AN OUNCE OF PREVENTION: APPLYING THE FRAMEWORK GOVERNING THE DUTY TO PREVENT TRANSBOUNDARY HARM TO THE COVID-19 PANDEMIC*

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ABSTRACT

This Note discusses the applicability of the legal framework governing the duty to prevent transboundary harm to zoonotic diseases emerging from wildlife trade activities and the operation of wild animal wet markets, and its possible applications. While legal experts have discussed the possibility of holding China accountable for the spread of COVID-19, among others, under domestic tort law and under the World Health Organization rules and regulations, not as much discussion is being done with regard to international environmental law—in particular, the duty to prevent transboundary harm. In this Note, the author argues that the framework governing the duty to prevent transboundary harm is applicable to the spread of zoonotic diseases emerging from wildlife trade activities and the operation of wild animal wet markets. Further, the author argues that as a result of its applicability, the issue may be brought to the International Court of Justice, and China may be ordered to cease its wildlife trade

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activities and give reparations for the damage caused by the COVID-19 pandemic. Furthermore, the author recommends the conclusion of a multilateral treaty regulating wildlife trade activities and wild animal wet market operations worldwide in order to prevent the future emergence of zoonotic disease as a prospective application.

"History repeats itself,
first as tragedy, second as farce."
—Karl Marx[1]

I. INTRODUCTION

Since the start of the Coronavirus disease 2019 (COVID-19) pandemic, there has been an ongoing discussion about the liability of the government of the People's Republic of China (China)—particularly, to what extent and under what grounds they can be held accountable for the COVID-19 pandemic. Various academics and legal experts have looked into the possibility of pursuing litigation. Included among the commonly discussed means and mechanisms of holding China accountable are resort to domestic courts and international courts with causes of action arising from the World Health Organization ("WHO") International Health Regulations,[2] human rights treaties,[3] international humanitarian law,[4] and international criminal law.[5] However, only few have discussed holding China accountable under customary international environmental law.

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[1] *Excerpt from* Karl Marx, *The Eighteenth Brumaire of Louis Napoleon* (1852).

[2] *See* Antonio Coco & Talita de Souza Dias, *Prevent, Respond, Cooperate: States' Due Diligence Duties vis-à-vis the COVID-19 Pandemic*, 11 J. INT'L HUMANITARIAN LEGAL STUD., 218 (2020); Brett Joshpe, Considering Domestic and International Frameworks for Analyzing China's Potential Legal Liability in the Aftermath of COVID-19 (May 13, 2020), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3598614; Pulung Hananto, *Legal Opinion: Does China Can Be Sued for The Global Pandemic?*. 3(2) ADM. L. J. 232, 236 (2020); Usulor, Chukwuebuka, COVID-19: Examining China's Liability under International Law (July 31, 2020), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3667341; Matthew H. Ormsbee, *State Liability for a Mishandled Response: Strategic Remedies on the Heels of COVID-19,* 104 MARQ. L. REV. 227 (2020); Valerio de Oliveira Mazzuoli, *State International Responsibility for Transnational Pandemics: The Case of COVID-19 and the People's Republic of China*, 7 INDON. J. INT'L & COMP. L. 431 (2020).

[3] Joshpe, *supra* note 2; Coco & Dias, *supra* note 2.

[4] Coco & Dias, *supra* note 2.

[5] Joshpe, *supra* note 2; Hananto, *supra* note 2.

With regard to domestic litigation, as of June 2020, there have been 14 cases[6] filed in the United States domestic courts that aim to hold China liable for damages under domestic tort law. The two most notable are: first, the Miami national class action entitled *Alters v. People's Republic of China*[7] filed on March 12, 2020, which is the first domestic action filed against China; and second, the Missouri state class action, entitled *Missouri ex rel. Schmitt v. People's Republic of China*[8] filed on April 21, 2020, which is the first state claim. Both actions implead China and the Chinese Communist Party.[9] The lawsuits seek compensatory damages for those who have suffered personal injuries, deaths, and other damages as a result of China's failure to contain COVID-19.[10]

Domestic actions filed in the United States have been criticized by law experts, with the biggest criticism being that the courts will fail to acquire jurisdiction due to the Foreign Sovereign Immunities Act of 1976 ("FSIA").[11] The general rule is that sovereign states, along with their agencies and instrumentalities, are immune from suit in the United States under the FSIA.[12] The parties argue that their cases fall under the exceptions, but it has been pointed out that this is tenuous.[13] Furthermore, none of the plaintiffs have

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[6] Sean Mirski & Shira Anderson, *What's in the Many Coronavirus-Related Lawsuits Against China?,* LAWFARE, June 24, 2020, *at* https://www.lawfareblog.com/whats-many-coronavirus-related-lawsuits-against-china.

[7] Alters v. People's Republic of China [hereinafter "*Alters*"], No. 1:20-cv-21108 (S.D. Fla. 2020).

[8] Missouri ex rel. Schmitt v. People's Republic of China, No. 1:20-cv-99 (E.D. Mo. 2020).

[9] *Alters*, No. 1:20-cv-2110.

[10] Peter Burke, *Class-action lawsuit filed in South Florida blames China for coronavirus, seeks billions in damages*, WPTV, Mar. 14, 2020, *at* https://www.wptv.com/news/region-s-palm-beach-county/boca-raton/class-action-lawsuit-filed-in-south-florida-blames-china-for-coronavirus-seeks-billions-in-damages.

[11] John B. Bellinger III, *Suing China over the coronavirus won't help. Here's what can work*, WASHINGTON POST, Apr. 24, 2020, *at* https://www.washingtonpost.com/opinions/2020/04/23/suing-china-over-coronavirus-wont-help-heres-what-can-work/; Andrew McCarthy, *The Foolish GOP Proposal to Open China to American Lawsuits over COVID-19*, NAT'L REV., Apr. 21, 2020, *at* https://www.nationalreview.com/2020/04/the-foolish-gop-proposal-to-open-china-to-american-lawsuits-over-covid-19; Rebecca Bratspies, *Trail Smelter Arbitration Offers Little Guidance for COVID-19 Suits against China*, JUST SECURITY, July 14, 2020, *at* https://www.justsecurity.org/71363/the-trail-smelter-arbitration-offers-little-guidance-for-the-covid-19-world-on-attempts-to-sue-china/.

[12] Mirski & Anderson, *supra* note 6.

[13] David Savage & Alice Su, *Can China be sued in the U.S. and forced to pay for coronavirus losses? Legal expertssay no*, L.A. TIMES, May 15, 2020, *available at* https://www.latimes.com/politics/story/2020-05-15/can-china-be-sued-in-the-u-s-and-forced-to-pay-for-coronavirus-losses-legal-experts-say-no.

addressed the possible obstacle of common law sovereign immunity for foreign officials.[14]

With regard to public international law, much academic discussion has taken place for the possibility of holding China accountable under the International Health Regulations of 2005 ("IHR") which China has ratified. In particular, under Articles 6 and 7 thereof:

> [Article 6 of the IHR obliges each member state] to inform the WHO regarding the events occurring in their territory, which are capable of causing a public health emergency of international concern (PHEIC) within 24 hours of the public health assessment. [Furthermore], Article 7 of the IHR provides that if a state has any evidence regarding any unusual or unexpected event within their territory which has the tendency of causing PHEIC, then it shall immediately provide all the relevant information regarding it to the WHO.[15]

Experts argue that China "[suppressed] information about the virus, [did] little to contain it, and [allowed] it to spread unchecked in the crucial early days and weeks,"[16] hence a potential for the above provisions to impose liabilities on China.

While states may very well bring an action against China on the basis of its failure to abide by the regulations, is there a cause of action that can touch upon the origin or emergence of the disease itself? This Note argues that a cause of action arising from China's failure to abide by the duty to prevent transboundary harm is an equally viable ground to hold China accountable for the pandemic. To do this, this Note will answer the question of whether or not the legal framework governing the duty to prevent transboundary harm may be applicable to wildlife trade activities and the conduct of wild animal wet market operations.

Part II of this Note provides a background of the relevant and commonly accepted facts surrounding the COVID-19 pandemic, its probable origins, and the national policies of China that contributed to the virus' emergence. Part III discusses the legal framework governing the duty to

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[14] Mirski & Anderson, *supra* note 6.

[15] Srishti Bhargav & Milind Rajratnam, *COVID-19: China's Liability Under International Law*, SOC'Y INT'L L. & POL'Y, Apr. 14, 2020, *at* https://silpnujs.wordpress.com/2020/04/14/covid-19-chinas-liability-under-international-law/.

[16] Shadi Hamid, *China Is Avoiding Blame by Trolling the World*, ATLANTIC, Mar. 19, 2020, *available at* https://www.theatlantic.com/ideas/archive/2020/03/china-trolling-world-and-avoiding-blame/608332.

prevent transboundary harm. Part IV explores its applicability to zoonotic diseases which emerge due to wildlife trade activities and wild animal wet market operations. Part V suggests a potential judicial framework for China's liability for the COVID-19 pandemic and suggests a conclusion of a multilateral treaty as a prospective application.

II. BACKGROUND

A. The COVID-19 Pandemic

In 2002, a virus from the wet markets in southern China[17] infected a 45-year-old man who experienced fever and respiratory symptoms, and went on to pass the infection to four relatives.[18] From there, the virus quickly spread to become the closest thing to a pandemic the modern world had seen at the time. It was only on July 5, 2003 that the WHO announced that all known chains of human-to-human transmission had been broken.[19]

The aftermath of the severe acute respiratory syndrome ("SARS") disease left more than 8,098 cases and 774 deaths across 29 countries.[20] In 2020, however, history repeats itself and the numbers this time are worse. Unlike in the case of SARS, the spread of COVID-19 was not prevented. As of March 4, 2021, there have been 114,853,685 confirmed cases with 2,554,694 lives lost, across 223 countries.[21]

The WHO was first alerted about this new virus on December 31, 2019, after a cluster of cases of "viral pneumonia" in Wuhan, China was reported.[22] The WHO announced an official name for the disease causing the 2019 novel coronavirus outbreak on February 11, 2020 as the "coronavirus

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[17] Nsikan Akpan, *New coronavirus can spread between humans—but it started in a wildlife market*, NAT'L GEOGRAPHIC, Jan. 22, 2020, *available at* https://www.nationalgeographic.com/science/2020/01/new-coronavirus-spreading-between-humans-how-it-started/.

[18] World Health Org. [hereinafter "WHO"] Reg'l Office for the W. Pac., *SARS: How a global epidemic was stopped*, WHO WEBSITE, *available at* https://apps.who.int/iris/handle/10665/207501.

[19] *Id.* at 60.

[20] *Id.*

[21] WHO, *Coronavirus disease (COVID-19) pandemic*, WHO WEBSITE, *available at* https://www.who.int/emergencies/diseases/novel-coronavirus-2019 (last visited Mar. 5, 2021).

[22] WHO, *Coronavirus disease (COVID-19) pandemic, Q & A*, WHO WEBSITE, Oct. 12 2020, *at* https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19.

disease 2019," which was abbreviated as COVID-19.[23] It is a "highly transmittable and pathogenic viral infection caused by severe acute respiratory syndrome coronavirus 2 ("SARS-CoV-2")."[24] As of writing, it is theorized that the virus commonly spreads between people who are in close contact with one another[25] through respiratory droplets or small particles produced when an infected person coughs, sneezes, talks, or breathes.[26]

People infected with COVID-19 have reported a wide range of symptoms from mild to severe, which sometimes lead to death. Symptoms may appear 2 - 14 days after exposure to the virus.[27] "Most people infected with the COVID-19 virus, about 80%,[28] will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness."[29] "About 15% of those infected become seriously ill [...] and 5% become critically ill and need intensive care."[30]

B. Origins of the COVID-19 Pandemic

1. China's Wild Animal Wet Markets and COVID-19

Almost all credible sources would state that the coronavirus pandemic originated from Wuhan, China. More specifically, reports pinpoint the Huanan Seafood Wholesale Market in Wuhan City as "the likely source of many early cases of COVID-19"[31] after more than 50 pneumonia-like cases were traced back to the market by health officials as reported in December

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[23] Ctrs. for Disease Control and Prevention [hereinafter "CDC"], *Frequently Asked Questions*, CDC WEBSITE, *at* https://www.cdc.gov/coronavirus/2019-ncov/faq.html (last visited Mar. 1, 2020).

[24] Muhammad Adnan Shereen et. al., *COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses*, 24 J. ADVANCED RES. 91, 91 (2020).

[25] CDC, *supra* note 23.

[26] *Id.*

[27] *Id.*

[28] WHO, *supra* note 22.

[29] *Id.*; WHO, *Coronavirus, Overview*, WHO WEBSITE, *at* https://www.who.int/health-topics/coronavirus#tab=tab_1 (last accessed Dec. 3, 2020).

[30] WHO, *supra* note 22.

[31] Dina Fine Maron, *'Wet markets' likely launched the coronavirus. Here's what you need to know*, NAT'L GEOGRAPHIC, Apr. 15, 2020, *available at* https://www.nationalgeographic.com/animals/2020/04/coronavirus-linked-to-chinese-wet-markets/; WHO, *COVID-19 – a global pandemic*, WHO WEBSITE, June 5, 2020, *at* https://www.who.int/docs/default-source/coronaviruse/risk-comms-updates/update-28-covid-19-what-we-know-may-2020.pdf?sfvrsn=ed6e286c_2.

31, 2019.[32] Beginning January 1, 2020, China temporarily closed the Huanan market.[33]

Most cities in China feature a robust wet market industry and Wuhan is no exception, it being "a transit hub in central China with more than 11 million inhabitants."[34] Culturally, in China, food is considered healthy and tasty if it is prepared from fresh animals, while frozen meat is considered inferior in overall quality.[35] Hence, wet markets are located in residential areas in most parts of China.[36] This fact allows contact between a number of animals and humans on a daily basis.[37]

Wet markets are where animals and fresh animal products are sold in open air environments with little to no health safety precautions or sanitation measures.[38] The animals are closely packed in cages and would shed large amounts of bodily fluids which may contain high concentrations of zoonotic microbes.[39] According to a study, "[a] typical wet market is a partially open commercial complex with vending stalls organized in rows; they often have slippery floors and narrow aisles along which independent vendors primarily sell 'wet' items such as meat, poultry, seafood, vegetables, and fruits."[40]

Some wet markets contain rare, and sometimes endangered species.[41] In addition to typical animals used as food, people in southern China, specially the affluent, have the habit of eating a wide range of exotic wild animals as this is "traditionally believed to improve health and sexual performance"[42] along with a host of other medicinal properties.[43] A 2014 study found that "in Guangzhou, 83% of people interviewed had eaten wildlife in the previous year."[44] Peter Li, China policy specialist at Humane Society International and

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[32] Shereen et. al., *supra* note 24 at 92.

[33] Maron *supra* note 31.

[34] Nsikan Akpan, *supra* note 17.

[35] Patrick Cy Woo et al., *Infectious diseases emerging from Chinese wet-markets: zoonotic origins of severe respiratory viral infections*, 19 CURRENT OP. IN INFECTIOUS DISEASES 401, 401 (2006).

[36] *Id.*

[37] *Id.*

[38] A. Alonso Aguirre et al., *Illicit Wildlife Trade, Wet Markets, and COVID-19: Preventing Future Pandemics*, 12 WORLD MED. & HEALTH POL'Y 256, 258 (2020).

[39] Woo et al., *supra* note 35.

[40] Shuru Zhong et al., *Constructing freshness: the vitality of wet markets in urban China*, 37 AGRIC. HUM. VALUES 175, 175 (2020).

[41] Aguirre et al., *supra* note 38.

[42] Woo et al., *supra* note 35.

[43] Zhong et al., *supra* note 40.

[44] Li Zhang & Feng Yin, *Wildlife consumption and conservation awareness in China: A long way to go*, 23 BIODIVERSITY & CONSERVATION 2371, 2374 (2014).

professor in East Asian politics at the University of Houston-Downtown, states that the affluent consume soup made with palm civet, fried cobra, or braised bear paw.[45]

In the Huanan Seafood Wholesale Market in Wuhan city, the live animals frequently sold are bats, frogs, snakes, birds, marmots and wild rabbits among others.[46] [47] For this Note, the term "wild animal wet markets" will be used to refer to wet markets where wild animals, their meat, or other derivative products can be purchased for human consumption. This term will be used as opposed to merely "wet markets" which, in this Note, would include wet markets that do not sell wild animals and wild animal-derived products.

Steven Osofsky, a professor of wildlife health and health policy at the Cornell University College of Veterinary Medicine, described the role of wild animal wet markets in the emergence of zoonotic disease in an interview:[48]

> When we harvest wild animals from all over the world and bring them into markets, let them all mix together, what we're doing is creating the perfect storm. If you're a virus whose goal is to spread, you couldn't really design a better system to aid and abet a pandemic than these wildlife markets, particularly in urban centers in Asia. You have species that never under natural conditions would run into each other, all packed together, bodily fluids mixing, and then people come into the equation. Pathogens are meeting species that they've never met before. That's when we have these opportunities for viral jumps, including the ones that lead to humans and create the situation we're in now.[49]

Furthermore, Dr. Heinz Feldmann, chief of Laboratory of Virology of the National Institute of Allergy and Infectious Diseases, explained that wild animal wet markets, particularly those in China, have a unique role in the emergence of diseases:

> With approximately one quarter of the world's population and a vast diversity of wild and domestic animals living in close proximity to humans, it is likely that China has the greatest

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[45] Natasha Daly, *Chinese citizens push to abolish wildlife trade as coronavirus persists*, NAT'L GEOGRAPHIC, Jan. 30, 2020, *available at* https://www.nationalgeographic.com/animals/2020/01/china-bans-wildlife-trade-after-coronavirus-outbreak/.

[46] Maron *supra* note 31.

[47] Shereen et. al., *supra* note 24.

[48] *S2. Ep. 5: The Wildlife Origins of SARS-COV2 and Employing a One Health Approach*, EXCELSIOR (Apr. 3, 2020), *at* https://excellsior.libsyn.com/s2-eps5-the-wildlife-origins-of-sars-cov2-and-protecting-one-health.

[49] *Id.*

> potential for the emergence or reemergence of infectious diseases worldwide. In particular, Chinese animal markets are considered unique places for the transmission of pathogens from animals to humans.[50]

All these factors contribute to the role of these wild animal wet markets as a unique place for transmission of zoonotic disease to humans.[51]

2. The Wildlife Protection Law and Wildlife Trade

There will be no marketplace if there are no goods to be sold. After the Great Chinese Famine between the years of 1959 and 1961, China focused on growth and development.[52] In order to do this, the Chinese government adopted several legal and policy measures, including the Peoples Republic of China's Protection of Wildlife Act 1988 ("Wildlife Protection Law").[53]

The law provides that "[w]ildlife resources shall be owned by the state. The state protects the lawful rights and interests of units and individuals engaged in the development or utilization of wildlife resources according to law,"[54] effectively classifying wildlife as a "natural resource" that may be exploited by the citizens of the state.[55] The law also encouraged the domestication and breeding of wildlife.[56] This law enabled the creation and the boom of an industry.[57] The breeders scaled up and would sell these animals in the wild animal wet markets.[58] This was recently amended in 2017[59] which then allowed the farming of more exotic species such as pangolins and tigers.[60]

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[50] Heinz Feldmann, *Truly Emerging—A New Disease Caused by a Novel Virus*, 365 NEW ENG. J. MED. 1561, 1562 (2011).

[51] Woo et al., *supra* note 35.

[52] EurAsian Times Desk, *China's Wet Markets Up & Running Again; Is Beijing In Breach Of International Laws?*, EURASIAN TIMES, Apr. 7, 2020, *at* https://eurasiantimes.com/chinas-wet-markets-up-is-beijing-in-breach-of-international-laws/.

[53] Law of the People's Republic of China on the Protection of Wildlife [hereinafter "Wildlife Protection Law"] (promulgated by President of the People's Republic of China, Nov. 8, 1988, effective Mar. 1, 1989).

[54] Wildlife Protection Law, art 3.

[55] Sam Ellis, *Why New Diseases keep appearing in China*, VOX, Mar. 6, 2020, *at* https://www.vox.com/videos/2020/3/6/21168006/coronavirus-covid19-china-pandemic.

[56] Wildlife Protection Law, art. 17.

[57] Ellis, *supra* note 55.

[58] *Id.*

[59] Laney Zhang, *China: New Wildlife Protection Law*, LIBRARY OF CONG. (U.S.), Aug. 5, 2016, *available at* https://www.loc.gov/law/foreign-news/article/china-new-wildlife-protection-law/; China L. Translate, *2016 Wildlife Protection Law*, CHINA L. TRANSLATE, July, 2, 2016, *at* https://www.chinalawtranslate.com/en/2016-wildlife-protection/.

[60] Ellis, *supra* note 55.

According to Zhou Jinfeng, the Secretary-General of the China Biodiversity Conservation and Green Development Foundation, "[t]he government allows 54 wild species to be bred on farms and sold for consumption, including minks, ostriches, hamsters, snapping turtles, and Siamese crocodiles [and many] wild animals, such as snakes and birds of prey, are poached and brought to state-licensed farms."[61]

Various Chinese and international conservation groups have been calling for a policy change with regard to the wildlife trade. According to them, the Wildlife Protection Law "views wild animals as essentially a commodity and sanctions farming and breeding for human consumption and corporate profit."[62] However, political and economic pressures to maintain the status quo are present. According to a 2017 report, it is an industry worth USD 73 billion that employs more than 14 million people.[63] Contrary to these calls, China even promoted the trade's development in the recent years.[64] For example, in Wanan county in Ji'an, Jiangxi, the government invested in more than USD 1.3 million in infrastructure for civet breeding and given more than USD 28,000 in subsidies to farmers who enter the wildlife industry.[65]

3. The Wildlife Trade and the Emergence of Zoonotic Diseases

What exactly links the wildlife trade to the COVID-19 pandemic? There is a substantial amount of evidence to suggest that the virus originated from some kind of wild animal such as horseshoe bats who then transmitted it to another wild animal such as a pangolin as an intermediary.[66] According to Woo, et al., "[t]wo research groups independently discovered the presence

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[61] Daly, *supra* note 45; China Breeding Net, *List of terrestrial wildlife allowed by the State*, CHINA ANIMAL HUSBANDRY ASS'N (CAAA), Mar 12, 2010, *at* http://www.caaa.cn/show/newsarticle.php?ID=176126.

[62] Alice Su, *Why China's Wildlife Ban Is Not Enough to Stop Another Virus Outbreak*, L.A. TIMES, Apr. 2, 2020, *available at* https://www.latimes.com/world-nation/story/2020-04-02/why-china-wildlife-ban-not-enough-stop-coronavirus-outbreak.

[63] *Id. See also* Zhang Ke, *Why is it difficult to amend the Wildlife Protection Law? Big data reveals over 500 billion big industry*, YICAI, Feb. 20, 2020, *at* https://www.yicai.com/news/100514161.html.

[64] Su, *supra* note 62.

[65] *Id.*

[66] *Id.*; *See* Kristian Andersen et al., *The proximal origin of SARS-CoV-2*, 26 NATURE MED. (2020); Chaolin Huang et al., *Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China*, 395 LANCET, 497, 498 (2020); Stu Woo, *China Ousts Senior Officials as Beijing Seeks Distance From Outbreak*, WALL STREET JOURNAL, Feb. 14, 2020, *available at* https://on.wsj.com/3bUBUA3; *But see* L.-F. Wang & G. Crameri, *Emerging zoonotic viral diseases*, 33 REV. SCI. TECH., 569, 569 (2014).

of severe acute respiratory syndrome coronavirus-like viruses in horseshoe bats."[67] Regardless of the species of wild animal from which it originated, there is consensus that COVID-19 either has a zoonotic source[68] or is, itself, a zoonotic disease.[69]

A zoonotic disease is a disease caused by germs like viruses, bacterial, parasites, and fungi being transferred from an animal source to humans.[70] Scientists estimate that three out of four emerging infectious diseases in people come from animals.[71] Recent epidemics such as Ebola, Middle East Respiratory Syndrome ("MERS"), bird flu, SARS, Asian avian influenza A ("H5N1"), and swine flu are all examples of zoonotic diseases.[72]

Various zoonotic diseases have been traced to have emerged from Chinese wild animal wet markets due to the wildlife trade,[73] the most recent case being SARS.[74] This led to the immediate, albeit temporary, closure of the markets from where the outbreak was traced back, accompanied by a transient halt to wildlife trade. While zoonotic diseases can and do emerge due to the wildlife trade and wild animal wet market activities from other countries, this Note will focus on Chinese wild animal wet markets and its wildlife trade since this is the state from where COVID-19 emerged.

The 1997 outbreak of the H5N1 virus in Hong Kong serves as an example to illustrate the role of wet markets in the emergence of zoonotic severe respiratory viral infections.[75] An influenza "A" subtype emerges from wild birds, primarily in waterfowl, gulls, and shorebirds.[76] At that time, a risk factor for being infected was exposure to live poultry.[77] During the outbreak, the H5N1 virus was detected in about 20% of poultry in wet markets in Hong

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[67] Woo et al., *supra* note 35.

[68] WHO, *Coronavirus disease 2019 (COVID-19) Situation Report – 94*, Apr. 23, 2020, *at* https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200423-sitrep-94-covid-19.pdf.

[69] John Mackenzie & David Smith, *COVID-19: A Novel Zoonotic Disease: A Review of the Disease, the Virus, and Public Health Measures*, 32 ASIA PAC. J. PUB. HEALTH 145, 146 (2020).

[70] CDC, *Zoonotic Disease*, CDC WEBSITE, *at* https://www.cdc.gov/onehealth/basics/zoonotic-diseases.html (last accessed Dec. 1, 2020).

[71] *Id.*

[72] Aguirre et al., *supra* note 38.

[73] Bhargav & Rajratnam, *supra* note 15.

[74] WHO Reg'l Office for the W. Pac., *supra* note 18, at 74.

[75] Woo et al., *supra* note 35.

[76] DAVID SWAYNE, AVIAN INFLUENZA 22 (2008).

[77] Woo et al., *supra* note 35.

Kong, thus leading experts to conclude that these wet markets served as the epicenter and the source of the zoonotic disease.[78]

In 2002, the SARS epidemic broke out in the southern province of Guangdong in China.[79] The first case was traced back to a wild animal wet market in the city of Foshan.[80] The second case infected a chef from Heyuan who worked in a restaurant in Shenzhen and had regular contact with wild food animals.[81] SARS-CoV-like viruses were isolated from animals being sold in wild animal wet markets in Guangdong, suggesting that wild animals such as farmed civet cats[82] could be the source of SARS-CoV-like viruses.[83] After this discovery, Chinese officials shut down the market and banned wildlife farming and trade.[84] However, on August 16, 2003, not even a year after the discovery of the outbreak, the Chinese officials decided to lift the ban on wildlife trade activities.[85]

C. The Call to Ban Wildlife Trade Activities and Changes in China's Wildlife Trade Policy following COVID-19

As early as 2003, there have been calls to close down wild animal wet markets selling live animals and to halt the wildlife trade. In 2003, after the SARS outbreak, China attempted to institute a ban on wildlife trade, but this was short-lived since the markets and trade routes returned when the outbreak ended.[86] At the time, experts have been urging the international community to put an end to wildlife trade activities. Ian Lipkin, director of Columbia University's Center for Infection and Immunity, whose laboratory worked with Chinese officials to develop early diagnostic tests for SARS, says that "[i]f we were to shut the wildlife markets, a lot of these outbreaks would be a thing of the past."[87] Infectious disease experts emphasized that:

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[78] *Id.*

[79] Rui-Heng Xu et al., *Epidemiologic clues to SARS origin in China*, 10 EMERGING INFECTIOUS DISEASES 1030, 1030 (2004).

[80] WHO Reg'l Office for the W. Pac., *supra* note 18, at 75.

[81] *Id.* at 6; Woo et al., *supra* note 35.

[82] *Id.* at 227.

[83] Woo et al., *supra* note 35.

[84] Ellis, *supra* note 55.

[85] *Id.*

[86] Aguirre et al., *supra* note 38.

[87] Akpan, *supra* note 17.

> "The environmental conditions that led to the spread of disease have to be dealt with [...] [T]he close interaction between humans, livestock and wild animals should be discouraged. Abandoning the widespread use of exotic animals as food or traditional medicine and the practice of central slaughtering of livestock and fowl will decrease the chance of viruses jumping from animals to humans."[88]

During the COVID-19 pandemic, similar to when the SARS outbreak occurred, there have been calls from experts to halt wildlife trade and the operation of wild animal wet market. In an April 3, 2020 interview, the Director of the National Institute of Allergy and Infectious Diseases, Dr. Anthony Fauci, stated that "the international community should help force a global closure of the markets, arguing that the current public health crisis is a 'direct result' of such unsanitary shopping places."[89] He states that "[i]t boggles my mind how when we have so many diseases that emanate out of that unusual human-animal interface, that we don't just shut it down."[90]

On April 6, 2020, Elizabeth Maruma Mrema, the United Nations' biodiversity chief and acting executive secretary of the UN Convention on Biological Diversity, stated that "[i]t would be good to ban the live animal markets" explaining that countries should move to prevent future pandemics by banning wet markets that sell live and dead animals for human consumption.[91] Furthermore, on April 8, 2020, 60 lawmakers from the United States sent a letter to the WHO, World Organization for Animal Health, and the United Nations to call for a ban on wet markets.[92]

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[88] Moira Chan-Yeung & Rui-Heng Xu, *SARS: epidemiology*, 8 RESPIROLOGY, S9, S13 (2003); *See also* Rosie Perper, *The last time China was hit by a deadly illness like the Wuhan coronavirus, it covered it up and 774 people died. There are fears it could happen again.*, BUS. INSIDER, Jan. 21, 2020, *at* https://bit.ly/3dYRYmi.

[89] Quint Forgey, *'Shut down those things right away': Calls to close 'wet markets' ramp up pressure on China*, POLITICO, Mar. 3, 2020, *at* https://www.politico.com/news/2020/04/03/anthony-fauci-foreign-wet-markets-shutdown-162975.

[90] *Id.*; Sigal Samuel, *The coronavirus likely came from China's wet markets. They're reopening anyway*, VOX, Apr. 15, 2020, *at* https://www.vox.com/future-perfect/2020/4/15/21219222/coronavirus-china-ban-wet-marketsreopening.

[91] Patrick Greenfield, *Ban wildlife markets to avert pandemics, says UN biodiversity chief*, GUARDIAN, Apr. 6, 2020, *at* https://www.theguardian.com/world/2020/apr/06/ban-live-animal-markets-pandemics-un-biodiversity-chief-age-of-extinction.

[92] Samuel, *supra* note 90; Amy Harder, *Citing coronavirus, lawmakers call for a ban on wildlife markets*, AXIOS, Apr. 8, 2020, *at* https://www.axios.com/coronavirus-crisis-lawmakers-call-to-ban-wildlife-markets-244e9447-d44c-4a66-add68d5311de856f.html?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosfutureofwork&stream=future.

On January 26, 2020, China announced a ban on its wild animal trade until the crisis is over.[93] The Secretary General of the China Biodiversity Conservation and Green Development Foundation, Jinfeng Zhou, urged Chinese officials to permanently ban wet markets and the wildlife trade.[94] He stated that "more than 70% of human diseases are from wildlife."[95] [96]

Also on January 26, 2020, three Chinese agencies jointly issued the "[n]otification regarding prohibition of trade in wildlife" which states that "until the epidemic situation is resolved nationwide … all business operations including agricultural produce markets, supermarkets, food[,] and beverage sellers and online sales platforms shall strictly prohibit trade of wild animals in any form."[97] "On 24 February 2020, a set of 'Decisions' adopted by the Standing Committee of the National People's Congress […] banned the commercial breeding and trade in [a number of land] wild animal species."[98] However, these "[d]ecisions only addressed consumption as food," which means that breeding and trade for other purposes such as pets, ornamental items and traditional medicine are not within its scope.[99]

Since the February Decisions, the Chinese National Forestry and Grassland Administration has confiscated 39,000 wild animals and investigated more than 350,000 sites such as wild animal wet markets.[100] Wildlife conservation groups and NGOs have praised the ban as a step in the right direction but stated that it was not enough to stop another outbreak since the ban only applies to land animals with a loophole allowing continued use of wildlife for traditional Chinese medicine.[101] Even with the ban imposed, the government permits the farming of exotic animals to make medicine from their feces, scales and bile, which still maintains the demand for wildlife.[102]

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[93] Aron White, *China's Wildlife Trade Policy: What has changed since COVID-19?*, GLOB. INITIATIVE AGAINST TRANSNAT'L ORGANIZED CRIME, May 27, 2020, *at* https://globalinitiative.net/analysis/china-wildlife-covid/.

[94] Greenfield, *supra* note 91.

[95] *Id.*

[96] *China's legislature adopts decision on banning illegal trade, consumption of wildlife*, XINHUANET, Feb. 24, 2020, *at* http://www.xinhuanet.com/english/2020-02/24/c_138814328.htm.

[97] White, *supra* note 93.

[98] *Id.*

[99] *Id.*

[100] Adolfo Arranz & Hans Huang, *China's wildlife trade*, S. CHINA MORNING POST, Mar. 4, 2020, *at* https://multimedia.scmp.com/infographics/news/china/article/3064927/wildlife-ban/index.html.

[101] Su, *supra* note 62.

[102] *Id.*

Furthermore, China, in an attempt to offset the losses due to the domestic wildlife trade ban, offered tax breaks for the export of these animals.[103]

Ultimately, "[a]s of April 14, 2020, China has not banned the commercial sale of wild animals for pets, traditional medicine, or ornamental uses."[104] To date, there has been no amendment to the Wildlife Protection Law reflecting this development. [105]

III. LEGAL FRAMEWORK GOVERNING THE DUTY TO PREVENT TRANSBOUNDARY HARM

This part of the Note will attempt to outline and clarify the concepts which compose the legal framework governing the duty to prevent transboundary harm. The discussion will focus on four sources, namely, the Trail Smelter Arbitration; declarations and conventions embodying the principle; pronouncements of the International Court of Justice (ICJ); and the work of the International Law Commission (ILC) and Xue Hanquin as publicists.

A. The Trail Smelter Arbitration

One cannot discuss the concept of transboundary harm without mentioning the *Trail Smelter* arbitration between Canada and the United States.[106] The dispute arose because of sulfur dioxide emissions produced by a zinc and lead smelter in Trail, British Columbia. The Columbia River, which flows from Canada to the United States, flows past the smelter, thus the emissions were being carried by the river to the United States. The emissions damaged private timber and agriculture in Washington State from 1925 to 1931. The arbitrator of the dispute is the International Joint Commission established by the Boundary Waters Treaty of 1909.[107] Ultimately, the tribunal found Canada liable for damages totaling USD 350,000 and enjoined it from causing more damage.

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[103] Kate O'Keeffe & Eva Xiao, *Amid Coronavirus Pandemic, China Bans Domestic Trade of Wild Animals, but Offers Tax Breaks for Exports,* WALL STREET JOURNAL, Apr. 12, 2020, *available at* https://www.wsj.com/articles/amid-coronavirus-pandemic-china-bans-domestic-trade-of-wild-animals-but-offers-tax-breaks-for-exports-11586683800.

[104] Maron, *supra* note 31.

[105] Su, *supra* note 62.

[106] Trail Smelter Case (U.S. v. Can.) [hereinafter "*Trail Smelter*"], Special Agreement, 3 RIAA 1905 (U.N. Arbitral Trib. 1952).

[107] Jon M. Van Dyke, *Liability and Compensation for Harm Caused by Nuclear Activities*, 35 DENV. J. INT'L L. & POL'Y 13, 13 (2006).

Two principles were first pronounced and applied by the Tribunal in its 1941 decision:

1. The state has a duty to prevent transboundary harm; and
2. The polluter pays.[108]

They are referred to as the *Trail Smelter* principles.[109] The first principle, as reflected in the *Trail Smelter* dictum, is also sometimes referred to as the "no-harm" principle. According to James Crawford, it is now a "widely recognized principle of customary international law whereby a State is duty-bound to prevent, reduce[,] and control the risk of environmental harm to other states."[110] The dictum of the Tribunal in *Trail Smelter* states:

> [U]nder principles of international law [...] no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes on or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.[111]

This dictum has inspired[112] Principle 21 of the 1972 Stockholm Declaration on the Human Environment and Principle 2 of the Rio Declaration on Environment and Development, which will both be discussed further below. The two limbs—namely the (1) sovereignty limb and (2) the no-environmental-damage limb—were reproduced in both declarations.[113] However, Principle 21 does not require the damage to be "serious," and, unlike the dictum, it does not provide for the proof requirement.[114]

It is worth noting that the tribunal in *Trail Smelter*, in effect, ruled that Canada was still held to be liable for an internationally wrongful act even if

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[108] Neil Craik, *Transboundary Pollution, Unilateralism, and the Limits of Extraterritorial Jurisdiction: The Second Trail Smelter Dispute, in* TRANSBOUNDARY HARM IN INTERNATIONAL LAW: LESSONS FROM THE TRAIL SMELTER ARBITRATION (Rebecca Bratspies & Russell Miller, eds., 2006).

[109] *Id.*

[110] IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 275-85 (7th ed., 2008).

[111] *Trail Smelter*, 3 RIAA 1905, 1965.

[112] Stephen McCaffrey, *Of Paradoxes, Precedents, and Progeny: The Trail Smelter Arbitration 65 Years Later, in* TRANSBOUNDARY HARM IN INTERNATIONAL LAW: LESSONS FROM THE TRAIL SMELTTER ARBITRATION 41 (Rebecca Bratspies & Russell Miller, eds., 2006).

[113] *Id.*

[114] *Id.*

the act of operating a smelter is lawful.[115] Furthermore, the fact that the damage did not result from Canada's intentional act was of no moment.[116] Renowned publicist Michael Barton Akehurst's view on this is enlightening:

> The fact that operating a smelting plant is permitted by international law does not necessarily mean that all acts committed in the course of that activity are permitted by international law: the activity of operating a smelting plant is lawful, but the act of discharging fumes from that plant is not lawful. The discharge of fumes arises out of an activity which is permitted by international law, but the discharge itself is an act which is not permitted by international law.[117]

Furthermore, the dictum in *Trail Smelter* inspired the ILC topic of "International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law"[118] for which it created the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities ("Draft Articles on Prevention") and the Draft Principles on the Allocation of Loss in the case of Transboundary Harm Arising Out of Hazardous Activities ("Draft Principles"), both of which will also be discussed in more detail below.

B. Declarations and Conventions

1. The Stockholm Declaration

Principle 21 of the Stockholm Declaration on the Human Environment embodies the dictum set out by the tribunal in *Trail Smelter*. Principle 21 reads:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

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[115] Van Dyke, *supra* note 107, at 14.

[116] *Id.*

[117] Michael Akehurst, *International liability for injurious consequences arising out of acts not prohibited by international law*, 16 NETH. Y.B. INTL. L. 3, 8 (1985).

[118] McCaffrey, *supra* note 112, at 43.

This affirmation of the no-harm principle in *Trail Smelter* then became one of the cornerstones of International Environmental Law.[119] The purpose of the Stockholm Conference was to "serve as a practical means to encourage, and to provide guidelines for, action by [g]overnments and international organizations designed to protect and improve the human environment, and to remedy and prevent its impairment, by means of international co-operation."[120] Principle 21, in turn, inspired Article 3 of the Convention on Biological Diversity where it is incorporated therein verbatim[121] as well as the Statement of Forest Principles[122] in Principle 1(a), thereof.

2. The Rio Declaration

Twenty years after Stockholm, the principle was once again confirmed by the 1992 Conference on Environment and Development through Principle 2 of the Rio declaration.[123] Principle 2 of the Rio Declaration reads:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

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[119] PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 236 (2d ed. 2003).

[120] G.A. Res. 2581 (XXIV), ¶ 2 (Dec. 15, 1969).

[121] The Convention on Biological Diversity ("CBD"), art. 3, June 5, 1992, 1760 U.N.T.S. 69. "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

[122] U.N. Conf. on Envtl. and Dev., *Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol.1), annex III (1993).

[123] U.N. Conf. on Env't and Dev., *Rio Declaration on Environment and Development* [hereinafter "Rio Declaration"], princ. 2, U.N. Doc. A/CONF.151/26/Rev. 1 (Vol. 1), annex I (1993).

The preamble of the 1992 U.N. Framework Convention on Climate Change[124] also reflects this principle, as well as Article 194(2) of the 1982 U.N. Law of the Sea Convention[125] among other conventions and treaties.

These formulations contain the two elements that: (1) first, states have the sovereign right to *exploit their own resources* and (2) second, that they are not to *cause damage to the environment of other States or of areas beyond the limits of national jurisdiction* in the process of such or the "sovereignty" limb and the "no-environmental damage" limb, respectively.

C. ICJ Rulings

1. Nuclear Tests Case

In 1974, the ICJ was called on to determine whether the conduct of atmospheric nuclear tests in the South Pacific region was in conformity with international law. From 1966 to 1972, the French government has been conducting atmospheric nuclear tests in the South Pacific region. The legality of these tests was put into issue by New Zealand and Australia.[126] On one hand, New Zealand asked the Court to adjudge and declare that the nuclear tests in the area constituted a violation of its rights under international law and that a continuance of this act would further violate its rights.[127] On the other hand, Australia asked the Court to declare whether carrying out further atmospheric nuclear tests in the area was inconsistent with rules of international law.[128] France maintained that the radioactive matter produced by its tests has been so "infinitesimal that it may be regarded as negligible and

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[124] U.N. Framework Convention on Climate Change ("UNFCCC"), pmbl. ¶ 9, Jan. 20, 1994, A/RES/48/189. "Recalling also that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

[125] U.N. Convention on the Law of the Sea ("UNCLOS"), art. 194(2), Dec. 10, 1982, 1833 U.N.T.S. 397. "States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention."

[126] Nuclear Tests (Austl. v. Fr.) [hereinafter "*Nuclear Tests I*"], Judgment, 1974 I.C.J. Rep. 253 (Dec. 20); Nuclear Tests (N.Z. v. Fr.) [hereinafter "*Nuclear Tests II*"], Judgment, 1974 I.C.J. Rep. 457 (Dec. 20).

[127] *Nuclear Tests II*, 1974 I.C.J. at ¶ 11.

[128] *Nuclear Tests I*, 1974 I.C.J. at ¶ 11.

that any fall-out on New Zealand territory has never involved any danger to the health of the population of New Zealand."[129]

The court, however, did not pass upon the merits of the case since France, through repeated public declarations by its public officials, stated that it would cease to conduct atmospheric tests.[130] Still, the separate opinions of the judges are worth examining.[131]

In his separate opinion, Judge Petren argued that the admissibility of the issue depended on whether or not a customary rule of international law exists that would operate to "prohibit States from carrying out atmospheric tests of nuclear weapons giving rise to radio-active fall-out on the territory of other States."[132] This view was shared by Judges Gros and Judge Pinto.[133] They, however, came to the conclusion that there was no such rule of customary law due to a lack of state practice.[134] Judge de Castro, on the other hand, opined in his dissenting opinion that Australia's complaint is based on a "legal interest which has been well known since the time of Roman law", namely the *sic utere* principle.[135] He compared the current case to the *Trail Smelter* and the Corfu channel cases,[136] reasoning that if states can invoke custom to prohibit noxious fumes from being deposited into one's territory then, by analogy, states can also invoke the principle to prohibit states from depositing radioactive fallout on its territory.[137]

In 1995, France once again, began to carry out nuclear tests in the South Pacific, however, this time, they were being conducted underground. Shortly after, New Zealand attempted to reactivate the proceedings of 1974. In the proceedings, the court again did not address the merits of the case due to procedural issues. However, it stated that the order is without prejudice to the "obligations of States to respect and protect the natural environment"[138]

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[129] *Nuclear Tests II*, 1974 I.C.J. at ¶ 18.

[130] *Id.* at ¶¶ 52-53.

[131] Marte Jervan, The Prohibition of Transboundary Environmental Harm. An Analysis of the Contribution of the International Court of Justice to the Development of the No-harm Rule, at 31 (2014) (Research Paper No. 14-17 for PluriCourts).

[132] *Nuclear Tests II*, 1974 I.C.J. at 305 (Petrén, *J., separate*).

[133] *Id.* at 276, 308 (Gros, *J., separate*) (Ignacio-Pinto, *J., separate*).

[134] *Id.* at 306 (Petrén, *J., separate*).

[135] *Id.* at 388 (de Castro, *J., dissenting*).

[136] *Id.* at 388–89 (de Castro, *J., dissenting*).

[137] *Id.*

[138] Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in Nuclear Tests (N.Z. v. Fr.) [hereinafter "Request for an Examination"], 1995 I.C.J. Rep. 288, ¶ 64 (Sept. 22).

while deriving its basis from "the development of international law in recent decades."[139]

Judge Weeramantry, in his separate dissenting opinion, stated that a rule of customary international law provides that "no nation is entitled by its own activities to cause damage to the environment of any other nation."[140] He went on to state that this was a "fundamental principle of modern environmental law."[141] Furthermore, Judge Palmer in his dissenting opinion stated that the "obvious and overwhelming trend of these developments from Stockholm to Rio has been to establish a comprehensive set of norms to protect the global environment."[142] Lastly, Judge Koroma in his dissenting opinion stated that "under contemporary international law, there is probably a duty not to cause gross or serious damage which can reasonably be avoided, together with a duty not to permit the escape of dangerous substances."[143]

Hence, while the court refrained from ruling on the merits of the *Nuclear Tests* cases, the development of the status of the rule of no-harm or the duty to prevent transboundary harm to custom may be traced back to the separate opinions of the judges of the ICJ.

2. Advisory Opinion on the Legality of the Use of Nuclear Weapons

On December 15, 1994, the ICJ was faced with a question: "Is the threat or use of nuclear weapons in any circumstance permitted under international law?" During the course of the proceedings, some States argued that "any use of nuclear weapons would be unlawful by reference to existing norms relating to the safeguarding and protection of the environment, in view of their essential importance."[144] Furthermore, Principle 21 of the Stockholm Declaration was among the legal instruments invoked to support this.[145] Regarding this contention, the court stated:

> The Court also recognizes that the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of States to ensure that

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[139] *Id.* ¶ 64.

[140] *Id.* at 347. (Weeramantry, *J.*, *dissenting*).

[141] *Id.* at 346-47. (Weeramantry, *J.*, *dissenting*).

[142] *Id.* at 409 (Palmer, *J.*, *dissenting*).

[143] *Id.* at 378 (Koroma, *J.*, *dissenting*).

[144] Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion [hereinafter "*Legality of Nuclear Weapons*"], 1996 I.C.J. Rep. 226, ¶ 27 (July 8).

[145] *Id.*

> activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.[146]

Here, the court reaffirms the "no-harm" principle as customary. Interestingly, the court here defines the environment as "not an abstraction but represents the living space, the quality of life[,] and the very health of human beings." This dictum was reiterated in the 1997 *Gabčíkovo-Nagymaros Project* case.[147]

3. Pulp Mills

In 2006, Argentina filed an application, instituting proceedings before the ICJ due to the two pulp mills constructed by Uruguay on the bank of the Uruguay river.[148] The river serves as the international boundary between Uruguay and Argentina used by both states. Argentina claims that the mills posed "major risks of pollution of the river, deterioration in biodiversity, harmful effects on health and damage to fish stocks, as well as to the extremely serious consequences for tourism and other economic interests"[149] Argentina based its claims on treaty obligations between the two states and on the customary obligation to prevent transboundary environmental damage among others, and the procedural obligations to notify, inform, and cooperate.[150] In the court's judgment on whether or not Uruguay breached its procedural obligations, the court stated the following:

> The Court points out that the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory. It is "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."[151]

Hence, here, the court acknowledged that a state's duty to prevent includes the procedural duty to notify, inform, and cooperate. The court repeated the rule stated in the *Corfu Channel* case whereby a country may not

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[146] *Id.* at ¶ 29.

[147] Gabčíkovo-Nagymaros Project (Hung. v. Slovak.) [hereinafter "*Gabčíkovo-Nagymaros Project*"], Judgment, 1997 I.C.J. Rep. 7, ¶ 53 (Sept. 25).

[148] Pulp Mills on the River Uruguay (Arg. v. Uru.) [hereinafter "*Pulp Mills*"], Judgment, 2010 I.C.J. Rep. 14, ¶ 1. (Apr. 20).

[149] Pulp Mills Application Instituting Proceedings, (Arg v. Uru) 2006 I.C.J. 1, ¶ 15 (May 4).

[150] *Id.* at ¶ 24.

[151] *Pulp Mills*, 2010 I.C.J. at ¶ 101, *citing* Corfu Channel (U.K. v. Alb.) [hereinafter "*Corfu Channel*"], Merits, 1949 I.C.J. Rep. 4, 22 (Apr. 9).

even passively cause harm to other states by allowing its territory to be used resulting to harmful consequences. The court further elucidated on this obligation by referring to the Court's pronouncement in the *Legality of Nuclear Weapons* Advisory Opinion:

> A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State. This Court has established that this obligation "is now part of the corpus of international law relating to the environment."[152]

The court ultimately ruled that Uruguay violated a duty to inform other states based on its conventional obligations and, furthermore, that that in order to fulfil the obligations to cooperate and notify, Uruguay was required to conduct environmental impact assessments.[153]

D. Publicists

1. The Work of the ILC

The purpose of the International Law Commission is to codify and promote the progressive development of international law. It prepares drafts on topics that are referred to it by the General Assembly. In the late 1970s, the ILC had begun working on draft articles on the topic of liability of states for acts not prohibited by international law, and, by 1990, the first draft articles on this matter were prepared.[154] The articles were called "The Draft Articles on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law." They were meant to supplement the Draft Articles on the Responsibility of States for Wrongful Acts ("Draft Articles on State Responsibility") so as to provide for liability for activities that are not unlawful *per se*.[155]

In 1992, the ILC divided the topic into prevention and remedial measures with the first being embodied in the Draft Articles on Prevention of Transboundary Harm from Hazardous Activities of 2001 ("Draft Articles on Prevention") and the second being the subject of the 2006 Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out

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[152] *Id.* at ¶ 101, *citing Legality of Nuclear Weapons*, 1996 I.C.J. 226, ¶ 29.
[153] *Pulp Mills*, 2010 I.C.J. at ¶ 119.
[154] SANDS, *supra* note 119, at 734.
[155] *Id.*

of Hazardous Activities ("Draft Principles").[156] Both of these documents will be discussed in turn.

In 2001, during the 53rd session of the ILC, the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities was adopted.[157] It was subsequently approved by the UN General Assembly at its 56th session. According to Xue Hanquin, these draft articles "[illustrate] well the progressive development of the law in the past twenty years, particularly in respect of the principles of prevention and mitigation of transboundary damage."[158]

According to the ILC, "[t]he articles deal with the concept of prevention in the context of authorization and regulation of hazardous activities which pose a significant risk of transboundary harm."[159] The articles deal with "prevention" as the duty involved in the period of time before the harm or damage actually occurs as differentiated from the obligation to repair that arises due to the occurrence of such harm or damage.[160] According to the ILC, the duty of prevention of transboundary harm finds basis in the Rio Declaration, in the *Legality of Nuclear Weapons* Advisory Opinion, and the *Trail Smelter* case among others.[161]

In the Draft Articles, the ILC has defined "transboundary harm" as "harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State of origin, whether or not the States concerned share a common border."[162] Here, the ILC has provided that the duty to prevent means that the State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof.[163] These concepts will be expounded on in Part V in an attempt to examine whether they will be applicable to zoonotic disease emerging from wildlife trade activities and the operation of wild animal wet markets.

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[156] *Id.*

[157] Int'l L. Comm'n, Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, UN Doc. 1/CN/4/L.601. (May 3, 2001).

[158] XUE HANQIN, TRANSBOUNDARY DAMAGE IN INTERNATIONAL LAW 14 (2003).

[159] Int'l L. Comm'n, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries, at 153, U.N. Doc. A/56/10 (May 3, 2001).

[160] *Id.* at 148, ¶ 1.

[161] *Id.* at 148, ¶ 2.

[162] *Id.* at 152.

[163] *Id.* at 154.

In 2006, in its 58th session, the ILC adopted the Draft Principles which were subsequently adopted by the UN General Assembly in its 61st session. Here they defined "transboundary damage" to mean the "damage caused to persons, property or the environment in the territory or in other places under the jurisdiction or control of a State other than the State of origin".[164] These articles claim that transboundary harm can be brought based on several distinct theories:

> Nuisance, which refers to excessive and unreasonable hindrance to the private utilization or enjoyment of real property[;] [...] Trespass, [...] [the] direct and immediate physical intrusion into the immovable property of another person[;] [...] Negligence[;] [...] [T]he doctrine of public trust [...] and that of riparian rights[;] [...] [and] [N]eighborhood law (duty of owner of a property or installation, especially one carrying industrial activities, to abstain from any excesses which may be detrimental to the neighbour's property)[.][165]

According to the ILC, the background or rationale of these Draft Principles is that "with its prevention obligations, under international law, accidents or other incidents may nonetheless occur and have transboundary consequences that cause harm and serious loss to other States and their nationals."[166] The principles aim to provide for the means by which affected states can seek prompt and adequate compensation.[167]

2. The Work of Xue Hanquin

In 2003, the Vice President of the International Court of Justice, Xue Hanquin wrote a book entitled TRANSBOUNDARY DAMAGE IN INTERNATIONAL LAW. In it, she defined transboundary damage as:

> [Embodying] a certain category of environmental damage, including physical injury, loss of life and property, or impairment of the environment, caused by industrial, agricultural, and technical activities conducted by, or in the territory of, one country, but suffered in the territory of another

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[164] Int'l L. Comm'n, Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities, with Commentaries, at 64, U.N. Doc. A/61/10 (2006).

[165] Int'l L. Comm'n, First Report on the Legal Regime for Allocation of Loss in Case of Transboundary Harm Arising Out of Hazardous Activities, at ¶ 123, U.N. Doc. A/CN.4/531 (Mar. 21, 2003); Van Dyke, *supra* note 107, at 17.

[166] Int'l L. Comm'n, *supra* note 164, at 59.

[167] *Id.*

> country or in the common areas beyond national jurisdiction and control.[168]

The book detailed four definitional elements of transboundary damage, which were first proposed by Professor Schachter.[169] The four elements are:

1. The physical relationship between the activity concerned and the damage caused;
2. Human causation;
3. A certain threshold of severity that calls for legal action; and
4. Transboundary movement of the harmful effects.

The first element is that there must be a physical relationship between the activity and the damage.[170] The requirement of it having a "physical" character would exclude damage that does not cause "bodily, materially or environmentally" harmful consequences.[171] Examples of these are expropriation of foreign property, discriminatory trade practices, or currency policies which are of an economic or financial nature.[172] According to Hanquin, industrial, agricultural, and technological activities commonly fall into this category.[173]

The second element is that there is human causation.[174] The effect of the second element would be to exclude "acts of God" or natural calamities such as earthquakes, floods, volcanos, and hurricanes even though they can cause significant damage to more than one state. Hence, transboundary damage should have "some reasonably proximate causal relation to human conduct."[175]

The third is that a certain threshold of severity has been breached which calls for legal action.[176] Conventions providing for protection of natural resources and the environment, terms such as "serious," "significant," "substantial," and "appreciable" have been used to qualify damage.[177]

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[168] HANQUIN, *supra* note 158, at 10.

[169] OSCAR SCHACHTER, INTERNATIONAL LAW IN THEORY AND PRACTICE 366-68 (1991).

[170] HANQUIN, *supra* note 158, at 4, *citing* SCHACHTER, *supra* note 169.

[171] *Id.* at 5.

[172] *Id.*

[173] *Id.*

[174] *Id.* at 4, *citing* SCHACHTER, *supra* note 169.

[175] *Id.* at 6.

[176] *Id.* at 4, *citing* SCHACHTER, *supra* note 169.

[177] *Id.* at 6.

According to Hanquin, to be legally relevant, damage should be at least "greater than the mere nuisance or insignificant harm which is normally tolerated," but that "different limits are required for different purposes and in different contexts."[178]

The last element is that there should be transboundary movement of the harmful effects. According to Hanquin, the term "transboundary" emphasizes the element of "boundary-crossing" of the consequences of the act of the responsible state and that it is this act that triggers the application of these rules. The harm or damage must affect or involve more than one state. To add to this, transboundary harm may result from a "transboundary movement across several boundaries that causes detrimental effects in several States."[179]

Furthermore, the book explores the subject of transboundary damage through three perspectives, particularly: *accidental damage, non-accidental damage,* and *damage to the global common areas.*[180]

Accidental damage means damage that "arises from the sudden and generally unforeseen occurrence of an event (or a series of occurrences with a common origin)." Examples of accidental damage include ultra-hazardous activities such as nuclear activities, space activities, maritime oil transportation, and activities involving other hazardous substances.[181]

Non-Accidental damage refers to the "injurious consequences resulting from the gradual, incremental effects of an activity."[182] Sources of these would typically be industrial activities and their cumulative transboundary pollution of the air, land, and water.[183] The type of damage considered under this category is usually caused by "deliberate, occasional, or cumulative acts with harmful effects".[184]

Lastly, *damage to the global common areas.* The "global commons" are areas beyond the limits of national jurisdiction or control.[185] Examples of this

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[178] *Id.*
[179] *Id.* at 9.
[180] *Id.* at 10.
[181] *Id.* at 19.
[182] *Id.* at 13.
[183] *Id.* at 113.
[184] *Id.*
[185] *Id.* at 191.

include damage to the polar areas, the high seas, and outer space.[186] Damage to the global common areas can be characterized by four points:

> First, the damage as such is not to a particular State but to the common areas. Further, it is caused over a long span of time by human activities and yet cannot be attributed to any particular State. The harmful effects of the damage, if not duly controlled in time, will affect the community as a whole; therefore, there is a common interest among States to take action. Finally, any preventive or remedial action taken by a single State is of no use to reverse the course of degradation and deterioration.[187]

Hence, as it stands now, the general consensus within the international law community is that the status of the duty to prevent transboundary harm is customary. Furthermore, there appears to be two distinct frameworks for the obligation: First is the more "traditional" framework as developed by *Trail Smelter*, the declarations and conventions, and the rulings of the ICJ which adopts the "two-limbed" approach of sovereignty and the obligation to prevent transboundary harm. Second is the more "modern" framework on the duty to prevent transboundary harm as developed by the ILC and Xue Hanquin which involves certain criteria and definitional elements for transboundary harm and its application. Both of these frameworks will be discussed as they apply to wildlife trade activities and the operation of wild animal wet markets in the next part of the Note.

IV. APPLICABILITY OF THE FRAMEWORK TO WILDLIFE TRADE AND THE OPERATION OF WILD ANIMAL WET MARKETS

There is no debate that activities such as nuclear activities, milling and smelting activities, and activities involving other hazardous substances would constitute activities that come under the scope of the framework of the duty to prevent transboundary harm. However, may the framework similarly apply to wildlife trade activities, wild animal wet market operations, and the risk of the emergence of zoonotic disease and its subsequent spread? This part will attempt to argue in the affirmative. Part A will discuss the applicability of the framework as embodied in the conventions and declarations and as interpreted by the ICJ, or the more "traditional" framework, and Part B will discuss the applicability of the framework as developed by the publicists, or the more "modern" framework.

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[186] *Id.* at 15.

[187] *Id.* at 16.

A. Under the Framework of the Declarations

The language of Principle 2 of the Rio Declaration and Principle 21 of the Stockholm Declaration do not differ. As previously discussed, there are two principles or "limbs" embodied in the principles: (1) *first*, that states have the sovereign right to exploit their own natural resources and (2) *second*, to not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction in the process of such.[188]

The definitions of two terms are material in determining whether the framework may be applied to pandemics caused by zoonotic diseases emerging from wildlife trade activities and wild animal wet market operations. The first term is "natural resources" and the second is "environmental damage." The definitions of these terms will be material since, as worded in the declarations, the duty to prevent transboundary harm will apply to activities undertaken to utilize a state's "natural resources" and that such activities should not cause "environmental harm" to other states. If it is established that the term "natural resources" includes wildlife and that the term "environmental damage" includes damage to human health, then the principles - to the extent that they embody customary international law on the prevention of transboundary harm - would be applicable to the activities aforementioned. Hence, both terms and their respective definitions will be discussed in turn.

1. "Natural Resources"

The first question to be answered is whether the term "natural resources" could include wildlife. It is submitted that wildlife is included in the term "natural resources" due to the definition of natural resources as provided by treaties and conventions.

Principle 2 of the Stockholm declaration refers to the natural resources of the Earth as including "air, water, land, flora and fauna and [...] natural ecosystems." Principle 2 reads:

> The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

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[188] SANDS, *supra* note 119, at 190.

The word "fauna" means animal life, hence would necessarily include wildlife. Furthermore, Article 15(1) of the 1992 Convention on Biodiversity (CBD) states:

> Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.

This reiterates the first limb of Principle 21, in that states would have sovereign rights over their natural resources. The wording of the provision suggests that "genetic resources" are included in the term "natural resources." With genetic resources being derived from animals among others.[189]

Furthermore, the preamble of the Convention on Migratory Species provides that "[e]ach generation of man holds the resources of the earth for future generations and has an obligation to ensure that this legacy is conserved and, where utilized, is used wisely;" implying that migratory species in particular and by implication, animals and wildlife in general are part of the "natural resources of the earth." Hence, wildlife may properly be included in the definition of "natural resources."

2. "Environmental Damage"

With regard to "environmental damage," the question to be answered is whether the term "environmental damage" could include damage to persons and human health. It is submitted that damage and injury to persons is included in the term "environmental damage" due to the definition of natural resources as provided by the ICJ, its ordinary meaning and definitions provided by treaties.

It is first worth noting that the tribunal in *Trail Smelter* declared that Canada was liable due to the damage and injury caused by the smelters and its fumes "to the territory of another or the properties or persons therein."[190] Hence, the tribunal applied the obligation to not cause transboundary damage as including damage and injury to property and persons. Insofar as Principles 2 and 21 are based on the customary obligation as applied by the Tribunal in *Trail Smelter* then it is submitted that damage to persons would fall within the ambit of the custom.

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[189] CBD, art. 2, ¶¶ 10–11.

[190] *Trail Smelter*, 3 RIAA 1905, 1965.

Furthermore, Principle 21 of the Stockholm Declaration, in particular, was invoked in the *Legality of Nuclear Weapons* Advisory Opinion.[191] Regarding this, the court stated that "[t]he Court also recognizes that the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. Hence, the court interpreting the term "environment" as it relates to the Stockholm declaration, expressly states that the environment includes the "health of human beings."[192] This was further reiterated in the *Gabčíkovo-Nagymaros Project* judgment.[193]

It is also worth noting that the latest developments in international law would show an increasing intersection of international environmental law with the area of human rights protection.[194] The relationship of the environment and human rights has been raised in the *Aerial Herbicide Spraying* case filed before the ICJ. [195] In its application, Ecuador claims injury to its citizens due to Colombia's spraying of broad-spectrum herbicides near their border regions.[196] To quote the Application: "During and after each of Colombia's spraying campaigns, for instance, Ecuador's population in the northern boundary areas has reported serious adverse health reactions including burning, itching eyes, skin sores, intestinal bleeding and even death [...]"[197] In a similar vein, the 1998 Aarhus Convention states in its Preamble that "every person has the right to live in an environment adequate to his or her health or well-being".[198]

An important issue at the United Nations Conference on Environment and Development was the extent of an anthropocentric approach, that is, that the environment should be protected for the sake of humans rather than doing so as an end in itself. The Rio and Stockholm declarations seem to adopt this approach due to their respective first principles.[199] Principle 1 of the Rio Declaration reads:

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[191] *Legality of Nuclear Weapons*, 1996 I.C.J. 226, ¶ 27.

[192] *Id.* at ¶ 29

[193] *Gabčíkovo-Nagymaros Project*, 1997 I.C.J. 7, ¶ 53.

[194] SANDS, *supra* note 119, at 700.

[195] *Id.* at 776.

[196] *Aerial Herbicide Spraying* (Ecuador v. Colom) Application Instituting Proceedings, 2008 I.C.J. Rep. 2, ¶ 3 (Mar. 31).

[197] *Id.* at ¶ 4.

[198] SANDS, *supra* note 119, at 776.

[199] *Id.*

> Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

While Principle 1 of the Stockholm Declaration reads in part:

> Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.

In relation to this, the preamble of the Stockholm Declaration provides in part that:

> Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth [....] Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights the right to life itself.
>
> * * *
>
> The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world.

Hence, this emphasizes the inseparability of the environment and human health. The author submits that when one speaks of damage to the environment, it is inevitable but to include damage to persons. This is because the declarations which adopt an anthropocentric approach emphasize that the ends to justify protecting the environment is the protection of humankind itself.

It is therefore submitted that applying the "traditional" framework, the principle could apply to zoonotic diseases which emerge from wildlife trade and wet market operations. This is because the sovereignty limb would apply to enable states to conduct wildlife trade activities and wet market operations in its territory, which is a form of exploiting a state's natural resource, and this right is limited by the second limb, the duty to not cause environmental damage to other states in the form of damage to human health.

B. Under the Framework as Developed by the Publicists

Under this more "modern" framework, two hurdles must be overcome in order to establish its applicability to the activities in question. The first hurdle is to prove that the framework can be applied to zoonotic diseases in a sense that its spread in the form of a pandemic would constitute a "transboundary harm." The second hurdle, would be to prove that wildlife trade activities and wild animal wet market operations can then be considered as a "hazardous" or "ultrahazardous" activity that the obligation to prevent transboundary harm would attach to. The analysis in this part shall take into consideration the pertinent facts about zoonotic disease and the wildlife trade activities outlined in Part II as applied to the framework discussed in Part III. D. above.

1. Draft Articles on Prevention of Transboundary Harm from Hazardous Activities

We turn first to the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities. The scope of the draft articles is laid out in Article 1 thereof, which provides:

> [T]he present articles apply to activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences.

The question to be answered is this: Can wildlife trade activities and wild animal wet market operations be considered as falling within the scope of these Draft Articles on Prevention? For an activity to be deemed included in the scope of the draft articles, four criteria were specified by the ILC in their commentaries to the draft articles:

1. First, is that the activity is "not prohibited by international law;"[200]
2. Second, is that the activities "are planned or carried out" in the territory or otherwise under the jurisdiction or control of a state;[201]
3. Third, that the significant transboundary harm must have been caused by the "physical consequences" of such activities;

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[200] Int'l L. Comm'n, *supra* note 159, at 150.

[201] *Id.*

4. Lastly, is that the activities must involve a "risk of causing significant transboundary harm,"[202]

The following section will discuss wildlife trade and wild animal wet market activities in light of the four criteria provided by the draft articles. It is the author's submission that, if the wildlife trade activities and wild animal wet markets operations meet the four criteria, then the obligations under the Draft Articles on Prevention would apply. Thus, insofar as they embody the customary duty to prevent transboundary harm, then, by implication, the duty would then attach to the aforementioned activities.

i. "Not Prohibited by International Law"

Regarding the first criterion, these articles emphasize the point that if the activity in question itself is not unlawful then it is not a bar to the imposition of a liability. According to the ILC, the first criterion is adopted in order to "separate the topic of international liability from the topic of State Responsibility" which the ILC covers in the Draft Articles on State Responsibility. However, more importantly, these articles would allow a state who will most likely be affected by such acts that are not itself prohibited by international law, to invoke these articles with regard to the obligations of prevention.[203]

The question now is, can the conduct of wildlife trade activities and the operation of wild animal wet markets meet the first criteria? This Note submits that it can. Operation of wild animal wet markets and the trade in wildlife is not illegal *per se* under international law; as of this writing, there are no treaties which outright ban these activities.[204] Granted that the conduct of the trade has to abide with certain international conventions such as the Convention on Biological Diversity and the Convention on International Trade in Endangered Species of Wild Fauna and Flora,[205] assuming that the wildlife trade is being conducted in a legal manner, then it would not constitute a breach of international obligations *per se.*

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[202] *Id.* at 151.

[203] *Id.* at 150.

[204] Dilys Roe et al., *Beyond Banning Wildlife Trade: COVID-19, Conservation and Development.* WORLD DEV., *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7388857/.

[205] Convention on International Trade in Endangered Species of Wild Fauna and Flora, Mar. 3, 1973, 993 UNTS 243.

ii. Planned or Carried Out in the Territory or Otherwise Under the Jurisdiction or Control of a State

Regarding the second criterion which provides that the activities "are planned or carried out" in the territory or otherwise under the jurisdiction or control of a state, this element is subsumed in the definition of "State of Origin" in Article 2.[206] This criterion provides that the activities the articles are applicable to are those "planned or carried out in the territory or otherwise under the jurisdiction or control of a state."[207] According to the ILC, for the purpose of applying these articles, territorial jurisdiction is the dominant criterion;[208] hence, when the activity occurs within the territory of a state, the state must comply with the obligations of prevention and that territory is taken as conclusive evidence of jurisdiction.

It is important to note here that unlike the Articles on State Responsibility which require attribution to states of acts that will be deemed as acts of a state with regard to state responsibility.[209] The Draft Articles on Prevention merely require that the activity be done within the state. This follows the dictum of the court in *Corfu Channel* case where presumptive knowledge was deemed enough to hold Albania liable.[210] Furthermore, the actors in *Pulp Mills* and *Trail Smelter* were private parties, and what the tribunal or court considered was that the activity was being done in the impleaded state's territory and not necessarily whether it was attributable to the State in the sense of "Attribution" as embodied in the Draft Articles on State Responsibility.

In the case of wildlife trade and wild animal wet market operations, this activity would inevitably be done in the territory of one state or another. Unlike activities done outside the territory of any state such as exploiting resources in the high seas or in outer space, wildlife trade would necessarily have to be carried out in the territory of a state. Even in cases where the activity is done outside of the territory of any state, the applicable standards would be "control" to determine jurisdiction. However, in this case, the act of selling and buying wild animals would naturally not be done outside of the jurisdiction of any state.

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[206] Int'l L. Comm'n, *supra* note 159, at 150.

[207] *Id.*

[208] *Id.*

[209] Int'l. L. Comm'n, Draft Articles on Responsibility of States for Internationally Wrongful Acts, at chp.IV.E.1, Supplement No. 10 (A/56/10) (Nov. 2001).

[210] *Corfu Channel*, 1949 I.C.J. 4, 22.

iii. Caused by the Physical Consequences
of Such Activities

Regarding the third criterion. The ILC provides that the significant transboundary harm "must have been caused by the 'physical consequences' of such activities."[211] This is as opposed to monetary, socio-economic or similar consequences. The ILC states that this criterion implies that the activities covered in the Draft Articles on Prevention must have a physical quality and that the consequences would flow from that quality.

Although invisible to the naked eye, one may simply peer into microscopes[212] or conduct chemical tests[213] in order to prove the physical presence of viruses and to examine their physical properties. Depending on the type of disease, they spread through some type of medium such as air and possibly even water. Furthermore, in the event of a spread of zoonotic diseases, the effect of this would be to affect a person's physical well-being among others. Granted that a spread of disease can cause economic recession or political conflict such as the case of the COVID-19 pandemic, primarily however, it can be argued that the root of the consequences caused by these diseases are due to the potential for them to cause physical harm above all else. Hence, a zoonotic disease and its spread has a physical element and has physical consequences.

iv. Involves a Risk of Causing Significant
Transboundary Harm.

Regarding the fourth criterion that activities covered in the articles "must involve a 'risk of causing significant transboundary harm.'" This criterion is a combination of three terms that the commentary to the Draft Articles on Prevention each defines:

1. First, is the concept of "risk;"
2. Second, is the concept of "transboundary harm;" and
3. Last, is the concept of "significant."

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[211] Int'l L. Comm'n, *supra* note 159, at 150.

[212] Grace Roberts, *Five techniques we're using to uncover the secrets of viruses*, CONVERSATION, Aug. 26, 2020, *at* https://theconversation.com/five-techniques-were-using-to-uncover-the-secrets-of-viruses-144363.

[213] *Id.*

First, the Note will discuss the phrase "risk of causing significant transboundary harm" as discussed by the ILC. Then, the Note will discuss each of the three terms listed above in turn.

According to the ILC, "risk of causing significant transboundary harm," as a phrase, refers to the combined effect of the probability of occurrence of an accident and the magnitude of its injurious impact and it is the combined effect of "risk" and "harm" that sets the threshold; this combined effect then should reach a level that is deemed "significant."[214] Hence, whether or not the four criteria are met will depend on how the three concepts of "risk", "transboundary harm" and "significant" equate.

a. "Risk"

First, regarding the term "risk", the ILC states that this is "concerned with future possibilities, and thus implies some element of assessment or appreciation of risk."[215] To determine if there is risk the test is "whether a properly informed observer was or could have been aware of that risk at the time the activity was carried out."

It is submitted that the scientific community was made aware of the risks that zoonotic diseases can emerge from wild animal wet markets and the conduct of wildlife trade. As early as 2003, when the SARs outbreak was traced back to a seafood market in southern China, experts have been calling on a ban of wild animal wet markets and on wildlife trade.[216] It is but reasonable to believe that the Chinese government was made aware of such calls and the reasons for such. Knowledge is also manifested through the acts of the Chinese government itself. Immediately after the outbreak of COVID-19, Chinese authorities quickly put a halt to wildlife trade and closed wild animal wet markets.[217] This manifests that the Chinese government at least knew or should have known that these activities most likely caused the disease even before the outbreak.

b. "Transboundary Harm"

With regard to the phrase "transboundary harm," the ILC defines transboundary harm in Article 2(c) as a "harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State

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[214] Int'l L. Comm'n, *supra* note 159, at 152.

[215] *Id.* at 151.

[216] Roe et al., *supra* note 204, at 3.

[217] Maron, *supra* note 31; White, *supra* note 93; Arranz & Huang, *supra* note 100.

of origin, whether or not the States concerned share a common border[.]"[218] The ILC did not give a list of all the forms of transboundary harm because it cannot "forecast" such. However, it intended to "draw a line and clearly distinguish a State under whose jurisdiction and control an activity covered by these articles is conducted from a State which has suffered the injurious impact."[219]

A zoonotic disease can spread to the scale of an epidemic or a pandemic. A pandemic is defined as "an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people."[220] Thus, by its very definition, pandemics are transboundary in nature, thereby transcending borders and jurisdictions of states. Furthermore, the ILC defines "harm" as "harm caused to persons, property[,] or the environment,"[221] without further giving commentary. There is no debate that a disease's consequence is to cause harm to human health. Hence, a pandemic, causing "harm" to persons crossing borders, may be considered as a "transboundary harm."

c. "Significant"

In turn, the ILC defines "significant" as "something more than 'detectable' but need not be at the level of 'serious' or 'substantial.'"[222] According to the ILC the harm must lead to real detrimental effects on "matters such as human health, industry, property, environment or agriculture in other states, and is susceptible of being measured by factual and objective standards. The determination whether the harm is significant involves factual as opposed to legal considerations and is determined from case to case.[223]

Literature provides two approaches in determining what threshold of severity would have to be to crossed to constitute "significant" harm.[224] On one hand, the first approach implies that the threshold of harm must be determined by "balancing the socio-economic utility of an activity against its detrimental effects on the environment,"[225] resulting to a threshold that would

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[218] Int'l L. Comm'n, *supra* note 159, art. 2.

[219] *Id.* at 153.

[220] A DICTIONARY OF EPIDEMIOLOGY (John Last ed., 4th ed. 2001).

[221] Int'l L. Comm'n, *supra* note 159, at 153.

[222] *Id.* at 152.

[223] *Id.* at 388, ¶ 4.

[224] Jervan, *supra* note 131, at 54; *citing* RENÉ LEFEBER, TRANSBOUNDARY ENVIRONMENTAL INTERFERENCE AND THE ORIGIN OF STATE LIABILITY 87-89 (1996).

[225] *Id.*

adjust based on the economic utility an activity yields.[226] On the other hand, the second approach provides that a "*de minimis* test must be applied to the harm, a test which implies that if the harm is not minor [...] the threshold is crossed."[227] This latter approach is similar to ILC's taken approach in the Draft Articles on Prevention as it characterized significant as "something more than 'detectable.'"[228]

There can be no argument that disease spread affects human health in more than an insignificant level of severity. The effects of diseases range from rendering individuals incapable of carrying out their day-to-day activities because of mild cases to even causing death in extreme cases. In fact, as of time of writing, the COVID-19 pandemic has already resulted to 114,853,685 confirmed cases with 2,554,694 lives lost, across 223 countries[229] and the 2003 SARS epidemic had more than 8,098 cases and 774 deaths across 29 countries.[230]

d. "Risks Taking the Form of a Low Probability of Causing Disastrous Transboundary Harm"

Although not exactly part of the criteria, the ILC Draft Articles on Prevention expounds on the phrase "risk of causing significant transboundary harm" in Article 2(a). Article 2(a) on Use of Terms of the Draft Articles on Prevention reads:

> For the purposes of the present articles:
>
> (a) 'Risk of causing significant transboundary harm' includes risks taking the form of a high probability of causing significant transboundary harm and a low probability of causing disastrous transboundary harm;[231]

The inclusions refer to two classes of activities: first, one with a low probability of causing disastrous harm or "ultrahazardous activities" and second, activities with a high probability of causing significant harm as opposed to disastrous harm. After arguing that wildlife activities and wild animal wet market operations have a "risk of causing significant

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[226] *Id.*
[227] Jervan, *supra* note 131, at 51.
[228] *Id.*
[229] WHO, *supra* note 22.
[230] WHO Reg'l Office for the W. Pac., *supra* note 19.
[231] Int'l L. Comm'n, *supra* note 159, art. 2 (a).

transboundary harm," it would be apt to discuss which of the two classes mentioned these activities would fall under.

The ILC states that "any hazardous and by inference, any ultrahazardous activity which involves a risk of significant transboundary harm is covered."[232] The ILC defines an "ultrahazardous activity" as an activity "perceived to be with a danger that is rarely expected to materialize but might assume, on that rare occasion, grave (more than significant, serious or substantial) proportions."[233]

Furthermore, a discussion on the different perspectives of transboundary damage, as proposed by Hanquin, would be relevant at this juncture. As discussed above, Hanquin presented three different perspectives: accidental damage, non-accidental damage, and damage to the global commons. Accidental damage involves damage that "arises from the sudden and generally unforeseen occurrence of an event (or a series of occurrences with a common origin)."[234]

In her discussion, Hanquin noted that the ILC also adopted a similar approach when it distinguished the situation where damage is caused by a sudden event from that where damage is caused in its Draft Articles on Prevention[235] in its discussion about the Article 2 definition of "risk of causing significant transboundary harm." A discussion of "ultrahazardous activities" in this section would then be linked to Hanquin's definition of "accidental damage."

Given the above, can the conduct of wildlife trade and wild animal wet market operations be deemed as an "ultrahazardous activity"? In relation, can the resulting emergence and spread of zoonotic diseases constitute "accidental damage"?

Admittedly, the probability that a zoonotic disease (that would subsequently cause a detectable outbreak) would emerge from these activities is low, which can be inferred from the fact that wildlife trade activities are undertaken daily and only a number of zoonotic diseases epidemics or pandemics in the past two decades (i.e. MERS, SARS, H5N1) caused outbreaks. However, the consequences of these outbreaks are grave in terms

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[232] *Id.* at 149.
[233] *Id.*
[234] HANQUIN, *supra* note 158, at 19.
[235] *Id.* at 12.

of proportions as discussed above.[236] This is similar to how the probability of nuclear activities causing transboundary damage would be low since there are only a number of nuclear accidents in the recent past (i.e. Fukushima, Chernobyl, Three Mile Island, SL-1 and Windscale, among others)[237] although these activities are undertaken daily. Nuclear activities are an examples of ultrahazardous activity.[238] Hence, similarly, the conduct of wildlife trade activities and operation of wild animal wet markets may properly be considered as an "ultrahazardous activity."

2. Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities

The discussion will now turn to the Draft Principles. The background of the Draft Principles is that even if states comply with their prevention duties under the Draft Articles, it can be inevitable that some damage would still arise due to transboundary harm.[239] Article 1, or the scope, reads as follows:

> The present draft principles apply to transboundary damage caused by hazardous activities not prohibited by international law.

As stated by the commentary, the scope of these Draft Principles would be the same scope as that of the 2001 Draft Articles on Prevention.[240] The ILC reiterated the four criteria discussed above. The only significant difference being that these articles are concerned with "damage" as opposed to "harm." The term "damage" is used here as referring to the phase where harm as actually occurred as opposed to reference only to the risk of harm.[241] Article 2 defines the term "damage" as:

> [S]ignificant damage caused to persons, property, or the environment; and includes:
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> (i) loss of life or personal injury;
> (ii) loss of, or damage to, property, including property that forms part of the cultural

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[236] WHO, *supra* note 22.

[237] *A Brief History of Nuclear Accidents Worldwide,* UNION OF CONCERNED SCIENTISTS, Oct. 1, 2013, https://www.ucsusa.org/resources/brief-history-nuclear-accidents-worldwide.

[238] HANQUIN, *supra* note 158, at 19.

[239] Int'l L. Comm'n, *supra* note 164, at 59.

[240] *Id.* at 61–62.

[241] *Id.* at 63.

> heritage;
> (iii) loss or damage by impairment of the environment;
> (iv) the costs of reasonable measures of reinstatement of the property, or environment, including natural resources;
> (v) the costs of reasonable response measures[.][242]

The ILC has qualified the term damage with "significant". However, the discussion on its definition follows the discussion of the meaning of "significant" in the Draft Articles on Prevention. Hence, it would not be necessary discuss the same here. It is also relevant to note that the chapeau is similarly worded as the definition of "harm" in the previous Draft Articles on Prevention discussed above, suggesting the similarity in scope of the word "harm" and "damage." The 2006 Draft Principles, however, specified examples of "damage." Among these examples include "loss of life or personal injury" and "the costs of reasonable response measures", which seem to be the most relevant of the enumerated examples in relation to zoonotic disease and pandemics. These two terms will be discussed further in turn.

Regarding "loss of life or personal injury," it requires no stretch of the imagination to associate the loss of life caused by these diseases as "damage" in the contemplation of the Draft Principles. Furthermore, the ILC explicitly stated in the commentary that "consequential economic losses are covered under subparagraphs (i) and (ii)." This means the loss of income because of the inability of a person who is injured by the damage to earn, among other instances.

Regarding "the costs of reasonable response measures," the ILC has stated that this includes "any reasonable measures taken by any person including public authorities, following the occurrence of the transboundary damage, to prevent, minimize, or mitigate possible loss or damage." Hence, when applied to the pandemic, this can be taken to include the losses incurred due to measures taken by states to prevent the spread thereof and improve the healthcare systems.

The next point of discussion is the definition of "transboundary damage." Article 2 (e) reads as follows:

> "[T]ransboundary damage" means damage caused to persons, property or the environment in the territory or in other places

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[242] *Id.* at art. 2 (a).

> under the jurisdiction or control of a State other than the State of origin;[243]

The ILC restated this definition: "[T]ransboundary damage refers to damage occurring in one state because of an accident or incident involving a hazardous activity with effect in another state." Similar to the definition of "transboundary harm" discussed above, it requires that the harm befalls persons or a state as distinguished from the state that caused them. Again, the definition of a pandemic would be useful in this discussion since by its very definition, it involves more than one state.

Having established that the scope and definitional limitations of the Draft Articles on Prevention and Draft Principles are similar, it is then submitted that both frameworks on transboundary harm and damage could apply to the spread of zoonotic diseases, which emerge from wildlife trade and wild animal wet market operations.

3. Under the Framework of Transboundary Damage as Developed by Xue Hanquin

As discussed in Part III, Hanquin reiterated the proposal of four definitional elements for the application of the principle. The four elements are the following:

1. The physical relationship between the activity concerned and the damage caused;
2. Human causation;
3. Certain threshold of severity that calls for legal action; and
4. Transboundary movement of the harmful effects.

It is worth noting that the elements mentioned are similar to the criterion established by the ILC in their Draft Articles on Prevention. First, the criterion in the draft articles which states that activities must involve a "risk of causing significant transboundary harm" since the discussion of this criterion would cover the third and fourth elements proposed by Hanquin above; and second, the criterion in the draft articles that states that "the significant transboundary harm must have been caused by the physical consequences of such activities", which would cover the discussion of the first element proposed by Hanquin.

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[243] *Id.* at art. 2 (e).

It would then be repetitive to discuss the aforestated elements again in detail. Hence, the discussion under this part will focus on the second element proposed by Hanquin—that there was "human causation"—since it is the element not discussed above.

According to Hanquin, the effect of the element of human causation is to exclude "acts of God" or natural calamities, such as earthquakes, floods, volcanos, and hurricanes, even though they can cause significant damage to more than one state. Hence, transboundary damage should have "some reasonably proximate causal relation to human conduct."[244]

This element is fulfilled in the case of wildlife trade activities and wild animal market operations as the proximate cause of the emergence of a disease are the acts of humans.

"Proximate cause" is defined in BLACK'S LAW DICTIONARY as "that which, in a natural and continuous sequence, unbroken by any efficient intervening cause, produces injury, and without which the result would not have occurred."[245] Causation in environmental law is defined similarly to that in common law torts[246] to which the "but-for test"[247] or the "substantial factor"[248] test is applied. It is submitted that the wildlife trade activities would pass these tests.

For a zoonotic disease to emerge, a pathogen from one species must come into contact with a human host.[249] Although the emergence of zoonotic diseases can occur when animals are in their natural habitats—untouched by humans—the probability of this is significantly smaller than if they are displaced from their natural habitats because of wildlife trade.[250] The probability of this cross-mutation is high because of various species are brought together in places such as wild animal wet markets.[251] On top of this, these animals are then exposed to humans because of wild animal wet markets that attract millions of customers every day. These conditions established by

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[244] HANQUIN, *supra* note 158, at 6.

[245] BLACK'S LAW DICTIONARY 1103 (5th ed. 1979).

[246] *Causation In Environmental Law: Lessons From Toxic Torts*, 128 HARV. L. REV. 2256.

[247] *Causation in Personal Injury Cases*, JUSTIA, Apr. 2018, *at* https://www.justia.com/injury/negligence-theory/actual-and-proximate-cause/.

[248] *Id.*

[249] Robert G. Webster, *Factors of Emergence*, EMERGENCE OF ZOONOTIC DISEASES: UNDERSTANDING THE IMPACT ON ANIMAL AND HUMAN HEALTH: WORKSHOP SUMMARY, *available at* https://www.ncbi.nlm.nih.gov/books/NBK98097/.

[250] *Supra* note 48.

[251] *Id.*

wildlife trade create a "perfect storm" for these diseases' emergence.[252] Hence, although fortune and chance play a role, there is still a human element in the emergence of zoonotic disease because of wildlife trade and wild animal wet market operations.

In conclusion, Part IV analyzes whether the framework governing the duty to prevent transboundary harm may be applicable to the conduct of wildlife trade and the operation of wild animal wet markets. The conclusion provides that the framework does, especially since under the "traditional" framework, the two limbs would be applicable to two aspects: first, the conduct of wildlife trade as permitted due to the sovereignty limb; and second, the duty to not cause environmental damage to other states includes damage to human health. Furthermore, under the "modern" framework, the activity and consequent harm in question fall within the scope of the obligation as delineated by its criteria and definitional elements.

V. SUGGESTED APPLICATIONS WITH REGARD TO THE COVID-19 PANDEMIC

As discussed above, it would be possible to apply the framework of the duty to prevent transboundary harm to the conduct of wildlife trade activities, the operation of wild animal wet market and the emergence of zoonotic diseases. This part will explore the implications of this through possible applications.

In this suggested case, COVID-19, the disease that emerged, and its subsequent spread were characterized as a pandemic. For the suggested case's purpose, facts in Part II are presumed to be accurate. Part A argues that injured states may institute proceedings in the ICJ, and Part B recommends that a multilateral treaty regulating the conduct of wildlife trade and the operation of wild animal wet markets may be concluded as a prospective application.

A. Institution of Proceedings in the ICJ

The framework's applicability can be a cause to institute proceedings in the ICJ. There are two types of cases that the ICJ may entertain: first, legal disputes between States submitted to it by them or "contentious cases;" and second, requests for advisory opinions on legal questions referred to it by

[252] *Id.*

United Nations organs and specialized agencies or "advisory proceedings."[253] Either can be resorted to, but this Note will only discuss the *second* type of case, particularly since acquiring jurisdiction over China through consent in a contentious proceeding has been found to be implausible given its infamous attitude toward dispute settlement in international courts and tribunals.[254]

The United Nations General Assembly ["UNGA"] and Security Council ["UNSC"] may request advisory opinions on "any legal question". Other United Nations organs and specialized agencies that have been authorized to seek advisory opinions can also do so with respect to "legal questions arising within the scope of their activities."[255] When the Court receives a request, it would then hold written and oral proceedings to determine the necessary facts and gather information in relation to the question.[256]

A suggested question may take this form: "What are the legal consequences arising from the conduct of wildlife trade activities within and by the People's Republic of China considering the rules and principles of international law, including the Duty to Prevent Transboundary Harm?"[257]

Although the advisory opinions delivered by the court differs from its judgments in contentious cases in that it has no binding effect, nevertheless, such advisory opinions are "associated with its authority and prestige, and a decision by the organ or agency concerned to endorses an opinion is as it were sanctioned by international law."[258]

States in their written submissions may suggest that China violated the Duty to Prevent Transboundary Harm: *first*, by breaching its Duty to Prevent; and *second*, by breaching its Duty to Cooperate in so far as both obligations operationalize and elaborate on the customary duty to prevent transboundary harm. States may also request that the court opine that China

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[253] *How the Courts Work*, I.C.J. WEBSITE, *at* https://www.icj-cij.org/en/how-the-court-works (last accessed Dec. 8, 2020).

[254] Harriet Moynihan, *China's Evolving Approach to International Dispute Settlement*, CHATHAM HOUSE, Mar. 2017, *at* https://www.chathamhouse.org/sites/default/files/publications/research/2017-03-29-chinas-evolving-approach-international-dispute-settlement-moynihan-final.pdf.

[255] *Supra* note 253.

[256] *Id.*

[257] This suggested question is inspired by the phrasing of the Question in the *Construction of a Wall*. *See* Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory [hereinafter "*Construction of a Wall*"], Advisory Opinion, 2004 ICJ 136. (July 9).

[258] *Supra* note 253.

is to ban or regulate its wildlife trade activities and give reparation to states affected by such activities. Both suggestions will be discussed in turn.

1. The Duty to Prevent

First, with regard to the duty to prevent. Underlying the "no-harm" rule is the duty to prevent the harm in the first place, whereas states have the duty to prevent transboundary harm and minimize the risk thereof, the duty is one of conduct and not result.[259] For this discussion, reference will be made to the ILC Draft Articles on Prevention insofar as they embody customary international law. Article 3 of the ILC Draft Articles on Prevention states that:

> The State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof.

Regarding this principle, the ILC stated that this articulates the principle of "no harm" or *sic utere tuo ut alienum non laedas*, which is also reflected in the *Trail Smelter* dictum and principle 21 of the Stockholm Declaration.[260] Its underlying principle is customary. However, Article 3, as worded itself, has not yet been ruled as customary. Along with Article 4, Article 3 provides for the very foundation of the articles of prevention.[261]

Article 3 obligates states to prevent significant transboundary harm and only if this is not possible should the state then proceed to merely minimizing the risk of such.[262] Articles 9 and 10 operationalize the general duty to prevent.[263] The modes by which states can comply with this obligation to prevent is through its organs be it administrative or legislative.[264] Stated in another way, the obligation of prevention is one of due diligence.[265] According to the ILC, the due diligence of a state is manifested through:

> [R]easonable efforts by a State to inform itself of factual and legal components that relate foreseeably to a contemplated procedure and to take appropriate measures, in timely fashion, to address them [...] Such measures include, first, formulating policies designed to prevent significant transboundary harm or to minimize the risk thereof and, secondly, implementing those policies.

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[259] *Pulp Mills*, 2010 I.C.J. 14, ¶ 197.
[260] Int'l L. Comm'n, *supra* note 159, at 153.
[261] *Id.*
[262] *Id.*
[263] *Id.*
[264] Int'l L. Comm'n, *supra* note 159, at 154.
[265] *Id.*

Furthermore, the ICJ's jurisprudence supports the approach that the no-harm rule imposes an obligation to act with due diligence.[266] A due diligence test was applied in *Corfu Channel*, when the court recognized that "the question whether there is a breach of an obligation not to inflict damage on other states, is a question of whether a state has acted with a certain standard of care, and that it is a state's failure to take reasonable measures to prevent harm which trigger the obligation."[267]

In addition, the court discussed the duty to prevent transboundary harm hand-in-hand with the obligation to act with due diligence in the *Pulp Mills* case.[268] Characterizing this obligation as an obligation of "conduct", the court ruled that it was "an obligation which entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators, to safeguard the rights of the other party."[269]

Regarding the standard of due diligence that states must follow, it should be proportionate to the degree of risk of transboundary harm[270] with ultrahazardous activities requiring a higher degree of diligence.[271] The legal meaning of due diligence and the standards to be used will depend on the specific risks related to the activities it will be applied to.[272] However, there seems to be a consensus on the basic elements of the standard.[273] The standard involves a test where "the conduct of the state must be compared to what a 'good government' would do in a particular situation of transboundary pollution."[274] According to the ILC, this obligation is "manifested in reasonable efforts by a State to inform itself of factual and legal components that relate foreseeably to a contemplated procedure and to take appropriate measures, in timely fashion, to address them,"[275] and that these policies are to

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[266] Jervan, *supra* note 131, at 63.

[267] *Corfu Channel*, 1949 I.C.J 4, 15.

[268] Jervan, *supra* note 131, at 63.

[269] *Pulp Mills*, 2010 I.C.J. 14, ¶ 197.

[270] Int'l L. Comm'n, *supra* note 159, at 154.

[271] *Id.*

[272] Jervan, *supra* note 131, at 66, *citing* Responsibilities and obligations of states sponsoring persons and entities with respect to activities in the Area, Advisory Opinion, 2011 ITLOS 10, ¶¶ 111, 115 (Feb. 11).

[273] *Id.* at 66.

[274] *Id.*

[275] Int'l L. Comm'n, *supra* note 159, at 154, ¶ 10.

be expressed in legislation and administrative regulations and implemented through various enforcement mechanisms."[276]

As applied, the states may submit that China's actions are inconsistent with this obligation. As early as the SARS outbreak in 2003, there has been evidence to show that zoonotic diseases can and do emerge from wildlife trade activities, and in particular, wild animal wet market activities.[277] Despite this, China's wild animal wet markets remain open and unregulated. If China had acted according to the obligation of due diligence, it would have regulated such wild animal wet market activities as early as 2003 at the least, by ensuring more stringent sanitation practices within them, if not outright banning them altogether.

As discussed above, China had knowledge of the link between the wildlife trade and emergence of zoonotic diseases as evidenced by its conduct immediately after the coronavirus outbreak.[278] Immediately after the SARs outbreak, China banned the hunting, trading, and consumption of wildlife.[279] However, this did not last since it was lifted three months later.[280] After the recent outbreak of COVID-19, China closed down the Huanan Food Market[281] and once again banned the trade of wildlife nationwide.[282] These acts of the Chinese government could only point to the conclusion that it at least knew that wildlife trade and wild animal wet markets played a critical role in the emergence of these disease. Still, the calls for the immediate ban of such remain unheeded.

Furthermore, China not only failed to employ policies that could have prevented the emergence of the virus, but it also failed to prevent its transboundary movement. China could have imposed travel bans earlier upon discovery of such new potential public health emergency. A study shows that if China had only acted a week sooner, this could have prevented up to 66% of cases of COVID-19 worldwide; and if it had acted three weeks sooner, the number of cases could have been reduced by 95%.[283] China not only failed to

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[276] *Id.*

[277] Maron, *supra* note 31.

[278] *Id.*; Arranz & Huang, *supra* note 100.

[279] Su, *supra* note 62.

[280] *Id.*

[281] Maron, *supra* note 31.

[282] White, supra note 93.

[283] Ian Sample, *Research finds huge impact of interventions on spread of Covid-19,* GUARDIAN, Mar. 11, 2020, *at* https://www.theguardian.com/world/2020/mar/11/research-finds-huge-impact-of-interventions-on-spread-of-covid-19; Shengjie Lai et al., *Effect of non-pharmaceutical interventions for containing the COVID-19 outbreak in China,* 2020 NATURE 410, 411.

impose travel bans to control the spread of the harm, but China also purposefully tried to conceal the fact that there was a harm in the first place.[284] Hence, a possible violation of the Duty to Prevent.

2. Duty to Cooperate

The second fundamental obligation to fulfill in a state's duty to prevent transboundary ham is the obligation to cooperate in good faith. This obligation has been characterized as a "procedural obligation."[285] This obligation is a customary obligation[286] that has been embodied in a number of international conventions which concern the environment and the protection thereof.[287] This discussion will refer to the obligation as worded in Article 4 of the Draft articles. Article 4 provides for the duty to cooperate in good faith, and it reads:

> States concerned shall cooperate in good faith and, as necessary, seek the assistance of one or more competent international organizations in preventing significant transboundary harm or at any event in minimizing the risk thereof.

The rationale of this principle is that the states likely to be affected should be able to participate in designing and implementing policies to prevent significant transboundary harm for a more effective policy.[288]

The obligation is to be read in conjunction with Article 9 and 10 of the Draft Articles.[289] Article 9 requires states to enter into consultations in order to agree on the measures to prevent significant transboundary harm, or at any event to minimize the risk thereof, while Article 10 provides for factors involved in an equitable balance of interests in making such consultations in Article 9. Article 8 of Draft Articles on Prevention also provides for the duty to notify in this vein:

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[284] Rhea Mahbubandi, *A Wuhan doctor says Chinese officials silenced her coronavirus warnings in December, costing thousands their lives*, BUS. INSIDER, Mar. 12, 2020, *at* https://bit.ly/2whUyCO; Lily Kuo, *Coronavirus: Wuhan doctor speaks out against authorities*, GUARDIAN, Mar. 11, 2020, *at* https://bit.ly/2XdfJkx; Bao Zhiming *et al.*, *Update: Wuhan Doctors Say Colleagues Died in Vain Amid Hospital Official Cover-Up*, CAIXIN, Mar. 11, 2020, *at* https://bit.ly/3aQLyU8; Joshpe, *supra* note 2; *See also* Chao Deng & Josh Chin, *Chinese Doctor Who Issued Early Warning on Virus Dies*, WSJ, Feb. 7, 2020, *at* https://on.wsj.com/2RjmBJw; Stephanie Hegarty, *The Chinese doctor who tried to warn others about coronavirus*, BBC NEWS, Feb. 6, 2020, *at* https://bbc.in/2x6Xhzq.

[285] *Pulp Mills*, 2010 I.C.J 14, ¶ 71-79.

[286] *Pulp Mills*, 2010 I.C.J. 14, ¶ 55.

[287] Jervan, *supra* note 131, at 88.

[288] Int'l L. Comm'n, *supra* note 159, at 155.

[289] *Id.* at. 169.

> [T]he State of origin shall provide the State likely to be affected with timely notification of the risk and the assessment and shall transmit to it the available technical and all other relevant information on which the assessment is based.

Furthermore, the ICJ has interpreted and applied these obligations in the *Corfu Channel* and the *Pulp Mills* cases. In *Corfu Channel*, the court attached the obligation to notify other states to the obligation to act with due diligence.[290] Here, the ICJ ruled that Albania had the duty to notify the UK of the danger posed by the mines and that by failing to do so, there was a breach of these duties, it being part and parcel of the obligation to not to knowingly allow their territory to be used for acts contrary to the rights of other states.[291]

In the *Pulp Mills* case, the court interpreted the customary obligation to cooperate.[292] The court, in its ruling, emphasized that had the states cooperated in the planning and jointly managing the risks involved in the project, the chances of preventing the damage would have been greater.[293] Furthermore, the court stated that the parties had a duty to inform the other party when there has been an assessment that the project might cause significant damage to the other party.[294]

Underlying the obligation to cooperate is the principle of good faith. The tribunal in the *Lake Lanoux* arbitration stated that "consultations and negotiations between the two States must be genuine, must comply with the rules of good faith and must not be mere formalities. The rules of reason and good faith are applicable to procedural rights and duties relative to the sharing of the use of international rivers."[295]

China's attempts to conceal the new virus' discovery from the international community show their inconsistency with this obligation. Some reports state that the virus started spreading in September 2019[296], whereas more conservative reports state that it started spreading November 2019.[297] As early as December 30, 2019, a scientist, Dr. Li Wenliang, has made reports

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[290] *Corfu Channel*, 1949 I.C.J 4, 22.

[291] *Id.*

[292] *Pulp Mills*, 2010 I.C.J at ¶ 55.

[293] *Id.* at ¶ 77.

[294] *Id.* at ¶ 105.

[295] Lake Lanoux Arbitration (Fr. v. Spain), 24 ILR 101 (1957).

[296] Hannah Osborne, *Coronavirus Outbreak may have Started as Early as September, Scientists Say*, NEWSWEEK, Apr. 17, 2020, *at* https://www.newsweek.com/coronavirus-outbreak-september-not-wuhan-1498566.

[297] Josephine Ma, *Coronavirus: China's first confirmed Covid-19 case traced back to November 17*, S. CHINA MORNING POST, Mar. 13, 2020, *at* https://bit.ly/2xOoAyt.

about a new pneumonia-like virus circulating in Wuhan.[298] The Chinese government, however, responded by imposing a gag order on the doctor.[299] Furthermore, another whistleblowing doctor was reported missing.[300] On January 3, 2020, China's National Health Commission, the nation's top health authority, "ordered institutions not to publish any information related to the unknown disease, and ordered labs to transfer any samples they had to designated testing institutions, or to destroy them."[301] It was only by January 9 that the commission reported that there is a new coronavirus circulating in the country and finally, only reported person-to-person transmission on January 20, 2020.[302]

This response is not at all new. In fact, China employed the same acts of concealment in its response to the SARS epidemic. SARS was said to have been circulating as early as November 2002.[303] However, it was only reported for the first time to the international community via the WHO on February 11, 2003, or more than three months later,[304] with its next report given only on March 26, 2003.[305] Furthermore, similar to the alleged concealment of the COVID-19 pandemic, there were reports that Chinese officials ordered doctors to hide SARS patients from WHO health inspectors.[306]

This simple act of informing the international community could have allowed the faster implementation of measures on the part of other states. These measures include the earlier imposition of travel bans or the preparation of healthcare systems to mitigate the damage caused by the pandemic. Furthermore, this failure to furnish information even seems to have been an intentional act given its recurring nature. Hence, because of these facts, China may be said to have violated its duty to cooperate with other states.

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[298] Joshpe, *supra* note 2. *See also* Deng & Chin, *supra* note 284.

[299] Hegarty, *supra* note 284.

[300] Mairead McArdle, *Chinese Doctor Disappears after Blowing the Whistle on Coronavirus Threat*, NAT'L REV., Apr. 1, 2020, *at* https://bit.ly/2wjzRGL.

[301] Gao Yu et al., *In Depth: How Early Signs of a SARS-Like Virus Were Spotted, Spread, and Throttled*, CAIXIN, Feb. 29, 2020, *at* https://bit.ly/2Xeg2M7.

[302] Eliza Relman, *China confirmed that the deadly Wuhan virus sweeping the country can spread from human to human, increasing the risk of an epidemic*, BUS. INSIDER, Jan 20, 2020, *at* https://bit.ly/2wYzlhP.

[303] *See* WHO Reg'l Office for the W. Pac, *supra* note 18.

[304] *Id.*

[305] *Id.*

[306] *Id.*

3. Consequences of China's Acts

Regarding the consequences for the damage caused. Hand in hand with the "no harm" principle is the "polluter pays" principle as the second principle announced in the *Trail Smelter* case. For specific standards and framework of this principle this discussion will refer to the articles on State Responsibility.

Although the Draft Principles seem more in line with regard to its scope, a reading of the obligations provided therein are prospective in application. Hence, would not be adequate to apply to the current situation where the damage has been done. It is therefore submitted that the customary duty to cease illegal acts and to give reparations as embodied in the Draft Articles on State Responsibility would be more applicable to the present suggested case since it provides for customary rules regarding compensation.

The violation of the duty to prevent transboundary harm may be deemed as an internationally wrongful act due to the rule's customary nature. Taking a step back from the distinction drawn by the ILC in creating the Draft Articles on Prevention, the fact that operating wild animal wet markets and conducting wildlife trade is not specifically banned by treaties or conventions is of no moment, especially since what makes it a breach of an international obligation is that its effect is deemed contrary to custom.

Discussion will then be made on the application of the rules of State Responsibility to the present case.

The first general principle provided by the articles is Article 1 or the "[r]esponsibility of a State for its Internationally Wrongful Acts."[307] It provides that "[e]very internationally wrongful act of a State entails the international responsibility of that State." Furthermore, Article 2 provides that "[t]here is an internationally wrongful act of a State when conduct consisting of an action or omission (a) is attributable to the State under international law; and (b) constitutes a breach of an international obligation of the State."[308] Article 28 provides for the legal consequences of an internationally wrongful act. It provides that states are obliged to cease the wrongful conduct and to

[307] Int'l L. Comm'n, *supra* note 209, art. 1.

[308] *Id.* at art. 2.

guarantee non-repetition[,] if needed[309] and to give reparation to the affected states[310] following the forms of reparation enumerated under Article 34.[311]

In *Construction of a Wall*, the court determined the consequences of the violations of the construction of the wall. The final paragraph containing the findings of the court reads in part:[312]

> The construction of the wall being built by Israel [...] [is] contrary to international law;
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> * * *
>
> Israel is under an obligation to terminate its breaches of international law; it is under an obligation to cease forthwith the works of construction of the wall being built [...], to dismantle forthwith the structure therein situated, and to repeal or render ineffective forthwith all legislative and regulatory acts relating thereto[;]
>
> * * *
>
> Israel is under an obligation to make reparation for all damage caused by the construction of the wall[;]
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> * * *
>
> All States are under an obligation not to recognize the illegal situation resulting from the construction of the wall and not to render aid or assistance in maintaining the situation created by such construction;
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> * * *
>
> The United Nations, and especially the General Assembly and the Security Council, should consider what further action is required to bring to an end the illegal situation resulting from the

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[309] *Id.* at art. 30. "Cessation and non-repetition" reads: "The State responsible for the internationally wrongful act is under an obligation: (a) to cease that act, if it is continuing; (b) to offer appropriate assurances and guarantees of non-repetition, if circumstances so require."

[310] *Id.* at art. 31. "Reparation" reads: "1. The responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act. 2. Injury includes any damage, whether material or moral, caused by the internationally wrongful act of a State."

[311] *Id.* at art. 34. "Forms of reparation" reads: "[f]ull reparation for the injury caused by the internationally wrongful act shall take the form of restitution, compensation and satisfaction, either singly or in combination, in accordance with the provisions of this chapter."

[312] *Construction of a Wall*, 2004 ICJ 136, ¶ 163.

> construction of the wall and the associated régime, taking due account of the present Advisory Opinion.

As evidenced by the above-cited excerpt, the ICJ has ruled upon the consequences of the illegal act. Even in an advisory capacity, the ICJ has found that it was proper to rule that Israel must cease its act and make reparations. Furthermore, that other states are obliged to not recognize the illegal acts and for the United Nations to consider further actions.

By analogy, if it is decided that Chinese officials or organs of the state breached of the international obligation of preventing transboundary harm, then it would be liable for reparation for the damage caused thereof in the form of restitution, compensation, and satisfaction, the amount thereof to be discussed during the proceedings.

B. Multilateral Treaty Proposal

While seeking reparation from China due to the transboundary damage caused by the COVID-19 pandemic would be possible, this would not prevent future zoonotic diseases from emerging and letting history repeat itself. As a recommendation for prospective application, the author respectfully submits that a treaty regulating, if not prohibiting, wildlife trade and wild animal wet market operations worldwide should be adopted.

Included in the duty to prevent transboundary harm is the duty to negotiate in good faith.[313] In *Pulp Mills*, the court qualified that this duty did not include the duty to reach an agreement[314] but that it only involved the conduct of meaningful negotiations.[315] In *Gabčíkovo-Nagymaros Project*, the court emphasized that "It is not for the Court to determine what shall be the final result of these negotiations to be conducted by the Parties."[316] Citing the *North Sea Continental Shelf* cases, the court expounded on the duty to negotiate in this vein:

> [The Parties] are under an obligation so to conduct themselves that the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating any modification of it.[317]

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[313] *Pulp Mills*, 2010 I.C.J. 14, ¶ 102.

[314] *Id.* at ¶ 150.

[315] *Id.* at ¶¶ 146–47.

[316] *Gabčíkovo-Nagymaros Project*, 1997 I.C.J. 3, 7, ¶ 141.

[317] North Sea Continental Shelf Case (Ger. v. Den.), Judgment, 1969 I.C.J. 3, 47, ¶ 85 (Feb. 20).

Furthermore, the Draft Principles of the ILC on the allocation of loss is prospective in nature and may provide some guidance on how the treaty may be structured. One of the Principles, Principle 7 is concerned with development of specific international regimes. It provides in part:

> Where, in respect of particular categories of hazardous activities, specific global, regional or bilateral agreements would provide effective arrangements concerning compensation, response measures and international and domestic remedies, all efforts should be made to conclude such specific agreements.

According to the ILC, this principle builds upon Principle 22 of the Stockholm Declaration and Principle 13 of the Rio Declaration,[318] and is consistent with the ILC's aim of "promoting the construction of regimes to regulate without recourse to prohibition, the conduct of any particular activity which is perceived to entail actual or potential dangers of a substantial nature and to have transnational effects."[319]

The current recommendation draws inspiration from these principles and state practice of entering into treaties to regulate certain activities. Most if not all ultrahazardous activities are regulated by treaties. Examples of such treaties include: Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water,[320] Convention on Third Party Liability in the Field of Nuclear Energy and Additional Protocol,[321] United Nations Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space,[322] International Convention for the Prevention of Pollution of the Sea by Oil,[323] and the Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal,[324] among others.

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[318] Int'l L. Comm'n, *supra* note 164, at 89.

[319] *Id., citing* Robert Q. Quentin-Baxter, *Preliminary report on international liability for injurious consequences arising out of acts not prohibited by international law*, 1980 Y.B. vol. II (Part One), U.N. Doc. A/CN.4/334 and add.1–2, 250, ¶ 9.

[320] Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water. Aug. 5, 1963, 480 UNTS 43.

[321] Convention on Third Party Liability in the Field of Nuclear Energy, July 29, 1960, 956 UNTS 251; Additional Protocol to the Convention on Third Party Liability in the Field of Nuclear Energy Jan. 28, 1964, 956 UNTS 335.

[322] United Nations Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, Dec. 16, 1963, UN Doc. A/RES/1962 (XVIII).

[323] International Convention for the Prevention of Pollution of the Sea by Oil, May 12, 1954, 327 UNTS 3; International Convention for the Prevention of Pollution from Ships Nov. 2, 1973, 1340 UNTS 18.

[324] Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 UNTS 125.

Although the wildlife trade in China is the subject of this Note thus far because of the COVID-19 outbreak, this does not mean that China is the only place a new zoonotic disease may emerge, and indeed it is not the only place where they have. The recent MERS-Cov emerged in Saudi Arabia in 2012,[325] the Avian Influenza (AH5N1) in Hong Kong in 1997 and the Ebola virus disease in 1976 in the Democratic Republic of Congo, among others.[326] Hence, it is all the more imperative that the international community negotiates and adopts such a treaty regulating, if not prohibiting, trade in wildlife and the operation of wild animal wet markets.

VI. CONCLUSION

At the start of the Note, the question of whether or not the legal framework governing transboundary harm may be applicable to wildlife trade activities and the conduct of wild animal wet market operations was posed. The question may be answered in the affirmative. The author believes that the framework governing the duty to prevent transboundary harm applies to the ultrahazardous activity of wildlife trade and the operation of wild animal wet markets. This is because there is a risk of significant transboundary harm due to these activities. The resulting injury would be transboundary damage due to the emergence and subsequent spread of zoonotic diseases. Furthermore, while states have the right to exploit wildlife within their respective territories, this should be qualified in that the exploitation should not result to damage to the environment of other states in the form of loss of life and human health.

The author argues that the institution of proceedings before the ICJ, invoking the latter's advisory capacity would be possible. This is due to the applicability of the framework and hence, the corresponding obligations of China under that framework may be discussed. Furthermore, as a recommendation for prospective application, a treaty regulating if not prohibiting wildlife trade and wild animal wet market operations worldwide can be adopted.

COVID-19 brought about a collective devastation that the modern world has never experienced before. While the regulation of wildlife trade and

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[325] WHO, *Middle East Respiratory Syndrome coronavirus (MERS-CoV)*, WHO ORGANIZATION WEBSITE, Mar. 11, 2019, *at* https://www.who.int/news-room/fact-sheets/detail/middle-east-respiratory-syndrome-coronavirus-(mers-cov).

[326] WHO, *Ebola Virus disease*, WHO WEBSITE, Feb. 10, 2020, *at* https://www.webmd.com/a-to-z-guides/ebola-fever-virus-infection#2-7.

the operation of wild animal wet markets is a step in the right direction, it is not, by any means, the only solution against future pandemics worldwide. It is, however, one of the more apparent solutions.

The emergence and subsequent spread of SARs in 2003 was a tragedy. What was more tragic, though, is the uncanny repetition of the mistakes leading up to its outbreak, for a second time, in 2019. Hopefully, the international community will not let history repeat itself a third time. In the words of Benjamin Franklin: "An ounce of prevention is worth a pound of cure."

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