A new Treaty on Pandemics –
Key to (re)build trust in international cooperation?

Maike Voss[1], *Clare Wenham*[2], *Mark Eccleston-Turner*[3], *Rithika Sangameshwaran*[1], *Bianka Detering*[1]

The international community responded to the multiple governance failures of responding to the pandemic by agreeing to three major consensuses at a Special Session of the World Health Assembly (WHASS): Understanding there are large gaps in pandemic preparedness and response; a need to develop a new instrument [to mitigate failures experienced]; and the need to strengthen existing norms and framework including the International Health Regulations (IHR). Subsequently, an intergovernmental negotiating body (INB) was established to draft a convention, agreement or other international instrument for pandemic preparedness and response under the Constitution of the World Health Organization (WHO).

The justification for a pandemic treaty is that whilst the technical expertise on how to govern and end a pandemic exists, political will to do so is missing. It is hoped that the technical expertise will inform and therefore increase the political will . A new instrument – a proposed pandemic treaty or framework convention for pandemic preparedness and response – may be a key to (re) build trust in international health cooperation. Yet, a new pandemic treaty cannot stand on its own and will not be the solution to all failures in global health. As such, there are concrete next steps for the INB, WHO member states and particular the German government in its current G7 presidency to take to achieve as much as possible with the proposed pandemic treaty, without overstretching its mandate to make it unachievable.[4]

Shared understanding of the problem that needs to be fixed

Ongoing deliberations reveal that there are different motivations to pursue the treaty underlined by an expansive diagnosis of what ails global health governance. However, a lack of clarity and coherence on what specific problems the treaty aims to resolve risks rendering it futile. A starting point for the INB and government must be to articulate a shared understanding on the need for a treaty to provide clarity on its purpose and foster trust in the process. Defining the *problem that needs to be fixed* with a new legal instrument is one of the first tasks for each country, regional actor and the INB.

A first problem is the current system: the IHR failed to prevent COVID-19 becoming a global pandemic. This included multiple contraventions including, but not limited to, (presumed) limitations on sharing of information of infectious disease outbreaks; the implementation of travel and trade restrictions despite WHO not recommending these; a failure to follow the other temporary recommendations issued by WHO IHR Emergency Committee. Furthermore, IHR obligations are heavily tailored towards prevention and detection of pathogens and very limited on response stages to prevent transmission. The failure of the IHRs to effectively control the spread of COVID-19 is one such problem that is used to justify the need for a treaty. However, to date there is no comprehensive analysis as to why governments failed to

[1] German Alliance on Climate Change and Health (KLUG), Germany, corresponding author: maike.voss@klimawandel-gesundheit.de
[2] London School for Economics, UK
[3] Kings College London, UK
[4] In this policy brief, we aim to answer the difficult question how concrete next policy steps could look like and raise questions for the INB and WHO member states. The policy brief is informed by the forthcoming scientific article of the author team[4], a desk review and results from an expert consultation in 2021 and a policy dialogue in February 2022. This policy brief is one output of a project that was conducted with support of the German Foreign Office.

comply with their obligations under the IHR. The only analysis of the IHR has been on their functioning as an independent instrument, rather than compliance with them. The first step for the treaty negotiations must be to understand why governments failed to comply to the IHR as the contemporary global governance mechanism for global disease control, in order to mitigate replicable problems with any pandemic treaty in the future.

Process for the treaty text and beyond

A first draft text is expected for 1st August 2022. To get there, principles around the process need to be developed and implemented ensuring a member state-led, transparent, inclusive and fair procedure with full participation of all member states with meaningful inclusion of non-state actors. **Consultation of experts and academics in an interdisciplinary manner could further inform the INB, especially on the content of the treaty and support priority setting.** A science-policy-interface and formats like policy dialogues together with accompanied research projects could support trust building activities bringing researchers and diplomats together - digitally and in person.

Nikogosian & Kickbusch (2021) recommend involving World Bank, International Monetary Fund, World Trade Organisation and International Labour Organisation for treaty negotiations. Additionally, for the treaty to not be viewed as an instrument being pushed by the high-income countries, involvement of political bodies such as the G7 and the G20 along with important regional bodies such as the African Union, ASEAN, Mercosur and others would be crucial. **In its G7 presidency, Germany could host discussions how to engage the G7 and regional actors such as the European and the African Union in the treaty development.**

The INB also needs to ensure close collaboration with the WHO secretariat and with the working group on pandemic preparedness and response (WGPR) to reduce overlaps. Engaging in these several initiatives in Geneva puts some countries under a lot of pressure. Supporting these countries and their civil society organizations will be crucial to ensure inclusive participation. **Without the support of civil society, a pandemic treaty will not see the light of day, or it will fail to ensure that the contents protect those most at risk.** The current pandemic has demonstrated the inequalities that perpetuate global society, and that those who suffer the most of intersectional barriers (race, gender, age, sexual orientation, income, disability) are those who are most affected both by COVID-19 itself, and the downstream effects of pandemic policy. That's why engagement with civil society also nationally and including their feedback in negotiations will be crucial.

There is the risk that negotiating the treaty costs a lot of time and money. To make sure there will be fundamental changes in the ways in which states respond to emerging infectious diseases or address the underlying inequalities which blights the global health system, **diplomats especially those from high-income countries, could advocate the pandemic treaty domestically to achieve larger acceptance nationally and open the floor for discussion on behavioural changes of their countries towards failures in responding to COVID-19.**

Instrument form

After discussions of the binding/ non-binding nature of a new instrument, the treaty is expected to be modelled as a Framework Convention complemented by additional instruments (protocols, guidelines or standards) for adoption by governance bodies created through the treaty. This approach to treaty-making allows parties to reach consensus on high-level legally binding principles and commitments within the initial Convention – i.e., the meaning of 'equity' or 'solidarity' in a health emergency, and states parties give a commitment to act in solidarity during such an emergency, followed by agreements

adding detailed commitments regarding operationalising these commitments – i.e., a protocol regarding pathogen sharing, or one on equitable access to vaccines etc.

A notable precedent of such a public health treaty under the auspices of the WHO is the Framework Convention on Tobacco Control (FCTC). However, unlike the FCTC which focuses on a specific problem with proven solutions, the treaty seeks to focus on an expansive, transnational health issue with limited technological or policy solutions. Therefore, while a framework convention may seem appealing from a "get it done" perspective, building on contemporary political momentum, its inability to create a harmonious international legal regime could leave significant gaps in the global governance of health emergencies. In addition, while civil society organizations pushed WHO member states to develop the FCTC; so far, no supportive movement for the pandemic treaty currently exists, even though several civil society groups have shown interests in the treaty discussions. Moreover, no non-state actor engagement mechanism has yet been established by the INB.

By enabling states to select which protocols within the treaty they wish to be party to, the approach risks different states ratifying different elements of the overall treaty package leading to more fragmentation in global health governance. However, as a result, this may promote a broad consensus to overarching principles and norms, but with national differentiation regarding specific obligations.

The long list of thematic wishes

Many different thematic issues are on the table making strategic priority setting vital to focus on where there might be easy consensus and meaningful measures towards pandemic preparedness and response. However, there are clear differences in scope and depth of the proposed thematic issues challenging the INB to bring them together in a structured manner. The long list of wishes and expectation includes:

- Anchoring the treaty in human rights and address the principles of the right to health, equity, solidarity, transparency, trust, and accountability;
- Using a One Health approach for pandemic prevention and early detection;
- Stronger health systems information and reporting mechanisms; including a better use of digital technology for data collection and sharing;
- A reform of the WHO alarm mechanism, the public health emergency of international control (PHEIC) declaration process and travel and travel restrictions;
- Pathogen and genomic data sharing;
- Resilience to and response to pandemics, including universal access to medicines, vaccines, diagnostics, medical equipment and treatments as well as resilient supply chains, technology transfer;
- Investments in health system strengthening and increased financing for pandemic preparedness and response;
- Stronger international health framework with a strengthened WHO at the centre and increase global coordination;
- Reinforcing legal obligations and norms of global health security and standard settings of health care systems;
- Coordination of research and development (R&D)

Whilst we do not suggest that all will make it into a treaty, we do see a risk of so much being touted for inclusion within a single accord, that it seems unlikely that it will be able to achieve it all. Moreover, if the substantive content does make it to the drafting and negotiation process of the INB, it is unlikely that during this process there will be consensus on these issues from member states, which in turn will limit ratification of any treaty nationally, particularly if these are seen to infringe on trade or sovereignty.

To bring some order into this long list of thematic issues, the Graduate Institute Geneva suggests a taxonomy of thematic grouping for a new instrument on pandemic prevention, preparedness and response. However, we argue that even more focus and *priority setting on response* is needed, especially at the beginning of a health emergency, as this is the gap evident in the IHR. We therefore suggest aiming to formalise cooperation on the systems that alert the world to a pandemic that triggers action in four areas following the life cycle of an outbreak:

1. Pandemic Prevention

Proponents of the treaty push to address potential pandemic sources using the concept of One or Planetary Health and 'deep prevention' to include antimicrobial resistance (AMR), zoonoses, climate adaptation and mitigation and accidental pathogen release into the content discussion of a pandemic treaty. Implementing a One Health approach can link human, animal, and environmental health by harnessing multi-sectoral collaboration to establish integrated surveillance systems, build global health monitoring frameworks based on One Health metrics and methodology, and effectively address cross-sectoral challenges of AMR, food insecurity, and climate change.

Questions to be answered:

- How can a One Health Approach be implemented and incentivised in pandemic prevention?
- How can data on infectious pathogens in wildlife, companion animals, livestock, humans, and the environment (i.e. soil and water), as well as on risk factors for disease emergence be connected, integrated and equally shared?
- How can One Health capacity and pandemic preparedness monitoring and assessment be built into the global governance architecture? Who would be responsible to do so?
- If a pandemic treaty is negotiated under WHO, how will WHO govern other legal regimes, e.g., animal health, environmental issues and biodiversity implications of pathogen sharing under the Convention on International Trade in Endangered Species, Convention on Biological Diversity, Pandemic Influenza Preparedness Framework and the Nagoya Protocol, UN Convention to Combat Desertification.
- How can coherence between new legal instruments with existing environmental treaties, the IHR and animal health regulations be strengthened?

2. Pandemic Preparedness and Detection

There is an urgent need to promote equity in pathogens and data sharing during outbreaks, as part of efforts to decolonise global health and the environment.

Questions to be answered:

- How can we incentive the prompt sharing of data and pathogens during a health emergency?
- How can we remove barriers to open sharing of data during a health emergency, such as trade and travel restrictions imposed on those nations who do share – e.g, South Africa/Omicron variant?
- How is the sharing of data and pathogens linked to the sharing of vaccines and medical countermeasures?
- What role for Access and Benefit Sharing arrangements in the above, particularly considering the critique that they are unable to deliver *equity?*
- Is digital sequence information a sovereign resource under the CBD/Nagoya Protocol system?

3. Pandemic Response

The issue of equitable access to vaccines, diagnostics, therapeutics and equipment will be one of the most serious conversations the INB, all WHO member states and the German government in its G7 presidency will face in the months and years to come.

Questions to be answered:

- Who triggers travel and trade restrictions and for what purpose? What mitigations can WHO (or other international actors) put in place to minimise disruption and negative impacts?
- What are the requirements for equitable distribution of and access to health products and technology?
- What role will the ACT Accelerator play in the future?
- How can political public health literacy be increased to provide evidence informed public health communication?

4. Financing Pandemic Preparedness and Response

Several proposals to finance pandemic preparedness and response have been made by the IPPPR, the G20, the US and the WHO sustainable financing working group. Financing for the pandemic treaty could come from Bretton Woods institutions, such as the IMF as Special Drawing Rights or from World Bank in the form of loans, or indeed a new pooled insurance mechanism for pandemics could be established to cost share the risks associated with infectious disease outbreaks, while simultaneously using these financing resources to encourage compliance with a pandemic treaty. A new Global Health Security Financial Intermediary Fund (FIF) pushed by the US could be housed at the World Bank and could be overseen by a Global Health Threats Council, as suggested by the US. The importance of sustainable financing for effective public health security would also entail an increase of compulsory and voluntary funding of WHO by member states, public health taxations, and permanent endowments. Secured financing would allow for greater autonomy and support independent governance by shielding the body from excessive political influence. However, these discussions while crucial to the future success of WHO during a health emergency, are not part of the present treaty negotiations.

Questions to be answered:

- At what point and how quick is a financing mechanism accessible for countries responding to outbreak and for its neighbour states?
- What are the incentives to mobilise funding for core capacity building under the IHR?
- How can duplication of funding initiatives be reduced?
- How can this be connected to the pandemic treaty?

Interaction with the IHR

A potential alternative to the treaty would be to update the IHR, making them more relevant, and enhancing the governance and compliance gaps, moving them beyond the current “name and shame”. However, reopening the text of the IHR for renegotiation runs the risk of not simply adding in more tenets, but losing some of what is currently there during negotiations. The US is proposing to update the IHR alongside with calls on countries to design and establish a FIF with initial goal of reaching $10 billion. The president of the EU commission Ursula von der Leyen has already committed to work with the US and within the G20 on this proposal. A universal agreement on the characteristics of a FIF is still a matter of debate.

Beyond the content proposals listed above, states have clarified their expectations that any treaty must work in conjunction with IHR (2005); that it has legally binding enforcement mechanisms; a strong secretariat; clear metrics for monitoring and evaluation; must involve heads of state and not simply public health professionals; forms part of broader WHO reform efforts; has both technical guidance and

political engagement; address material conditions to facilitate adherence; and not only focuses on global level, but requires action at national level and state buy-in domestically.

Given the substantive overlap in content between the IHR and the newly proposed instrument, it is necessary to consider how the two instruments can work in harmony. This is made all the more important due to the fragmentation issue highlighted above; some member states will be party only to IHR, some to IHR and the framework convention treaty, and some to IHR, the treaty and its subsequent protocol(s).

A half-way house would be, rather than reopening the IHR for (re) negotiation, to implement a review conference to tweak the IHR regularly, ironing out issues which emerge on an ongoing basis. This model is well utilised for the Biological Weapons Convention which has biannual meetings to re-establish procedures and norms associated with the treaty. **Accountability could also be strengthened (but not ensured) through coordinated, concrete commitments and impact assessments like regular conferences of the parties (COP) as used in the Paris Agreement on Climate Change.** A high-level conference of the parties for pandemic prevention and preparedness (COPHealth) is expected to include monitoring and evaluation mechanisms which are straightforward, clear and vigorous and provide access from and inclusive engagement with civil society, private sector and academia.

Parallel and ongoing processes such as the "universal periodic health review" (UPHR) mechanism are not yet linked to the pandemic treaty debates even though integration could have benefits to both processes by including regular peer-reviews, reports by special rapporteurs, experts, and civil society, and incentives and provision of financial assistance to fill identified gaps in pandemic prevention, preparedness and detection and response.

Questions to be answered:

- How will IHR work in tandem with the pandemic treaty?
- What is missing from the IHR that is needed in the pandemic treaty?
- How to ensure that revisions to the IHR complement broader governance norms in global health?
- How will a UHPR mechanism work alongside IHR and a pandemic treaty?

Enhanced response will enhance compliance

For this treaty to have teeth, the organization that governs it needs to have power – either political or legal - to enforce compliance. In its current form, WHO does not possess such powers. Even though the discussion on strengthening WHO is broader and sits outside of the pandemic treaty negotiations, WHO currently has neither the capacity/mandate to govern a pandemic treaty including the long list of thematic wishes, nor will other international organizations accept WHO's mandate to do so. In order to enforce compliance, Schwalbe & Lehtimaki (2021) recommend learning from convention on chemical weapons and conclude the treaty at the United Nations level, and not a member state-controlled organisation like the WHO**. However, we fear, that it has been already decided with the INB mandated by WHASS, that a treaty will be developed under the roof of WHO. To move on with the treaty, WHO therefore needs to be empowered – financially, and politically.**

Proponents argue that non-compliance with the legally binding IHRs is a severe shortcoming in the current pandemic. However, it remains unclear how the proposed pandemic treaty under Article 19 of the WHO Constitution, would foster compliance compared to the IHRs. **We argue, that if international pandemic response is enhanced, compliance is enhanced. In case of a declared health emergency, resources need to flow to countries in which the emergency is occurring, triggering response elements such as financing and technical support. These are especially relevant for LMICs, and could be used to encourage and enhance the timely sharing of information by states, by assuring them that they will not be subject to arbitrary trade and travel sanctions for reporting, but instead, be provided with the**

necessary financial and technical resources they require to effectively respond to the outbreak. High-income settings, however, may not be motivated by financial resources in the same way as their low-income counterparts, warranting consideration as to non-financial incentives for compliance. We therefore argue, that an adaptable incentive regime for the variety of states and their contexts is needed.

The need for a treaty is often justified by citing the current public health regime's lack of ability to sanction non-compliance. In order to achieve compliance two key options for enforcement mechanisms are being discussed: incentives or sanctions (or both). Duff and colleagues (2021) discuss forms which these mechanisms could take. Incentives for compliance "could include tangible resources, such as financial aid or technical assistance […] access to data and information, recommendations and guidance". Sanctions "could include public reprimands, economic sanctions, or denial of benefits". The benefits for countries would need to be significant in order to serve as an incentive. Moreover, these mechanisms would need to be tailored to the various needs and capabilities of the individual countries.

Questions to be answered:

- What incentives can be drawn from across the governance space to encourage compliance?
- How to ensure these incentives are acceptable for states seeking to ratify the pandemic treaty?
- What other measures can be brought in to support compliance?

Next steps

Looking from August 2022 onwards, it will likely take years to negotiate the treaty, given the scope of proposed content and the many lessons identified but not learnt yet. The world in its current pandemic state cannot wait until 2024 for a pandemic treaty to be negotiated to fundamentally impact behaviours in international disease prevention and response. The minimum outcome of the treaty negotiations are trustworthy relations between the global south and the global north; the maximum outcome must be trust that has been built by a process that leads to a pandemic treaty with teeth and an incentive regime that is sensitive for a variety of actors. To get there, negotiators and all WHO member states, especially high income-countries need to be willing to compromise and to collectively chose a set of rules to be willing to comply to in health emergencies as well as in 'peacetime'. At the same time, expectations on what the treaty as a legal instrument can and cannot do, must be managed. **A treaty cannot and will not bind together all the many proposed initiatives and will not fix all challenges WHO and global health face. The ongoing debates around the pandemic treaty, however, could be a forum to mitigate fragmentation and reduce duplication in global health, if meaningful discussions are encouraged. To do so, Questions that the WHO member states and the INB need to answer to move forward with the pandemic treaty are:**

Questions for all WHO member states

- What is the *specific* problem that need to be fixed with a new legal instrument?
- Why don't governments follow the IHR?
- What are the non-negotiables of the long list of thematic wishes?
- What do the WHO member states mean by 'equity' or 'solidarity' in a health emergency?
- How do countries commit to act equitably or in solidarity during a health emergency? Is this a broad interpretive principle or will it be operationalised around specific issues e.g., information sharing, pathogen sharing, or access to vaccines and countermeasures?
- What are (high income) countries willing to give up/invest nationally in order to ensure the world is better prepared internationally for future pandemics? E.g., suspend advance purchase agreements for novel vaccine candidates, committing a higher percentage of GDP to WHO?
- What steps can be taken now by (high income) countries' governments to ensure that their (new) commitment to health equity does not change with a change of government?

- Where can manufacturing policy (outside the pandemic treaty) tackle failures in responding to COVID-19? (Supporting manufacturing health products in resourceful countries with small population that provide access to their 'family first' before they produce for the world market might be one way forward in order to increase speed to access these tools.)

Questions for the INB

- How can a new pandemic treaty and the IHR work in harmony without duplication?
- When does a pandemic treaty kick into action and what triggers its engagement?
- What kind of system for voluntary vs. mandatory transfer of technology and/or waiving of intellectual property rights in an emergency is needed and how is it linked to the pandemic treaty?
- How will equitable transfer of knowledge, capacities, technology and products be ensured in future pandemics?
- What is the future of ACT-A?
- How can shifts in power, and the need to decolonise global health, be included in the process of developing and negotiating the treaty?
- How to ensure that a variety of states engage with the development and negotiation of the treaty?
- How can inclusive engagement with non-state actors be ensured? What can be done if civil society or the private sector are not supporting the process?
- How can a science-policy-interface be designed in order to inform the INB and WHO member states with the best available evidence? Which formats are useful to bring experts and diplomats together?

Frieden & Buissonnière (2021) recommend strengthening and sustaining core capabilities of public health systems while ensuring the treaty also includes a robust implementation strategy. We add, that the world cannot wait for the pandemic treaty to be implemented to accelerate the response to the current pandemic. **We believe, that trust can be (re)build in the process of developing and negotiating a pandemic treaty. To start with it, the question of what can be done now to accelerate action on equitable distribution of health products and strengthening health system resilience need to be answered immediately.**

Bibliography

World Health Assembly [WHA]. (28.11.2021). The World Together: Establishment of an intergovernmental negotiating body to strengthen pandemic prevention, preparedness and response. SSA2/CONF./1Rev.1. Retrieved from: https://apps.who.int/gb/ebwha/pdf_files/WHASSA2/SSA2_CONF1Rev1-en.pdf

Wenham, C; Eccleston-Turner, M.; Voss, M. The futility of the Pandemic Treaty, International Affairs (forthcoming in March 2022)

Nikogosian, H., & Kickbusch, I. (2021, April 26). A pandemic treaty: Where are we now that the leaders have spoken? The BMJ Opinion. https://blogs.bmj.com/bmj/2021/04/26/a-pandemic-treaty-where-are-we-now-that-the-leaders-have-spoken/

Frieden, T. R., & Buissonnière, M. (2021). Will a global preparedness treaty help or hinder pandemic preparedness? BMJ Global Health, 6(5), e006297. https://doi.org/10.1136/bmjgh-2021-006297

Fidler, D. P. (2021, November 26). The Case Against a Pandemic Treaty. Think Global Health. https://www.thinkglobalhealth.org/article/case-against-pandemic-treaty

Haik Nikogosian and Ilona Kickbusch, 'A Pandemic Treaty: Where Are We Now That the Leaders Have Spoken?', *BMJ* 2021.

Gian-Luca Burci et al., 'Envisioning an International Normative Framework for Pandemic Preparedness and Response: Issues, Instruments and Options ', (Geneva: Graduate Institute Geneva, 2021).

Sakiko Fukuda-Parr, Paulo Buss, and Alicia Ely Yamin, 'Pandemic Treaty Needs to Start with Rethinking the Paradigm of Global Health Security', *BMJ Global Health* 6:6, 2021.

Suerie Moon and Ilona Kickbusch, 'A Pandemic Treaty for a Fragmented Global Polity', *The Lancet Public Health* 6:6, 2021.

Swee Kheng Khor and David L Heymann, 'Pandemic Preparedness in the 21st Century: Which Way Forward?', *The Lancet Public Health* 6:6, 2021.

Faouzi Mehdi et al., 'An International Treaty for Pandemic Preparedness and Response Is an Urgent Necessity', *British Medical Journal*, 2021.

European Council, 'An International Treaty on Pandemic Prevention and Preparedness', (Brussels, Belgium, 2021).

Dentico, N., van de Pas, R., & Patnaik, P. (2021). The politics of a WHO pandemic treaty in a disenchanted world (p. 58). Geneva Global Health Hub (G2H2). https://g2h2.org/wp-content/uploads/2021/11/The-Politics-of-a-WHO-Pandemic-Treaty-final.pdf

Moreno, A.B.B., Burci, G.-L. & Strobejko, A. (2022). Taxonomy of Substantive Proposals for a New Instrument on Pandemic Prevention, Preparedness and Response. *Global Health Centre. The Graduate Institute Geneva.* Retrieved from: https://www.graduateinstitute.ch/sites/internet/files/2022-02/taxonomy-paper.pdf

Wilson, L., Van Katwyk, S., Weldon, I. & Hoffman, S. (2021). A Global Pandemic Treaty Must Address Antimicrobial Resistance. *Journal of Law, Medicine & Ethics*, 49(4), 688-691. doi:10.1017/jme.2021.94

Vinuales, J., Moon, S., Le Moli, G.& Burci, G.-L. (2021). A global pandemic treaty should aim for deep prevention. *The Lancet*, 397(10287), 1791-1792. https://doi.org/10.1016/S0140-6736(21)00948-X

One health as a pillar for a transformative pandemic treaty (No. 299531; Global Health Centre Policy Brief, p. 29). (2021). Graduate Institute of International and Development Studies, Global Health Centre. https://www.graduateinstitute.ch/sites/internet/files/2021-11/policybrief-onehealth-v3.pdf

Vinuales, J., Moon, S., Le Moli, G.& Burci, G.-L. (2021). A global pandemic treaty should aim for deep prevention. *The Lancet*, 397(10287), 1791-1792. https://doi.org/10.1016/S0140-6736(21)00948-X

Piselli, D. (2022). International Sharing of Pathogens and Genetic Sequence Data under a Pandemic Treaty. What Linages with the Nagoya Protocol and the PIP Framework?. *Global Health Centre. The Graduate Institute Geneva.* Retrieved from: https://www.graduateinstitute.ch/sites/internet/files/2022-02/policy-brief6.pdf

Carlson, C.J., Albery, G.F. & Phelan, A. (2021). Preparing international cooperation on pandemic prevention for the Anthroposcene. *BMJ Global Health*, 6(3), e004254. https://doi.org/10.1136/bmjgh-2020-004254

Rourke, M., Eccleston-Turner, M., Switzer, S. (2022). Sovereignty, sanctions, and data sharing under international law. *Science*, 357(6582), 724-726. . https://doi.org/10.1126/science.abn5400

Karunakara, U. (2021). Europe Cannot "Treaty" its Way Out of the Pandemic. Health Policy Watch. Retrieved from: https://healthpolicy-watch.news/europe-treaty-pandemic/

Financing the Global Commons for Pandemic Preparedness and Response (2021). A Global Deal for Our Pandemic Age. Report of the G20 High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response. https://pandemic-financing.org/report/high-level-summary/

Duff, J.H., Liu, A., Saavedra, J., Batycki, J.N., Morancy, K., Stocking, B., … Szapocznik. (2021). A global public health convention for the 21st century. *The Lancet*. 6(6), e428-e433.

Davies, S.E. (2012). Nowhere to hide: informal disease surveillance networks tracing state behaviour. *Global Change, Peace & Security* 24, 1, 95-107. doi: https://doi.org/10.1080/14781158.2012.641272

The White House (2021). Global COVID-19 Summit: Ending the Pandemic and Building Back Better – Statement and Releases September 21,2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/24/global-covid-19-summit-ending-the-pandemic-and-building-back-better/

Schwalbe, N., & Lehtimaki, S. (2021, April 14). The World Should Treat Pandemics Like It Treats Chemical Weapons. Foreign Policy. https://foreignpolicy.com/2021/04/14/pandemic-treaty-who-tedros-china-transparency-inspections-data-covid-19-coronavirus/

Katz, R. (2019). Pandemic Policy Can Learn from Arms Control. *Nature* 575, 259. https://doi.org/10.1038/d41586-019-03452-0

Meier, B.M., de Mesquita, J.B., Sekalala, S. (2021). The Pandemic Treaty as a Framework for Global Solidarity: Extraterritorial Human Rights Obligations in Global Health Governance. *Harvard Law. Petrie-Flom Centre Staff. Bill of Health.* Retrieved from: https://blog.petrieflom.law.harvard.edu/2021/10/13/pandemic-treaty-extraterritorial-obligations/