

Global pandemic treaty: negotiators must not repeat climate errors

The WHO's draft agreement proposes a COP-like process. That's unlikely to improve on the world's disastrous COVID response.

The global response to COVID-19 represented a “catastrophic failure of the international community in showing solidarity and equity”. This frank assessment comes in the opening line of the first, or ‘zero’, draft of a new international pandemic agreement, published by the World Health Organization (WHO) last week. The agreement is intended to help the world to better prepare for future pandemics. Negotiations over the details are due to start later this month and are likely to last at least a year.

Although it doesn't say so explicitly, the WHO's statement can be read as a rebuke to the leaders of high-income nations, highlighting the fact that their response to the ongoing pandemic has not been a model of cooperation or compassion. A promise to properly support a vaccine-distribution scheme called COVAX went unfulfilled, undermining its potential. Rich countries over-ordered and hoarded vaccines, stopping them from reaching people in other countries who needed them. Some of the world's best-known and well-respected pharmaceutical companies fought to stop intellectual property (IP) being shared. Had they not done so, more manufacturers could have produced vaccines and treatments, and more lives could have been saved. The treaty drafted by the WHO is intended to ensure that this behaviour is never repeated. But as *Nature* has argued before, a treaty on its own offers no guarantee that promises will be kept.

Share and share alike

The draft text encourages the waiving of applicable IP rights for a defined period during a pandemic. In addition, at least one-fifth of relevant vaccines must be deposited with the WHO, to ensure that sufficient numbers reach the world's poorest and most vulnerable people at the same time as they reach people in richer countries. Prices and contracts should be made public – something that didn't happen during the COVID-19 pandemic, allowing countries to outbid each other for vaccines by offering higher prices that only pharmaceutical companies were a party to.

The current wording also recognizes the importance of open science and the sharing of data such as viral genome sequences. Last month, the WHO urged China's authorities



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to share sequence data, as well as information on cases, hospitalizations and vaccination rates. Another point emphasized in the zero draft is that countries that share their scientific knowledge – as many low-income countries did during the pandemic – should also share in the benefits.

All of this is necessary and overdue, and has the backing of scientists and campaigning organizations. But researchers are rightly concerned about the lack of clarity on how the treaty will work in practice, and how signatories will be held to their promises. The WHO recommends that countries make decisions through a conference of the parties (COP), a democratic forum in which all countries have an equal voice in decision-making.

But COPs are expensive to run, and the creation of such a framework would mean that the WHO – which faces a constant struggle to get countries to fund it properly – would struggle even more. COPs also take their time to reach decisions, as we know all too well from those governing international action on concerns such as climate change and biodiversity loss.

Perhaps most important of all, a forum of 200-odd countries, plus tens of thousands of observers and lobbyists, is, arguably, not the best way to ensure that an agreement is adhered to, especially when the onus for action lies with a relatively small number of high-income nations. There's good evidence from the climate-change COP process that even legally binding agreements cannot compel nations to meet their commitments.

Sensibly, the WHO wants countries to agree on some kind of monitoring system – a way to get them to report back on whether promises on funding, IP or vaccines are being kept. But negotiators and their teams would also be well advised

to explore alternative ways of achieving the agreement's aims. Researchers who study the impact of international treaties could advise on other potential models.

It's clear from the WHO's zero draft text that the agency is determined to avoid a repeat of some of the worst of the behaviours seen during the pandemic. And it is reassuring to see, throughout the text, encouragement for governments and companies to be transparent and willing to share, particularly when it comes to know-how and products that are based on publicly funded research. Had this happened previously, the coronavirus pandemic might well have been behind us by now.

The world has little more than a year to convert the draft into finished text. The commitments in the current version will probably be watered down before an agreement is reached. But as researchers prepare to publish their studies, and campaigners rush to accelerate campaigning, it is easy to forget the need to determine the kinds of institution and structure that are essential to ensuring an agreement is delivered on. Institutional structures are as important as the content of treaties. The WHO and national negotiators need to ask themselves what value an agreement has if it includes everything in the WHO's zero draft, but proves unworkable in practice.

Indoor air pollution: the invisible killer that should be more visible to science

Researchers and policymakers are only now waking up to the effects of dirty indoor air. As ever, poorer communities are most affected.

The image of air pollution is often one of chimney stacks and smoggy cities. But this can be a misleading picture. Indoor air pollution killed more than 3 million people in 2020, almost as many as did its outdoor counterpart. And yet it has been mostly invisible to science, and to policy.

In a Comment article in *Nature* this week (page 220), three researchers describe how that needs to change. Christopher Whitty, the UK government's chief medical adviser, and colleagues Deborah Jenkins and Alastair Lewis, show what researchers and policymakers must do to improve our understanding of, and ultimately to reduce, indoor air pollution. Most people spend 80–90% of their time indoors, in homes, schools and places of work, the authors observe. But, in contrast to detailed and legally enforceable national standards for

outdoor pollution that exist in many parts of the world, indoor spaces are mostly not subject to similar air-quality controls.

The authors are right to draw attention to something that has been neglected for too long. Progress is hampered by our ignorance of basic facts, such as what indoor air pollution actually consists of. It includes familiar compounds such as carbon monoxide and carbon dioxide from coal burning, and nitrogen oxides from natural-gas boilers. But there is also a multiplicity of other sources, for example chemicals from synthetic compounds in paints and fabrics, mould from damp buildings and viruses and bacteria from human breath. Researchers need to be doing more to understand how all of these circulate, how they interact with each other, their impact on human health and how they will be affected by climate change.

Although indoor air pollution is a global problem, the right strategies for combating it will vary between regions, countries and even localities. "Construction styles and materials, climate and energy sources, as well as behaviours and cultural practices, all affect indoor air", the authors point out.

What's clear, however, is that, just as poorer and marginalized people are disproportionately affected by bad outdoor air quality (A. Jbaily *et al. Nature* **601**, 228–233; 2022), indoor air pollution is a source of inequality, too. In sub-Saharan Africa, for example, 700,000 people are estimated to have died from indoor air pollution in 2019, many of them from the effects of particles from indoor biomass stoves (B. Khavari *et al. Nature Sustain.* <https://doi.org/grqrbg>; 2023). Cleaner alternatives do exist, but their large-scale use needs a panoply of research-based interventions – from engineering and design to behavioural sciences.

In richer or colder countries, people on lower incomes tend to rely on gas or solid fuels for heating, or live in homes affected by damp and mould. Targeted interventions to improve air quality by, for example, incentivizing the switch to cleaner fuels, can be a win-win situation, with the happy complementary effect of assisting decarbonization, too. (The reverse is, perhaps, less true: interventions to improve energy efficiency by better insulating indoor environments might have a negative effect on air quality, a relationship that must be carefully examined.) But, as the authors write, "it is essential that decarbonization, building improvement and gains in indoor air quality are, as much as possible, delivered equitably across society."

Indoor air pollution clearly needs to attract urgent attention from policymakers – the most recent guidelines from the World Health Organization on damp and mould were published in 2009. That's where Whitty and colleagues' article, coming from researchers who advise governments, will undoubtedly help. Ultimately, science must be better prepared for when it is called on to advise about the various strategies. Indoor air pollution should become as mainstream a public-health concern as its outdoor sibling, with all the requisite funding that flows towards it. This is one good intention that shouldn't go up in a puff of smoke.

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