

# Global challenges in the post-pandemic world. A critical approach to the WHO pandemic agreement. The world together equitably

## Abstract

This commentary aims to advance a critical reading of the document published under the title The WHO Pandemic Agreement. The World Together Equally by the WHO. The aim is to generate a broad and reasoned debate on the health, pharmacological and scientific implications of international cooperation in a context of complex interactions between the health crisis and climate change. Recognizing the disjunction between human activity and the functioning of natural ecosystems, a general crisis of absolute uncertainty is emerging that requires fundamental agreements to face the new challenges. The paper integrates generally excluded dimensions comprising biological, medical, social and ecological spheres that have been part of broader conceptions of the SARS-CoV2 pandemic.

**Keywords:** SARS-CoV2; pandemic; WHO; syndemia; change of climatic; economy.

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## Introduction

At the beginning of January 2020, the news of an epidemic in China was registered as an isolated event, inaccessible in its immediate effects, in the major media and social networks of the Western world. By mid-March, this immune perception turned into a dreadful feeling of anguish, uneasiness and fear at the imminence of contagions and deaths in Spain, Italy, England, the United States, Ecuador, Mexico and Brazil. Nothing remained exempt from the vast biological, psychological, social, economic and political consequences that human life began to experience with the irruption of an unknown coronavirus.

The COVID-19 pandemic highlighted to the scientific world, multilateral institutions and national governments the extreme vulnerability of epidemiological surveillance systems. Mainly due to the absence of health forecasts, the collapse of hospital systems and the shortage of medical supplies which, like a recursive loop, acted as a catalytic effect on the vectors of coronavirus contagion. The spread to 221 countries and regions of the globe indicated its rapid propagation in contrast to the governmental responses that demonstrated the sanitary and hospital weaknesses within the countries. Alarming figures published by WHO indicate that around 15 million people died from the pandemic between January 2020 and December 31, 2021.

These lethal effects coincided with health and pharmacological policies that favored the selective responses of some nation-states, which prevented a comprehensive and coordinated view of the catastrophic health event. This is particularly relevant because of the differentiated access to vaccines that shaped a pharmacological nationalism that was intertwined with the coincidence between non-communicable diseases and social inequalities, enhancing the catastrophic effects of SARS-CoV2. A number of authoritative voices in a variety of medical, scientific and diplomatic fields began to warn about health management in the management of the pandemic. *The Independent Panel for Pandemic* report stressed "COVID-19 is the 21st century's Chernobyl moment -not because a disease

outbreak is like a nuclear accident, but because it has shown so clearly the gravity of the threat to our health and well-being".<sup>1</sup> For Richard Horton, editor of *The Lancet*, the interaction between the biological, the medical and the social made it necessary to seek a syndemic approach to understanding the vulnerabilities produced by the pandemic. Syndemia is not only comorbidity, it is an integrated approach characterized by understanding the "biological and social interactions between conditions and states, interactions that increase a person's susceptibility to harm or worsen health outcomes".<sup>2</sup> Undoubtedly, advancing the coordination of pandemic prevention involves advancing a syndemic approach that integrates the structural causes of the irruption of pathogens in modern life.

## From Wuhan to pandemic declaration

In late 2019, in the city of Wuhan, an alarming set of cases of a rare pneumonia caused by a new beta-coronavirus, initially dubbed 2019-nCoV by Chinese health authorities, were reported. Subsequently, the China Center for Infectious Diseases (CDC) reported 27 cases of this new type of pneumonia to the World Health Organization (WHO). A publication in the *Lancet* reported that this emerging health event, with more than 800 confirmed cases, was not confined to Wuhan, but was spreading to other "provinces in China and in Thailand, Japan, South Korea and the United States".<sup>3</sup> At this point, they warned about the irruption of novel zoonotic events, which could potentially shape a more dramatic horizon than previous infectious outbreaks in the region. The uncertainties associated with the origin, the epidemic outbreak, the forms of human transmission and the clinical spectrum of the disease represented an unavoidable epidemiological challenge for the Chinese health authorities and, at the same time, for the world in general.

The identification of simultaneous symptoms such as hypoxemia, fever, cough, sputum production, muscle pain and fatigue in hospitalized patients indicated the need for immediate health measures. For Professor Chaolin Huang, and the group of researchers who signed this paper, "due to the pandemic potential of 2019-n-CoV,

Careful surveillance is essential to monitor its future host adaptation, viral evolution, ineffectiveness, transmissibility and pathogenicity”.<sup>3</sup> Between January 10 and 19, Chinese researchers published the genetic sequence of the virus on open platforms and confirmed person-to-person transmission, displacing the previous assumption of limited person-to-person transfer. At midnight on January 22, an immediate and unprecedented move to lock down the city of Wuhan, a city of 11 million people, was announced; the lockdown was to begin at 10 am the following day. Soon the lockdown spread to the entire Hubei province of 56 million people when 1975 new cases, and 56 cumulative deaths were reported in China. Since then, almost all provinces in China initiated the highest level of public health emergency and the country as a whole politically, scientifically and militarily defined an unprecedented global health program.

The Chinese government in the city of Wuhan adopted a comprehensive policy of centralization of resources in order to optimize the results of sanitary control and, at the same time, extended the social measure of total quarantine, concentrated efforts in the construction of hospitals, improved the immediate attention of recurrent symptoms, forced the disinfection of public spaces, forced the use of masks, promoted the frequent washing of hands and face with soap solution, social distancing, biometric control of symptoms and the extended use of Artificial Intelligence devices, as a systemic health policy with the aim of identifying cases of contagion and isolating them in medical care centers. This vast social experiment would become - as the months went by - the dominant model of care for the global health crisis involving a strategic knotting of quarantine, distancing and state exceptionality. In the words of Guo Jing, a Chinese activist, “from January 23 to April 8, Wuhan, a Chinese city with a population of 11 million people, was blockaded to contain the spread of the coronavirus. This extreme measure is unprecedented in the history of global public health”.<sup>4</sup> The systemic objective of the Chinese multifactorial strategy was to control the sources of infection through prevention mechanisms, blocking and systematic isolation of viral transmission dynamics.

On January 30, WHO declared an international public health emergency that required urgent preventive measures to contain the likely spread of the epidemic. In retrospect, the declaration was not accompanied by the convening of a World Health Assembly to devise a global strategy in line with bioinformatics reports that pointed to the seriousness of the health event. Between February 16 and 24, a scientific visit to China was organized for the purpose of gathering information from primary sources to assist in the diagnostic and prospective phase with respect to the health emergency in progress. The Report of the WHO-China Joint Mission on COVID-19 disease (with the participation of scientists from China, Germany, Japan, Korea, Singapore, Russia, Nigeria, the United States and WHO) establishes a set of working protocols to coordinate efforts between scientific research and pandemic management in a global context. Undoubtedly, the scientific mission explored the forecasting, management and epidemiological management of Chinese medical institutions in locations such as Beijing, Guangdong and Wuhan, among others. This included visits to research centers, hospitals and local health centers and, at the same time, assessing pharmaceutical inventories, fresh produce markets and means of transportation in order to gain first-hand knowledge in the management of the health crisis.

The Joint Mission Report focuses on highlighting scientific knowledge on three vital topics, namely: origin of the virus, location of the outbreak and transmission dynamics of SARS-CoV-2 to address the severity of the health situation in China. The

first scientific objective was to identify the causes of pneumonia of unknown etiology by collecting samples from infected patients in different locations for virus isolation and detection in the laboratory. By isolating human airway epithelial cells, cytopathic effects and corona-shaped particles were observed by transmission electron microscopy (TEM) using the negative staining technique. The ability of the inoculated virus to take cellular control, replicate and grow in the samples taken “was completely neutralized by sera obtained from convalescent patients. ACE2 transgenic human mice and rhesus monkeys, tested intranasally with this viral isolate, induced multifocal pneumonia with hyperplasia”.<sup>5</sup>

Certainly, the research protocol of the joint mission indicated that the localization of SARS-CoV-2 virus in lung tissue and in the intestines of inoculated animals was a clinical constant. Simultaneously, it is established that this foreign pathogen has no pre-existing immunity in humans. “Whole genome sequencing analysis of 104 COVID-19 virus strains isolated from patients in different localities with symptom onset between late December 2019 and mid-February 2020 showed 99,9 % homology with no significant mutation”.<sup>5</sup>

The second most relevant scientific finding is found to be a zoonotic virus by virtue of phylogenetic analyses performed on complete genomic sequences and, at the same time, it is established that bats appear to be the reservoir of the COVID-19 virus, although by the time of the report the intermediate host(s) had not been identified. Undoubtedly, the joint investigation from the initial symptoms in December 2019, through environmental sampling of markets, to wildlife collection and recording, made it possible to establish the zoonotic origin of the virus from a scientific-epidemiological perspective. Finally, it was necessary to establish the contextual transmission dynamics that include the initial transmission from the intermediate host to the person, from person to unprotected person and a limited number of cases through fecal excretion. The transmission dynamics conclude that the acts of touching, coughing, and rubbing that are regularly unnoticed, unconscious, and surreptitious and are an inseparable part of daily life become direct and indirect vectors of transmission of COVID-19 infection. Direct transmission by respiratory secretions (coughing) with droplets of more than 5 µm capable of being transmitted over a distance of up to two meters between people and indirect transmission by surfaces contaminated by these secretions followed by contagion (touching) with the mucous membranes of the mouth, nose and eyes (rubbing). The tension between reproduction and change contributes to prepare the scene that the coronavirus introduces in the various national societies, as a radical transformation in everyday life, by disrupting the foundations that underlie the daily life of human actions in their constitutive plurality.

In the Western media, a growing decoupling between scientific-medical information and the hesitant political-health decisions of governments was evident. The disjunction between health and welfare, which became common sense in the psychology of political decision-making in the West, is only understandable to the extent that the pandemic as a pandemic had not positioned itself in its manifest gravity in global governance as a core issue of public opinion. The Lancet editorial of the first quarter of 2021 stated that “there is a high level of skepticism towards China. Anti-Chinese sentiment has intensified. As for science, data transparency is a point of ongoing controversy”.<sup>6</sup> These doubts from the scientific community contrasted with the health control of COVID-19 in China as opposed to the management and management in the United States, Europe, Africa, and Latin America. In particular, there were epidemiological reports showing the rapid growth of the epidemic in the months of December,

January and February in different Chinese localities. The absence of a global response, together with national delays in implementing sanitary measures in response to the notification of a cluster of cases of pneumonia of unknown origin, contributed to the spread of SARS-CoV-2.

For Richard Horton, editor-in-chief of *The Lancet*, the news from China had to be dealt with urgently and rigorously because the message of a new coronavirus with pandemic potential was affecting several cities in East Asia. For him, “we were too late with everything. In *The Lancet*, we published five articles in the last week of January that told the story: a new virus, rapid mortality, human-to-human transmission. We could have mobilized more quickly”.<sup>7</sup> Since January 22, 2020, there were sufficient epidemiological, medical and scientific reasons for the recognition of an impending health crisis and, a lost month of February became the proof of global inaction. The efforts of scientific, political and diplomatic institutions warning about the imminence of a catastrophic transition from an epidemic to a pandemic between January and February indicated the emergence of a new public sensitivity. On March 11, 2020, the Director of the WHO declared that the COVID-19 disease could be characterized as a pandemic because of the alarming levels of contagion and spread shown by bioinformatics indicators.

In May 2020, through the WHO, a request was made for the creation of an Independent Panel to review epidemiological, pharmaceutical and scientific information in order to formulate global recommendations. In this regard, the report of the Independent Panel underlined the lack of preparedness of health systems to confront the planetary dimensions of a crisis that overstepped the bounds of the possible. “The COVID-19 pandemic could have been avoided. And the world must learn from the mistakes that led a viral outbreak in a corner of China to become a global crisis”.<sup>8</sup> Ironically, the health outbreak was aligned with the worrying alarms of climate change, the desolate landscapes of major cities, the disruption of the commodity supply chain and the overexploitation of essential labor; together these signals evidenced the need for a New Gestalt in understanding the globality of contemporary issues. In general terms, the epidemiological, health, medical, pharmacological, geopolitical, geoeconomic, communicational, social and epistemic events triggered by the coronavirus produced an essential transformation of global reality. The identity between globalization, climate change and infectious diseases that erupted with the pandemic increased the levels of complexity in the decision-making arena that forced the search for new approaches to health surveillance. The complex synergies between infectious diseases and zoonoses are simultaneously correlated with the destruction of ecosystems and the release of pathogens from specific contexts.

## The WHO pandemic agreement. The world together equitably

The agreement is the result of intense negotiations aimed at addressing the inequities and gaps detected during the course of the global COVID-19 pandemic. Indeed, the purpose is to foster collaboration for the construction in the medium term of a system of pathogen access and benefit sharing that will help to confront systemic obstacles. The agreement on pandemics is the second international legal agreement negotiated in accordance with Article 19 of the WHO Constitution and was signed at a plenary session of the World Health Assembly. It establishes “principles, approaches and tools in a number of areas to strengthen the global health architecture for pandemic prevention, preparedness and response.”<sup>9</sup>

Within WHO, a process of consultation, evaluation and prospection was initiated with the aim of confronting the structural shortcomings of health management, including the absence of international solidarity in the management of SARS-CoV2. *The World Together Equitably Agreement*, published in May 2025, is a fundamental step in the pursuit of global health governance. “The agreement lays out a comprehensive framework for action on pandemic, including preventing zoonotic spillovers, health system preparedness, and equitable pandemic response”.<sup>10</sup> The main weakness of the agreement recently favored by the WHO is the withdrawal of the United States in the programmatic contents of international cooperation and solidarity in a matter as relevant as global health. This last point is of unquestionable relevance. In any case, the agreement advances in the need for a comprehensive approach that recognizes “the interconnectedness of human health, the health of domesticated and wild animals, and the environment”.<sup>10</sup> Including a syndemic approach in the understanding of future pandemics incorporates “multimorbidity along with economic, ecological and social contexts as structural causes in the understanding of this complex epidemiological event”.<sup>11</sup>

By establishing a non-linear causal identity between communicable diseases, social inequality and destruction of natural ecosystems, it is recognized that the human-animal-environment interface is an essential dynamic variable in the globalized understanding of zoonotic diseases. Increased global risks as a consequence of “the combined rates of deforestation and defaunation have subway implications for the loss of genetic biodiversity, the devastation of ecological cycles and the disruption of species’ adaptive capacities”.<sup>11</sup> The WHO’s institutional and multilateral recognition of this dimension is a substantive advance in the understanding between ecology, deforestation and zoonoses that have formed the basic substrate of the irruption of foreign pathogens. Likewise, the background of this proposal is to prevent the spread of unknown viruses, increase health surveillance and minimize the risks from their probable origins. Scientific and institutional initiatives leading to cooperation in areas such as clinical epidemiology, molecular epidemiology, environmental epidemiology and host identification would contribute to the purposes of a universal and preventive approach.

The WHO Agreement is based on the International Health Regulations (IHR), the primary objective of which is to strengthen the primary health care system by including universal coverage among its medical budgets. Paradoxically, the coronavirus crisis highlighted the simultaneity between the collapse of the hospital system and the crisis of health insecurity that severely affected access to health systems. The need to improve diagnostic care, the equity of health services and the strengthening of laboratory tests pursued by the agreement attempts to confront the structural lags that led to an institutional ataraxia of health systems. This makes it necessary to align epidemiological information with an early warning system based on international cooperation in order to simultaneously address health care and the prevention of detectable risks. Universal access to primary care has become an incontrovertible moral imperative after the catastrophic consequences of the coronavirus pandemic in terms of risk of death.

In any case, the definition of a set of global problems that outline the probable paths of action becomes a critical route to address issues such as the humanitarian situation, the preventive approach to health, the pandemic emergency and human vulnerability. The reflective horizon of the document establishes that the principles of equity function as a normative ideal to promote cooperation, solidarity and prevention in health in correspondence with the axiological fabric of the United Nations. This requires constant training of medical-health

personnel to rigorously face the risks inherent to the treatment of infectious diseases, including the production of knowledge from the social sciences. Articles eight, nine, ten and eleven of the Agreement recognize the need for an equitable commitment in terms of access, distribution and even production of vaccines.

From the requirements of drug regulatory agencies to the strengthening of drug R&D capabilities and technology transfer in the field of patents, the document outlines possible courses of action in a priority area such as vaccine production. But above all, the paper confronts the pharmacological nationalism that has led to an unequal distribution of access to vaccines, a control of health supplies in high-income countries and a monopoly of intellectual property of vaccines. Taken as a whole, this is a systemic challenge that goes beyond the scope of action of the WHO insofar as its plan of action involves recognizing the presence of predatory logics in the functioning of the global economy. In any case, the emphasis on equitable access in the face of the probability of a pandemic involves recognizing this effort in the mechanisms of transfer, cooperation and integrality in the management, distribution and production of vaccines, incorporating low-income countries in this operation. This involves supporting regional and local scientific and medical institutions in order to promote technology transfer mechanisms that address sustainable production and the geographic distribution of inputs and products. Undoubtedly, the issue of the supply chain of products and raw materials is a key area to address the decoupling between supply and demand in the production of medical and pharmacological products.

The Global Supply Chain and Logistic Network (hereinafter the GSCL Network) is hereby established to enhance, facilitate, and work to remove barriers and ensure equitable, timely, rapid, safe, and affordable access to pandemic related health products for countries in need during public health emergencies of international concern, including pandemic emergencies, and for prevention of such emergencies. The GSCL Network shall be developed, coordinated and convened by the World Health Organization in full consultation with the Parties, World Health Organization Member States that are not Parties, and in partnership with relevant stakeholders, under the oversight to the Conference of the Parties.<sup>12</sup>

Thus, building and consolidating a logistics network with strict state obligations is a necessary principle of reality to avoid the global risks of monopoly, exclusion and shortages generated by the health crisis. The agreement establishes the necessary steps for its implementation without intervening in national health legislation, defining a Pathogen Access and Benefit Sharing System (SAP) through the Intergovernmental Working Group (IWG). Including, establishing the “Financial Coordination Mechanism for Pandemic Prevention, Preparedness and Response and the Global Supply Chain and Logistics Network (GSCL) to improve, facilitate and ensure equitable access. To health products”.<sup>9</sup> All this includes an urgent global task of health literacy to remedy infodemia in a matter as sensitive and pressing as health and human life. From research funding to coordinated governance, to the place of the United States in such relevant matters as a Global Agreement to address a potential pandemic, the document is presented as a necessary and urgent syndemic approach to such a vital issue as health and human life. It is necessary to advance in the shared research on the origin of SARS-CoV-2 that analyzes the scientific findings in different latitudes and, above all, that in the midst of the necessary disputes in the scientific, pharmaceutical and institutional spheres we can advance in the achievement of the objectives of this important document: *The WHO Agreement on Pandemics. A united and equitable world*. Certainly, the likelihood of reaching a global health compromise that addresses

the complex issues of technology transfer, intellectual property and trade between countries is a moral, political and scientific imperative. The critical assessments made in and during the COVID-19 pandemic have become institutional, health and pharmaceutical lessons that need an urgent reminder for future generations. It remains to be hoped that the Agreement will be valid and up to date at the different levels (scientific, pharmaceutical and institutional) that it calls for in order to advance a global agenda in accordance with the axiological precepts of the United Nations system. This means promoting the principles of equity and solidarity among people and countries in the context of pandemic emergencies in order to respond to and prepare for the health situation.

## Conclusion

A core aspect of the Agreement favored by the WHO focuses on the need to build an early warning system to avoid the expansion of the catastrophic situations of the recent past, associated in this last case with the COVID-19 pandemic. This includes, without saying so, advancing a comprehensive approach that integrates the simultaneity of historical-contextual, ecological and behavioral processes in the emergence of foreign pathogens. The goal of intertwining the expansion of the economy, cultural habits of consumption, climate change and human health is to recognize the urgency of a new explanation and understanding of the systemic functioning of planet Earth. Certainly, the probability of massive contagions due to the interrelation between deforestation, expansion of industrial agriculture and extension of livestock farming have become a critical warning to the systemic interdependence of the globalization of infectious diseases. This epistemic slippage is inscribed in the need to think of the world as a fluid totality in the terms of the physicist Dave Bohm, to reconstruct the systemic intertwining's and variegations of a crisis that integrates other global crises such as climate change, social inequalities and forms of historical discrimination in the world system.

Undoubtedly, WHO's policy of preventing future pandemics implies promoting a comprehensive and rigorous analysis that includes explanations of the structural causes of the irruption of foreign pathogens. The comprehensive nature of the Agreement aims at a systematic review of the nomological patterns that contributed to the zoonotic outbreak of the pandemic, integrating anthropogenic activity with the planetary debate on climate change. The expansion of the economy on a globalized scale is presented as one of the organizing principles of global extraction, production, distribution and consumption ranging from raw materials to manufactures. Taken together, the combined impacts of human action are leading to catastrophic processes that shape the emergence of a mass extinction produced by events associated with the economy. This forces us to think critically about the dramatic simultaneity between the intersection of the global economic system and the functioning of natural ecosystems on planet Earth. The impact of climate change on the degradation of terrestrial and marine ecosystems increases the emergence of alien pathogens and harmful blooms, as a consequence of the intertwining of deforestation, defaunation and nutrient pollution that act on life on the planet and human health. These combined processes form a destructive vector that manifests itself in global warming, melting of the poles, rising sea levels, acidification of the oceans and destruction of genetic biodiversity.

The Anthropocene, as a new epochal designation that includes a set of human activities that have become a geological force that is substantially modifying the climate, is at the center of this planetary debate. On the one hand, the translation of the global system of the economy in its immediate effects is represented in magnitudes such as

“the growth rate of the number of vehicles, of fertilizer consumption, of water consumption, of the number of dams, of fast-food megabusinesses or of the gross domestic product (GDP)”.<sup>13</sup> On the other hand, addressing the health crisis and the climate crisis as if they were independent contributes to increasing planetary risks in that “rising temperatures, extreme weather events, air pollution and the spread of infectious diseases are some of the main health threats exacerbated by climate change”.<sup>14</sup> The objective of the Agreement is to draw attention to zoonotic events that could occur as a consequence of the catastrophic intersection between human activity and the functioning of natural ecosystems.

We start from the assumption that complex systems can develop and preserve a specific systemic order only under the condition that their environment is of a higher complexity. In this sense there is a kind of ecological pressure of complexity not only as a condition for the emergence, but also for the functioning of complex systems. Both conditions, taken together, constitute the premise of evolutionary-theoretical analyses that deal not only with the construction, but also with the conservation and destruction of systems immersed in transforming environments.<sup>15</sup>

This comprehensive, non-linear approach understands the relationship between environmental complexity and time scales (in a human perspective) to advance explanations of ecological pressures (biodiversity loss) resulting from the combined effects of deforestation, defaunation, air and marine pollution. “Biodiversity loss could eventually become the most pervasive global environmental change facing our species, as all taxa that have disappeared from the Earth will disappear forever”.<sup>13</sup> In this context, anthropogenic activity (wars, economic expansion, cultural habits of consumption) becomes the transforming vector of natural ecosystems and, consequently, planetary effects associated with the irruption of foreign pathogens and climate change. The chaotic interaction between systems that continuously feedback and modify each other drives a multiplicity of complex causalities that are unlikely to be controlled in the foreseeable future.

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## Conflicts of interest

The author declares that there are no conflicts of interest.

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