2 Interrelationship Among Relevant Rules of International Law on Epidemics

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SECTION 1 INTRODUCTION

Efforts to protect public health have depended predominantly on science. Since the first International Sanitary Conference was held in 1851 in Paris, it has been scientists and medical professionals who have been the main contributors to building the necessary institutions and formulating the relevant rules in the field. It was the force of science that made it possible for the World Health Organization (WHO) to be established in 1948. Thus the WHO, as an organisation for scientific cooperation, has been central in combatting epidemics. However, it has also been pointed out by some authors that the dominance of scientists and medical experts in the WHO has led to the situation that it has not paid sufficient attention to law [1]. Problems of global health, including those of epidemics, have long been neglected by mainstream international law, and this neglect is still prevalent today [2]. It is probably because they have been considered almost exclusively as matters of WHO law, composed of the WHO Constitution, the International Health Regulations (IHR 2005) and other laws adopted by the WHO.

However, WHO law is in no way a "sealed" or "self-contained" regime. It exists and functions in relation to other fields of international law. This is clear

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1. David P. Fidler, "International Law and Global Public Health", *University of Kansas Law Review*, Vol. 48, No. 1 (1999), pp. 27-394; Jose E. Alvarez, "The WHO in the Age of the Coronavirus", *American Journal of International Law*, Vol. 114, No. 4 (2020), pp. 578-587, at 585.

2. The Hague Academy of International Law has not been an exception. I recall that, after the H1N1 influenza outbreak in 2009, an informal suggestion was made at a meeting of the Curatorium of the Hague Academy by one of its members from the United States, Mr Peter Trooboff, that the topic on epidemics should be taken on for the Centre for Studies and Research. Unfortunately, there was no strong support among the Curatorium members at that time, and it was soon forgotten, which I deeply regret, as I myself was then a member of the Curatorium.

from the IHR Article 57 (Relationship with other International Agreements), paragraph 1, which provides: "States Parties recognize that the IHR and other relevant international agreements should be interpreted so as to be compatible". It may be recalled that the World Trade Organization (WTO) Appellate Body stated in the 1996 *Gasoline* case that "the General Agreement is not to be read in clinical isolation from public international law" [3]. Likewise, the WHO law cannot stand by itself in *clinical* isolation from public international law. This is exactly the reason why we can and should contribute to placing international public health law within the framework of general international law. Thus the IHR needs to be supplemented by other rules of international law. Indeed, the core strength of international law on epidemics as a legal system lies in such an interrelationship that ensures coherence among the rules of international law.

The present paper reflects the fact that epidemics touch every facet of human life. In the past few decades, commentators have begun to recognise that epidemics will concern many specialised regimes of international law [4]. A determination of which rules of international law are implicated in any given situation is necessarily fact-dependent, and these commentaries do not purport to give an exhaustive analysis of every possible interaction. It would be necessary first to provide an overview of the main rules of various specialised regimes which are most likely to be implicated when a State or international organisation responds to an epidemic. The paper will then look at specific fields of international law such as international human rights law, international environmental law, international trade and investment law, international transport law, international law on peace and security, and international humanitarian law.

SECTION 2 **PRINCIPLE OF INTERRELATIONSHIP**

In addressing the question of the interrelationship of legal norms, the work of the Study Group on the Fragmentation of International

3. WTO, Appellate Body report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R, 29 April 1996, p. 17; See Shinya Murase, "Unilateral Measures and WTO Dispute Settlement", in Simon C. Tay and Daniel C. Esty (eds.), *Asian Dragons and Green Trade, Environment, Economics and International Law*, Times Academic Press, 1996, pp. 137-144.

4. See, for example, Fidler, above footnote 1, who provides an early overview of the interaction of the right to health with international trade law, international humanitarian law, arms control law, international human rights law, international labour law and international environmental law. A recent update, Armin von Bogdandy and Pedro A. Villarreal, "International Law on Pandemic Response: A First Stocktaking in Light of the Coronavirus Crisis", MPIL Research Paper Series, No. 2020-07, 26 March 2020, https://ssrn.com/abstract=3561650, pp. 16-25, focuses on human rights, international trade law, the UN Security Council's powers and the law of development finance, while noting that the list is non-exhaustive.

Law: Difficulties Arising from the Diversification and Expansion of International Law [5] should first be noted. Any overlaps or conflicts arising from several conventions that may be applicable to the same subject matter may require coordination in the relevant context. In general, it is appropriate to follow the above conclusions from the Study Group on the *relationships of interpretation* (mutually supplementary) and the *relationships of conflict* (one prevailing over the other), as well as the *principle of harmonisation* (for a single set of obligations to the extent possible), though admittedly this process presents some difficulties [6]. It would be useful to clarify the various techniques in international law for addressing tensions between legal rules and principles, whether they relate to a matter of interpretation or a matter of conflict [7].

When the rules of international law are formulated, interpreted and applied, and implemented in a complementary manner, the possibilities for avoiding or resolving conflicts between them will increase with a view to achieving multiple benefits and sustainable development [8]. Hence, in order to effectively protect public health from epidemics, it is crucial that consideration of the relevant rules of international law be undertaken in a mutually supportive manner, which can turn potential conflict in coordinating treaty provisions to coherence for the protection of public health. The principle of "presumption of conformity" is also stressed in this context.

The above analysis may be highlighted within the relevant rules set forth in the Vienna Convention on the Law of Treaties of 1969,[9] including Articles 30 and 31, paragraph 3 *(c)*, and the principles and rules of customary international law. Article 31, paragraph 3 *(c)*, is intended to guarantee a "systemic interpretation", requiring "any relevant rules of international law applicable in

5. Adopted by the International Law Commission at its fifty-eighth session, in 2006, and submitted to the General Assembly as a part of the Commission's report covering the work of that session (A/61/10, para. 251). The report appears in *Yearbook of the International Law Commission*, 2006, Vol. II, Part 2.

6. See *ibid*., pp. 177-178; see also Shinya Murase, ILC Fourth Report on the Protection of the Atmosphere, A/CN.4/705, 2017, paras. 8-92; Campbell McLachlan, "The Principle of Systemic Integration and Article 31 (3) (c) of the Vienna Convention", *International and Comparative Law Quarterly*, Vol. 54 (2005), p. 279.

7. *Yearbook of the International Law Commission*, 2006, Vol. II, Part 2, para. 251. See Conclusion (2) on "relationships of interpretation" and "relationships of conflict". See, for the analytical study, "Fragmentation of International Law: Difficulties Arising From the Diversification and Expansion of International Law", Report of the Study Group of the International Law Commission finalized by Martti Koskenniemi (A/CN.4/L.682 and Corr.1 and Add.1).

8. See ILC Draft Guidelines on the Protection of the Atmosphere, Guideline 9 on interrelationship among relevant rules, *Official Records of the General Assembly, Seventy-third session*, Supplement No. 10, Report of the International Law Commission, Seventieth session, 2018, Chapter VI, pp. 151-200; see also ILA Resolution on the Legal Principles Relating to Climate Change, Washington DC 2014 (Res. 2/2014), Draft Article 10 on Inter-relationship.

9. 1155 UNTS 18232, p. 331.

the relations between the parties" to be taken into account [10]. In other words, Article 31, paragraph 3 *(c)*, of the 1969 Vienna Convention emphasises both the "unity of international law" and "the sense in which rules should not be considered in isolation of general international law" [11]. Article 30 of the 1969 Vienna Convention provides rules to resolve a conflict, if the above principle of systemic integration does not work effectively in a given circumstance. Article 30 provides for conflict rules of *lex specialis* (para. 2), of *lex posterior* (para. 3) and of *pacta tertiis* (para. 4) [12]. Paragraph 1 addresses three kinds of legal processes, namely the identification of the relevant rules, their interpretation and their application. The phrase "and with a view to avoiding conflicts" at the end of the sentence signals that "avoiding conflicts" is among the principal purposes of the paragraph.

In considering interrelationship, particular attention should be given first to human rights law. It may be recalled, from the viewpoint of interrelationship, that many of the human rights norms overlap with those of public health law, leading to the synergies between the two, some other human rights norms may come in conflict with the latter, requiring adequate coordination. It must be stressed once again that coordination between these bodies of law cannot come at the cost of derogations to human rights obligations beyond those permitted by international law. Thus, apart from human rights law, the relevant laws to be highlighted in this section are: (1) international environmental law, (2) international trade law, (3) international investment law, (4) international transport law, and (5) law on security and armed conflict, as described in detail in this section.

It would also be necessary to refer to situations in which States wish to develop new rules. It is thus important to signal a general desire to encourage States, when engaged in negotiations involving the creation of new rules, to take into account the systemic relationships that exist between rules of international law relating to health and rules in other legal fields.

SECTION 3 **INTERNATIONAL HUMAN RIGHTS LAW**

It is necessary at the outset to confirm that respect for human rights is a fundamental rule of international law, even when an epidemic

10. See, e.g., WTO, Appellate Body report, *United States — Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, 6 November 1998, para. 158. See also *Al-Adsani* v. *the United Kingdom*, Application No. 35763/97, ECHR 2001-XI, para. 55.

11. McLachlan, above footnote 6; O. Corten and P. Klein (eds.), *The Vienna Conventions on the Law of Treaties: A Commentary*, Vol. 1, Oxford University Press, 2011, pp. 828-829.

12. *Ibid*., pp. 791–798.

occurs. It must also be ascertained that the rules of international health law and those of international human rights law must be identified, interpreted, applied and implemented in an integrated manner [13]. It is also noted that there must be no further derogations than that already allowed under existing treaties. Thus the WHO IHR mandates full respect of the "dignity, human rights and fundamental freedoms" (Arts. 3 and 32).

The International Covenant on Economic, Social and Cultural Rights (ICESCR) [14] provides certain relevant rights. It does not provide for derogations, though there is a general provision on limitations (Art. 4). The right to health is guaranteed under ICESCR Article 12 and includes access to health facilities, goods and services, and "the prevention and treatment and control of epidemic . . . diseases" (Art. 12 (2) *(c)*) [15]. This includes "the implementation or enhancement of immunization programs and other strategies of infectious disease control" [16]. The Human Rights Council has further stressed "the responsibility of States to ensure access to all, without discrimination, of medicines, in particular essential medicines" [17]. Article 2 (2) obliges States to guarantee the rights "without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status". It is observed that "other status" may be relevant, for example, to not discriminate on the basis of age [18]. The CESCR's General Comment 14 on the Rights to the Highest Attainable Standard of Health (Art. 12) [19] emphasises that the term "progressive realization" used in Article 2 (1) of the ICESCR should be interpreted as meaning that "States parties have a specific and continuing obligation to move as expeditiously and effectively as possible towards the full realization of article 12" (para. 31).

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13. See Resolution 2 of the International Law Association (ILA) Kyoto Conference adopted on 13 December 2020, para. 4. Resolution 2 Kyoto 2020 Global Health Law FINAL.pdf (160KB); von Bogdandy and Villarreal, above footnote 4, pp. 17-20.

14. 170 States parties, as of 1 February 2020.

15. Committee on Economic, Social and Cultural Rights, General Comment No. 14, para. 16. See also Benjamin Mason Meier and Larissa Mori, "The Highest Attainable Standard: Advancing a Collective Human Right to Public Health", *Columbia Human Rights Law Review*, Vol. 37 (2005), pp. 113-115.

16. CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health, para. 16.

17. Human Rights Council Resolution 12/24: Access to Medicine in the Context of the Right of Everyone to the Highest Attainable Standard of Physical and Mental Health, para. 2.

18. Adina Ponta, "Human Rights Law in the Time of the Coronavirus", *ASIL Insights* [blog of the *American Society of International Law*], Vol. 24, No. 5 (20 April 2020), p. 5, https://www.asil.org/insights/volume/24/issue/5/human-rights-law-time-coronavirus. See Office of the United Nations High Commissioner on Human Rights, " 'Unacceptable': UN Expert Urges Better Protection of Older Persons Facing the Highest Risk of the COVID-19 Pandemic", 27 March 2020.

19. CESCR General Comment No. 14, E/C.12/200/4. https://www.refworld.org/pdfid/4538838d0.pdf.

Obviously, there are certain "limitations" built in to the human rights treaties [20], as well as "derogations" that are permitted in the extraordinary situations of epidemics. Most notably, Article 4 (1) of the International Covenant on Civil and Political Rights (ICCPR) [21] provides for a public emergency exception in which a human right can be temporarily suspended or restricted. The derogations are recognised on five conditions, namely, that (1) the State must officially proclaim a state of emergency [22], and that the measures must be (2) "necessary" and (3) "proportionate", to be applied (4) in a manner of "non-discrimination", and also (5) in conformity with other international law obligations of the State (such as those in regional human rights conventions to which the State is a party) [23]. Principles of necessity, proportionality and non-discrimination must be assessed very carefully in accordance with the circumstance and context of the emergency situation in question. First, the measures taken must satisfy the principle of necessity, meaning that they are required in the circumstances, where there are no alternatives. The measures must be strictly limited in "duration, geographical coverage and material scope" [24]. Second, it is also required for the measures to satisfy the principle of proportionality, that they are limited to the extent strictly required by the exigencies of the situation. Due to the exceptional character of the emergency measures, protected values (human rights and public safety) must be carefully considered [25]. Third, any measures imposed must respect the principle of non-discrimination and must not involve any discrimination "solely on the ground of race, colour, sex, language, religion or social origin" [26]. Fourth, it must be noted that: "No declaration of a state of emergency made pursuant to Article 4, paragraph 1, may be invoked as justification for a State party to engage itself, contrary to Article 20, in propaganda for war, or in advocacy of national, racial or religious hatred that would constitute incitement to discrimination, hostility or violence" [27].

There are a number of rights under ICCPR that may be affected by emergency measures. Article 12 (3) provides for the "right to liberty of movement", which

20. Articles 12, 18, 19, 21 and 22 of the ICCPR.
21. As of 1 February 2020, there are 173 State parties to ICCPR.
22. A declaration of a national state of emergency must be justified as a governmental response to an extraordinary situation posing a fundamental threat to the State. Ponta, above footnote 18.
23. No derogation is permitted for certain human rights that need absolute protection, including the right to life (ICCPR, Art. 4 (2)). The State must officially and promptly inform the international community about the measures taken (ICCPR, Art. 4 (3)). See also the Siracusa Principles, promulgated by the Commission on Human Rights (E/CN.4/1985/4), particularly paras. 10, 25 and 26.
24. CCPR General Comment 29, Article 4: Derogations during a State of Emergency, adopted on 29 July 2001, para. 4.
25. *Ibid*., para. 4.
26. *Ibid*., para. 8.
27. *Ibid.*, para. 13 *(e)*.

"shall not be subject to any restrictions except those which . . . are necessary to protect . . . public health, or the rights and freedoms of others . . .". The "classic" non-pharmaceutical interventions such as quarantine, isolation, social distancing, travel bans and curfews should be no more restrictive than necessary and should be based in evidence (sometimes the isolation of persons with an illness would be more justifiable than the curfew of the general population). It should be noted in this context that the needs of some populations must be considered in this context, such as the needs of differently abled persons who may require assistance from care providers and should not be isolated in the context of quarantine, or under any circumstances. The measures may be implemented progressively from "voluntary isolation" to "quarantine" and eventually "social distancing in parts or the whole of a country" (or *cordons sanitaires*) [28]. Nonetheless, international travel bans must take into account every person's right to leave any country (Art. 12 (2)) and the right to enter his own country (Art. 12 (4)).

Freedoms of opinion and expression under ICCPR Article 19 are not listed as non-derogable rights in the state of emergency, but it is generally considered that derogation might not be possible because of the condition of necessity [29]. Freedom of the press may be included as a corollary of this freedom, with certain inherent limitations. Freedoms of thought, conscience and religion under Article 18 are non-derogable, but the freedom to *manifest* one's religion may be limited for emergency public health reasons under Article 18 (3) by which the bans on mass gatherings in churches, mosques and temples may be imposed as necessary.

The legislative and regulatory frameworks that States have implemented to fight against epidemics are being scrutinised from the viewpoint of compatibility with international human rights norms, which must be examined carefully to establish whether the measures taken have been "proportionate" to the evaluated risk, "necessary" and applied in a "non-discriminatory" way, citing the "best practices" and "concerns" of those measures [30].

It should be noted that the territorial scope of the human rights obligations of States in the context of epidemics has been extended. As stated by the Inter-American Court for Human Rights in the advisory opinion requested by the

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28. Von Bogdandy and Villarreal, above footnote 4; Lawrence Gostin and Benjamin E. Berkman, "Pandemic Influenza: Ethics, Law, and the Public's Health", *Administrative Law Review*, Vol. 59, No. 1 (2007), pp. 121-175 at 171; A. Wilder-Smith and David Freedman, "Isolation, Quarantine, Social Distancing and Community Containment: Pivotal Role for Old-Style Public Health Measures in the Novel Coronavirus (2019-nCoV) Outbreak" *Journal of Travel Medicine*, Vol. 27, No. 2 (2020).

29. CCPR, General Comment 34, Article 19: Freedoms of Opinion and Expression, para. 5.

30. Liora Lazarus *et al.*, "A Preliminary Human Rights Assessment of Legislative and Regulatory Responses to the COVID-19 Pandemic across 11 Jurisdictions", Bonavero Report No. 3/2020, 6 May 2020, Oxford University.

Republic of Colombia (2017): "the States Parties to the American Convention [on Human Rights] should not act in a way that hinders other States Parties from complying with their obligations under this treaty. This is important not only with regard to acts and omissions outside its territory, but also with regard to those acts and omissions within its territory that could have effects on the territory or inhabitants of another State" [31]. The Committee on Economic, Social and Cultural Rights issued a "Statement on the Covid-19 Pandemic and Economic, Social and Cultural Rights" in which it stated that:

> "State parties have extraterritorial obligations related to global efforts to combat COVID-19. In particular, developed States should avoid decisions, such as imposing limits on the export of medical equipment, resulting in obstructing access to vital equipment to the world's poorest victims of the pandemic. Moreover, state parties shall make sure that unilateral border measures do not hinder the flow or [*sic*] necessary and essential goods, particular staple foods and health equipment. Any restriction based on the goal for securing national supply shall be proportionate and take into consideration the urgent needs of other countries." [32]

SECTION 4 INTERNATIONAL ENVIRONMENTAL LAW

Public health has an intrinsic link with the environment. Direct and indirect river and maritime pollution, climate change, depletion of the ozone layer, deforestation, desertification and biodiversity loss have all been cited by scientists as possible causes of epidemics. The WHO's strategy on health, environment and climate change notes that at least 13 million deaths each year (a quarter of all deaths and disease burden) are due to known avoidable environmental risks [33]. The UN Environmental Assembly of the UNEP recognised in its Resolution 3/4 of 6 December 2017 on "Environment and Health" "the substantial risk posed by climate change to health" (para. 18) and the "the likely increased risks of vector-borne diseases due to climate change" (para. 19). The same resolution recognised that "biodiversity loss is a health risk multiplier" (para. 23) and that "human, animal, plant and ecosystem health are interdependent, and emphasizes in that regard the value of the 'One Health' approach, an integrated approach that fosters cooperation between environmental conservation and the human health, animal health

31. Advisory Opinion OC-23/17 (15 November 2017), para. 94, available at https://www.corteidh.or.cr/docs/opiniones/seriea_23_ing.pdf.
32. 24 May 2020, available at https://brill.com/view/journals/hrlr/9/1/article-p135_135.xml?language=en.
33. https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_15-en.pdf?ua=1.

and plant health sectors" (para. 24) [34]. Thus, improving the quality of the environment leads to an increased protection of human health. It is for this reason that multilateral environmental instruments refer to the "human environment" [35] rather than the "natural environment", or the environment itself. While protecting human health is not the only objective of international environmental law, it ranks as one of the most important goals of this body of international law. Thus international health law needs to be integrated with international environmental law in a systemic and harmonious manner in the identification, interpretation, application and implementation of the relevant norms [36].

The obligation of "due diligence" is one of the core principles of international environmental law [37] and of international law in general [38]. This principle is also the basic principle of international law regarding response to epidemics. It should be noted that in the field of epidemics, the "due diligence" obligation is not limited to the subjective capability of each State and of its discretion, but it is "objectified" by the reference to objective standards of conduct as laid down in the WHO IHR, human rights treaties and under customary international law. Closely related to the "due diligence" obligation is the precautionary principle [39]. An early elucidation from the UN's 1982 World Charter for Nature is instructive. Article 11 *(b)* provides that "[a]ctivities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed". As noted in paragraph 1, the environment is understood to comprise human health, and thus States should consider it when applying the precautionary principle. This may interact with the obligation under general principles of international law to perform an environmental

34. UNEP/EA.3/Res.4 (30 January 2018), https://wedocs.unep.org/bitstream/handle/20.500.11822/30795/UNEA3_4EN.pdf?sequence=1&isAllowed=y. The present author similarly proposes a holistic, "one atmosphere" approach in his work of the ILC on the Protection of the Atmosphere, integrating transboundary air pollution and global climate change. See his First Report, A/CN.4/667, 2014, para. 27.

35. Thus the most important instrument adopted at the beginning of international environmental law was the 1972 Stockholm Declaration of Human Environment. See also the IDI resolution of 1989 on "Environment", Article 2 of which provides that: "[E]very human being has the right to live in a *healthy environment*" (emphasis added).

36. Fidler, above footnote 1, pp. 38-39; see also, Alan Boyle, "Relationship Between International Environmental Law and Other Branches of International Law", in Daniel Bodansky *et al.* (eds.), *The Oxford Handbook of International Environmental Law*, Oxford University Press, 2007, pp. 125-146.

37. The *Trail Smelter* arbitral award, 1941, United Nations, 3 RIAA 1907f, 1965.

38. *Corfu Channel Case*, Judgment of 9 April 1949, *ICJ Reports 1949*, p. 22.

39. Meinhard Schröder, "Precautionary Approach/Principle", in Rüdiger Wolfrum (ed.), *Max Planck Encyclopedia of Public International Law*, Oxford University Press, 2014.

impact assessment in situations of transboundary environmental harm if such harm would detrimentally affect human health in other States [40].

Degrading situations of biodiversity are closely related to the spread of epidemics, and thus public health law should be integrated with biodiversity law. This paragraph focuses on the spread of communicable diseases which can be attributed to biodiversity. As the Director-General of the WHO has noted, "biodiversity can sometimes be a source of pathogens and, when unsustainably managed, can exacerbate negative health outcomes. Thus the interactions between people and biodiversity can strongly influence population health, livelihoods, and the sustainability of public health interventions" [41]. The Conference of Parties to the Convention on Biological Diversity (CBD) has echoed this sentiment, encouraging States to research the "relationships between biodiversity, ecosystem degradation and infectious disease emergence" [42]. The CBD Conference of Parties further urged States to "consider health-biodiversity linkages in environmental impact assessments, risk assessments and strategic environmental assessments" [43]. Biodiversity law is also relevant to the governance of treatments, vaccines and diagnostics to address epidemics, for example through its relevance to the sharing of genetic materials from pathogens [44].

The Cartagena Protocol on Biosafety to the CBD has aims to protect biodiversity from the impact of living modified organisms "taking also into account risks to human health" [45]. Commentators have noted that "widespread

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40. *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment [2010], *ICJ Reports 2010*, p. 78, para. 193: "[I]t may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource."

41. WHO (Report of the Director-General), "Health, Environment and Climate Change: Human Health and Biodiversity", 29 March 2018, A71/11, para 4. See generally Cristina Romanelli *et al.*, *Connecting Global Priorities: Biodiversity and Human Health*, WHO and CBD, 2015.

42. CBD Conference of Parties, "Biodiversity and Human Health" (14 December 2016), UN Doc. CBD/COP/DEC/XIII/6, para. 6 *(a)*. See also annex, "Information on Health-Biodiversity Linkages", para. *(e)*, which recommends promoting "an integrated . . . approach to the management of ecosystems, associated human settlements and livestock, minimizing unnecessary disturbance to natural systems and so avoid or mitigate the potential emergence of new pathogens".

43. CBD COP XII/6 (footnote 65) para. 4 *(d)*.

44. See, for example, the Preamble to the Nagoya Protocol, which notes the "importance of ensuring access to human pathogens for public health preparedness and response purposes". Also Sam F. Halabi and Rebecca Katz, *Viral Sovereignty and Technology Transfer: The Changing Global System for Sharing Pathogens for Public Health Research*, Cambridge University Press, 2020, https://www.cambridge.org/core/books/viral-sovereignty-and-technology-.

45. Cartagena Protocol on Biosafety to the Convention on Biological Diversity, adopted 29 January 2000, entered into force 11 September 2003, 2226 UNTS 208, Article 1.

agreement that protection against indirect effects on human health, i.e. resulting from effects on biological diversity, is part of the objective of the Protocol" [46]. The Nagoya-Kuala Lumpur Supplementary Protocol to the Cartagena Protocol, which establishes guidelines on domestic law approaches to liability and redress, requires consideration of an "adverse effect" to include damage to human health [47]. There is an emerging recognition that intentional and unintentional interference with biodiversity can negatively impact human health through the spread of communicable disease, and that such interference may be restricted through international law.

Scientific studies reveal that the human-animal contact in some regions can contribute to epidemics, though this is not related to biodiversity *per se* but zoonotic diseases (zoonosis, transfer from animals to humans). The UNEP 2016 Report points out that "some emerging diseases have enormous impacts. Human immune deficiency virus (HIV and AIDS), highly pathogenic avian influenza (bird flu), bovine spongiform encephalopathy (mad cow disease), and Ebola are well-known examples of particularly harmful emerging zoonoses. Outbreaks of epidemic zoonoses typically occur intermittently. Epidemic zoonoses are often triggered by events such as climate changes, flooding and other climate events, and famines". The International Union for the Conservation of Nature (IUCN) World Congress adopted a resolution in November 2004, noting that "recent outbreaks of zoonotic diseases . . . such as SARS, Ebola, West Nile Virus and Avian Influenza, pose a serious threats to human and animal health . . ." and that "the health threat posed by the movement of millions of live animals and animal parts through markets annually within the global wildlife trade has not yet been recognized, and that efforts to regulate this trade fall far short of the imperative for action" [48]. States are trying to restrict such habits through strict enforcement measures, but the

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46. Ruth Mackenzie *et al.*, *An Explanatory Guide to the Cartagena Protocol on Biosafety*, IUCN, 2003, para. 170.

47. Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, adopted 15 October 2010, entered into force 5 March 2018, UN Doc. CBD/BS/COP-MOP/5/17, Article 2 (3) *(d)*.

48. IUCN World Congress, November 2004, Resolution 3.011, Addressing the Linkages Between Conservation, Human and Animal Health, and Security, http://www2.ecolex.org/server2neu.php/libcat/docs/LI/WCC_2004_RES_11_EN.pdf. See also UNEP Frontiers 2016 Report: Emerging Issues of Environmental Concern, "Zoonoses: Blurred Lines of Emergent Disease and Ecosystem Health", https://environmentlive.unep.org/media/docs/assessments/UNEP_Frontiers_2016_report_emerging_issues_of_environmental_concern.pdf, pp. 18-31. It is pointed out that "some emerging diseases have enormous impacts. Human immune deficiency virus (HIV and AIDS), highly pathogenic avian influenza (bird flu), bovine spongiform encephalopathy (mad cow disease), and Ebola are well-known examples of particularly harmful emerging zoonoses. Outbreaks of epidemic zoonoses typically occur intermittently. Epidemic zoonoses are often triggered by events such as climate changes, flooding and other climate events, and famines" (*ibid*., p. 19).

efforts have not always been successful [49]. In this context, it should be stressed that States should cooperate with the World Organisation for Animal Health (OIE) [50]. Climate change also has a number of impacts on epidemics, including by increasing the spread of food-borne, water-borne and zoonotic diseases [51]. The preamble to the Paris Agreement recognises that parties should, when taking action to address climate change, respect, promote and consider their respective obligations on . . . the right to health.

SECTION 5 INTERNATIONAL TRADE AND INVESTMENT LAW

International trade law may regulate, for example, restrictions on the export of medical goods or intellectual property in medicines. Depending on the circumstances, State action could run afoul of the general principles described in the General Agreement on Tariffs and Trade (GATT) and General Agreement on Trade in Services (GATS), as well as specific sectoral agreements such as the Agreement on Technical Barriers to Trade (TBT Agreement), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) [52]. These rules of international trade law must be interpreted and applied in a mutually supportive manner

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49. See Peng Yong, "Study on the Enforcement and Justice of Wildlife Crimes: From the Perspective of 1041 Judgments in 2019", Beijing DHH Law Firm Research Paper, 20 April 2020; Cao Yin, "Wildlife Protection Law to be Strengthened to Safeguard Health", *China Daily*, 11 February 2020, https://www.chinadaily.com.cn/a/202002/11/WS5e420ff8a310128217276977.html. See also Jiwen Chang, "China's Legal Response to Trafficking in Wild Animals: The Relationship between International Treaties and Chinese Law", in Anne Peters (ed.), *Studies in Global Animal Law*, Max Planck Institute, 2020, pp. 71-80 (chap. 7). China imposed a fast-track and complete ban on the consumption of terrestrial wildlife on 24 February 2020 as a response to Covid-19. It was introduced in a format of a "decision" by the Standing Committee of the National People's Congress. This ban applies to the consumption of terrestrial wildlife, whether artificially bred or wild-sourced: a scope broader than the pre-existing laws that only cover rare or endangered species under specifical state protection. This decision is thought to have had a significant influence on the implementation and revision of the current Wildlife Protection Law in China, as well as new Chinese Biosafety Law that is being drafting at the time of writing.

50. For instance, in the WTO case *India – Measures Concerning the Importation of Certain Agricultural Products*, the Panel consulted with the OIE on the interpretation of the OIE Terrestrial Code in respect to India's domestic measures prohibiting the importation of certain agricultural products for fear of the avian influenza (para. 169 *infra*).

51. WHO (Report by the Director-General), "Health, Environment and Climate Change", 18 April 2019, WHA A/72/15, https://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_15-en.pdf?ua=1.

52. For a general overview of the interactions between public health and trade law, see *WTO Agreements & Public Health* (footnote 14). See also WHO Executive Board, "International Trade and Health: Report by the Secretariat" (28 April 2005), EB 116/4 para 4.

with the rules of international public health law [53], as the WTO Appellate Body has long held that the WTO law does not exist "in clinical isolation" from public international law [54] and that "relevant customary rules of interpretation of public international law" can be considered in the interpretation of WTO law [55].

The GATT and GATS both enshrine a general principle of non-discrimination, from which derogation is allowed in limited circumstances [56]. Applicable in this context are Articles XX and XIV respectively, which allow measures "necessary to protect human, animal or plant life or health" [57]. The World Health Assembly has sought to "ensure that the interests of trade and health are appropriately balanced and coordinated" [58], a sentiment echoed in the Doha Declaration made by WTO ministers, which stated the TRIPS Agreement "can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all" [59]. It should be noted that Articles 7 and 8 of TRIPS, titled "Objectives" and "Principles" recognises that intellectual property should be protected and enforced in a manner conducive to social and economic welfare, and that members may adopt measures necessary to protect public health and nutrition provided they are consistent with the other provisions of TRIPS. The Doha Declaration recognises these two articles as particularly relevant to determining the object and purpose of the TRIPS Agreement, a position that also finds support in a recent decision of the WTO Appellate Body [60].

As regards intellectual property, WTO members followed the Doha Declaration with an amendment to the TRIPS Agreement, taking effect in January 2017, which added an Article 31 *bis* clarifying when a State may impose compulsory licences on pharmaceutical products. Article 31 and

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53. The principle of "mutual supportiveness" has been the part of the WTO GATT jurisprudence in its case law. Shinya Murase, Fourth Report on the Protection of the Atmosphere, A/CN.4/705, 2017, pp. 5-16. See also Shinya Murase, "Perspectives from International Economic Law on Transnational Environmental Issues", *Recueil des cours*, Vol. 253 (1995), pp. 283f.

54. WTO, Appellate Body report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R, 29 April 1996, p. 17.

55. WTO, Appellate Body report, *India – Measures Concerning the Importation of Certain Agricultural Products*, WT/DS430/AB/R, 4 June 2015, para. 5.89.

56. For the general framework of non-discrimination, see General Agreement on Tariffs and Trade (hereinafter GATT), adopted 30 October 1947, entered into force 1 January 1948, Article I, and General Agreement on Trade in Services (hereinafter GATS), adopted 15 April 1994, entered into force 1 January 1995, Article II.

57. GATT Article XX; GATS Article XIV.

58. World Health Assembly, "International Trade and Health", WHA 59.26, 27 May 2006.

59. WTO, "Declaration on the TRIPS Agreement and Public Health", 14 November 2001, para 4.

60. WTO, Appellate Body report, *Australia – Tobacco Plain Packaging*, WT/DS435/AB/R, WT/DS441/AB/R, 9 June 2020, at paras. 6.657 to 6.658.

31 *bis* of the Agreement must be read in conjunction with its Annex and Appendix. Article 31 provides that a State may "allow for other use of the subject matter of a patent without the authorization of the right holder" if the use is "predominately for the supply of the domestic market" of that State, among other requirements. This presented a problem for developing nations without pharmaceutical manufacturing capabilities [61]. Article 31 *bis* allows the application of Article 31 by exporting States. It provides that "Article 31 *(f)* shall not apply with respect to the grant by [a State] of a compulsory license to the extent necessary for the purposes of production of a pharmaceutical product(s) and its export to an eligible importing Member(s)". Eligible importing members are defined in the Annex as a least-developed country with "insufficient or no manufacturing capacities in the pharmaceutical sector for the product(s) in question" [62]. The granting of compulsory licences must be performed in a manner consistent with the obligations of those agreements.

Two WTO dispute settlement cases which concern epidemics should be noted: one is the *Brazilian Tyre* case and the other the *Indian Agricultural Products* case. In the case of *Brasil – Measures Affecting Imports of Retreaded Tyres*, the European Communities complained Brazil's restriction of importation of retarded tyres. The Appellate Body upheld the Panel's finding that the import ban can be considered "necessary" within the meaning of Article XX *(b)*, and thus provisionally justified under that provision, but that it cannot be justified under the umbrella of Article XX. The Appellate Body [63] makes references to some infectious diseases: "At the end of their useful life, tyres become

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61. Under Article 31, States may generally compulsorily license medicines for use within their territory, that the Doha Declaration confirms that they may choose the grounds on which they do so and that in situations of national emergency (which the Doha Declaration defines as including epidemics) the normal procedural requirement they have to follow of consultation with patent holders is waived.

62. *Agreement on Trade-Related Aspects of Intellectual Property Rights*, adopted 15 April 1994, entered into force 1 January 1995, Article 31 *bis*. See also Suerie Moon and Thirukumaran Balasubramaniam, "The World Trade Organization: Carving out the Right to Health to Promote Access to Medicines and Tobacco Control in the Trade Arena", in Benjamin M. Meier and Lawrence O. Gostin (eds.), *Human Rights in Global Health*, Oxford University Press, 2018, pp. 379-386; Holger P. Hestermeyer, "Canadian-Made Drugs for Rwanda: The First Application of the WTO Waiver on Patents and Medicines", *ASIL Insights*, Vol. 11, No. 28 (2007).

63. *Brasil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332/R, 7 June 2007; WT/DS332/AB/R, 3 December 2007. See Isabelle Van Damme. "III. WTO, Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, adopted on 17 December 2007," *International and Comparative Law Quarterly*, Vol. 57 (2008), p. 710f; Kevin R. Gray, "Brazil – Measures Affecting Imports of Retreaded Tyres", *American Journal of International Law*, Vol. 102, No. 3 (2008), p. 610f; Julia Qin, "WTO Panel decision in *Brazil – Tyres* Supports Safeguarding Environmental Values," *ASIL Insights*, Vol. 23, No. 11 (2007), https://www.asil.org/insights/volume/11/issue/23/wto-panel-decision-brazil-tyres-supports-safeguarding-environmental; Philippe Sands *et al.*, *Principles of International Environmental Law*, 4th ed, Cambridge University Press, 2018, pp. 867-869.

waste, the accumulation of which is associated with risks to human, animal, and plant life and health. Specific risks to human life and health include: (i) the transmission of dengue, yellow fever and malaria through mosquitoes which use tyres as breeding grounds; . . .” (para. 119) [64]. The other case, *India – Measures Concerning the Importation of Certain Agricultural Products*, concerns India’s import prohibition affecting certain agricultural products from countries reporting notifiable avian influenza to the OIE. This import prohibition is maintained through India’s avian influenza measures, based on its domestic law, *inter alia*, the Livestock Importation Act. The United States complained the prohibitions imposed by India purportedly because concerns related to avian influenza were not based on the relevant international standard (the OIE Terrestrial Code) or on a scientific risk assessment [65].

Due to a concern among GATT parties with measures imposed by some States within this exception, the SPS Agreement limited their application by requiring them to be based on the “available scientific evidence” [66]. Subsequent disputes brought before the WTO have clarified this requirement, most notably in the *Hormones* [67] and the *Radionuclides* [68] Appellate Body reports.

In the field of international investment law, many substantive guarantees of the international investment regime, as expressed in bilateral investment treaties and the investment chapters of free trade agreements, are likely to be triggered by a State’s epidemic response, including, *inter alia*, national treatment, most favoured nation, fair and equitable treatment, full protection and security, non-discrimination and protection against expropriation [69].

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64. The report also stated as follows: “In this case, the Panel identified the objective of the Import Ban as being the reduction of the exposure to risks arising from the accumulation of waste tyres. It assessed the importance of the interests underlying this objective. It found that risks of dengue fever and malaria arise from the accumulation of waste tyres and that the objective of protecting human life and health against such diseases “is both vital and important in the highest degree” (para. 179).

65. *India – Measures Concerning the Importation of Certain Agricultural Products*, WT/DS430/AB/R, 4 June 2015, para. 5.82.

66. *Agreement on the Application of Sanitary and Phytosanitary Measures*, adopted 15 April 1994, entered into force 1 January 1995, Article 5 (2). See also David P. Fidler, “Public Health and International Law: The Impact of Infectious Diseases on the Formation of International Legal Regimes, 1800-2000”, in Andrew T. Price-Smith (ed.), *Plagues and Politics*, Palgrave Macmillan, 2001, pp. 271-□274.

67. WTO, Appellate Body report, *European Communities: Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R and WT/DS48/AB/R, 16 January 1998, pp. 46-48, 72-85.

68. WTO, Appellate Body report, *Korea – Import Bans, and Testing and Certification Requirements for Radionuclides*, WT/DS495/AB/R, 11 April 2019.

69. For a general overview of the protections provided by international investment law, see Christoph Schreuer, “Investments, International Protection”, in Rüdiger Wolfrum (ed.), *Max Planck Encyclopedia of Public International Law*, Oxford University Press, 2013.

One of the earliest cases on the matter is *Bischoff*, decided by the German-Venezuelan Claims Commission [70]. Though concerned with the protection of aliens and applying "absolute equity" rather than any clear rules of international law, the rulings of the Venezuelan Claims Commissions have continued vitality for international investment law [71]. In the context of the wrongful seizure of a carriage by police responding to the 1898 Venezuelan smallpox epidemic, the Commission stated that "during an epidemic of infectious disease there can be no liability for the reasonable exercise of police power, even though a mistake is made" [72].

The current position developed by investor-State tribunals since *Bischoff* is summarised in the 2016 *Philip Morris* award, which affirmed the existence of a "police powers doctrine" in customary international law as it relates to expropriation and public health [73]. The trend among such tribunals, including *Methanex* [74] and *Chemtura* [75], has been to examine whether an expropriation occurred depending "on the nature and purpose of the State's action" [76]. The *Philip Morris* tribunal found the customary international law formulation to be reflected by the 2004 and 2012 US Model BIT: "Except in rare circumstances, non-discriminatory regulatory actions by a Party that are designed and applied to protect legitimate public welfare objectives, such as public health, safety, and the environment, do not constitute indirect expropriation" [77].

It remains to be clarified by investment tribunals how the "police powers doctrine" or the "general principles for the exercise of public power" [78] in the context of public health may apply to the other substantive guarantees described above, as the case law currently focuses on expropriation, though

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70. *Bischoff* case *(Germany/Venezuela)*, 1903, 10 RIAA 420-421.

71. Heather Bray, "Venezuelan Claims Commissions", in Hélène Ruiz Fabri (ed.), *Max Planck Encyclopedia of International Procedural Law*, Oxford University Press, 2018.

72. *Bischoff*, above footnote 70, p. 420.

73. *Philip Morris Brands SARL v Oriental Republic of Uruguay* (2016) (Award), ICSID Case No. ARB/10/7, paras 290-291.

74. *Methanex Corp v United States of America* (2005) (Final Award on Jurisdiction and Merits), UNCITRAL, Part. IV, Chap. D, para 7.

75. *Chemtura Corp* v. *Government of Canada* (2010) (Award), UNCITRAL para. 266.

76. *Philip Morris*, above footnote 73, para. 295.

77. *Ibid.*, paras. 300-301.

78. Benedict Kingsbury and Stephan Schill, "Investor-State Arbitration as Governance: Fair and Equitable Treatment, Proportionality and the Emerging Global Administrative Law", in Albert Jan Van den Berg (ed.), *50 Years of the New York Convention: ICCA International Arbitration Conference* (ICCA Congress Series, Vol. 14), Kluwer Law International, 2009; see also Yuka Fukunaga, "Margin of Appreciation as an Indicator of Judicial Deference: Is It Applicable to Investment Arbitration?", *Journal of International Dispute Settlement*, Vol. 10 (2019), pp. 69-87.

there are also some cases on fair and equitable treatment [79]. Some guidance may be found in cases related to environmental regulations, which implicate other doctrines of international investment law [80].

SECTION 6 **INTERNATIONAL TRANSPORT LAW**

The obligation of all States to prevent, reduce and control epidemics is reflected in several international instruments on maritime and civil aviation law, as well as the IHR as it relates to these regimes. IHR Article 20 requires States to develop certain health-related "core capacities" at designated air and water ports within the time frame indicated by Article 19 [81]. Under Article 14 of the Convention on International Civil Aviation (Chicago Convention), States agree "to take effective measures to prevent the spread" of communicable diseases through air travel [82]. Annex 9, Standard 8.16, of the Convention requires all States to "establish a national aviation plan in preparation for an outbreak of a communicable disease posing a public health risk or public health emergency of international concern" [83]. The International Convention for the Control and Management of Ships' Ballast Water and Sediments, which regulates the emptying of ballast waters by vessels partially to prevent the spread of pathogens harmful to human health, obliges States to "develop national policies, strategies or programmes" [84]. States must also ensure ports have "adequate facilities" to comply with the Convention [85].

Article 28 of the IHR provides that "a ship or an aircraft shall not be prevented for public health reasons from calling at any point of entry", but the same Article also provides: "However, if the point of entry is not quipped for applying health measures under these Regulations. The ship or aircraft may be ordered to proceed at its own risk to the nearest suitable point of entry available to it . . .". The State has an obligation to notify such measures to the WHO and to justify them with available scientific evidence (Art. 48, para. 3).

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79. Campbell McLachlan, Matthew Weiniger and Laurence Shore, *International Investment Arbitration: Substantive Principles*, 2nd ed., Oxford University Press, 2017, at [7.153]-[7.173] (fair and equitable treatment).

80. For an overview, see Valentina Vadi, *Public Health in International Investment Law and Arbitration*, Taylor & Francis, 2012, pp. 127-159.

81. IHR Articles 19-20, which outline these "core capacities", with more detail in Annex I.

82. Convention on International Civil Aviation (Chicago Convention), adopted 7 December 1944, entered into force 4 April 1947, 15 UNTS 102, Article 14.

83. *Ibid*., Annex 9, Standard 8.16.

84. International Convention for the Control and Management of Ships' Ballast Water and Sediments (hereinafter Ballast Water Convention), adopted 13 February 2004, entered into force 8 September 2017, Article 4 (2).

85. Ballast Water Convention, Article 5 (1).

The WHO may ask the State party concerned to reconsider the imposition of such measures (Art. 48, para. 4). In entering the ports, vessels must also be accorded *free pratique* [86]. Public health measures may not be applied to vessels simply passing through their jurisdiction except in narrow circumstances [87]. Public health restrictions of the State must be applied in a non-discriminatory fashion [88].

It would be necessary to indicate the possible measures to be taken, proceeding generally from least to most invasive measures, similar to Article 18 of the IHR, which describes a wider array of measures. In accord with Article 43 of the IHR, States may apply additional health measures beyond those explicitly required. It is also implicit in IHR Articles 23 and 31, which authorises the medical examination of travellers, and Article 34, which provides for the "inspection and isolation of containers". It is generally understood that not every air or water port within a State will have the required public health capabilities within the scope of Article 20 and Annex 1 of the IHR [89]. It is recognised that inspection may be necessary before allowing a vessel to unload. This is authorised by UNCLOS Article 21 and IHR Article 27 [90]. After such an inspection, or other evidence of a public health risk, certain measures may be taken by the State such as mandating the decontamination of vessels before unloading crew, passengers or cargo and quarantining affected vessels. IHR Article 27 provides that competent authorities "disinfect, decontaminate, disinsect or derat" the vessel, and may isolate the vessel to prevent the spread of disease. Articles 9 and 10 of the Ballast Water Convention allow States,

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86. A certificate from the port health authorities that the ship is without infectious disease or plague on board and therefore permitted to enter port and to allow people to board and disembark.

87. The general obligation is reflected in the United Nations Convention on the Law of the Sea (hereinafter UNCLOS) but differs according to whether the ship is in a coastal State's territorial waters, defined in Article 3, or the State's exclusive economic zone (EEZ), defined in Article 57. In territorial waters, coastal States must accord vessels innocent passage according to Article 17, subject to actions meant to prevent the "infringement of . . . sanitary laws and regulations" as stated in Article 21. In the EEZ, the freedom of navigation is presumed (Arts. 58 and 87) and coastal States may not apply health measures, which are absent from matters over which they have jurisdiction according to Article 56. The IHR clarifies that coastal States must allow vessels showing signs of contamination, or originating from an affected area as defined by the WHO in Annex 5, to dock as a means to take on fuel, water, food and supplies (Arts. 25 and 27) when passing through the coastal State's territorial waters, though those vessels may be subject to public health restrictions.

88. UNCLOS Article 227; IHR Article 32; Ballast Water Convention, Article 3 (3); "by virtue of the prevailing global economic order, all States have a right to free general and maritime economic access and non-discrimination": International Tribunal for the Law of the Sea, *M/V "Saiga" (No. 2)* (Sep. Op. Laing), para. 56.

89. Article 28 further permits the competent authorities to order the vessel to "the nearest suitable point of entry available to it".

90. Article 9 of the Ballast Water Convention also allows inspections "for the purpose of determining whether the ship is in compliance with this Convention".

after sampling a vessel's ballast water, to prohibit it from discharging such water until the "threat is removed" or to detain the vessel.

It must also be noted that UNCLOS Article 94 provides: "Every State shall effectively exercise its jurisdiction and control in administrative, technical and social matters over ships flying its flag." This duty is only absolute on the high seas; as noted above, and in UNCLOS Article 19(g), coastal States may apply national sanitary measures in territorial waters. Given IHR Article 43, these may be different from those of the flag State or may be harmonised by an international treaty. One such treaty is the Ballast Water Convention, which provides in Article 4 that "[e]ach Party shall require that ships to which this Convention applies and which are entitled to fly its flag or operating under its authority comply with the requirements set forth in this Convention".

Another is the Maritime Labour Convention, which states in Article V (2) that "[e]ach Member shall effectively exercise its jurisdiction and control over ships that fly its flag by establishing a system for ensuring compliance with the requirements of this Convention" including health regulations. IHR Annex 5, paragraph 3, provides that "States Parties should accept disinsecting, deratting and other control measures for conveyances applied by other States if methods and materials advised by the Organization have been applied". With regard to air travel, States must comply with the Standards and Recommended Practices outlined in Chicago Convention Annex 9, which cover the IHR and outbreaks of communicable disease. Considering all of the applicable international rules, the difference between coastal and flag State health regulations may be minimal, but more guidance is needed to manage obligations between the two. One such example is the questions posed by cruise ships, many of which remain in the grey areas of law [91].

Issues regarding the position of the vessel itself and that of its passengers and crew should be, in principle, separated. The rights of these persons should

91. For instance, the flag State of the cruise ship *Diamond Princess* was the United Kingdom and its owner was a United States corporation. When the ship was on the high seas, a coronavirus patient was found in the ship in February 2020, and after it anchored at Yokohama, Japan, it was not clear to what extent the Japanese government could exercise its jurisdiction over the treatment of the passengers while the captain of the ship was still directly in charge of the maintenance of the order in the ship. Some experts admitted that this was one of the gaps in the existing maritime law regime. It is reported that, as of 2 May 2020, over forty cruise ships all over the world have had confirmed positive cases of coronavirus. See also Donald Rothwell, "International Law and Cruise Ships: Sailing into Stormy Waters", website of the ANU College of Law, "COVID-19 and International Law", 28 April 2020, https://law.anu.edu.au/research/essay/covid-19-and-international-law/international-law-and-cruise-ships-sailing-stormy; Natalie Klein, "International Law Perspectives on Cruise Ships and COVID-19", *Journal of International Humanitarian Legal Studies*, Vol. 11, No. 2 (2020), pp. 282-295.

be fully respected in accordance with the obligations of the affected States, including the treatment and safe repatriation of seafarers [92].

SECTION 7 INTERNATIONAL LAW ON PEACE AND SECURITY AND INTERNATIONAL HUMANITARIAN LAW

International law on public health has been relevant to international law of peace and security. The UN Security Council adopted Resolutions 1308 (2000) [93] and 1983 (2011) [94] on HIV/AIDS. It also adopted resolutions on the Ebola virus, comprising 2177 (2014) [95] addressing Western Africa and 2439 (2018) [96] addressing the Democratic Republic of the Congo (DRC). The resolutions all referred to "the Council's primary responsibility for the maintenance of the international peace and security" under the Charter. However, the Security Council, as a political organ of the UN, has not demonstrated consistency in addressing epidemics of international concern that have had impacts similar to HIV/AIDS and Ebola. The incidents of SARS, MERS, the H1N1 influenza and Zika virus have not received the same attention from it [97]. Regarding the ongoing threat of Covid-19 in Sudan, it was five months after its outbreak that it was referred to by the Security Council [98].

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92. International Maritime Organization, "Joint Statement IMO-ICAO-ILO on designation of seafarers, marine personnel, fishing vessel personnel, offshore energy sector personnel, aviation personnel, air cargo supply chain personnel and service provider personnel at airports and ports as key workers, and on facilitation of crew changes in ports and airports in the context of the COVID-19 pandemic", circular letter no. 4204/ add. 18, 26 May 2020.

93. UN Security Council Resolution 1308 (2000) on the Responsibility of the Security Council in the Maintenance of International Peace and Security: HIV/AIDS and International Peacekeeping Operations, S/RES/1308 (2000), 17 July 2000, https://www.refworld.org/docid/3b00efd10.html.

94. UN Security Council Resolution 1983 (2011) on Impacts of HIV/AIDS Epidemic in Conflict and Post-Conflict Situations, S/RES/1983 (2011), 7 June 2011, https://www.refworld.org/docid/4e0c355d2.html.

95. UN Security Council Resolution 2177 (2014) on the Outbreak of the Ebola Virus in, and its Impact on, West Africa, S/RES/2177 (2014), 18 September 2014, https://www.refworld.org/docid/546f0c644.html.

96. UN Security Council Resolution 2439 (2018) on Ebola in the DRC, S/RES/2439 (2018), 30 October 2018, https://undocs.org/S/RES/2439(2018).

97. J. Benton Heath, "Global Emergency Power in the Age of Ebola", *Harvard International Law Journal*, Vol. 57, No. 1 (2015), pp. 1-47; von Bogdandy and Villarreal, above footnote 4, pp. 22-23.

98. S/RES/2524 (3 June 2020) and S/RES/2525 (3 June 2020) on Sudan. S/RES/525 states as follows: "*Recognising* the impact of the COVID-19 pandemic on UNAMID's [United Nations Hybrid Operation in Darfur] drawdown" (Preamble, para. 5), "*Determining* that the situation in Darfur constitutes a threat to international peace and security" (Preamble, para. 8), and "Acting under Chapter VII of the United Nations Charter" (Preamble, para. 9), the Security Council "*Requests* UNAMID to provide support . . . to Sudan in its efforts to contain the spread of COVID-19 . . ." (main text, para. 6). Emphases in the original.

The Security Council finally, on 1 July 2020, referred to the potential impact of Covid-19 to "conflict-affected countries", demanding a cessation of hostilities in all situations, and also recalling "the need for unity and solidarity with all those affected" [99]. The linkage between international public health law and the international law on peace and security needs to be further explored.

International humanitarian law contains rules to protect the health of the sick, the shipwrecked, prisoners of war, civilians and medical personnel in armed conflicts [100]. Article 12 of the 1949 Geneva Convention I for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field provides: "Members of the armed forces and other persons . . . who are wounded or sick . . . shall not willfully be left without medical assistance and care, nor shall conditions exposing them to contagion or infection be created" [101]. Article 24 of the same Convention I stipulates: "Medical personnel exclusively engaged . . . in the prevention of disease . . . should be respected and protected in all circumstances". Article 29 of the 1949 Geneva Convention III Relative to the Treatment of Prisoners of War provides: "The Detaining Power shall be bound to take all sanitary measures necessary to ensure the cleanliness and healthfulness of camps, and to prevent epidemics". Furthermore, Article 56 of the 1949 Geneva Convention IV Relative to the Protection of Civilian Persons in Time of War provides: "To the fullest extent of the means available to it, the Occupying Power has the duty of ensuring and maintaining . . . the medical and hospital establishments and services, public health and hygiene in the occupied territory, with particular reference to the adoption and application of the prophylactic and preventive measures necessary to combat the spread of contagious diseases and epidemics. Medical personnel of all categories shall be allowed to carry out their duties". Article 91 of the same Convention IV provides, with regard to civilian internees, that " . . . [I]solation wards shall be set aside for cases of contagious or mental diseases". Common Article 3 of the Geneva Conventions provides for the minimum application of humane treatment in situations of non-international armed conflict [102]. Protocols I and II additional to the Geneva Conventions 1977 provide for detailed obligations of the parties for the protection of the victims of international conflicts (Protocol I) and non-international conflicts (Protocol II) [103].

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99. SRES/2352 (1 July 2020).

100. Obviously, "occupation" and "prisoners of war" are applicable only in international armed conflicts.

101. A similar provision is Article 12 of the 1949 Geneva Convention II for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea.

102. See David A. Elder, "The Historical Background of common Article 3 of the Geneva Conventions of 1949", *Case Western Reserve Journal of International Law*, Vol. 11, No. 1 (1979), pp. 37-69.

103. See Robert Kolb and Richard Hyde, *An Introduction to the International Law of Armed Conflicts*, Hart Publishing, 2008, pp. 262-266; Claude Pilloud *et al.* (eds.),

Security Council Resolution 2439 (2018), determining that the situation constituted "a threat to international peace and security", calls for "immediate cessation of hostilities by all armed groups" in the DRC (para. 4), condemns "all attacks by armed groups, including those posing serious security risks for responders and jeopardizing the response to the Ebola outbreak" (para. 5) and demands that "all parties to the armed conflict fully respect international law, including, as applicable, . . . international humanitarian law, including their obligations under the Geneva Conventions of 1949 and the obligations applicable to them under the Additional Protocols thereto of 1977 and 2005". Security Council Resolution 2532 (1 July 2020) called for a general and immediate cession of hostilities in all situations due to Covid-19. (Unlike the above resolution on Ebola, this resolution does not refer to "a threat to international peace and security".)

International public health law also has some relevance to the arms control dimension, particularly in the context of the Biological Weapons Convention [104].

SECTION 8 **OTHER LAWS**

Having referred to previous draft articles to the major fields of international law that are most closely related to public health law, it may be necessary to attempt to cover other rules of international law. It would require that these laws also be identified, interpreted, applied and implemented in a harmonious and systemic manner.

International law relating to immigration is relevant to the extent that it is concerned with the movement of persons, in particular the restrictions of entry into and exit from a country due to the spread of epidemics which adversely affects the rights of migrants, refugees and other displaced persons [105]. For a refugee or an asylum seeker, the principle of non-refoulement (Art. 33, para. 1, of the Refugee Convention) must be respected, which is an absolute and non-derogable rule under the UN Convention on the Prohibition of Torture (Art. 3). On a practical point, the concern should be addressed that refoulement itself may contribute to the international spread of a disease [106]. It should also

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Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949, Martinus Nijhoff, 1987, pp. 861-890.

104. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, 1972, 1015 UNTS 163. See Fidler, above footnote 1, pp. 33-35.

105. Institut d'Etudes Européennes de l'Université Libre de Bruxelles, "Human Mobility and Human Rights in the COVID-19 Pandemic: Principles of Protection for Migrants, Refugees, and Other Displaced Persons", 30 April 2020, https://www.iee-ulb.eu/en/blog/news/human-mobility-and-human-rights-in-the-covid-19-pandemic/.

106. Kate Ogg, "COVID-19 Travel Restrictions: A Violation of Non-Refoulement Obligations?", website of the ANU College of Law, "COVID-19 and International

be noted that the prohibition of "collective expulsion" could be relevant in this type of situation [107]. If a movement takes the form of a "mass migration", it may pose a more serious problem in the case of an epidemic [108].

Large-scale epidemics often disrupt economic activities, forcing many businesses and industries to close or suspend operation, leading to financial difficulties. The World Bank group created in 2017 the Pandemic Emergency Financing Facility (PEF) [109], aimed at enhancing the immediate availability of financial support during the outbreak of epidemics, mainly addressing low-income countries [110]. It is reported however that the PEF has not proven successful due to the limited funds it has raised and the limited list of eligible diseases, among other reasons [111].

With regard to international labour law, it may be noted that the International Labour Organization (ILO) has established international rules governing occupational health and safety. The ILO's Forced Labour Convention of 1930 noted in Article 2 (2) that the term "forced or compulsory labor" did not include "any work or service exacted in cases of emergency, that is to say, in the event of war or of a calamity or threatened calamity, such as . . . violent epidemic or epizootic diseases . . . and in general any circumstance that would endanger the existence or the well-being of the whole or part of the population". Such a policy has been superseded by multiple universal and regional human rights treaties that have been adopted in the post-war world. The ILO Convention Concerning Occupational Safety and Health and the Working Environment provides, in Article 4, paragraph 1, that "[e]ach Member shall . . . formulate, implement and periodically review a coherent national policy on occupational safety, occupational health and the working environment". This Convention specifically refers to workers handling "biological substances" (Art. 5 *(a)*), "biological agents in respect of the risk to the health of workers" (Art. 11 *(f)*)

Law", 24 April 2020, https://law.anu.edu.au/research/essay/covid-19-and-international-law/covid-19-travel-restrictions-violation-non-refoulement-obligations.

107. See Articles on Expulsion of Aliens, Article 9 (Prohibition of Collective Expulsion), *Official Records of the General Assembly, Sixty-Ninth Session*, Suppl. 10, Report of the International Law Commission, sixth-sixth session, 2014, pp. 21-59.

108. See Maurice Kamto (Rapporteur of the Sixteenth Commission), "Migrations de Masse", *Annuaire de l'Institut de droit international* (hereinafter *IDI Annuaire*), Vol. 77-I (2016), pp. 115-258; Final Resolution, *IDI Annuaire*, Vol. 78 (2017), pp. 131-213.

109. See World Bank Steering Body, "Pandemic Emergency Financing Facility Framework", 27 June 2017, http://pubdocs.worldbank.org/en/670191509025137260/PEF-Framework.pdf.

110. World Bank, *Pandemic Emergency Financing Facility*, operational brief, 2019, http://pubdocs.worldbank.org/en/478271550071105640/PEF-Operational-Brief-Feb-2019.pdf. It is reported that the World Bank has recently decided to cancel plans for another round of pandemic bonds. See Camilla Hodgson, "World Bank Ditches Second Round of Pandemic Bonds", *Financial Times*, 5 July 2020, https://www.ft.com/content/949adc20-5303-494b-9cf1-4eb4c8b6aa6b [subscription required].

111. Von Bogdandy and Villarreal, above footnote 4, pp. 24-25.

and "biological agents or products" (Art. 12 *(b)*) [112]. The exploitation of child labour is another issue of particular concern in international labour law, and constitutes a direct threat to the health of vulnerable children [113].

SECTION 9 **CONCLUSION**

Based on the above considerations, the present author proposes the following: The rules of international law relating to epidemics and other relevant rules of international law should, to the extent possible, be identified, interpreted, applied and implemented as coherent obligations, in line with the principles of harmonisation and systemic integration, in order to avoid conflicts between obligations, as well as the "due diligence" obligation and the need for international solidarity and cooperation in responding to the threats posed by epidemics. "Other relevant rules" include, *inter alia*, those related to international environmental law, international trade and investment law, international transport law, international law on peace and security and international humanitarian law. It is also proposed that States should, when developing new rules of international law relating to the protection of persons and communities from epidemics, seek to avoid conflicts with other relevant rules of international law [114].

It should be stressed that international health law should be placed in the framework of general international law. This is, of course, easy to say, but difficult to implement. Relevant rules of international law must be carefully coordinated with a view to achieving harmonisation and synergies among them. They must also be well coordinated with the domestic law of each State. The essential part of the work of international lawyers is to facilitate, among relevant rules, coordination in the interpretation and application of international law, and to promote the progressive development of international law. It is hoped that the role of international health law, and the work of the WHO, will be strengthened by greater participation of such international lawyers capable of facing the challenge.

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112. ILO Convention Concerning Occupational Safety and Health and the Working Environment, 1981, No. 155; see also Charter of Fundamental Rights of the European Union, Art. 35 on Fair and Just Working Conditions. Also Fidler, above footnote 1, pp. 37-38.

113. Charter of Fundamental Rights of the European Union, Article 32 on Prohibition of Child Labor and Protection of Young People at Work.

114. This is what was proposed by the IDI's Twelfth Commission as Draft Article 7 of the Draft Articles on Epidemics and International Law, to be presented at the eightieth session of the IDI in Beijing in August 2021. See Shinya Murase, "Epidemics and International Law", *Yearbook of the IDI*, Vol. 81, pp. 37-150; available also at https://www.idi-iil.org/app/uploads/2021/05/Report-12th-commission-epidemics-vol-81-yearbook-online-session.pdf.