and is totally prohibiting the collection, hunting and possession of wildlife, its by products and derivatives including trading and transporting. We are also working on the amendment of the aforesaid law to impose the most stringent penalty of 20 years imprisonment as the maximum penalty for wildlife trafficking. This effort to amend is to ensure effective punishment of wildlife crimes to act as a significant disincentive, together with our incessant effort to regulate import and export of wildlife trade to see to it that they strictly comply with the permitting system of CITES Convention and the DENR to prevent illegal trade of wildlife.

We also find indispensable the continued and intensified partnership with different law enforcement agencies in the country that man airports and seaports and other borders to prevent wildlife crimes like the Wildlife Traffic Monitoring Units (WTMU) and to include other cross collaborative activities. On the capacity building, there are about 12 workshops that are lined up for 2020 such as, Online Trade

¹⁷ Ibid.

¹⁸ Covid 19: The Wildlife Trade and Human Disease, Wildlife Conservation Society

¹⁹ Open Letter by Vietnamese People

Investigation, Financial Investigation on Wildlife Crimes Advance Prosecutor and Enforcement Workshop, to mention a few which are to be conducted in partnership with UNODC, USAID Protect Wildlife Project, BMB-ADB/GEF IWT Project and the United States Department of Justice Office of Overseas Prosecutorial Development, Assistance, & Training Counter Wildlife Trafficking.. The target participants include, DENR Regional Law Enforcement Units, DENR Lawyers, DOJ, NBI, BOC, among others, all intended to abate illegal wildlife trade. The Bureau has also strategized conservation of priority species like dugong, marine turtle, and tamaraw by coming up with a 10 year management and conservation plan, alongside with other priority species which have already an existing plan, to address the need to manage, protect and conserve their population and to prevent their extinction and assure the sustainable use of wildlife resources.

Lastly, our effort will also include escalation of our Community Education and Public Awareness campaign to raise awareness of the risks of wildlife consumption to public health by issuing Public Advisory, publications and newsletter with the end in view of furthering the enforcement efforts against trafficking of wildlife which has become the linchpin to the transfer of zoonotic diseases to human, and in this current time, from human to human.