



One Health and the Opportunity for Paradigm Shifts Through a New WHO Pandemic Agreement

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Abstract

The COVID-19 pandemic overwhelmed healthcare systems around the world, but in the aftermath it has now sharply focused policy attention. With the crisis being multi-dimensional it has ensured that with the many challenges we face, governments must now map a new way forward on global health. The clearest opportunity to enable this new path is the flagship WHO instrument on pandemic prevention, preparedness, and response, currently being negotiated by the Intergovernmental Negotiating Body of the WHO and its Member States. Whether the decisions they make affect meaningful change will depend on the extent to which they prioritize achieving equity for the most vulnerable communities, especially those who come into daily contact with pathogens, at the human-animal-environment interface, and across the entire pandemic prevention, preparedness, and response pathway. Prioritizing equity to more effectively prevent pandemics would seem intuitive but truly achieving this goal will require international institutions and governments to embrace a new way of designing and implementing health policy. In this article, we share the paradigm shifts that are mapping this new way forward, of which One Health has become central. We will also elaborate on the changes that the international community needs to make to enable those developments.

Keywords One health · Pandemic agreement · WHO · Animal health · Animal welfare · Zoonosis · Prevention at source · Spillover

A World Unprepared

The COVID-19 pandemic has triggered an ongoing global health, economic, social and development crisis and exposed several gaps in health systems and the way health policies are implemented (Filip et al. 2022). According to 2020 estimates, the COVID-19 pandemic marked the ‘first increase in global poverty since 1998’ raising the rate from 7.8 to 9.1% (Sánchez-Páramo et al. 2021) with a total estimate of 71 million people placed in extreme poverty in 2020¹ and a forecast of 130 million by 2030.² The cumulative loss of global financial outputs for 2020 and 2021 was estimated at \$8.5 trillion, equivalent to the total gains in financial outputs of the four years that preceded.³ The numbers and projections build a compelling case that we cannot afford to carry on with business as usual and solely prepare for a future

pandemic. What is needed is that the root causes and drivers of pandemics are tackled to protect vulnerable communities now and for the decades to come.

This article draws on learnings from the major gaps within our current system and highlights paradigm shifts and attempts to pave a new way forward.

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¹ Committee for the Coordination of Statistical Activities ‘How COVID-19 is changing the world: a statistical perspective Volume II’, 2020, https://unstats.un.org/unsd/ccsa/documents/covid19-report-ccsa_vol2.pdf.

² World Economic Situation and Prospects as of mid-2020 https://desapublications.un.org/file/738/download?_ga=2.155562427.1458714577.1696925706-1690615325.1614151722.

³ World Economic Situation and Prospects as of mid-2020 https://desapublications.un.org/file/738/download?_ga=2.155562427.1458714577.1696925706-1690615325.1614151722.



Lessons Learned from COVID-19 and Paradigm Shifts. From ‘Symptom Control’ to ‘Prevention’

Symptom Control

Health policy, especially in the context of diseases, is designed and implemented within institutional silos (Rifkin et al. 2021), kicking into motion only after a pathogen has spilled over from animals to humans, spreading and leading to a health emergency. The COVID-19 pandemic has compelled the global health community to consider transitioning away from a **symptom control driven** health strategy to one that breaks these silos, to strengthen public health systems (Rifkin et al. 2021). Openness to and a deeper examination of the importance of following a One Health approach also gained momentum. The importance of following a One Health approach means that complex health crises must be dealt with in a holistic way where human health is not viewed in isolation. It also meant that to protect human health, One Health strategies would intervene at the human-animal-environment interface, focusing on prevention before an outbreak spreads from animals into the human population.

Prevention at Source

In July 2020, the United Nations Environment Programme (UNEP) and the International Livestock Research Institute (ILRI) launched a report – ‘Zoonotic Diseases and how to break the chain of transmission’⁴—on preventing the next pandemic. Its authors brought attention to the fact that 75% of all new and emerging infectious diseases in humans have animal origin. The report was clear: the drivers of these disease outbreaks are largely tied to human activity, including the increased demand for animal protein, unsustainable agricultural intensification, increased ‘exploitation of wildlife’, unsustainable use of natural resources, ‘land use change and extractive industries’, ‘changes in food supply’, and climate change. The authors focused on the need to reduce risks of disease emergence through changing the current food systems, warning that while wildlife is a common source of emerging diseases in humans, domesticated animals may also be ‘original sources’ and amplifiers of zoonotic diseases. The report highlighted the need to not only tackle

health risks in animals and the environment after they emerge, but rather prioritize the forms of human activity that are increasingly driving these health risks.

The science was in line with what specialized actors working in animal welfare and health have been observing. Wild animals, caged and farmed for their fur are not only kept in systems that cause immense animal suffering but have been a frequent reservoir for pathogens, including COVID-19 (Oude Munnink et al. 2021) and Highly Pathogenic Avian Influenza strains (Montserrat et al. 2022), to spread and mutate. During the pandemic, millions of mink were culled in Europe and North America because they were infected by COVID-19.⁵ Trade in wildlife and live animal markets are activities and hotspots within which wild pathogens can spread from species of stressed animals among various new species and among humans via direct contact during extraction from the wild, handling, or slaughter – exposing immune systems to viruses they are otherwise not immune to (Pavlin et al. 2009; Naguib et al. 2021). While these risks will not always lead a pathogen dangerous enough to cause the next pandemic, such systems offer wild pathogens countless and unpredictable opportunities to spread and mutate into a potentially dangerous zoonotic disease.

Intensive or factory farms are prevalent and expanding globally, promoting systems that are not only a major driver of deforestation with land cleared to grow feed for and keep billions of farm animals (Anthis and Anthis 2019), they also bring health risks for animals, humans and the environment. Industrial farming systems are indoor systems holding animals that are bred to grow in the shortest time, at the lowest cost and in as little space as possible. Breeding for efficiency and growth traits is linked to illnesses in all farmed animal species. For example, bone fractures have been documented among laying hens bred to lay as many eggs as possible (Dunn et al. 2021), or fluid accumulation in the abdomen of broiler chicken (Hassanzadeh et al. 2014) is common in fast growing breeds and leads to other health complications and suffering (Kalmar et al. 2013). In addition the indoor keeping conditions themselves, with high stocking density of animals, cause stress which leads to immunosuppression (Yegani et al. 2005) thus making animals even more susceptible to diseases. Infections in farm animals are prevalent because of such systems and are addressed with a high use of antibiotics – residues of which end up in the animals, in the environment and eventually in humans. In fact, 70% of antibiotics worldwide are used in animal farming (Van Boeckel et al. 2019), making these farming systems a major structural contributor to antimicrobial resistance (AMR),

⁴ United Nations Environment Programme. Preventing the next pandemic – Zoonotic diseases and how to break the chain of transmission. UNEP – UN Environment Programme. May 15 2020 <http://www.unep.org/resources/report/preventing-future-zoonotic-disease-outbreaksprotecting-environment-animals-an>. Accessed 17 August 2022.

⁵ Fur Free Alliance, COVID-19 on Mink Farms <https://www.furfreealliance.com/covid-19-on-mink-farms/>.



which the World Health Organization (WHO) considers a leading global health challenge facing humanity.⁶

Intensive farming systems have also been a setting where poultry had to be culled because of diseases spread. According to the WHO and via reports to the World Organization for Animal Health (WOAH), in 2022 alone more than 131 million poultry either died or were culled in 67 countries due to exposure to highly pathogenic Avian Influenza.⁷ While the virus did not emerge in intensive farms and reached poultry kept in backyards, these systems where thousands of immunosuppressed animals are kept offer an ideal environment for any micro-organism to mutate and spread, including out of these farms into the environment via feces, contaminated feed or water or via farm equipment to other farms.⁸ In 2023, the virus began causing unusual bird die-offs, spreading from birds to mammals but also among mammals in Latin America and Europe causing global concern.⁹

It is becoming difficult to ignore that when animals suffer, humans suffer as well and that the improvements scientists and civil society are calling for will not only benefit animal welfare and the environment but are also essential to protect human health from future pandemics. Phasing out high risk practices like fur farming (Peacock and Barclay 2023) and the trade in wildlife as well as transitioning to more sustainable and balanced food and farming systems that ensure food security for humans and keep animals in better conditions will reduce risk of disease spread in animals and humans.

The science-based policy recommendations on preventing pandemics contained in the UNEP ILRI report¹⁰ are all related to a holistic One Health approach, one that goes beyond response and mitigation of disease outbreaks, towards strategies that reduce the risk of disease emergence. The report includes the need for raising awareness

and building support for zoonotic disease risk reduction strategies within all levels of society; improving interinstitutional One Health governance and collaboration; following an approach in which socio-economic and ecological dimensions of disease emergence form a basis for needed interventions; improved analysis of costs and benefits including ‘a full account of societal impacts of disease’ in order to ‘optimize investments and reduce trade-offs’; monitoring and regulating activities and practices including ‘removing the structural drivers of (disease) emergence’ including those tied to our food systems; measures to develop alternatives to practices that drive outbreaks and incentivize ‘management practices to control’ of these drivers such as ‘unsustainable agricultural practices, wildlife consumption and (legal and illegal) trade’; improving health promotion in animal husbandry systems and incentivizing ‘proven and under-used animal husbandry management’; divesting from industrial animal agriculture and strengthening the ‘health, opportunity and sustainability of diverse smallholder systems’; supporting agro-ecological methods that are sustainable, protective of wildlife habitats and reduce the risk of zoonotic disease spread; strengthening and building capacities on ‘human, animal and environment health dimensions of zoonotic and other diseases’, operationalizing the One Health approach in land-use and ‘sustainable development planning, implementation and monitoring’.¹¹

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) issued even more sharpened recommendations in October 2020 (IPBES 2020) when it also called for creating a high-level panel on prevention.

Prevention Means Investing in Health for All

In November 2020, the WHO Director General, Dr. Tedros Adhanom Ghebreyesus, announced the Council on the Economics of Health for All proclaiming that ‘The time has come for a new narrative that sees health not as a cost, but an investment that is the foundation of productive, resilient and stable economies’.¹² Investing in health and in a healthy population would mean treating ‘health for all’ as an outcome within national and international strategies. It would mean a shift in ‘what matters’¹³ for public health. According to

⁶ WHO, Ten threats to global health in 2019 (2019) <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>.

⁷ Ongoing avian influenza outbreaks in animals pose risk to humans, situation analysis and advice to countries from the FAO, WHO and WOAH (2023) (who.int) <https://www.who.int/news/item/12-07-2023-ongoing-avian-influenza-outbreaks-in-animals-pose-risk-to-humans#:~:text=In%202022%2C%2067%20countries%20in,in%20affected%20farms%20and%20villages.>

⁸ What is Avian Influenza—WOAH—World Organisation for Animal Health <https://www.woah.org/en/disease/avian-influenza/>.

⁹ Ongoing avian influenza outbreaks in animals pose risk to humans, situation analysis and advice to countries from the FAO, WHO and WOAH (2023) (who.int) <https://www.who.int/news/item/12-07-2023-ongoing-avian-influenza-outbreaks-in-animals-pose-risk-to-humans#:~:text=In%202022%2C%2067%20countries%20in,in%20affected%20farms%20and%20villages.>

¹⁰ The United Nations Environment Programme (2020). Preventing the next pandemic – Zoonotic diseases and how to break the chain of transmission. UN Environment Programme. 15 May 2020: 53.

[https://unsdg.un.org/resources/preventing-next-pandemic-zoonotic-diseases-and-how-break-chain-transmission.](https://unsdg.un.org/resources/preventing-next-pandemic-zoonotic-diseases-and-how-break-chain-transmission)

¹¹ The United Nations Environment Programme (2020). Preventing the next pandemic – Zoonotic diseases and how to break the chain of transmission. UN Environment Programme. 15 May 2020: 53.

[https://unsdg.un.org/resources/preventing-next-pandemic-zoonotic-diseases-and-how-break-chain-transmission.](https://unsdg.un.org/resources/preventing-next-pandemic-zoonotic-diseases-and-how-break-chain-transmission)

¹² Note: The WHO Council on the Economics of Health for All is announced during the closing remarks at the World Health Assembly WHO Director-General’s closing remarks at the World Health Assembly—13 November 2020.

¹³ WHO Council on the Economics of Health for All. Health for



the WHO Council on the Economics of Health for All, this strategy would require: long term investments in health and wellbeing, not treating health as a short-term cost; enforcing health as a human right; investing in planetary health, towards protecting the environment and a regenerative economy; adopting a ‘range of metrics that track progress across core societal values, above and beyond the narrow, static measure of GDP’; financing and innovating for health for all; and strengthening governments’ capacities for health for all through a ‘whole of government’ approach, meaning that health for all becomes a priority for all ministries, not just those responsible for human health.

The Council on the Economics of Health for All strongly reinforces the need for a radical shift from the economy of profit, based on GDP as *the* key indicator of governments’ performance, towards a more promising economy of wellbeing. This paradigm change entails investing in strategies rooted in preventing diseases and outbreaks, making policy choices for a healthy population rather than preparing for and responding when they are sick. Following a One Health approach to prevent disease outbreaks would achieve health for all because the approach is rooted in equity.

One Health Evolution

The beginnings of One Health date back to the nineteenth century where the interrelationship between human and animal health was documented by German physician and pathologist Rudolf Virchow, who coined with it the term ‘zoonosis’ and claimed that human and animal medicine should not be divided. In the 1980s, Calvin Schwabe introduced the concept of *One Medicine* ‘as a call for a unified approach between human and animal medicine to combat zoonoses’. In 2004 the One Health concept, with the integration of the environmental dimension, was adopted by the Wildlife Conservation Society in collaboration with the Rockefeller University and captured within the Manhattan Principles. These principles’ recommendations called for a holistic approach to prevent diseases of animal origin and maintain ecosystem integrity for the benefit of humans, animals, and biodiversity. The concept continued to evolve and has been most commonly evoked recently in the context of tackling antimicrobial resistance.

The scientific community and key international institutions have communicated priority measures to be pursued at the earliest stages of the COVID-19 pandemic, a few of which have been taken on. A One Health High Level Expert Panel was launched by the WHO Director-General, and

the combined support of France and Germany ushered the Quadripartite (formerly the tripartite: WHO, FAO WOA; plus, UNEP)¹⁴ at the Paris Peace Forum in November 2020. The updated definition of One Health developed by One Health High Level Expert Panel (OHHLEP)¹⁵ aims to offer a ‘common language and understanding’ of the concept, for the Quadripartite to work with. The OHHLEP definition managed to incorporate a paradigm shift from an anthropocentric view of One Health towards a more eco-centric concept, embracing the notion that human activity, and the industrial determinants of health, are at the core of most health risks. The aim of the approach is to optimize the health of people, animals and ecosystems. The approach requires the involvement of various stakeholders and segments of society.¹⁶

Based on the updated definition of One Health, the Quadripartite developed the first One Health Joint Plan of Action (OHJPA) in October 2022 with a comprehensive theory of change and six priority action tracks that are essential to operationalizing One Health. The action tracks tackle building one health capacities to strengthen health systems, reducing risks from emerging and re-emerging zoonotic epidemics and pandemics as well as controlling and eliminating endemic zoonotic, neglected and vector-borne diseases, tackling food safety risks, curbing AMR, and integrating the environment into the One Health approach. The OHJPA is a strategic plan that illustrates the types of activities that governments can take to operationalize the One Health approach.¹⁷ When compared to OHHLEP guidance on One Health¹⁸ and spillover prevention¹⁹ the activities proposed

¹⁴ Note: As of March 2022 the Tripartite plus UNEP became the Quadripartite formalizing the stronger integration of the environment into One Health UNEP joins alliance to implement One Health approach.

¹⁵ WHO. Tripartite and UNEP support OHHLEP’s definition of ‘One Health’. 1 December 2021. <https://www.who.int/news/item/01-12-2021-tripartite-and-unep-support-ohhlep-s-definition-of-one-health> Accessed 10 August 2022.

¹⁶ WHO. Tripartite and UNEP support OHHLEP’s definition of ‘One Health’. 1 December 2021. <https://www.who.int/news/item/01-12-2021-tripartite-and-unep-support-ohhlep-s-definition-of-one-health> Accessed 10 August 2022.

¹⁷ FAO, UNEP, WOA, & WHO. (2022). One Health Joint Plan of Action (2022–2026): Working together for the health of humans, animals, plants and the environment. <https://www.who.int/publications-detailredirect/9789240059139>.

¹⁸ FAO, UNEP, WOA, & WHO. (2022). One Health Joint Plan of Action (2022–2026): Working together for the health of humans, animals, plants and the environment. <https://www.who.int/publications-detailredirect/9789240059139>.

¹⁹ One Health High-Level Expert Panel White Paper/Opinion Piece ‘Prevention of Zoonotic Spillover – From Relying on Response to Reducing The Risk at Source’ <https://cdn.who.int/media/docs/default-source/one-health/ohhlep/ohhlep-prevention-of-zoonotic-spillover.pdf> (who.int).

Footnote 13 (continued)

all: transforming economies to deliver what matters—Final report. Geneva: World Health Organization; 2023.



under the OHJPA do not yet go far enough. Implementing the One Health approach in the context of pandemic prevention will mean going beyond surveillance and biosecurity measures towards tackling the root causes and activities that drive zoonotic disease risk.

Prevention, One Health and Achieving Equity

From an animal welfare perspective, it has always been clear that human activity across the human-animal-environment interface drives several health risks like disease outbreaks. The trade and intensive farming of animals for meat production and their fur, as well as the destruction of habitats and ecosystems to grow feed for livestock, are all situations that place animals in stressful conditions, suppress their immune response and bring humans and domesticated animals into closer contact with potentially unknown pathogens that could spill over, mutate and trigger a zoonotic disease outbreak.²⁰ Communities involved in trade and industrialized farming of animals end up being dependent on animal exploitation to secure their livelihoods. Protecting these communities would require working with them to examine how the state of the environment and animals is exposing them to health risks. They would need to be empowered and given resources to identify ways to protect themselves from disease outbreaks by reducing risks and in some cases transitioning away from high-risk practices towards alternative sources of income. Preventing outbreaks will only be possible if these communities are engaged and supported in ways forward that are in line with the One Health approach and can shape new industrial paradigms and alternative economic models to the ones that enable pathogenesis.

The New WHO Instrument on Pandemic Prevention, Preparedness and Response

The WHO Pandemic Agreement

The initial intention of the pandemic instrument, captured during the 74th World Health Assembly, was to ‘prepare’ for and ‘respond’ to future pandemics,²¹ complementing the scope covered within the International Health Regulations

(IHR), which address public health emergencies.²² On 1 December 2021, during a special session of the World Health Assembly, WHO member states decided unanimously to launch the negotiation of a ‘historic global accord on pandemic prevention, preparedness and response’.²³

The plan is for the negotiations on the pandemic instrument to conclude in May 2024. While the diplomatic process is moving on, it is still difficult to tell whether the elements necessary to achieve effective prevention, preparedness and response will make their way into the final iteration.

There is also growing acceptance of the need to follow a One Health approach including in a legal instrument that is anchored in a UN institution responsible for protecting public health. What is yet to be confirmed is whether prevention and One Health will be supported within the instrument, and if so, what policy choices will be associated to this goal within the pandemic agreement.

Equity through Prevention in the Agreement

At the current state, the prevention discourse is glaringly sidelined in the ongoing negotiation at the WHO towards attention on countermeasures and their equitable availability and access, as strongly pushed for by countries of the Global South. It is understandable that developing countries are eagerly working to ensure support for strengthening preparedness and response to disease outbreaks, to avoid a repeat of the challenges they faced during the COVID-19 pandemic. The vaccine inequity witnessed and suffered during COVID-19²⁴ mustn’t be replicated, of course. Equity should, however, not only be interpreted and prioritized in terms of preparedness and response. The new binding pandemic agreement must enable governments to support communities exposed to spillover and other health threats in transitioning away from high-risk practices, often related to the commercial – i.e. industrial—determinants of health.²⁵

Attempting to achieve equity *after* an outbreak, by being more prepared and better able to respond will mean that strategies would commence after communities that come into daily contact with pathogens have suffered an outbreak

²⁰ FOUR PAWS, Preventing Pandemics Position Paper https://media.4-paws.org/6/5/5/f/655f0d3a1393fa4b036fbefb53944f6d86fae67e/2022-10_PAW_positioningpaper-long.pdf.

²¹ WHA74(16) Decision on a ‘Special session of the World Health Assembly to consider developing a WHO convention, agreement or other international instrument on pandemic preparedness and response’ https://apps.who.int/gb/ebwha/pdf_files/WHA74-REC1/A74_REC1-en.pdf?page=94.

²² International Health Regulations (2005) (IHR) <https://www.who.int/publications/i/item/9789241580496>.

²³ WHO ‘World Health Assembly agrees to launch process to develop historic global accord on pandemic prevention, preparedness and response’ <https://www.who.int/news/item/01-12-2021-world-health-assembly-agrees-to-launch-process-to-develop-historic-global-accord-on-pandemic-prevention-preparedness-and-response>.

²⁴ OHCHR ‘UN Expert Urges States to End Vaccine Apartheid’ <https://www.ohchr.org/en/press-releases/2022/06/un-expert-urges-states-end-vaccine-apartheid>

²⁵ WHO ‘Commercial Determinants of Health’ <https://www.who.int/news-room/fact-sheets/detail/commercial-determinants-of-health>



and its symptoms. The strategy would theoretically aim to provide them with the capacities to detect these outbreaks through improved surveillance and early warning systems rather than help them in preventing outbreaks. Such strategies would mitigate risks but would fail these most vulnerable communities at the frontlines of the human-animal-environment interface, whose livelihoods currently rely on their exposure to pathogens. Without starting to support a One Health policy strategy that is developed with these communities and that tackles the root causes of outbreaks, they remain exposed and reliant upon practices that put them at risk. Of course, we cannot ignore that we are dealing with scenarios that are deeply embedded in global political economies and financial dependencies, and changing routes is not easy (Dentico et al. 2022). At the same time, the challenges we are confronted cannot be effectively countered with piecemeal policymaking.

The WHO Remit and Prevention at Source

We have established that protecting human health from pandemics will require Member States to tackle the root causes of disease outbreaks through a One Health approach. The science is clear on the need to transition from high-risk activities to achieve that objective. Experts built the case as to why the pandemic agreement must tackle deep prevention (Vinales et al. 2021),²⁶ before a pathogen jumps from animals to humans. The question that WHO Member States have been grappling with is the extent to which the role of tackling the drivers of outbreaks can indeed be addressed within a pandemic agreement that sits within the WHO. WHO units tasked with combatting diseases are largely focused on preparedness and response to emergencies²⁷ rather than deep prevention (Vinales et al. 2021).

At the same time, multilateral environmental agreements (MEAs) do exist to cover stages within which outbreaks may occur such as the trade in endangered wildlife²⁸ or biodiversity loss,²⁹ structural and mandate-type challenges emerge here though. Existing environmental instruments, do not have the explicit purpose of protecting human health by

addressing the drivers before an outbreak may potentially occur. Calls to extend the mandates of these agreements have been attempted but rejected (Ashe and Scanlon 2020).³⁰ MEAs will therefore fail to include all essential measures to protect human health for the time being.

As a first step to address these policy gaps a mapping is needed of the measures required to prevent pandemics according to public health and environmental science,³¹ and also of the policy measures that are required to ensure that the WHO instrument fully meets its objectives.³² Such a technical and scientific mapping must be enabled within the pandemic instrument through a policy coordination governance structure, to support with translating its recommendations into action.

Member states and international institutions recognized that pandemics are a One Health challenge and have taken steps including the formalization of the Quadripartite alliance³³ that is tasked to support member states with the implementation of One Health and the One Health Joint Plan of Action. The success of a pandemic agreement would greatly benefit from designating a formal role to the Quadripartite institutions, and a more evolved governance in which all four institutions participate in designing coherently holistic policy and support Member States in their national strategies efforts, well beyond the mere health agenda.

Studies and reports (Bernstein et al. 2022)³⁴ have built the case that investing in prevention through a One Health approach is by far more cost-effective than the cost of response. Bernstein et al. (2022) concluded that the annual cost of preventing spillover of pathogens would cost less than 5% of the value of lives lost from emerging infectious diseases (Bernstein et al. 2022). Yet, all measures required will not be enabled without the essential means of implementation, including of course financing. While global funds exist for climate action, biodiversity and other environmental challenges, sufficient formal international funding to tackle

²⁶ Global Health Centre 2022 'HOW CAN AN INTERNATIONAL PANDEMIC INSTRUMENT ADDRESS ONE HEALTH?' Workshop Report https://repository.graduateinstitute.ch/record/300592/files/20220630_OneHealthWorkshop_Report.pdf.

²⁷ WHO Headquarters Organigram (as of January 2023) <https://cdn.who.int/media/docs/default-source/documents/about-us/who-hq-organigram.pdf>.

²⁸ Convention on International Trade in Endangered Species Convention on International Trade in Endangered Species of Wild Fauna and Flora | CITES.

²⁹ Convention on Biological Diversity Home | Convention on Biological Diversity (cbd.int).

³⁰ As COVID-19 pandemic deepens, global wildlife treaty faces an identity crisis. <https://news.mongabay.com/2020/05/as-covid-19-pandemic-deepens-global-wildlife-treaty-faces-an-identity-crisis/>

³¹ One Health High-Level Expert Panel White Paper/Opinion Piece 'Prevention of Zoonotic Spillover – From Relying on Response to Reducing The Risk at Source' [ohhlep-prevention-of-zoonotic-spillover.pdf](https://www.who.int/publications/m/item/ohhlep-prevention-of-zoonotic-spillover) (who.int).

³² At the time of writing, the objectives reflect those publicly accessible as per the 'Bureau's Text of the WHO convention, agreement or other international instrument on pandemic prevention, preparedness and response (WHO CA+)' A/INB/5/6, 2 June 2023 https://apps.who.int/gb/inb/pdf_files/inb5/A_INB5_6-en.pdf.

³³ Note: UNEP joins alliance to implement One Health approach.

³⁴ World Bank 'Prevent the Next Pandemic with a One Health Approach' <https://www.worldbank.org/en/news/pressrelease/2022/10/24/prevent-rather-than-fight-the-next-pandemic-with-a-one-health-approach-world-bank>



animal health and welfare is still lacking. It also remains to be decided by WHO member states and financial mechanisms tasked with tackling pandemics whether they will coordinate with existing environmental funds or dedicate funding within the mechanisms to tackling the drivers of outbreaks and spillover prevention (beyond just surveillance and early warning). This will be a stumbling block in the negotiation.

Ultimately, provisions within the binding WHO pandemic agreement must enable and support member states in designing and implementing national One Health strategies. Fully operationalizing a One Health approach to prevent pandemics and achieve equity will mean that the scope on One Health and measures enabled within the instrument, must go deeper down the prevention pathway than surveillance, early detection, early warning and biosecurity measures towards deep prevention, tackling the root causes of outbreaks. The steps will entail a transformative shift from orthodox economics to equitable, sustainable economic paradigms conceptualized in recent research and literature—examples of which are post-growth economics (van Woerden et al. 2023), de-growth economy,³⁵ feminist economics, happiness economic³⁶, to mention a few.

One Health strategies enabled within the instrument, must focus on the activities that drive outbreaks and the regions per country where these activities are concentrated. The pandemic instrument would therefore function within a One Health approach, creating a space for measures beyond those strictly within the role of public health institutions to achieve its purpose of protecting human health.

Conclusion

Pandemics should not be considered our destiny for the future. Preventing future pandemics will require a paradigm shift in the way we view, design and implement health policy and achieving health for all is clearly a whole-of-government, whole-of-society task. Promising developments are underway, most of which are tied to operationalizing a One Health approach. Decision-makers tasked with negotiating the pandemic agreement have a truly historical opportunity to develop a legal instrument that can protect us all, elevate health as an outcome and place social indicators above GDP in international as well as national policy.

³⁵ Nature 'Degrowth can work - here's how science can help' <https://www.nature.com/articles/d41586-022-04412-x>.

³⁶ Investopedia 'Happiness Economics: What it is, How it Works' <https://www.investopedia.com/terms/h/happiness-economics.asp>

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