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A Combative Disease: The Ebola Epidemic in International Law

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A COMBATIVE DISEASE: THE EBOLA EPIDEMIC IN INTERNATIONAL LAW

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Abstract: In early 2014, a devastating epidemic of Ebola broke out across Guinea, Liberia, and Sierra Leone, which then spread to other countries and led to the deaths of more than 11,000 people. In response, the affected countries declared states of emergency, the World Health Organization (WHO) declared the epidemic to be a public health emergency of international concern, and the United Nations (UN) determined the epidemic was a threat to international peace and security. Though these actions helped confront the spread of Ebola, the WHO's and UN's responses were too slow and too inefficient to effectively combat the disease. To end this epidemic and to address future epidemics, the WHO and UN must be strengthened with more robust enforcement capabilities and increased funding. Further, the international community must recognize that Ebola is as much a threat to international peace and security as an act of war. Thus, states should react to disease outbreaks just as they would react to an act of war by utilizing the principle of self-defense pursuant to Chapter VII of the United Nations Charter.

INTRODUCTION

Beginning in March 2014, an outbreak of Ebola ripped through West Africa, spreading quickly from rural villages to urban centers and across the globe.[1] Though the outbreak began in Guinea, it travelled rapidly to Liberia and Sierra Leone.[2] Guinea, Liberia, and Sierra Leone were the African states most severely affected—in part because they have weak health systems, lack human capital and infrastructure, and only recently emerged from long periods of instability.[3] To assist the affected states, volunteers and healthcare workers from other countries provided manpower and resources to help contain the dis-

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[1] *See* Sarah Roache et al., *Lessons from the West African Ebola Epidemic: Towards a Legacy of Strong Health Systems*, O'NEILL INST. BRIEFING PAPER NO. 10, at 2–4 (Oct. 2, 2014), http://www.law.georgetown.edu/oneillinstitute/resources/documents/Briefing10Ebola2inTemplate.pdf [http://perma.cc/HE8Q-YTP6]; *WHO Fact Sheet No. 103: Ebola Virus Disease*, WHO (Aug. 2015), http://www.who.int/mediacentre/factsheets/fs103/en/ [http://perma.cc/Z94G-QGTP] [hereinafter *WHO Fact Sheet No. 103*].

[2] *See* Roache et al., *supra* note 1, at 2–3; *WHO Fact Sheet No. 103*, *supra* note 1.

[3] *See WHO Fact Sheet No. 103*, *supra* note 1.

ease.[4] As a result, a few cases of Ebola spread to countries outside of Africa, including the United States, the United Kingdom, Italy, and Spain.[5]

Although other states and international organizations observed the growing epidemic, many were slow to respond with assistance.[6] On August 8, 2014, approximately five months after the outbreak began, the World Health Organization (WHO) declared the epidemic to be a "public health emergency of international concern" and released its first roadmap to respond to the crisis.[7] The United Nations (UN) also took broad steps to combat the outbreak.[8] In September 2014, the UN Security Council (UNSC) passed a Resolution calling on UN member states to provide assistance, urging the WHO to accelerate its response, and encouraging Guinea, Liberia, and Sierra Leone to expedite the establishment of health systems that would better respond to such diseases.[9] The UNSC determined that the Ebola epidemic is a threat to international peace and security, and the UN created a new mission to tackle the crisis.[10] Though the WHO and UN have taken many positive steps to combat the Ebola outbreak, these responses have not been sufficient to contain the epidemic.[11]

This Note proceeds in three parts. Part I provides background on the Ebola virus disease, the ongoing Ebola epidemic in West Africa that began in 2014, and the legal mechanisms available to the WHO and UN in this situation. Part II explores the domestic responses of the three states most affected by the epidemic, the responses of the WHO and UN, and several shortcomings of these reactions. Part III argues that the WHO's legal solutions need to be bolstered with stronger enforcement capabilities and greater funding to address this and future disease epidemics. Moreover, Part III contends that states should be

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[4] *See* Lauren Z. Asher, Note, *Confronting Disease in a Global Arena*, 9 CARDOZO J. INT'L & COMP. L. 135, 142 (2001); Roache et al., *supra* note 1, at 3–6.

[5] *See Ebola Fast Facts*, CNN (Aug. 24, 2015), http://www.cnn.com/2014/04/11/health/ebola-fast-facts/ [http://perma.cc/VV5Z-GQMG]; *Ebola Situation Report*, WHO (Nov. 11, 2015), http://apps.who.int/ebola/current-situation/ebola-situation-report-11-november-2015 [http://perma.cc/V5GN-4ZDA].

[6] *See* Roache et al., *supra* note 1, at 5–6.

[7] *Statement on the 1st Meeting of the International Health Regulations (IHR) Emergency Committee on the 2014 Ebola Outbreak in West Africa*, WHO (Aug. 8, 2014), http://www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/ [http://perma.cc/5HDY-PWY8] [hereinafter *Statement on the 1st Meeting of the IHR Emergency Committee*]; *see Ebola Response Roadmap*, WHO (Aug. 28, 2014), http://apps.who.int/iris/bitstream/10665/131596/1/EbolaResponseRoadmap.pdf [http://perma.cc/67PW-WBVG] [hereinafter *Ebola Response Roadmap*] (coordinating implementation of response efforts).

[8] *See* G.A. Res. 69/1, ¶¶ 1, 3 (Sept. 19, 2014); S.C. Res. 2177, pmbl. (Sept. 18, 2014).

[9] *See* S.C. Res. 2177, *supra* note 8, pmbl., ¶ 1.

[10] *See* G.A. Res. 69/1, *supra* note 8, ¶¶ 1, 3; S.C. Res. 2177, *supra* note 8, pmbl.

[11] *See* Lena H. Sun et al., *Out of Control: How the World's Health Organizations Failed to Stop the Ebola Disaster*, WASH. POST (Oct. 4, 2014), http://www.washingtonpost.com/sf/national/2014/10/04/how-ebola-sped-out-of-control/ [http://perma.cc/6QD6-M3SX]; Roache et al., *supra* note 1, at 8–10. Although the number of active Ebola cases in the affected states has decreased dramatically since March 2014, new cases are still being intermittently reported. *See Ebola Situation Report*, *supra* note 5; *WHO Fact Sheet No. 103*, *supra* note 1.

permitted to act quickly and zealously under the authority of the UNSC and general principles of self-defense. A disease is as much a threat to international peace and security as an act of aggression, so the international community should treat it as one.

I. BACKGROUND

A. The Ebola Virus Disease

Ebola virus disease, or Ebola hemorrhagic fever, first appeared in 1976 during two outbreaks in remote villages in the Sudan and the Democratic Republic of the Congo.[12] Ebola is a severe disease that is transmitted from the organs and bodily fluids of wild animals to humans.[13] It spreads between humans through direct contact with the bodily fluids of an infected person or through direct contact with surfaces or materials contaminated with these bodily fluids.[14] Though moderately contagious, Ebola is highly infectious because a very small amount of the virus can cause illness.[15] Humans are not infectious until they develop symptoms, which can take up to twenty-one days and can include fever, vomiting, diarrhea, and hemorrhaging.[16] The average fatality rate for Ebola cases is approximately 50%, and no licensed vaccines are currently available.[17] Isolating and treating infected persons in even rudimentary treatment centers and tracing an infected person's contact with others can greatly reduce the spread of disease.[18]

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[12] Sylvain Baize et al., *Emergence of Zaire Ebola Virus in Guinea*, 371(15) NEW ENG. J. MED. 1418, 1418 (2014); *WHO Fact Sheet No. 103*, *supra* note 1. Since 1976, there have been twenty-eight outbreaks of Ebola in Africa. *WHO Fact Sheet No. 103*, *supra* note 1. Earlier major outbreaks occurred in the Democratic Republic of the Congo, Sudan, and Uganda. *Id*.; *see also* David P. Fidler et al., *Emerging and Reemerging Infectious Diseases: Challenges for International, National, and State Law*, 31 INT'L LAW. 773, 778 (1997) [hereinafter Fidler et al., *Emerging and Reemerging Infectious Diseases*] (describing 1995 outbreak of Ebola in Democratic Republic of the Congo and its successful local containment).

[13] *See WHO Fact Sheet No. 103*, *supra* note 1. Ebola is often spread to humans from infected animals such as chimpanzees, gorillas, monkeys, fruit bats, antelope, and porcupines. *See id*.

[14] *Id*.

[15] *See Ebola Fast Facts*, *supra* note 5.

[16] *See WHO Fact Sheet No. 103*, *supra* note 1.

[17] *See id*. Two vaccines are currently undergoing testing for human safety, and one experimental vaccine tested in Guinea is expected to be highly effective. *See id.*; *Ebola: UN Emergency Response Mission Winds Down as WHO Announces 'Game Changer' Vaccine*, UN NEWS CENTRE (July 31, 2015), http://www.un.org/apps/news/story.asp?NewsID=51543#.Ve8Z0HsmZKp [http://perma.cc/TJZ7-37M7] [hereinafter *UN Emergency Response Mission Winds Down*]; *see also* Editorial, *An Ebola Vaccine: First Results and Promising Opportunities*, 386 LANCET 830, 830 (2015), *available at* http://thelancet.com/pdfs/journals/lancet/PIIS0140-6736%2815%2961177-1.pdf [http://perma.cc/5L8Z-2EQ9] (describing results of randomized trial of vaccine in Guinea).

[18] *See* Editorial, *What Worked in Controlling the Ebola Outbreak in West Africa*, WASH. POST (Jan. 30, 2015), http://www.washingtonpost.com/opinions/what-worked-in-controlling-the-ebola-

Ebola frequently is spread within communities from infected people to healthcare workers or from an infected person to family members through traditional burial ceremonies.[19] In traditional burial ceremonies, family members and mourners often come into direct contact with the body of the deceased as they cleanse and prepare the body for burial, which can transmit Ebola from the infected person to the mourners.[20] Healthcare workers may become infected when they come into close contact with patients without personal protection or without utilizing proper infection control mechanisms.[21]

B. The Current Ebola Epidemic in West Africa

The current outbreak of Ebola is the longest, "largest[,] and most complex" outbreak of the disease ever, with "more cases and deaths in this outbreak than all others combined."[22] This is at least partially because Ebola spread quickly across three contiguous states that did not have prior experience with Ebola and lacked adequate healthcare infrastructure and workers.[23] As of November 11, 2015, there have been 28,635 cases of Ebola and 11,314 deaths globally, representing a fatality rate of approximately 40%.[24]

The first patient suspected of contracting Ebola in the current epidemic was a two-year-old in Guinea who died in December 2013.[25] The child's family members then contracted Ebola via contact with the deceased during the burial ceremony, and mourners carried the disease to nearby villages.[26] A health worker from the region where the first case arose also spread the disease

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outbreak-in-west-africa/2015/01/30/7a0cfd10-a643-11e4-a06b-9df2002b86a0_story.html [http://perma.cc/UR4F-EXY2].

[19] *See id.*; Roache et al., *supra* note 1, at 3–4; *WHO Fact Sheet No. 103*, *supra* note 1.

[20] *See* Abby Ohlheiser, *People Are Struggling to Bury the Ebola Dead. Here's Why*, WASH. POST (Aug. 7, 2014), http://www.washingtonpost.com/news/world/wp/2014/08/07/people-are-struggling-to-bury-the-ebola-dead-heres-why/ [http://perma.cc/KN3H-YHVX]; Roache et al., *supra* note 1, at 4; *WHO Fact Sheet No. 103*, *supra* note 1. Ebola is most contagious when a person has just died because the virus has overtaken the entire body. *See* Ohlheiser, *supra*. The Ebola virus may remain infectious on a dead body for up to a week and is detectable for up to ten weeks. Alexandra Sifferlin, *Ebola Bodies Are Infectious a Week After Death, Study Shows*, TIME (Feb. 13, 2015), *available at* http://time.com/3708994/ebola-bodies-infectious/ [http://perma.cc/YX9Q-UNTS].

[21] *See* Roache et al., *supra* note 1, at 3; *WHO Fact Sheet No. 103*, *supra* note 1.

[22] *WHO Fact Sheet No. 103*, *supra* note 1. Prior to the existing outbreak, there were a total of 2387 cases and 1590 deaths. *See id.*

[23] *See* Donald G. McNeil, Jr., *Using a Tactic Unseen in a Century, Countries Cordon Off Ebola-Racked Areas*, N.Y. TIMES (Aug 12, 2014), http://www.nytimes.com/2014/08/13/science/using-a-tactic-unseen-in-a-century-countries-cordon-off-ebola-racked-areas.html [http://perma.cc/9X79-6J9V]; *WHO Fact Sheet No. 103*, *supra* note 1.

[24] *See Ebola Situation Report*, *supra* note 5.

[25] *See* Baize et al., *supra* note 12, at 1421–23; Roache et al., *supra* note 1, at 2–3. The source of this outbreak is not yet known. *See* Baize et al., *supra* note 12, at 1424. One possible explanation is that the outbreak stemmed from fruit bats in West Africa carrying Ebola. *See id*. It is suspected that the virus had been transmitted for months before the outbreak became apparent. *See id.*

[26] *See* Baize et al., *supra* note 12, at 1422–23; Roache et al., *supra* note 1, at 2–3.

to nearby areas in Guinea in February 2014.[27] Most of the transmission of Ebola during this outbreak occurred among family members; after infection control mechanisms were put into place in April 2014, the transmission of Ebola in hospitals and during funerals decreased substantially.[28]

The WHO first confirmed the outbreak on March 22, 2014; by the end of that month, at least one hundred people had already contracted Ebola and eighty people had died.[29] Guinea, Liberia, and Sierra Leone have been affected most severely by the outbreak, and although the number of new cases reported has significantly decreased and stabilized, Guinea continues to report new cases.[30]

The socioeconomic consequences of the Ebola epidemic have been devastating.[31] The World Bank anticipates that Guinea, Liberia, and Sierra Leone will experience $1.6 billion of lost economic growth in 2015.[32] In Liberia, the economy has lost many more jobs than have been replaced—approximately half of Liberian households are under- or unemployed, and women have been hit particularly hard.[33] Workers in Sierra Leone are similarly underemployed, and individuals with non-farming businesses have lost significant amounts of revenue.[34]

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[27] *See* Baize et al., *supra* note 12, at 1421.

[28] *See* Ousmane Faye et al., *Chains of Transmission and Control of Ebola Virus Disease in Conakry, Guinea in 2014: An Observational Study*, 15 LANCET INFECTIOUS DISEASES 320, 323–24 (Jan. 23, 2015), http://www.thelancet.com/pdfs/journals/laninf/PIIS1473-3099(14)71075-8.pdf [http://perma.cc/2DP5-LCU6]; Editorial, *What Worked in Controlling the Ebola Outbreak*, *supra* note 18.

[29] *See* Baize et al., *supra* note 12, at 1421–23; Roache et al., *supra* note 1, at 2–3.

[30] *See Ebola Situation Report*, *supra* note 5; *WHO Fact Sheet No. 103*, *supra* note 1. On September 3, 2015, Liberia was declared Ebola-free for a second time and must undergo a three-month period of heightened surveillance. *Ebola Transmission in Liberia Is Over; Nation Enters 90-Day Intensive Surveillance Period*, WHO (Sept. 3, 2015), http://www.who.int/mediacentre/news/statements/2015/ebola-transmission-over-liberia/en/ [http://perma.cc/LT43-52SZ]. On November 7, 2015, the WHO declared that Ebola transmission ended in Sierra Leone, and Sierra Leone began a period of surveillance. *See Ebola Situation Report*, *supra* note 5. Guinea, however, reported a few new cases of Ebola at the end of October 2015. *Ebola Situation Report*, *supra* note 5.

[31] *See* James G. Hodge et al., *Global Emergency Legal Responses to the 2014 Ebola Outbreak: Public Health and the Law*, 42 J.L. MED. & ETHICS 595, 596–97 (2014); *Worst-Affected Countries 'Crippled' by Economic Impact of Ebola*, UN NEWS CENTRE (Jan. 20, 2015), http://www.un.org/apps/news/story.asp?NewsID=49847#.VN0JVHaodKo [http://perma.cc/6MZ7-VPAV].

[32] *See Worst-Affected Countries 'Crippled' by Economic Impact of Ebola*, *supra* note 31. In terms of gross domestic product, the World Bank expects Guinea to lose $540 million, Liberia to lose $180 million, and Sierra Leone to lose $920 million. *See id.*

[33] *See* Press Release, World Bank, Ebola Hampering Household Economies across Liberia and Sierra Leone (Jan. 12, 2015), http://www.worldbank.org/en/news/press-release/2015/01/12/ebola-hampering-household-economies-liberia-sierra-leone [http://perma.cc/6DKL-7P9D] [hereinafter Press Release, World Bank]. Women are particularly susceptible to being out of work because they are disproportionately employed in the non-farm self-employment sector, which has been impacted greatly. *See id.* Approximately 60% of women are not currently working, compared to 40% of men. *Id.*

[34] *See* Press Release, World Bank, *supra* note 33.

The disease has also spread outside of the most affected countries.[35] In July 2014, a Liberian government official died of Ebola in Nigeria.[36] Later that month, two U.S. aid workers were infected with Ebola while treating patients.[37] These events sparked widespread panic around the world about the cross-border and cross-continental spread of Ebola.[38] In July 2014, the United States Centers for Disease Control and Prevention (CDC) heightened its warning level and cautioned U.S. residents to abstain from non-essential travel to Guinea, Liberia, and Sierra Leone.[39] Many other organizations followed suit and withdrew their employees from the area.[40] Despite pervasive fear that Ebola might become a more globalized epidemic, only thirty-six cases and fifteen deaths have been reported in countries outside Guinea, Liberia, and Sierra Leone.[41]

C. The WHO's Responsibilities and the International Health Regulations

The WHO was established in 1948 as a specialized agency of the UN to promote and protect the health of all people, with the objective of attaining the highest possible level of health.[42] The WHO's constitution asserts that "[h]ealth is the state of complete physical, mental[,] and social well-being and not merely the absence of disease," and it stresses that health is a fundamental

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[35] *See Ebola Fast Facts*, *supra* note 5; *Ebola Situation Report*, *supra* note 5.

[36] *See Liberian Doctor Dies of Ebola Virus*, WALL ST. J. (July 27, 2014 9:49PM ET), http://www.wsj.com/articles/liberian-doctor-dies-of-ebola-virus-1406481862 [http://perma.cc/XU6W-YWVE]; *Ebola Fast Facts*, *supra* note 5.

[37] *See Liberian Doctor Dies of Ebola*, *supra* note 36; *Ebola Fast Facts*, *supra* note 5.

[38] *See* Carter Evans, *Ebola Panic Spreading Much Faster Than Disease in U.S.*, CBS NEWS (Oct. 18, 2014), http://www.cbsnews.com/news/ebola-panic-in-us-spreading-much-faster-than-disease/ [http://perma.cc/893G-KJTN]; Eric Zorn, *Ebola Panic More Widespread Than Disease*, CHI. TRIB. (Nov. 13, 2014), http://www.chicagotribune.com/news/opinion/zorn/ct-ebola-panic-kaci-hickox-perspec-1114-20141113-column.html [http://perma.cc/V4P4-3H4R]; *Ebola Fast Facts*, *supra* note 5.

[39] *See Ebola Fast Facts*, *supra* note 5; Press Release, Centers of Disease Control and Prevention [CDC], As West Africa Ebola Outbreak Worsens, CDC Issues Level 3 Travel Warning (July 31, 2014), http://www.cdc.gov/media/releases/2014/p0731-ebola.html [http://perma.cc/FB59-5WKS] [hereinafter Press Release, CDC].

[40] *See, e.g.*, U.S. State Dep't, *Liberia Travel Warning*, NEWSROOM, Jan. 21, 2015, 2015 WLNR 2464728 (issuing travel warning advising against non-essential travel to Liberia and ordering departure of family members of State Department employees on August 7, 2014); *Ebola Fast Facts*, *supra* note 5 (stating that the Peace Corps removed all volunteers from Guinea, Sierra Leone, and Liberia on July 30, 2014).

[41] *See* Zorn, *supra* note 38; *Ebola Situation Report*, *supra* note 5. Eight cases and six deaths were reported in Mali and twenty cases and eight deaths were reported in Nigeria. *Ebola Situation Report*, *supra* note 5. One case was reported in Senegal. *Id.* The United Kingdom, Italy, and Spain each reported one case of Ebola, with no deaths, and four cases have been reported in the United States, with one death. *Id.*

[42] Constitution of the WHO, pmbl., art. 1, July 22, 1946, 14 U.N.T.S. 185; *see* David P. Fidler, *Fighting the Axis of Illness: HIV/AIDS, Human Rights, and U.S. Foreign Policy*, 17 HARV. HUM. RTS. J. 99, 110 (2004) [hereinafter Fidler, *Fighting the Axis of Illness*].

human right critical to attaining peace and security.[43] To achieve its objective, the WHO is tasked with coordinating authorities for international health work, encouraging collaboration with the UN and other organizations, providing technical assistance to member states, promoting research and healthcare advances, and establishing and monitoring the implementation of norms and standards.[44] In general, the WHO has adopted a medical philosophy in which it views its "legislative role as neither active nor even reactive, but merely observational."[45]

Prior to the mid-1800s, states dealt with disease outbreaks domestically and without international cooperation.[46] In 1851, the International Sanitary Conference was the first attempt at global governance over combating the export and import of infectious diseases.[47] Consistent with the WHO's responsibilities, the International Health Regulations (IHR) were established to prevent domestic public health emergencies from becoming international problems.[48] The IHR are the only rules that have obtained international agreement aimed at controlling the cross-border spread of disease.[49]

The IHR began with the adoption of the International Sanitary Regulations in 1951, which sought to "ensure the maximum protection against the international spread of disease with minimum interference with world traffic."[50] In 1969, these regulations were renamed the International Health Regulations and were amended to focus on smallpox, plague, cholera, and yellow

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[43] *See* Constitution of the WHO, *supra* note 42, pmbl.; Fidler, *Fighting the Axis of Illness*, *supra* note 42, at 110.

[44] *See* Constitution of the WHO, *supra* note 42, art. 2; *About WHO: The Role of WHO in Public Health*, WHO, http://www.who.int/about/role/en/ (last visited Nov. 5, 2015) [http://perma.cc/L24Y-W7CN].

[45] David Bishop, Note, *Lessons from SARS: Why the WHO Must Provide Greater Economic Incentives for Countries to Comply with International Health Regulations*, 36 GEO. J. INT'L L. 1173, 1199–1200 (2005) (quoting Allyn Lise Taylor, *Making the World Health Organization Work: A Legal Framework for Universal Access to the Conditions for Health*, 18 AM. J.L. & MED. 301, 343 (1992)).

[46] *See* David P. Fidler, *Emerging Trends in International Law Concerning Global Infectious Disease Control*, 9(3) EMERGING INFECTIOUS DISEASES 285, 285 (2003) [hereinafter Fidler, *Emerging Trends*]; Fidler et al., *Emerging and Reemerging Infectious Diseases*, *supra* note 12, at 777.

[47] *See* Fidler, *Emerging Trends*, *supra* note 46, at 285; Fidler et al., *Emerging and Reemerging Infectious Diseases*, *supra* note 12, at 777.

[48] *See* Editorial, *Ebola: What Lessons for the International Health Regulations?*, 384 LANCET 1321, 1321 (2014), *available at* http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(14)61697-4.pdf [http://perma.cc/VR8W-X2UQ] [hereinafter Editorial, *What Lessons for the IHR?*].

[49] *See* Gian Luca Burci & Jakob Quirin, *Ebola, WHO, and the United Nations: Convergence of Global Public Health and International Peace and Security*, AM. SOC'Y INT'L L. INSIGHTS (Nov. 14, 2014), http://www.asil.org/insights/volume/18/issue/25/ebola-who-and-united-nations-convergence-global-public-health-and [http://perma.cc/SY9Y-H8UC].

[50] Fidler, *Emerging Trends*, *supra* note 46, at 286; *see* Fidler et al., *Emerging and Reemerging Infectious Diseases*, *supra* note 12, at 777.

fever.[51] Following several epidemics of diseases not previously included, the IHR were again revised in 2005 and entered into force in 2007.[52] The revised IHR are no longer limited to specific diseases and mark a shift away from legally binding rules toward increased reliance on global information networks and self-reporting by states.[53]

The 2005 IHR require member states to notify the WHO of events that may constitute a "public health emergency of international concern."[54] The revised IHR define a public health emergency as an event that constitutes a public health risk to other states through the international spread of disease that potentially requires a coordinated international response.[55] States are also required to have an implementation plan to meet the IHR core capacity standards and to ensure that their health surveillance and response capacities meet functional criteria.[56] Specifically, states are required to meet certain minimum capacity requirements for international points of entry in order to prevent the export and import of disease.[57] Although all WHO member states have agreed to the principles contained in the IHR, the IHR only require that states self-report public health events and their progress on developing core capacities.[58]

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[51] Editorial, *What Lessons for the IHR?*, *supra* note 48.

[52] *See* Fidler, *Emerging Trends*, *supra* note 46, at 286; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[53] *See* Fidler, *Emerging Trends*, *supra* note 46, at 286; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[54] *The International Health Regulations (2005): IHR Brief No. 1*, WHO, www.who.int/ihr/publications/ihrbrief1en.pdf?ua=1 [http://perma.cc/FH3P-NPE3] [hereinafter *IHR Brief No. 1*]; *see* Editorial, *What Lessons for the IHR?*, *supra* note 48. In addition to requiring states to self-report to the WHO, the WHO relies on the Global Outbreak Alert and Response Network to detect and respond to infectious disease outbreaks. *See* Editorial, *What Lessons for the IHR?*, *supra* note 48. The network includes both state governments and non-governmental organizations that collect information, confirm potential disease outbreaks, and respond to them. *See* Chiara Giorgetti, *International Health Emergencies in Failed and Failing States*, 44 GEO. J. INT'L L. 1347, 1375–76 (2013).

[55] Giorgetti, *supra* note 54, at 1369; *Notification and Other Reporting Requirements Under the IHR (2005): IHR Brief No. 2*, WHO, http://www.who.int/ihr/publications/ihr_brief_no_2_en.pdf?ua=1 [http://perma.cc/9VNR-GR5J] [hereinafter *IHR Brief No. 2*]. States individually determine whether a particular national outbreak is a "public health event" that might trigger classification as a public health emergency of international concern. *See IHR Brief No. 2*, *supra*. States consider four factors: (1) the seriousness of the event's public health impact; (2) the unusual or unexpected nature of the event; (3) the risk of international disease spread; and (4) the risk that other countries will impose travel or trade restrictions. *Id.*

[56] *See IHR Brief No. 1*, *supra* note 54. These "core capacities" include detecting events involving disease, assessing reported events, immediately notifying the WHO of disease events, reporting all essential information to the WHO, and creating and maintaining a "public health emergency contingency plan." Timothy Miano, *Understanding and Applying International Infectious Disease Law: U.N. Regulations During an H5N1 Avian Flu Epidemic*, 6 CHI.-KENT J. INT'L & COMP. L. 26, 36 (2006).

[57] *See* Editorial, *What Lessons for the IHR?*, *supra* note 48; *IHR Brief No. 1*, *supra* note 54.

[58] *See* Editorial, *What Lessons for the IHR?*, *supra* note 48.

Additionally, the IHR provide a dispute resolution system wherein states first seek to settle a dispute through negotiation or other peaceful means; if that fails, the parties may refer the dispute to the WHO's Director-General.[59] This system, however, is voluntary, and no final settlement is guaranteed; as a result, it is rarely used and does not provide for realistic conflict resolution.[60] There are currently no binding mechanisms to enforce the IHR or to ensure their successful implementation.[61]

If an event is determined to be a "public health emergency of international concern," the Director-General of the WHO may consult with experts and issue temporary recommendations aimed at preventing the international spread of disease and avoiding interference with international trade and travel.[62] As with the other provisions of the IHR, the Director-General's recommendations are not binding.[63]

D. The United Nations' Powers Under Chapter VII

The UNSC was established in 1946 and consists of five permanent member states—the United States, the United Kingdom, China, France, and Russia—and ten non-permanent members elected for two-year terms.[64] Under Chapter VII of the UN Charter, the UNSC has primary responsibility for determining the existence of threats to peace and is authorized to take action in order to "maintain or restore international peace and security."[65] Historically,

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[59] *See* Steven J. Hoffman, *Making the International Health Regulations Matter: Promoting Compliance Through Effective Dispute Resolution*, *in* ROUTLEDGE HANDBOOK OF GLOBAL HEALTH SECURITY 239, 241 (Simon Rushton & Jeremy Youde eds., 2015). Disputes can arise when there is disagreement over a state's compliance with the IHR requirements or the interpretation of an IHR provision. *See id*. at 240. A dispute among states may be subject to binding arbitration, but only if the states have voluntarily accepted the arbitration as compulsory. *See id.* at 241.

[60] *See id.* at 242; Bishop, *supra* note 45, at 1193, 1218–19. The parties are legally required to *attempt* to settle a dispute, but there is no requirement that parties actually *resolve* the dispute, and the negotiation and mediation procedures are entirely voluntary. *See* Hoffman, *supra* note 59, at 241–42. As a result, there is much uncertainty and little incentive to resolve disputes. *See id.*

[61] *See* Fidler, *Emerging Trends*, *supra* note 46, at 287; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[62] *IHR Brief No.1*, *supra* note 59; *see* Burci & Quirin, *supra* note 49.

[63] *See* Burci & Quirin, *supra* note 49. When revised in 2005, the IHR essentially replaced legally binding requirements with the Director-General's ability to issue non-binding recommendations—a power the WHO already had before the revisions. *See* Fidler, *Emerging Trends*, *supra* note 46, at 288; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[64] *See* DAVID L. BOSCO, FIVE TO RULE THEM ALL: THE UN SECURITY COUNCIL AND THE MAKING OF THE MODERN WORLD 3 (2009); *Current Members*, UNITED NATIONS SECURITY COUNCIL [UNSC], http://www.un.org/en/sc/members/ (last visited Nov. 5, 2015) [http://perma.cc/7ME4-WRBG].

[65] U.N. Charter art. 39; *see The Security Council*, UNSC, http://www.un.org/en/sc/ (last visited Nov. 5, 2015) [http://perma.cc/4579-9E2V]. In order to uphold this responsibility, the UNSC may act on behalf of UN members by issuing UNSC Resolutions. *See* U.N. Charter art. 24, ¶ 1. These resolutions

the UNSC has engaged in a broad range of diplomatic, legal, and military activities.[66] Binding UNSC Resolutions primarily have addressed issues of peace and security by responding to acts of aggression and the use or buildup of arms, authorizing military interventions and peacekeeping missions, and imposing sanctions.[67]

Recently, the UNSC has begun to use its powers to address non-traditional threats, marking an expansion of what it means to "maintain or restore international peace and security."[68] The UNSC has only once before treated a disease outbreak as an issue of global security: in the early 2000s, the UNSC used its powers to address the spread of HIV/AIDS in Africa.[69] The UNSC held a meeting in January 2000 in which it acknowledged that HIV/AIDS posed a serious threat to global security, jeopardized economic strength, and interfered with peacekeeping efforts.[70] The UNSC believed internal conflict and local violence exacerbated the spread of the disease, thereby endangering international peace; although it ultimately stopped short of classifying HIV/AIDS as a "threat to international peace and security," it specifically incorporated HIV/AIDS prevention into the mandates and training of peacekeeping operations.[71] In 2011, the UNSC reiterated the need for coordinated international action to minimize the impact of the HIV/AIDS epidemic and the

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are binding—all members of the UN "agree to carry out and accept the decisions of the Security Council" in accordance with the UN Charter. *Id.* at art. 25.

[66] *See* BOSCO, *supra* note 64, at 3.

[67] *See id.* at 3–4; Anna Hood, *Ebola: A Threat to the Parameters of a Threat to Peace?*, 16 MELB. J. INT'L L. 29, 32 (2015). The UNSC has typically determined that a threat to peace exists only when there is "an armed conflict or the prospect of one arising in the short to medium term." *See* Hood, *supra*, at 36.

[68] U.N. Charter art. 39; *see* Kristen Boon, *The UN Security Council Takes Up Ebola*, OPINIO JURIS (Sept. 18, 2014, 4:41 PM), http://opiniojuris.org/2014/09/18/un-security-council-takes-ebola/ [http://perma.cc/7846-ELNH]; Burci & Quirin, *supra* note 49.

[69] *See* Burci & Quirin, *supra* note 49. *See generally* S.C. Res. 1308 (Jul. 17, 2000) (recognizing impacts of HIV/AIDS on all sectors of society and encouraging international cooperation to prevent the spread of disease).

[70] *See* U.N. SCOR, 55th Sess., 4807th mtg. at 2, U.N. Doc. S/PV.4087 (Jan. 10, 2000). In the meeting, the President of the UNSC, Al Gore, stated:

> The heart of the security agenda is protecting lives, and . . . the number of people who will die of AIDS in the first decade of the twenty-first century will rival the number that died in all of the wars in all of the decades of the twentieth century . . . . [W]hen a single disease threatens everything from economic strength to peacekeeping, we clearly face a security threat of the greatest magnitude.

Id.

[71] Burci & Quirin, *supra* note 49; *see* S.C. Res. 1308, *supra* note 69, ¶¶ 1, 3; *see also* Joint United Nations Program on HIV/AIDS, ON THE FRONT LINE: A REVIEW OF PROGRAMMES THAT ADDRESS HIV AMONG INTERNATIONAL PEACEKEEPERS AND UNIFORMED SERVICES 2005–10 ii (2011), http://www.unaids.org/sites/default/files/sub_landing/files/20110519_OnTheFrontLine.pdf [http://perma.cc/9NEW-K5YZ] (stressing that societal violence contributed to spread of HIV/AIDS).

importance of incorporating HIV-related awareness, training, and treatment into peacekeeping operations.[72]

States parties to the UN may also take advantage of the principle of self-defense so as to act in the international sphere in accordance with UN Chapter VII.[73] Pursuant to traditional principles of international law, states are permitted to use self-defense when it is necessary, the threat is immediate, and the response is proportionate to the threat.[74] States typically are permitted to act in self-defense when a threat is "instant, overwhelming, leaving no choice of means, and no moment for deliberation."[75] Because states may use self-defense to confront traditional threats to peace like armed conflict, self-defense may also serve as an effective approach to confronting non-traditional threats to peace, such as disease.[76]

II. DISCUSSION

A. The Affected States' Responses

In response to the Ebola epidemic, Guinea, Liberia, and Sierra Leone—aided by the global community—have taken many steps to contain the epidemic and reduce disease incidence.[77] Guinea, Liberia, and Sierra Leone instituted travel bans and curfews, instructed communities on burial techniques that guard against the transmission of Ebola, and attempted to treat and isolate infected persons.[78] The affected states' responses, however, were hampered by delayed assistance from international donors, systematically weak healthcare,

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[72] *See* S.C. Res. 1983 (June 7, 2011).

[73] *See* Daniel Bethlehem, *Self-Defense Against an Imminent or Actual Armed Attack by Nonstate Actors*, 106 AM. J. INT'L L. 770, 772–73, 775 (2012); Leo Van den hole, *Anticipatory Self-Defense Under International Law*, 19 AM. U. INT'L L. REV. 69, 96–97, 99–104 (2003).

[74] *See* U.N. Charter art. 51; Bethlehem, *supra* note 73, at 772–73, 775; Van den hole, *supra* note 73, at 96–97, 99–104. Article 51 of the UN Charter provides, "Nothing in the present Charter shall impair the inherent right of individual or collective self-defence." U.N. Charter art. 51. The guiding principles for self-defense under customary international law are necessity and proportionality. *See* Eustace Chikere Azubuike, *Probing the Scope of Self Defense in International Law*, 17 ANN. SURV. INT'L L. 129, 145–46, 162–63 (2011). To use self-defense, a state must show that the action is "necessary to protect itself or its citizens" and that "the action is proportional to the attack being defended" in both seriousness and scope. *Id.* at 145–46.

[75] Van den hole, *supra* note 73, at 96–97 (citing Letter of Mr. Webster to Mr. Fox (Apr. 24, 1841), *in* BRITISH AND FOREIGN STATE PAPERS 1840–41, at 1137–38 (29th ed. 1857)).

[76] *See* Bethlehem, *supra* note 73, at 775; Michael R. Snyder, *Security Council Response to Ebola Paves the Way for Future Action*, GLOB. OBSERVATORY (Dec. 4, 2014), http://theglobalobservatory.org/2014/12/security-council-response-ebola-action/ [http://perma.cc/4VQ8-KBFN].

[77] *See* Hodge, *supra* note 31, at 596; Roache et al., *supra* note 1, at 4–6.

[78] *See* Hodge, *supra* note 31, at 595, 597; McNeil, *supra* note 23; *Ebola Response Roadmap*, *supra* note 7; Lawrence O. Gostin, Comment, *Towards an International Health Systems Fund*, 384 LANCET e49, e49 (Sept. 4, 2014), *available at* http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(14)61345-3.pdf [http://perma.cc/LP27-B2HN]; Roache et al., *supra* note 1, at 4–6.

and poor infrastructure—particularly as years of civil war and political instability impeded the creation of functional healthcare systems.[79]

Throughout the epidemic, healthcare facilities have been hot spots for the transmission of Ebola.[80] Although even the most rudimentary healthcare facilities can help isolate infected patients from the uninfected community, patients in poorly equipped facilities can spread the disease to healthcare workers and to people visiting the treatment centers.[81] Healthcare workers are particularly susceptible to contracting Ebola from their patients because many facilities do not have proper protective equipment and infection controls, workers have not been trained appropriately, and safe and sterile units in which to isolate infected patients are in short supply.[82] Additionally, symptomatic patients who are fearful of the disease often avoid going to hospitals for treatment, thereby spreading Ebola throughout the community.[83]

Further exacerbating the ineffectiveness of their healthcare systems, the affected states generally lack the necessary human capital to successfully respond to the outbreak and face a severe, pre-existing shortage of healthcare workers and doctors.[84] Not including those who have died from the Ebola epidemic, Liberia and Sierra Leone had 90 and 136 doctors, respectively, to care for a combined population of approximately 10 million.[85] Guinea has fewer than one thousand doctors to serve its population of approximately eleven million.[86] The spread of Ebola has taken a severe toll on these states' already inadequate human capital: as of November 4, 2015, 881 health workers have been infected with Ebola in Guinea, Liberia, and Sierra Leone, and 513 have died of the disease.[87] As a result, Guinea, Liberia, and Sierra Leone are forced

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[79] *See* Gostin, *supra* note 78; Roache et al., *supra* note 1, at 3–6; *WHO Fact Sheet No. 103*, *supra* note 1.

[80] *See* Gostin, *supra* note 78; Roache et al., *supra* note 1, at 3.

[81] *See* Editorial, *What Worked in Controlling the Ebola Outbreak in West Africa*, *supra* note 18; Faye et al., *supra* note 28, at 320; Gostin, *supra* note 78; Roache et al., *supra* note 1, at 3–5.

[82] *See* Gostin, *supra* note 78; Roache et al., *supra* note 1, at 3–4.

[83] Gostin, *supra* note 78. The Ebola outbreak has also influenced the incidence of other diseases. *See* Hodge, *supra* note 31, at 596. Persons suffering from non-Ebola diseases, such as malaria or chronic conditions, and pregnant mothers have actively avoided seeking treatment for fear of contracting Ebola at health centers, thereby increasing the overall disease burden and mortality rate. *See id.*

[84] *See* Gostin, *supra* note 78.

[85] *See id.*; *The World Factbook: Liberia*, CENT. INTELLIGENCE AGENCY LIBRARY, https://www.cia.gov/library/publications/the-world-factbook/geos/li.html (last updated Oct. 20, 2015) [https://perma.cc/RC5L-2UYM]; *The World Factbook: Sierra Leone*, CENT. INTELLIGENCE AGENCY LIBRARY, https://www.cia.gov/library/publications/the-world-factbook/geos/sl.html (last updated Oct. 15, 2015) [https://perma.cc/7B2U-QJTQ].

[86] Gostin, *supra* note 78. In contrast, the United States has approximately 245 doctors per 100,000 people. *Ebola in Graphics: The Toll of the Tragedy*, ECONOMIST (Aug. 27, 2015, 9:23 AM), http://www.economist.com/blogs/graphicdetail/2015/01/ebola-graphics [http://perma.cc/V2D8-VB8M].

[87] *See Ebola Situation Report*, WHO (Nov. 4, 2015), http://apps.who.int/ebola/current-situation/ebola-situation-report-4-november-2015 [http://perma.cc/EW4J-3AWS].

to rely on medical professionals from other states to supplement their extreme shortage of healthcare workers.[88]

Without strong healthcare systems capable of responding to the epidemic, Guinea, Liberia, and Sierra Leone took steps to isolate communities and to contain the spread of disease, which effectively militarized the outbreak.[89] Guinea, Liberia, and Sierra Leone each declared national states of emergency, thereby permitting extreme measures.[90] States instituted curfews, closed schools, restricted travel, and established community quarantines (*cordon sanitaire*) to prevent anyone from leaving.[91] In some states, armed troops were used to establish blockades and limit travel.[92] As the disease spread to urban areas, states introduced additional quarantines and lockdowns, which, in turn, sparked violence and unrest.[93] These extreme quarantines and lockdowns by the military and police generally have not been successful in reducing the spread of Ebola.[94] Rather, these measures militarized the situation and "end[ed] up driving people underground and jeopardizing the trust between people and health providers."[95]

The imposition of states of emergency and quarantines also severely affected food supplies in West Africa.[96] Travel restrictions and quarantines limited the importation of food into the affected countries, and agricultural pro-

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[88] *See* Gostin, *supra* note 78; Roache et al., *supra* note 1, at 5–6.

[89] *See* Roache et al., *supra* note 1, at 5.

[90] *See* Hodge, *supra* note 31, at 596–97.

[91] *See* Roache et al., *supra* note 1, at 4–5; *Ebola Fast Facts*, *supra* note 5; *see also* Hodge, *supra* note 31, at 596–97 (detailing emergency measures taken by Guinea, Liberia, and Sierra Leone beginning July 30, 2014).

[92] *See* Roache et al., *supra* note 1, at 4; *see, e.g.*, McNeil, *supra* note 23 (explaining that Sierra Leone, Guinea, and Liberia instituted *cordons sanitaires* by drawing lines around infected areas and not permitting anyone to leave, a tactic last used in Poland and Russia in response to typhus in 1918); Adam Nossiter, *Sierra Leone to Impose 3-Day Ebola Quarantine*, N.Y. TIMES (Sept. 6, 2014), http://www.nytimes.com/2014/09/07/world/africa/sierra-leone-to-impose-widespread-ebola-quarantine.html [http://perma.cc/KVZ6-28RG] (describing three-day quarantine enforced by military and police with door-to-door searches for residents infected with Ebola).

[93] *See* Roache et al., *supra* note 1, at 4–5. In August 2014, Liberia quarantined a large slum in its capital, Monrovia, and enforced the quarantine with military forces. *See* Norimitsu Onishi, *Quarantine for Ebola Lifted in Liberia Slum*, N.Y. TIMES (Aug. 29, 2014), http://www.nytimes.com/2014/08/30/world/africa/quarantine-for-ebola-lifted-in-liberia-slum.html [http://perma.cc/9Y7W-QDHH]. The quarantine was lifted after ten days when clashes between residents and military forces led to the death of a fifteen-year-old boy. *See id.*

[94] *See* James G. Hodge, Jr. et al., *Efficacy in Emergency Legal Preparedness Underlying the 2014 Ebola Outbreak*, 2 TEX. A&M L. REV. 353, 375–78 (2015); Nossiter, *supra* note 92.

[95] Nossiter, *supra* note 92 (referring to statement made by Doctors Without Borders); *see* Rae Ellen Bichell, *In Sierra Leone, a Lockdown . . . Or a Time to Reflect?*, NAT'L PUB. RADIO (Sept. 18, 2014), http://www.npr.org/blogs/goatsandsoda/2014/09/18/349268479/in-sierra-leone-a-lockdown-or-a-time-to-reflect [http://perma.cc/FW64-M3KP].

[96] *See* Hodge, *supra* note 31, at 596; Press Release, World Bank, *supra* note 33.

duction has slowed as agricultural laborers continue to be unable to work because they are taking care of sick family members.[97]

B. The WHO's Response to the Ebola Epidemic

On August 8, 2014, five months after the outbreak officially began, the WHO declared the Ebola epidemic to be a "public health emergency of international concern," which triggered the WHO and IHR response mechanisms.[98] Under the IHR, an emergency committee convened to address the outbreak, the WHO distributed a roadmap with guidelines for controlling the epidemic, and the Director-General of the WHO issued temporary, non-binding recommendations.[99] The WHO recommended that health ministers in states with active cases take strong leadership roles in coordinating response measures; put into place infection prevention mechanisms, case management tools, and communication strategies; and scale up activities for healthcare facilities, workers, and supplies.[100]

Consistent with the IHR's goal of preventing the spread of disease while minimizing interference with travel, the WHO recommended that states with active cases conduct exit screenings of all persons at international airports and ports, prevent the international travel of persons with Ebola or those who have had contact with an infected person, and isolate and restrict travel to those suspected of having Ebola.[101] The WHO, however, urged that there should be no general ban on international trade or travel.[102] Such a ban would cause economic hardship in the affected states, thereby increasing the risk of emigration of people from affected states and of spreading Ebola internationally.[103] The

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[97] *See* Hodge, *supra* note 31, at 596. For example, 80% of farmers who had completed their harvests for 2014 reported that the harvest was smaller than in previous years because the Ebola outbreak prevented farmers from working in groups. *See* Press Release, World Bank, *supra* note 33.

[98] *IHR Brief No.1*, *supra* note 59; *see* Roache et al., *supra* note 1, at 2–3; *Statement on the 1st Meeting of the IHR Emergency Committee*, *supra* note 7.

[99] *See Ebola Response Roadmap*, *supra* note 7; *Statement on the 1st Meeting of the IHR Emergency Committee*, *supra* note 7.

[100] *Statement on the 1st Meeting of the IHR Emergency Committee*, *supra* note 7.

[101] *Id.*

[102] *See id.*

[103] *See Statement on the 3rd Meeting of the IHR Emergency Committee Regarding the 2014 Ebola Outbreak in West Africa*, WHO (Oct. 23, 2014), http://www.who.int/mediacentre/news/statements/2014/ebola-3rd-ihr-meeting/en/ [http://perma.cc/CU5U-GD6A]. Noting the travel procedures implemented by states globally, such as quarantines and blocking entry of travellers, the WHO emphasized that these measures could impede efforts to contain Ebola by impeding the recruitment and return of international responders, increasing the stigma surrounding Ebola, and disrupting economies. *Statement on the 4th Meeting of the IHR Emergency Committee Regarding the 2014 Ebola Outbreak in West Africa*, WHO (Jan. 21, 2015), http://www.who.int/mediacentre/news/statements/2015/ebola-4th-ihr-meeting/en/ [http://perma.cc/6PYB-RPYN] [hereinafter *Statement on the 4th Meeting of the IHR Emergency Committee*].

WHO's temporary recommendations under the IHR remain in effect as of the date of this publication.[104]

Despite the WHO's non-binding recommendations and its work coordinating responses with local health ministries and international organizations, the WHO has not been entirely effective in containing the spread of Ebola.[105] Although the WHO sent what limited resources and experts it had to the affected countries, the WHO lacks the ability to forcibly mobilize health workers or equipment, and its response was delayed and disorganized to the detriment of the affected countries and other organizations.[106] In addition, the WHO has not effectively addressed the affected states' domestic health systems.[107] The inadequate healthcare systems in Guinea, Liberia, and Sierra Leone constitute a violation of the IHR's requirements that states develop the capacities to "detect, assess, report, and respond to global health emergencies."[108] Yet because the IHR are not binding, there are no legal or globally enforceable consequences through which the WHO can address these violations.[109]

Moreover, the WHO lacks the funding to implement thoroughly a global response to a disease like Ebola.[110] Article 44 of the IHR requires member states to pay dues, but those dues do not fully cover the costs of running the WHO.[111] The WHO supplements these dues with voluntary contributions from other sources, but this funding scheme makes it difficult for the WHO to plan for the long term or to establish sufficient funding reserves.[112] The WHO does not have funding dedicated to building durable healthcare capacities in developing countries, and high-income states obligated to provide financial and

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[104] *See Statement on the 6th Meeting of the IHR Emergency Committee Regarding the Ebola Outbreak in West Africa*, WHO (July 7, 2015), http://www.who.int/mediacentre/news/statements/2015/ihr-ebola-7-july-2015/en/ [http://perma.cc/4Q73-MJMF].

[105] *See* Gostin, *supra* note 78; Roache et al., *supra* note 1, at 8, 10.

[106] *See* Constitution of the WHO, *supra* note 42, at art. 2; Hoffman, *supra* note 59, at 240 (noting the IHR's lack of enforcement capability); *Heal Thyself: The Ailing International Health Authority Needs a Stronger Organization*, ECONOMIST (Dec. 13, 2014), http://www.economist.com/news/leaders/21636039-ailing-international-health-authority-needs-stronger-organisation-heal-thyself [http://perma.cc/HLM3-HTAD] [hereinafter *Heal Thyself*]; Roache et al., *supra* note 1, at 8–9.

[107] *See* Gostin, *supra* note 78.

[108] *Id*.

[109] *See* Hoffman, *supra* note 59, at 240; Bishop, *supra* note 45, at 1218–23.

[110] *See* Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106.

[111] *See* Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106. Member dues account for approximately 20% of the overall WHO budget. Danielle Renwick & Toni Johnson, *The World Health Organization*, COUNCIL ON FOREIGN REL. http://www.cfr.org/public-health-threats-and-pandemics/world-health-organization-/p20003 (last updated Oct. 7, 2014) [http://perma.cc/2D79-C438].

[112] *See* Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106. For 2014 and 2015, approximately 77% of the WHO's budget comprised voluntary donations from member states and non-governmental organizations. *See* Jeremy Youde, *Can the World Health Organization Lead? Do We Want It To?*, WASH. POST (Aug. 8, 2014), http://www.washingtonpost.com/blogs/monkey-cage/wp/2014/08/08/can-the-world-health-organization-lead-do-we-want-it-to/ [http://perma.cc/JQC7-ZGBZ].

technical assistance under the IHR have failed to do so.[113] As a result, the WHO's response to the epidemic was slow and disorganized, and it was unable to coerce higher-income states to assist the affected states.[114]

Recognizing many of the shortcomings of the WHO's response to the Ebola epidemic, delegates from the World Health Assembly approved several actions intended to strengthen the WHO and IHR in May 2015.[115] Accordingly, the WHO will institute an emergency program to respond to disease outbreaks swiftly and flexibly, and it will establish a $100 million contingency fund that can be tapped quickly in emergency situations.[116] In addition, the World Health Assembly launched a committee to review the IHR.[117] Specifically, the committee will examine the effectiveness of the IHR in preventing and responding to the Ebola outbreak, the utility of the WHO's temporary recommendations, and the viability of the IHR's core capacity requirement; it will provide additional recommendations to improve the transparency, efficiency, and functionality of the IHR.[118] The review committee held its first meetings in August 2015, and the committee is expected to present its recommendations in May 2016.[119]

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[113] *See* Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106. Currently, fundraising to respond to specific disease outbreaks only occurs once the outbreak is already underway, and no long-term response funds have been established. *See* Gostin, *supra* note 78; Sheri Fink, *W.H.O. Members Endorse Resolution to Improve Response to Health Emergencies*, N.Y. TIMES (Jan. 25, 2015), http://www.nytimes.com/2015/01/26/world/who-members-endorse-resolution-to-improve-response-to-health-emergencies.html [http://perma.cc/H9KE-CKBJ].

[114] *See* Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106; Roache et al., *supra* note 1, at 8–9.

[115] *See World Health Assembly Gives WHO Green Light to Reform Emergency and Response Programme*, WHO (May 23, 2015), http://www.who.int/mediacentre/news/releases/2015/wha-23-may-2015/en/ [http://perma.cc/55HH-5LDX] [hereinafter *World Health Assembly Gives WHO Green Light*]. The World Health Assembly is the decision-making body of the WHO attended by delegates of all WHO member states, which meets annually to determine the policies of the WHO and review the WHO's budget. *See World Health Assembly*, WHO, http://www.who.int/mediacentre/events/governance/wha/en/ (last visited Nov. 5, 2015) [http://perma.cc/5B9P-YGVL].

[116] *See World Health Assembly*, *supra* note 115; Nick Cumming-Bruce, *WHO Leader Outlines Changes in Response to Ebola Epidemic*, N.Y. TIMES (May 18, 2015), http://www.nytimes.com/2015/05/19/world/africa/who-leader-outlines-changes-response-ebola-epidemic.html [http://perma.cc/9RTY-R7CC].

[117] *See World Health Assembly Gives WHO Green Light*, *supra* note 115; *The Review Committee on the Role of the International Health Regulations (2005) in the Ebola Outbreak and Response*, WHO, http://www.who.int/ihr/review-committee-2016/en/ (last visited Nov. 5, 2015) [http://perma.cc/54LQ-RP8N] [hereinafter *The Review Committee*].

[118] *See The Review Committee*, *supra* note 117.

[119] *Report of the First Meeting of the Review Committee on the Role of the International Health Regulations (2005) in the Ebola Outbreak and Response*, WHO (Aug. 25, 2015), http://www.who.int/ihr/review-committee-2016/IHRReviewCommittee_FirstMeetingReport.pdf?ua=1 [http://perma.cc/UX83-TYCY].

C. UN's Response to the Ebola Epidemic

The UNSC has dealt directly with infectious disease outbreaks only twice in its history: first in reaction to the spread of HIV/AIDS in the early 2000s and now in response to the Ebola epidemic in West Africa.[120] The UNSC's unprecedented action marks the first time that a disease outbreak has risen to the level of a "threat to international peace and security," which indicates an expansion of the UNSC's mandate and demonstrates the increasing severity of cross-border public health problems and their global ripple effect.[121]

On September 18, 2014, six months after the outbreak officially began, the UNSC passed a Resolution declaring the Ebola epidemic a "threat to international peace and security."[122] The Resolution called on UN member states to provide assistance to Guinea, Liberia, and Sierra Leone; pushed states to lift travel restrictions that isolated the affected countries; urged the WHO to accelerate its response; and encouraged Guinea, Liberia, and Sierra Leone to establish better functioning health systems.[123]

In addition, the UN General Assembly created the UN Mission for Ebola Emergency Response (UNMEER).[124] Neither a peacekeeping nor a political mission, UNMEER was established to provide a unified operational structure for UN actors to respond to the outbreak.[125] UNMEER's primary goals included containing the spread of disease through case management and safe burial services, treating infected patients, ensuring that essential services were provided to affected communities, and generally preventing the spread of Ebola.[126] On July 31, 2015, UNMEER ended its operations and transferred its functions to the WHO because it had "achieved its core objective of scaling up the response on the ground and establishing unity of purpose among responders . . . ."[127]

Although the UNSC's Resolutions were an unprecedented attempt to combat the spread of disease, the UN's response was delayed and did not spark

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[120] *See* Burci & Quirin, *supra* note 49 (referring to S.C. Res. 1308, *supra* note 69).

[121] Boon, *supra* note 68; Burci & Quirin, *supra* note 49. *See generally* Hood, *supra* note 67 (discussing rationales for expanding definition of threats to peace and security).

[122] Burci & Quirin, *supra* note 49; *see* S.C. Res. 2177, *supra* note 8, at pmbl.; Roache et al., *supra* note 1, at 2–3.

[123] *See* S.C. Res. 2177, *supra* note 8, at pmbl., ¶¶ 1, 4, 12.

[124] *See* G.A. Res. 69/1, *supra* note 8, ¶¶ 1, 3; Burci & Quirin, *supra* note 49.

[125] *See* G.A. Res. 69/1, *supra* note 8, ¶¶ 1, 3; Burci & Quirin, *supra* note 49.

[126] *See* United Nations, *Ebola Response: UN Mission for Ebola Emergency Response (UNMEER)*, GLOBAL EBOLA RESPONSE, http://ebolaresponse.un.org/un-mission-ebola-emergency-response-unmeer (last visited Nov. 5, 2015) [http://perma.cc/W2GJ-VYEY].

[127] U.N. Secretary General, Statement on the Transition of U.N. Ebola Emergency Response (July 31, 2015), http://www.un.org/sg/statements/index.asp?nid=8874 [http://perma.cc/GL8P-9PDL]; *see UN Emergency Response Mission Winds Down*, *supra* note 17.

as significant a global reaction as was necessary to eliminate the spread of Ebola.[128]

III. ANALYSIS

In an era of globalization, the transmission of a disease like Ebola is truly an international problem.[129] As the spread of Ebola from Guinea to Liberia, Sierra Leone, and the rest of the world has shown, diseases spread easily across state borders as people travel and engage in trade.[130] It is also evident that Guinea, Liberia, and Sierra Leone do not have adequate resources and infrastructure to contain the outbreak.[131] Epidemics like Ebola clearly demonstrate that "microbes do not recognize borders . . . ."[132] Instead, Ebola acts like a "nonstate actor[] with transnational power," defying the political boundaries of sovereign states.[133] Individual states, acting alone, cannot protect people from the spread of infectious diseases.[134] Current non-binding international recommendations and resolutions, such as the IHR and Chapter VII of the UN Charter, merely "allow[] ideas to exist under the guise of law, without bite."[135] As a result, collective international action bolstered by strong enforcement mechanisms is needed to address the global spread of disease.[136]

Instead of the current non-binding tools, the IHR should be made binding on states and strengthened with mandatory enforcement capabilities and greater incentives for compliance.[137] The WHO should be given more funding, and it should be reorganized to respond to disease outbreaks more effectively and to facilitate the adoption of long-term health solutions in developing countries.[138] Lastly, states should acknowledge that diseases such as Ebola can be as dangerous as other threats to global security; thus, states should use the

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[128] *See* Fink, *supra* note 113; Sun et al., *supra* note 11; Burci & Quirin, *supra* note 49; *Ebola Situation Report*, *supra* note 5. In fact, the UNSC Resolution did not come until after healthcare workers from Europe and the United States became infected. *See* Gostin, *supra* note 78; *Ebola Fast Facts*, *supra* note 5.

[129] *See* David Fidler, *Return of the Fourth Horseman: Emerging Infectious Diseases and International Law*, 81 MINN. L. REV. 771, 773–74 (1997) [hereinafter Fidler, *Return of the Fourth Horseman*]; Giorgetti, *supra* note 54, at 1348.

[130] *See* Asher, *supra* note 4, at 141–43; Roache et al., *supra* note 1, at 2–3, 4–5.

[131] *See* Gostin, *supra* note 78, at 1; Roache et al., *supra* note 1, at 2–3, 4–5.

[132] Fidler, *Return of the Fourth Horseman*, *supra* note 129, at 774.

[133] *Id.* at 774–75, 811–12.

[134] *See id.* at 774–75; Giorgetti, *supra* note 54, at 1350–51.

[135] Asher, *supra* note 4, at 144–45.

[136] *See* Fidler, *Return of the Fourth Horseman*, *supra* note 129, at 774–75; Giorgetti, *supra* note 54, at 1350–51.

[137] *See* Hoffman, *supra* note 59, at 238–39, 240; Asher, *supra* note 4, at 166–70; Bishop, *supra* note 45, at 1218–23.

[138] *See* Bishop, *supra* note 45, at 1211–13; Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106.

principles of war under Chapter VII to guide their response to this non-traditional threat to international peace and security.[139]

A. Improving the Effectiveness of the IHR's and WHO's Capacity to Respond to the Ebola Epidemic

In order to combat the spread of Ebola, the currently non-binding mechanisms of the IHR and WHO need to be strengthened and made binding on member states.[140] Given the interconnectedness of the IHR and WHO, both must be improved in tandem because changing one without the other will have only a limited effect on the cross-border spread of disease.[141]

1. Strengthening the International Health Regulations

When revised in 2005 to more broadly address global health crises, the IHR shifted away from being a binding legal mechanism and moved toward establishing non-binding global information networks and self-reporting requirements.[142] For example, the IHR require that states monitor and report potential disease outbreaks and that states have strong domestic healthcare systems.[143] In response to the current Ebola outbreak, the WHO issued temporary, non-binding recommendations to guide states in their response to the epidemic.[144] These self-reporting requirements and temporary recommendations, however, have not been implemented effectively, resulting in a gap between states' individual responses and the global community's response.[145] Many states do not have the research, workforce, or surveillance capabilities required under the IHR.[146] In fact, as of 2013, no African state had fully implemented the IHR's core capacity requirements, even though forty-three of the forty-six African states had performed assessments of their required core capacities.[147]

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[139] *See* U.N. Charter ch. VII; Bethlehem, *supra* note 73, at 771–72; Asher, *supra* note 4, at 135.

[140] *See* Hoffman, *supra* note 59, at 240; Asher, *supra* note 4, at 166–70; Bishop, *supra* note 45, at 1218–23.

[141] *See* Bishop, *supra* note 45, at 1175.

[142] *See* Fidler, *Emerging Trends*, *supra* note 46, at 288–89; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[143] *See IHR Brief No. 1*, *supra* note 54; *IHR Brief No. 2*, *supra* note 55.

[144] *See Statement on the 1st Meeting of the IHR Emergency Committee*, *supra* note 7; *Statement on the 4th Meeting of the IHR Emergency Committee*, *supra* note 103.

[145] *See* Ann Marie Kimball & David Heymann, *Ebola, International Health Regulations, and Safety*, 384 LANCET 2023, 2023 (Dec. 6, 2014), *available at* http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(14)62330-8.pdf [http://perma.cc/V7UK-LUEA].

[146] Hoffman, *supra* note 59, at 239.

[147] Kimball & Heymann, *supra* note 145. The IHR had an implementation deadline in June 2012, but many states did not meet that deadline and instead requested an extension to continue building their domestic capacities. *See* Hoffman, *supra* note 59, at 239.

A major obstacle to the proper implementation of the IHR is a lack of funding.[148] Although the IHR require that states provide financial resources and support to develop and maintain strong domestic health systems, developed countries largely have failed to comply with the requirement that they assist other states, and the WHO currently does not have funding dedicated to building strong domestic health systems.[149] As will be discussed in Part III.A.2, increasing the WHO's funding and requiring states to contribute to a capacity-building fund would help to implement the IHR more effectively.[150]

In order to be a more operative tool in combating epidemics such as Ebola, the IHR also need to include stronger enforcement mechanisms for when states fail to react, act inappropriately, or otherwise do not meet the IHR's capacity-building requirements.[151] At present, the IHR do not include any mandatory enforcement capabilities, meaning that states that have fallen below the core capacity requirements have neither the opportunity nor the incentive to meet these unenforceable standards.[152] In fact, a Review Committee established by the WHO to evaluate the IHR after the H1N1 flu pandemic in 2009 concluded that one of the "most important structural shortcomings of the IHR is the lack of enforceable sanctions" and other enforcement mechanisms.[153]

The IHR include "soft" mechanisms to encourage compliance such as relying on peer pressure from other member states and a dispute resolution system, but neither functions as a mandatory or binding requirement.[154] Without

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[148] *See* Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106.

[149] *See* Gostin, *supra* note 78; Kimball & Heymann, *supra* note 145. Developed countries are legally obligated to assist developing countries in achieving the core capacity requirements; the IHR, however, do not provide clarification for *how* governments are supposed to collaborate in practice. *See* Hoffman, *supra* note 59, at 239–40.

[150] *See* Hoffman, *supra* note 59, at 239–40; Kimball & Heymann, *supra* note 145.

[151] *See* Hoffman, *supra* note 59, at 240; Giorgetti, *supra* note 54, at 1359; Asher, *supra* note 4, at 166–67. As Steven Hoffman, a professor of public health and law, explains, there can be extreme consequences when there are no enforcement mechanisms:

> [U]nresolved disagreements can delay or prevent global action during health security emergencies, . . . possibly leading to unnecessary death, environmental damage, illness or financial collapse, in addition to the economic, psychological, and social costs associated with uncertainty and fear. Disagreements over IHR compliance could also affect friendly relations among states . . . if a state's health security interests were perceived to be sufficiently threatened.

See Hoffman, *supra* note 59, at 240.

[152] *See* Giorgetti, *supra* note 54, at 1373–75; Asher, *supra* note 4, at 165–170; Gostin, *supra* note 78.

[153] Giorgetti, *supra* note 54, at 1373 (quoting W.H.O. Director-General, *Implementation of the International Health Regulations (2005): Report of the Review Committee on the Functioning of the International Health Regulations (2005) in Relation to Pandemic (H1N1) 2009*, Doc. A64/10 (May 5, 2011)).

[154] Giorgetti, *supra* note 54, at 1373–74, 1374 n.142; *see also* Hoffman, *supra* note 59, at 240 ("[T]he fundamental absence of any formal mechanism that can be expected to promote compliance.").

enforcement tools, states' obligations to report epidemics quickly, develop national capacities, and assist other states are easily shirked.[155] Moreover, without any binding mechanism to compel compliance, politics rather than law will determine the resolution of disputes.[156]

One possible enforcement solution is a more detailed dispute resolution procedure with a codified list of IHR violations so that states can be more aware of what constitutes an enforceable violation.[157] Once the IHR have been clarified, the dispute resolution system could be improved to guarantee that disputes are actually resolved and that the system is utilized more effectively.[158] The IHR could establish an advisory entity to help states reach mutually agreeable resolutions.[159] For example, states could seek advice from an independent legal expert about issues of IHR interpretation, or states could submit their disputes to a compulsory mediation organization, complete with professional, trained mediators.[160]

To encourage states to meet the core capacity standards under the IHR, a supervisory committee of experts could be established to oversee states' progress toward implementing the requirements.[161] If a state falls behind or violates the IHR, the committee could make recommendations to assist the state in meeting the requirements or impose negative consequences.[162] Some academics suggest that sanctions by individual states could be used to ensure compliance: states would be permitted to impose sanctions or trade restrictions to pressure other states that have violated the IHR or have not met their IHR ob-

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[155] *See* Giorgetti, *supra* note 54, at 1373–74; *IHR Brief No. 1*, *supra* note 54.

[156] *See* Hoffman, *supra* note 59, at 242. Hoffman notes that, without enforcement, "[p]olitics is allowed to reign supreme—which historically has been detrimental to progress in public health—with weaker states left particularly disadvantaged and all states left vulnerable." *Id.* Experts from the CDC have also criticized the WHO, explaining that "political considerations often overruled technical expertise at the United Nations agency." *See* Stephanie Nebehay, *After Ebola, WHO to Set Up Contingency Fund, Develop 'Surge Capacity,'* REUTERS (Jan. 27, 2015), http://www.reuters.com/article/2015/01/27/us-health-ebola-who-idUSKBN0L02M020150127 [http://perma.cc/CJP6-HKGD]. Politics are particularly at play when disputes between a state and the WHO are referred to the World Health Assembly, where there is a majority-rule system that "prioritizes politics and national self-interest over legal and scientific considerations." *See* Hoffman, *supra* note 59, at 242.

[157] *See* Asher, *supra* note 4, at 165–66.

[158] *See* Hoffman, *supra* note 59, at 243–48; Asher, *supra* note 4, at 165–66; Bishop, *supra* note 45, at 1218–19.

[159] *See* Hoffman, *supra* note 59, at 243–44.

[160] *See id.* at 243. Hoffman also has suggested that a formalized adjudication mechanism could be established, either through a separate judicial body, a dispute resolution board, an ad hoc judicial body, or by reference to the International Court of Justice. *See id.* at 244–45. Such an adjudication mechanism would ensure that disputes are resolved and provide some consistency; these mechanisms, however, are less effective at resolving disputes over the interpretation of the IHR requirements or encouraging state compliance with the IHR requirements. *See id.* at 244–46.

[161] *See id.* at 243–44.

[162] *See id*.

ligations.[163] Although sanctions may have some effect on compliance in the long run, they are not an appropriate tool to respond to disease epidemics such as Ebola.[164] If the international community imposed sanctions on an affected state, the state would suffer double economic harm: the economic consequences of the sanctions as well as the socioeconomic consequences of an Ebola epidemic that reduces workforce productivity, foreign investment, and gross domestic product.[165] This double harm would further hinder the state's ability to respond to and recover from a disease epidemic.[166] Accordingly, sanctions should not be relied upon to force states' compliance with the IHR.[167]

In addition to providing enforcement mechanisms, the IHR must provide more incentives for states to comply voluntarily.[168] States parties to the IHR are much more apt to comply with the IHR when the advantages of compliance far outweigh the advantages of noncompliance.[169] The WHO should consider providing affirmative economic incentives for states that comply with the IHR—as opposed to negative economic sanctions for noncompliance.[170] For example, a compensation fund could be established to help reimburse affected states for property damaged due to a disease outbreak.[171] The fund could be created subject to a corresponding repayment program so that affected states repay the money loaned to them.[172] Another option could be to establish a fund to compensate individuals quarantined during a disease outbreak for lost income.[173] Such a fund, however, would likely be very expensive to establish and administer.[174] Given how broadly the quarantines were instituted in parts of Guinea, Liberia, and Sierra Leone and how difficult it would be to measure lost income among the affected population, this option, in all likelihood, is not viable.[175]

The WHO should also provide greater incentives and assistance for improvements to domestic disease surveillance mechanisms, particularly for

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[163] *See* Asher, *supra* note 4, at 168. For example, member states could be permitted to impose sanctions if, contrary to the IHR, a state instituted strict travel bans to contain a disease epidemic.

[164] *See id.* at 169–70; Press Release, World Bank, *supra* note 33.

[165] *See* Asher, *supra* note 4, at 169–70; Press Release, World Bank, *supra* note 33.

[166] *See* Asher, *supra* note 4, at 169–70; Press Release, World Bank, *supra* note 33.

[167] *See* Asher, *supra* note 4, at 169–70; Press Release, World Bank, *supra* note 33.

[168] *See* Bishop, *supra* note 45, at 1217–23.

[169] *See* Asher, *supra* note 4, at 150; Bishop, *supra* note 45, at 1217.

[170] *See* Asher, *supra* note 4, at 168; Bishop, *supra* note 45, at 1217.

[171] *See* Bishop, *supra* note 45, at 1219–20.

[172] *See id*.

[173] *See id.* at 1220–22.

[174] *See id*.

[175] *See id.* at 1222; Hodge, *supra* note 31, at 596; Press Release, World Bank, *supra* note 33. Moreover, such a fund would create myriad free-rider problems. *See* Bishop, *supra* note 45, at 1222. For example, the fund might encourage people to stop working even if they were not symptomatic or encourage people to relocate to a community that was quarantined in order to receive the benefits. *See id.*

states like Liberia, Guinea, and Sierra Leone that lack resources.[176] Developed countries must assist developing countries with establishing and implementing domestic capacities, particularly by sharing technologies and providing funding.[177] One way to incentivize developed countries to contribute money to developing nations is to ensure that the developed countries receive a return on their investment.[178] Although spending money on health issues is expensive for any state, one unit of health expenditure in a developing state like Guinea, Liberia, or Sierra Leone will generate a disproportionately higher level of success than such an expenditure in a developed country because developing states have such a low public health baseline.[179] Moreover, experts in international health have shown that money spent for "promotive, protective, and primary care services" in developing states leads to large improvements in public health measures and can generate benefits for other states, such as containing disease to a small region.[180]

The IHR also could make the receipt of certain funding conditional upon developing states' meeting certain benchmarks in improving their disease surveillance and public health systems.[181] Thus, developed states would receive results from their spending and developing states would have reason to make reforms in order to receive funding.[182] This incentive, however, should be used sparingly—only limited amounts of funding should be conditioned upon states' performance because developing states rely heavily on outside funding to achieve health goals.[183] Moreover, conditional funding would not be appropriate during an active disease epidemic such as Ebola due to the need for funding that can be rapidly mobilized to affected states.[184]

Finally, the monitoring and self-reporting requirements under the IHR need to be modified to encourage compliance by the international community.[185] Instead of unreliable self-reporting, the IHR should require the independent monitoring of states' implementation of the IHR.[186] An outside non-governmental organization could be established to survey and monitor member states' progress

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[176] *See* Bishop, *supra* note 45, at 1217; Gostin, *supra* note 78.

[177] *See* Bishop, *supra* note 45, at 1217, 1223.

[178] *See id.* at 1211–13.

[179] *See id.* at 1212; Gostin, *supra* note 78.

[180] *See* Bishop, *supra* note 45, at 1212.

[181] *See id.* at 1212–13.

[182] *See id.*

[183] *See id.*; Roache et al., *supra* note 1, at 6–7; *The Global Health Regime*, COUNCIL ON FOREIGN REL., http://www.cfr.org/health/global-health-regime/p22763#p2 (last updated June 19, 2013) [http://perma.cc/ZEJ7-VMXH].

[184] *See* Bishop, *supra* note 45, at 1212–13; Fink, *supra* note 113.

[185] *See* Asher, *supra* note 4, at 160–62, 166; Editorial, *What Lessons for the IHR?*, *supra* note 48. As one author has pointed out, "The problem is that reports, without action, are not enforcement." Asher, *supra* note 4, at 168.

[186] *See* Asher, *supra* note 4, at 161–62, 166; Editorial, *What Lessons for the IHR?*, *supra* note 48.

in meeting the IHR standards and then report that progress to the WHO.[187] If a state fails to meet the IHR requirements based on these assessments, then more formalized enforcement mechanisms could be initiated.[188]

2. Strengthening the World Health Organization

At present, surveillance and detection of potential health crises is a purely domestic problem.[189] As one academic has noted, "no matter what the [WHO] mandates, it will always be limited by the sovereignty of its member states."[190] The WHO, for example, is not able to assist a state in responding to an infectious disease epidemic unless the state invites the WHO to provide such assistance.[191] The WHO should be restructured and given greater resources so that it is more readily able to intervene when disease breaks out.[192]

First and foremost, the WHO needs to be given a larger and more flexible budget.[193] Currently, the WHO's budget consists of assessed contributions from member states as well as voluntary contributions.[194] Its reliance on voluntary contributions, however, limits the WHO's autonomy, particularly given that "the amount of funding allocated to the WHO serves as a measure of the degree of confidence donors have in the Organization and a gauge of the WHO's performance and credibility in the world."[195] If donors are not feeling

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[187] *See* Asher, *supra* note 4, at 160–62; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[188] *See* Hoffman, *supra* note 59, at 246–48; Asher, *supra* note 4, at 160–62; Editorial, *What Lessons for the IHR?*, *supra* note 48.

[189] *See* Fidler, *Return of the Fourth Horseman*, *supra* note 129, at 811; Bishop, *supra* note 45, at 1202.

[190] Bishop, *supra* note 45, at 1176.

[191] *See id*. at 1202; Fidler, *Return of the Fourth Horseman*, *supra* note 129, at 811.

[192] *See* Bishop, *supra* note 45, at 1212–22; Gostin, *supra* note 78; *Heal Thyself*, *supra* note 106.

[193] *See* Bishop, *supra* note 45, at 1212–13; *Heal Thyself*, *supra* note 106; Youde, *supra* note 112. Although the WHO has control over how its mandatory dues are spent, the use of the voluntary contributions—which represent a majority of the WHO's overall budget—is determined by the donors, not the WHO. *See* Youde, *supra* note 112. Thus, the WHO is heavily reliant on funding it cannot control, and the WHO has little recourse if a donor state's interests do not align with those of the WHO. *See id*.

[194] *See Heal Thyself*, *supra* note 106; Youde, *supra* note 112.

[195] Bishop, *supra* note 45, at 1203. As the author explains:

> The limitations in the WHO's funding structure have resulted in an inherent dichotomy in the fight against infectious disease: in order to effectively combat infectious disease, the WHO is reliant on member states for both funding and disease outbreak information. Because the WHO has no mechanism to force member states to pay their financial dues and cannot compel states to allow WHO officials into their territory to fight illness, the Organization is extremely cautious in the way it deals with nations that do not comply with the IHR . . . . If the WHO did begin confronting nations in an effort to promote the WHO's programs, member states would be disinclined to participate, and the WHO could be eliminated altogether.

Id. at 1203–04.

particularly confident, the WHO suffers and is unable to plan its expenditures consistently.[196]

The WHO should increase the dues from member states—despite their consistent resistance—so that it can implement its programs regularly, make long-term plans, and avoid leaving affected states without recourse due to budgetary constraints.[197] The Ebola epidemic has exposed the systemic vulnerabilities in West Africa; WHO member states must acknowledge the organization's need for increased funding to respond to such epidemics.[198] The transmission of Ebola from Africa to Europe and the United States has also demonstrated that the risk of the international spread of disease is very high.[199] Developed states can protect themselves by assisting developing states in responding to the epidemic and by providing further funding.[200] In addition to the incentives identified above, the WHO may be able to attract more funding from donor states by consolidating its organization and operations and by spending money in a more cost-efficient manner.[201] The WHO could streamline its operations and its bureaucracy to reduce overhead costs or partner with other technical organizations to allocate responsibilities more efficiently.[202] In the long run, the WHO should focus its spending on capacity building, disease surveillance, and sanitation efforts to prevent disease epidemics before they occur.[203]

In addition to increasing its budget, the WHO should broaden its mission to encompass more proactive intervention into public health emergencies.[204] The WHO, as a specialized agency of the UN, claims that it is not intended to be the "first responder" in health emergencies, but rather that it acts in an observational capacity.[205] But if the affected states are too weak to respond to disease outbreaks and the WHO does not act as a first responder, then there will be a significant delay in the international community's ability to react to disease epidemics.[206] Instead of limiting itself to being an observer, the WHO

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[196] *See id*. at 1203; *Heal Thyself*, *supra* note 106.

[197] *See* Bishop, *supra* note 45, at 1203–04; Editorial, *What Lessons for the IHR?*, *supra* note 48; *Heal Thyself*, *supra* note 106; Youde, *supra* note 112.

[198] *See* Bishop, *supra* note 45, at 1217, 1223; Sun et al., *supra* note 11; Youde, *supra* note 112.

[199] *Ebola Situation Report*, *supra* note 5; Roache et al., *supra* note 1, at 5–6.

[200] *See* Bishop, *supra* note 45, at 1212–13; *Ebola Situation Report*, *supra* note 5.

[201] *See* Bishop, *supra* note 45, at 1211–18.

[202] *See id.* at 1213–14; Giorgetti, *supra* note 54, at 1375–76.

[203] *See* Bishop, *supra* note 45, at 1213–14.

[204] *See* Giorgetti, *supra* note 54, at 1374; Bishop, *supra* note 45, at 1199; *Heal Thyself*, *supra* note 106.

[205] Fink, *supra* note 113; *see* Giorgetti, *supra* note 54, at 1374; Bishop, *supra* note 45, at 1199–1200. The current Director-General of the WHO has explicitly stated, "We are not the first responder." Fink, *supra* note 113. As a result of decreases in the WHO's budget and a reprioritization of issues, the WHO's response capabilities have been scaled back over the past few years. *See id.*

[206] *See* Bishop, *supra* note 45, at 1199–1200; Gostin, *supra* note 78; Roache et al., *supra* note 1, at 4, 10.

should revise its mandate so that it can respond more quickly and take preventative action: "Instead of doing the job of governments, it should focus on the things [governments] cannot manage alone, such as helping poor countries set up health systems, disseminating the best medical research and policies, and combating global epidemics."[207] Once the WHO has been backed by strong enforcement mechanisms, given greater funding, and reinvigorated with a modified mandate, politics can largely be left out of the international community's response to global disease epidemics.[208]

B. Responding to Ebola Under the UN's Chapter VII Powers

As the UNSC acknowledged in its September 2014 Resolution, the Ebola epidemic poses a serious threat to international peace and security, and therefore, the international community should respond to the epidemic as such a threat.[209]

The impacts of the Ebola epidemic are as dangerous as an act of aggression by a state actor: "Statistically, disease is a more formidable killer than war, with the power to completely destabilize governments."[210] Like war, disease epidemics reduce workforce capacity and productivity, threaten food security, erode government legitimacy, and create power vacuums that allow other states to take over control or territory.[211] Moreover, disease epidemics can impede economic growth by reducing life expectancy, removing productive individuals from the workforce, imposing costs of prevention and treatment, and negatively impacting investments in a state's businesses and infrastructure.[212] As discussed in Parts I.B. and II.A., even though the health situation has improved significantly in Guinea, Liberia, and Sierra Leone during 2015, the socioeconomic consequences of the Ebola epidemic have been devastat-

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[207] *Heal Thyself*, *supra* note 106.

[208] *See* Hoffman, *supra* note 59, at 240, 242; Bishop, *supra* note 45, at 1199–1200; Gostin, *supra* note 78. As noted in a recent *New York Times* editorial, "One big question, which can only be answered in practice, is whether the [WHO's] 194 member states will set aside their typical politicking on behalf of national self-interests and allow it to function as the global health leader it ought to be." Editorial, *Reform After the Ebola Debacle*, N.Y. TIMES (Feb. 10, 2015), http://www.nytimes.com/2015/02/10/opinion/reform-after-the-ebola-debacle.html [http://perma.cc/DLS6-ZCVY].

[209] *See* S.C. Res. 2177, *supra* note 8, at pmbl.; Ibrahim Boubacar Keita, *In West Africa, Disease Just as Devastating as War*, GLOBE & MAIL (Nov. 26, 2014), http://www.theglobeandmail.com/globe-debate/in-west-africa-disease-just-as-devastating-as-war/article21788869/ [http://perma.cc/Q5VZ-GC8S].

[210] Asher, *supra* note 4, at 135; *see* Keita, *supra* note 209. Ibrahim Boubacar Keita, the President of Mali, stated, "Ebola has taught [West Africa] that infectious disease is equally capable of ignoring borders and destabilizing regions as any armed conflict." Keita, *supra* note 209.

[211] *See* UNITED NATIONS ENV'T PROGRAMME, AFRICA ENVIRONMENT OUTLOOK 2, 392–95 (2006), http://www.unep.org/dewa/Africa/publications/AEO-2/content/pdf/AEO2_Our_Environ_Our_Wealth_English.pdf [http://perma.cc/JEY7-D8ZD] [hereinafter AFRICA ENVIRONMENT OUTLOOK]; Hodge, *supra* note 31, at 596; Asher, *supra* note 4, at 135 n.3; Bishop, *supra* note 45, at 1206–07.

[212] *See* Bishop, *supra* note 45, at 1206–07; Keita, *supra* note 209.

ing.[213] The combination of economic stagnation, restricted trade and travel, and a depleted workforce have destabilized the region and jeopardized its recovery, much like in a war zone.[214] As a result, the global community should respond to Ebola in a manner similar to the way in which it responds to acts of aggression by state actors or other non-traditional threats to peace and security.[215] As states respond swiftly and strongly to threats of war, the international community should respond to threats from infectious diseases at an early stage by notifying the WHO quickly, seeking the assistance of other states, and responding effectively to domestic conditions.[216]

States should be guided by the principles of self-defense when responding to the Ebola epidemic.[217] Self-defense is typically permitted when action is necessary and proportional to the threat at hand.[218] The global community should utilize this standard as a benchmark to determine when global action is required to intervene in a global health crisis.[219] To determine whether action is necessary, states could utilize the monitoring and information collection systems already established by the WHO and adopt an early-warning system.[220] Using the information collected by the WHO and other non-governmental organizations, the affected states would be able to take action or seek assistance from others at an earlier stage.[221] In effect, this would be analogous to permitting states to use force preemptively to respond to potential security threats.[222] Though the use of force preemptively is not always a widely accepted form of self-defense, a preventative response to a potential disease outbreak—if implemented properly—could positively impact disease containment and access

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[213] *See* Hodge, *supra* note 31, at 596–97; Press Release, World Bank, *supra* note 33.

[214] *See* AFRICA ENVIRONMENT OUTLOOK, *supra* note 211, at 392–95; Roache et al., *supra* note 1, at 4; Snyder, *supra* note 76; Press Release, World Bank, *supra* note 33; *Worst-Affected Countries 'Crippled' by Economic Impact of Ebola*, *supra* note 31. Brice De Le Vingne, the Director of Operations for Doctors Without Borders, has stated, "[T]he fight against Ebola is like a war . . . ." Cécile Barbière, *Médecins Sans Frontières Chief: 'The Fight Against Ebola Is Like a War,'* EURACTIV (Oct. 17, 2014, 4:38PM), http://www.euractiv.com/sections/development-policy/medecins-sans-frontieres-chief-fight-against-ebola-war-309259 [http://perma.cc/538E-HHUN].

[215] *See* Keita, *supra* note 209; Snyder, *supra* note 76.

[216] *See* Azubuike, *supra* note 74, at 167; Asher, *supra* note 4, at 166; Bishop, *supra* note 45, at 1223; Roache et al., *supra* note 1, at 4.

[217] *See* Bethlehem, *supra* note 73, at 775–77; Snyder, *supra* note 76.

[218] *See* Van den hole, *supra* note 73, at 96–97.

[219] *See id.*

[220] *See* Giorgetti, *supra* note 54, at 1375–76; Snyder, *supra* note 76.

[221] *See* Giorgetti, *supra* note 54, at 1375–76; Snyder, *supra* note 76.

[222] *See* Van den hole, *supra* note 73, at 72; Snyder, *supra* note 76. A state acting preemptively will use force "to repel an attacker before an actual attack has taken place . . . ." Van den hole, *supra* note 73, at 72. In the disease context, a response under the UNSC would be triggered before a disease outbreak becomes a full-blown epidemic. *See id.*; Roache et al., *supra* note 1, at 2–3; Burci & Quirin, *supra* note 49.

to emergency healthcare equipment and facilities while avoiding the negative consequences of a delayed response.[223]

As states' self-defense measures in reaction to traditional security threats must be proportional, so too must states' responses to disease outbreaks.[224] Preemptive responses should be focused on triggering the IHR's mechanisms early and on efficiently mobilizing resources, manpower, equipment, and knowledge.[225] Treating a disease outbreak like a security problem and responding to it like an act of war, however, creates a risk of militarizing a disease outbreak; this in turn instills fear, deters symptomatic individuals from seeking treatment, and has damaging socioeconomic consequences.[226] As a result, states should avoid harsh responses such as instituting lockdowns, travel bans, or strict quarantines.[227] To avoid militarizing the Ebola epidemic, this "war" should be fought primarily by those states and organizations with medical expertise and experience in combating disease epidemics, rather than military forces.[228]

Moreover, states should act in collective self-defense in responding to future epidemics.[229] In general, the international community approves the use of

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[223] *See* Azubuike, *supra* note 74, at 170–71; Van den hole, *supra* note 73, at 81–82; McNeil, *supra* note 23; Albert Sun & Hannah Fairfield, *How the Speed of Response Defined the Ebola Crisis*, N.Y. TIMES (Nov. 3, 2014), http://www.nytimes.com/interactive/2014/11/04/health/visuals-ebola-model.html [http://perma.cc/T6EH-JRRP]; Snyder, *supra* note 76.

[224] *See* Bethlehem, *supra* note 73, at 775; Van den hole, *supra* note 73, at 102–04; *Statement on the 4th Meeting of the IHR Emergency Committee*, *supra* note 103.

[225] *See* Asher, *supra* note 4, at 166; Gostin, *supra* note 78; Sun & Fairfield, *supra* note 223.

[226] *See* Hodge, *supra* note 31, at 596; Sun et al., *supra* note 11; Roache et al., *supra* note 1, at 4; *Statement on the 4th Meeting of the IHR Emergency Committee*, *supra* note 103.

[227] *See* Nossiter, *supra* note 92; Karen Greenberg, *America's Response to Ebola Looks Disturbingly Similar to the War on Terror*, MOTHER JONES (Nov. 12, 2014), http://www.motherjones.com/politics/2014/11/4-lessons-war-terror-apply-ebola-fight [http://perma.cc/TKG7-2PW6]; Roache et al., *supra* note 1, at 4–5. To contain the spread of Ebola, several countries tried to prevent individuals from travelling by air. *See* Greenberg, *supra*; Roache et al., *supra* note 1 at 4; *Statement on the 4th Meeting of the IHR Emergency Committee*, *supra* note 103. Under the IHR, states are permitted to hold a passenger suspected of carrying a disease for non-invasive tests, observation and quarantine, medical treatment or to deny entry altogether. Alexandra R. Harrington, *Germs on a Plane!: Legal Protections Afforded to International Air Travelers and Governments in the Event of a Suspected or Actual Contagious Passenger and Proposals to Strengthen Them*, 22 J.L. & HEALTH 295, 306 (2009). The WHO, however, has explicitly encouraged states not to engage in such practices, which interfere with the flow of key goods and services, generate animosity, and impede the affected states' recovery from the epidemic. *See* Bishop, *supra* note 45, at 1217–18; *Statement on the 4th Meeting of the IHR Emergency Committee*, *supra* note 103.

[228] Greenberg, *supra* note 227. One way to accomplish this may be by further integrating health considerations into the missions of peacekeeping operations and including disease awareness in peacekeepers' community outreach efforts. *See* Snyder, *supra* note 76. The UNSC explicitly incorporated its previous response to the HIV/AIDS epidemic in the mission of peacekeeping units, and a similar tactic could be employed with the current Ebola epidemic. *See* Burci & Quirin, *supra* note 49; Snyder, *supra* note 76.

[229] *See* U.N. Charter art. 51; Azubuike, *supra* note 74, at 174–76; Van den hole, *supra* note 73, at 78; Roache et al., *supra* note 1, at 6–7.

collective self-defense in two scenarios: when a state is a member of an established collective defense alliance, or when a state requests that another state intervene on its behalf.[230] Similar mechanisms could be established for states to respond to disease outbreaks like Ebola.[231] States could come together in advance agreements to assist one another in responding to disease outbreaks.[232] Much like the North Atlantic Treaty Organization (NATO), states could treat a disease threat to one state as a disease threat to all member states, thereby requiring rapid intervention by other member states.[233] Such advance agreements to combat disease epidemics should *require* states to assist an affected state, in contrast to the current systems that are unable to compel action even when assistance has been requested.[234] Furthermore, similar to what has occurred in the current Ebola epidemic, an affected state may make a formal request for assistance, which would permit other states to intervene on the affected state's behalf and take any measures necessary and proportionate to the disease threat.[235]

In the same way that states safeguard against armed attacks by maintaining critical infrastructure and stockpiling equipment, states should similarly shore up their domestic defenses against diseases like Ebola and receive assistance to build up domestic health capacities.[236] One way to accomplish this

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[230] *See* Azubuike, *supra* note 74, at 174–75. On the one hand, a state may act in collective self-defense to aid another state if the "victim state" has been attacked and has requested assistance from the other state. *See id*. at 174. On the other hand, states may enter into self-defense treaties that create an obligation on all members to assist each other in the event of an attack against a member. *Id*. at 175.

[231] *See id.* at 174–76; *see, e.g.*, Helene Cooper, *Liberian President Pleads with Obama for Assistance in Combating Ebola*, N.Y. TIMES (Sept. 12, 2014), http://www.nytimes.com/2014/09/13/world/africa/liberian-president-pleads-with-obama-for-assistance-in-combating-ebola.html [http://perma.cc/BC36-N3AR] (describing letter from Liberian president to President Obama requesting assistance managing Liberia's Ebola outbreak).

[232] *See* Azubuike, *supra* note 74, at 175–76.

[233] *See* North Atlantic Treaty art. 5, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243. In order to maintain collective security, a NATO member state is required to respond to a threat directed toward another member state:

> The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defense recognized by [the UN Charter] will assist the Party or Parties so attacked by taking . . . such action as it deems necessary . . . .

Id.

[234] U.N. Charter chap. VII; WHO Const., *supra* note 42, at art 2; Bishop, *supra* note 45, at 1203–04.

[235] *See* Azubuike, *supra* note 74, at 174–75; Cooper, *supra* note 231; Roache et al., *supra* note 1, at 6–7. In the context of war, a state that has been "attacked" must request assistance from another state to trigger collective self-defense. *See* Azubuike, *supra* note 74, at 174.

[236] *See* Fidler, *Return of the Fourth Horseman*, *supra* note 129, at 828–29; Sun et al., *supra* note 11; Roache et al., *supra* note 1, at 3–4. *See generally* JOHN D. MOTEFF, CONG. RESEARCH SERV., RL30153, CRITICAL INFRASTRUCTURES: BACKGROUND, POLICY, AND IMPLEMENTATION (2010),

goal is for the UNSC to implement an early warning system to detect potential health and security situations and to spur early action.[237] A special adviser could be established to collect information, assess potentially dangerous situations, and bring them to the attention of the UN Secretary-General, who then would make recommendations to member states.[238] Such a system at the UN would complement and give strength to the WHO's disease-tracking systems that are already in place but currently unable to formally recommend that the UNSC take action on a particular issue.[239]

Although self-defense and the UNSC's powers may be potent tools to mobilize international health interventions and to prevent widespread socioeconomic devastation, these tools are limited by the fact that they are not aimed at controlling disease, but rather at a traditional state aggressor.[240] First, there are no easily identifiable targets toward which states can direct action—"enforcement action in this case cannot be directed against particular 'targets,' and the practical value of enforcement actions squarely placed under Chapter VII seems questionable."[241]

Second, the traditional tools that states often use to respond to a threat to international peace and security would be less effective in the context of a disease outbreak.[242] When attempting to stave off an act of aggression by a state actor, states acting in accordance with UN Chapter VII may impose sanctions on a state; use force against another state, if authorized; send in peacekeeping troops; or take other measures.[243] These measures, however, would not be entirely effective against Ebola.[244] For example, sending troops into a health crisis may worsen the situation on the ground and spread fear among the population.[245] Although sanctions may encourage states to comply with international

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[237] *See* Snyder, *supra* note 76.

[238] *See* U.N. Secretary-General, Letter dated July 13, 2004 from the Secretary-General addressed to the President of the Security Council, U.N. Doc. S/2004/567 (July 13, 2014) (outlining special adviser's responsibilities); Snyder, *supra* note 76.

[239] *See* Snyder, *supra* note 76.

[240] *See* Burci & Quirin, *supra* note 49.

[241] *Id*.

[242] *See* BOSCO, *supra* note 64, at 3–4; Burci & Quirin, *supra* note 49; Snyder, *supra* note 76.

[243] *See* BOSCO, *supra* note 64, at 3–4; Snyder, *supra* note 76. Chapter VII gives the UNSC and its member states the power to employ any "such action . . . as may be necessary to maintain or restore international peace and security." U.N. Charter art. 42.

[244] *See* Burci & Quirin, *supra* note 49; Greenberg, *supra* note 227; Snyder, *supra* note 76.

[245] *See* Geoff Brumfiel, *Can the U.S. Military Turn the Tide in the Ebola Outbreak?*, NAT'L PUB. RADIO (Sept. 11, 2014), http://www.npr.org/blogs/goatsandsoda/2014/09/11/347666891/can-the-u-s-military-turn-the-tide-in-the-ebola-outbreak [http://perma.cc/QD6P-TJFP]. The United States sent 3000 military personnel to help oversee and coordinate relief efforts and accelerate the distribution of

law, imposing sanctions alone likely would not contain the spread of Ebola and may lead to negative socioeconomic consequences.[246]

Ultimately, to effectively fight Ebola like a war, states must balance the need to respond to disease threats swiftly and proportionately and to maintain readiness to defend against such "attacks" with the need to avoid reacting too strongly through use of extreme measures or brute force that create fear and isolate the affected states.[247]

CONCLUSION

The Ebola epidemic began in Guinea in March 2014 and spread quickly to Liberia, Sierra Leone, and across the globe. After more than a year, the epidemic has taken the lives of more than 11,000 people, and more deaths are likely to occur before the epidemic is fully contained. Guinea, Liberia, and Sierra Leone have been affected severely because chronic poverty has impeded the development of robust health systems, the states have recently emerged from long periods of civil war and instability, there is an extreme dearth of experienced healthcare workers and medical infrastructure, and rampant distrust of government has kept populations in fear. The socioeconomic consequences for the affected states have been overwhelming: the epidemic has reduced workforce productivity; interfered with trade, travel, and investment; and impeded economic growth.

In response to the epidemic, Guinea, Liberia, and Sierra Leone instituted quarantines and states of emergency, but these efforts were not fully effective. Their responses have been hindered by the states' systematically weak healthcare systems and a drastic shortage of equipment. Consequently, international organizations and individual states stepped in to assist. The WHO declared the epidemic to be a public health emergency of international concern and made recommendations under the IHR. These IHR mechanisms, however, are not mandatory and have often been undermined by the WHO's limited funding. In addition, the UN declared the Ebola epidemic to be a threat to international peace and security and established an emergency response mission for West Africa.

Although the responses of the WHO and UN were important steps to combat the spread of Ebola, additional and more rapid collective action—supported by strong enforcement capabilities and adequate funding—is needed to effectively address the global spread of disease. The IHR should be backed

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equipment. *See* Sun et al., *supra* note 11; Roache et al., *supra* note 1, at 7. Although troops may be helpful in mobilizing resources and coordinating logistics, sending foreign troops may simultaneously contribute to the destabilization of the situation on the ground. *See* Brumfiel, *supra*.

[246] *See* Asher, *supra* note 4, at 168–70; Press Release, World Bank, *supra* note 33.

[247] Greenberg, *supra* note 227; *see* Fidler, *Return of the Fourth Horseman*, *supra* note 129, at 828–29; Sun & Fairfield, *supra* note 223; Roache et al., *supra* note 1, at 4; Snyder, *supra* note 76.

by mandatory enforcement mechanisms that incentivize compliance with IHR requirements and lead to the guaranteed resolution of disputes. The IHR also should encourage developed countries to assist developing countries in maintaining domestic healthcare capacities and allow for third-party observers to ensure that states meet the IHR's core capacity requirements. The WHO should be strengthened by allowing it to more readily intervene on behalf of states and by giving it a more active role in fighting the global spread of disease. To do so, the WHO will need a larger and more flexible budget with special funds established for emergency responses and developing domestic healthcare systems.

Since 2014, the effects of the Ebola epidemic have been as destabilizing as a war, prompting the UN Security Council to declare Ebola a threat to peace and security. Just as states respond swiftly and strongly to threats of war, the international community should respond swiftly and strongly to threats from infectious diseases like Ebola. States' responses should be guided by principles of self-defense and the guidelines of Chapter VII of the UN Charter. In addition, states should act in collective self-defense against disease threats and maintain operational readiness to confront future disease epidemics without over-militarizing the situation on the ground.