# Politics DA

### NC - Infrastructure DA

**Biden not pushingthe waiver**

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Reallocating excess doses and relying on pharmaceutical companies looking to profit off the prolongation of the pandemic that has driven demand for additional booster doses will not be enough to end this crisis. **Despite his promise to support an IP waiver for Covid-19 vaccines, Biden has done seemingly little to encourage his counterparts in other wealthy nations including the European Union and United Kingdom to do the same**; instead, these nations have continued to obstruct the waiver at the World Trade Organization (WTO). Going beyond a single statement of support, President Biden should champion this proposal and leverage his strong personal connections with allies to ensure its prompt passage and enactment at the WTO.

**Biden going weak on IPR burns capital and trades-off with other agenda items. Arun 21:**

TK Arun, April 15, 2021, Economic times, View: With the US sitting on a pile of vaccines, Biden needs to change tack on policy that harms the world, https://economictimes.indiatimes.com/news/economy/foreign-trade/view-with-the-us-sitting-on-a-pile-of-vaccines-biden-needs-to-changes-tack-on-policy-that-harms-the-world/articleshow/82058647.cms?from=mdr

So, what **can Biden** do, to scale up vaccine production? Remove export restrictions. Buy out the intellectual property rights (IPRs) of successful vaccine candidates, strip vaccine know-how of patents and royalties**,** and make it available as a global public good. This is tactically superior to waiving IPR at the World Trade Organisation (WTO) for Biden, as the **Republicans have already started a campaign against such threats to capitalism and Biden needs all the political capital he has to push his American Jobs Plan through the Senate.**

#### The infrastructure and budget bills are key to combating climate change and are on the knife’s edge to pass.

Grandoni & Dennis 8/11 - Dino Grandoni and Brady Dennis [Environment reporters], “Biden aims for sweeping climate action as infrastructure, budget bills advance,” *Washington Post* (Web). 8/11/21. Accessed 9/15/21. <https://www.washingtonpost.com/climate-environment/2021/08/10/biden-climate-congress/> AT

The Senate approved on Tuesday a sweeping bipartisan $1.2 trillion infrastructure bill with funding for many public works meant to cut climate-warning emissions. A day later, Democrats in the chamber took a major step to adopt an even bigger, $3.5 trillion budget bill supporting yet more programs for cleaning up power plants and cars.¶ Each, if passed, would invest billions of dollars in the sort of clean energy transition the United States must make to have any chance of hitting the goal set by President Biden to cut the nation’s emissions by at least 50 percent by the end of this decade.¶ “This was one of the most significant legislative days we’ve had in a long time here,” Senate Majority Leader Charles E. Schumer (D-N.Y.) told reporters Wednesday.¶ But both bills face a potentially bumpy road ahead. Democrats still need to draft in committees the details of their massive budget reconciliation package over the coming weeks, with not a single vote to spare in the 50-50 split Senate. The bipartisan public-works bill, meanwhile, still needs approval from the House, where progressive Democrats hold significant sway.¶ The moves on Capitol Hill come as hundreds of scientists detailed this week the intensifying fires, floods and other catastrophes that will continue to worsen until humans dramatically scale back greenhouse gas emissions.¶ Scientists assembled by the United Nations made clear in a landmark report Monday that time is running out for the world to make immediate and dramatic cuts to emissions produced by the burning of fossil fuels and other human activities. U.N. Secretary General António Guterres called the sobering, sprawling report from the Intergovernmental Panel on Climate Change a “code red for humanity.”

**Warming is linear—every decrease in rising temperatures radically mitigates the risk of existential climate change.**

**Xu and Ramanathan 17,** Yangyang Xu, Assistant Professor of Atmospheric Sciences at Texas A&M University; and Veerabhadran Ramanathan, Distinguished Professor of Atmospheric and Climate Sciences at the Scripps Institution of Oceanography, University of California, San Diego, 9/26/17, “Well below 2 °C: Mitigation strategies for avoiding dangerous to catastrophic climate changes,” Proceedings of the National Academy of Sciences of the United States of America, Vol. 114, No. 39, p. 10315-10323//recut CHS PK

We are proposing the following extension to the DAI risk categorization: warming greater than 1.5 °C as “dangerous”; warming greater than 3 °C as “catastrophic?”; and warming in excess of 5 °C as “unknown??,” with the understanding that changes of this magnitude, not experienced in the last 20+ million years, pose existential threats to a majority of the population. The question mark denotes the subjective nature of our deduction and the fact that catastrophe can strike at even lower warming levels. The justifications for the proposed extension to risk categorization are given below. From the IPCC burning embers diagram and from the language of the Paris Agreement, we infer that the DAI begins at warming greater than 1.5 °C. Our criteria for extending the risk category beyond DAI include the potential risks of climate change to the physical climate system, the ecosystem, human health, and species extinction. Let us first consider the category of catastrophic (3 to 5 °C warming). The first major concern is the issue of tipping points. Several studies (48, 49) have concluded that 3 to 5 °C global warming is likely to be the threshold for tipping points such as the collapse of the western Antarctic ice sheet, shutdown of deep water circulation in the North Atlantic, dieback of Amazon rainforests as well as boreal forests, and collapse of the West African monsoon, among others. While natural scientists refer to these as abrupt and irreversible climate changes, economists refer to them as catastrophic events (49). Warming of such magnitudes also has catastrophic human health effects. Many recent studies (50, 51) have focused on the direct influence of extreme events such as heat waves on public health by evaluating exposure to heat stress and hyperthermia. It has been estimated that the likelihood of extreme events (defined as 3-sigma events), including heat waves, has increased 10-fold in the recent decades (52). Human beings are extremely sensitive to heat stress. For example, the 2013 European heat wave led to about 70,000 premature mortalities (53). The major finding of a recent study (51) is that, currently, about 13.6% of land area with a population of 30.6% is exposed to deadly heat. The authors of that study defined deadly heat as exceeding a threshold of temperature as well as humidity. The thresholds were determined from numerous heat wave events and data for mortalities attributed to heat waves. According to this study, a 2 °C warming would double the land area subject to deadly heat and expose 48% of the population. A 4 °C warming by 2100 would subject 47% of the land area and almost 74% of the world population to deadly heat, which could pose existential risks to humans and mammals alike unless massive adaptation measures are implemented, such as providing air conditioning to the entire population or a massive relocation of most of the population to safer climates. Climate risks can vary markedly depending on the socioeconomic status and culture of the population, and so we must take up the question of “dangerous to whom?” (54). Our discussion in this study is focused more on people and not on the ecosystem, and even with this limited scope, there are multitudes of categories of people. We will focus on the poorest 3 billion people living mostly in tropical rural areas, who are still relying on 18th-century technologies for meeting basic needs such as cooking and heating. Their contribution to CO2 pollution is roughly 5% compared with the 50% contribution by the wealthiest 1 billion (55). This bottom 3 billion population comprises mostly subsistent farmers, whose livelihood will be severely impacted, if not destroyed, with a one- to five-year megadrought, heat waves, or heavy floods; for those among the bottom 3 billion of the world’s population who are living in coastal areas, a 1- to 2-m rise in sea level (likely with a warming in excess of 3 °C) poses existential threat if they do not relocate or migrate. It has been estimated that several hundred million people would be subject to famine with warming in excess of 4 °C (54). However, there has essentially been no discussion on warming beyond 5 °C. Climate change-induced species extinction is one major concern with warming of such large magnitudes (>5 °C). The current rate of loss of species is ∼1,000-fold the historical rate, due largely to habitat destruction. At this rate, about 25% of species are in danger of extinction in the coming decades (56). Global warming of 6 °C or more (accompanied by increase in ocean acidity due to increased CO2) can act as a major force multiplier and expose as much as 90% of species to the dangers of extinction (57). The bodily harms combined with climate change-forced species destruction, biodiversity loss, and threats to water and food security, as summarized recently (58), motivated us to categorize warming beyond 5 °C as unknown??, implying the possibility of existential threats. Fig. 2 displays these three risk categorizations (vertical dashed lines).

#### Climate change disproportionately impacts disadvantaged countries and people of lower socioeconomic status.

#### McCarthy ’21 [Global Citizen Writer]. “Why Climate Change and Poverty Are Inextricably Linked.” *Global Citizen*, https://www.facebook.com/GLBLCTZN, https://www.globalcitizen.org/en/content/climate-change-is-connected-to-poverty/. Accessed 29 June 2021.

**“Climate change** is going to **amplify the** already existing **divide between those who have resources and those who do not**,” Eliot Levine, director of the environment technical support Unit at Mercy Corps, told Global Citizen. “We are already seeing the impacts of climate change around the world, and the latest IPCC reports clearly illustrate that we are very quickly heading towards experiencing them at a greater scale and degree of severity than we had previously understood," he added. **As global temperatures and sea levels rise,** as the oceans acidify and precipitation patterns get rearranged, **people living in poverty are the most severely impacted.** Since **climate change affects everything** from **where a person can live** to their **access to health care**, **millions of people could be plunged further into poverty** as environmental conditions worsen. **This is especially true for poor people living in low-income countries.** Just as climate change deepens inequalities within a country, it also further stratifies international relations because some nations are [more threatened by it than others](https://www.vice.com/en_in/article/7xgdgq/nine-countries-most-threatened-by-climate-change-crisis-disaster-hazard-all-asia-report-finds). And **poor countries have fewer resources to deal with the problem.** **“The world’s poorest communities often live on the most fragile land, and they are** often **politically, socially, and economically marginalized, making them especially vulnerable to the impacts of climate change,”** Christina Chan, director of the World Resource Institute’s Climate Resilience Practice, told Global Citizen. “**More frequent and intense storms, flooding, drought, and changes in rainfall patterns** are already **impacting these communities, making it difficult for them to secure decent livelihoods.”**

#### People in poverty and Indigenous people who have been oppressed by colonizers are put at an extreme disadvantage in dealing with climate change.

**EPA** **‘12**- “Climate Impacts on Society.” *EPA*, Environmental Protection Agency, 22 Dec. 2016, 19january2017snapshot.epa.gov/climate-impacts/climate-impacts-society\_.html.

As a society, we have structured our day-to-day lives around historical and current climate conditions. We are accustomed to a normal range of conditions and may be sensitive to extremes that fall outside of this range. Climate change could affect our society through impacts on a number of different social, cultural, and natural resources. For example, climate change could affect human health, infrastructure, and transportation systems, as well as energy, food, and water supplies. Number of days likely to exceed 100°F by the end of this century - in low and high emissions scenarios. Source: USGCRP (2009) Some groups of people will likely face greater challenges than others. Climate change may especially impact people who live in areas that are vulnerable to coastal storms, drought, and sea level rise or people who are poor. Similarly, some types of professions and industries may face considerable challenges from climate change. Professions that are closely linked to weather and climate, such as outdoor tourism and agriculture, will likely be especially affected. Impacts on Vulnerability and Equity Projected climate change will affect certain groups of people more than others, depending on where they live and their ability to cope with different climate hazards. In some cases, the impacts of climate change would worsen existing vulnerabilities. Where people live influences their vulnerability to climate change. Over the past four decades, population has grown rapidly in coastal areas and in the southern and western regions of the United States. These areas are most sensitive to coastal storms, drought, air pollution, and heat waves. [1] Populations in the Mountain West will likely face water shortages and increased wildfires in the future. [1] Arctic populations will likely experience problems with melting permafrost and reduced sea ice. [1] Along the coasts and across the western United States, both increasing population and changes in climate place growing demands on transportation, water, and energy infrastructure. [1] [2] Elderly people are particularly prone to heat stress. Ability to Cope Different groups have different abilities to cope with climate change impacts. People who live in poverty may have a difficult time coping with changes. These people have limited financial resources to cope with heat, relocate or evacuate or respond to increases in the cost of food. [1] [2] Older adults may be among the least able to cope with impacts of climate change. Older residents make up a larger share of the population in warmer areas of the United States. These areas will likely experience higher temperatures, tropical storms, or extended droughts in the future. [1] Young children are another sensitive age group, since their immune system and other bodily systems are still developing and they rely on others to care for them in disaster situations. [2] To find out more about climate change and health, please visit the Health Impacts page. Native Americans Native Americans are particularly vulnerable to projected changes in climate for a number of reasons. Their communities are closely tied to specific reservation boundaries that restrict their ability to relocate to avoid climate change impacts. Their opportunity to change their livelihoods may be limited, and they may have difficulty coping with impacts, including those on water resources, agriculture and ecosystems. For example, tribes located in the Southwest are projected to experience changes in water quality and water availability on their lands. [1] Furthermore, climate change may significantly affect cultural traditions practiced by tribes. For example, certain Alaskan Natives have cultural ties with animals, such as seals and caribou, which will experience changes to their habitats. [1] Urban Populations City residents and urban infrastructure have distinct sensitivities to climate change impacts. [1] For example, heat waves may be amplified in cities because cities absorb more heat during the day than suburban and rural areas. Cities are more densely populated than suburban or rural areas. In fact, more than 80% of the U.S. population lives in urban areas. As a result, increases in heat waves, drought, or violent storms in cities would affect a larger number of people than in suburban or rural areas. [1] Higher temperatures and more extreme events will likely affect the cost of energy air and water quality, and human comfort and health in cities. City dwellers may also be particularly susceptible to vulnerabilities in aging infrastructure. This includes drainage and sewer systems, flood and storm protection assets, transportation systems, and power supply during periods of peak demand, which typically occur during summer heat waves. Federal crop and flood insurance, and non-weather-related losses represent about 10% of the total each. Privately insured weather-related events represent roughly 70% of the losses. In the 1980s losses fluctuated around two to five billion dollars. In 1992 and 2001 there are small peaks at about 30 billion dollars. In 2004 and 2005 losses reached about 75 billion dollars. View enlarged image Weather-related and non-weather-related insurance losses over time. Smaller-scale losses (many of which are weather-related) are not shown since they are not comprehensively reported by the U.S. insurance industry. Impacts on Economic Activities and Services Certain areas of the United States benefit from being located close to natural resources that support the local economy. Climate change could threaten these resources, as well as the goods and services they produce and the jobs and livelihoods of those who depend upon them. [1] For example, climate change will likely affect farming communities, tourism and recreation, and the insurance industry. Communities that developed around the production of different agricultural crops, such as corn, wheat, or cotton, depend on the climate to support their way of life. Climate change will likely cause the ideal climate for these crops to shift northward. Combined with decreasing rural populations, as in the Great Plains, a changing climate may fundamentally change many of these communities. Certain agricultural products, such as maple syrup and cranberries in the Northeast, may disappear entirely from the United States. These crops would then have to be imported. [1] Climate change will also likely affect tourism and recreational activities. A warming climate and changes in precipitation patterns will likely decrease the number of days when recreational snow activities such as skiing and snowmobiling can take place. In the Southwest and Mountain West, an increasing number of wildfires could affect hiking and recreation in parks. Beaches could suffer erosion due to sea level rise and storm surge. Changes in the migration patterns of fish and animals would affect fishing and hunting. Communities that support themselves through these recreational activities would feel economic impacts as tourism patterns begin to change. [1] Climate change may make it harder and more expensive for many people to insure their homes, businesses, or other valuable assets in risk-prone areas. Insurance is one of the primary mechanisms used to protect people against weather-related disasters. [1] We rely on insurance to protect investments in real estate, agriculture, transportation, and utility infrastructure by distributing costs across society. Climate change is projected to increase the frequency and intensity of extreme weather events, such as heat waves, droughts, and floods. These changes are likely to increase losses to property and cause costly disruptions to society. Escalating losses have already affected the availability and affordability of insurance. More frequent losses, increased variability in the type and location of impacts, and increases in widespread losses that occur at the same time would increase the risks to insurers and their customers. [1]

# Innovation DA

## NC

#### The pharma industry is strong now but patents are key for continued economic growth. Batell and PhRMA 14:

Batell and PhRMA {Battelle is the world’s largest nonprofit independent research and development organization, providing innovative solutions to the world’s most pressing needs through its four global businesses: Laboratory Management, National Security, Energy, Environment and Material Sciences, and Health and Life Sciences. The Pharmaceutical Research and Manufacturers of America (PhRMA) represents the country’s leading pharmaceutical research and biotechnology companies, which are devoted to inventing medicines that allow patients to live longer, healthier, and more productive lives.}, 14 – “The U.S. Biopharmaceutical Industry: Perspectives on Future Growth and The Factors That Will Drive It,” http://phrma-docs.phrma.org/sites/default/files/pdf/2014-economic-futures-report.pdf//marlborough-wr//

Compared to other capital-intensive, advanced manufacturing industries in the U.S., the biopharmaceutical industry is a leader in R&D investment, IP generation, venture capital investment, and R&D employment. Policies and infrastructure that helped foster these innovative activities have allowed the U.S. to seize global leadership in biopharmaceutical R&D over the past 30 years. However, as this report details, other countries are seeking to compete with the U.S. by borrowing and building upon some of these pro-innovation policies to improve their own operating environment and become more favorable to biopharmaceutical companies making decisions about where to locate their R&D and manufacturing activities. A unique contribution of this report was the inclusion of the perspective of senior-level strategic planning executives of biopharmaceutical companies regarding what policy areas they see as most likely to impact the favorability of the U.S. business operating environment. The executives cited the following factors as having the most impact on the favorability of the operating environment and hence, potential growth of the innovative biopharmaceutical industry in the U.S.: • Coverage and payment policies that support and encourage medical innovation • A well-functioning, science-based regulatory system • Strong IP protection and enforcement in the U.S. and abroad The top sub-attribute identified as driving future biopharmaceutical industry growth in the U.S. cited by executives was a domestic IP system that provides adequate patent rights and data protection. Collectively, these factors underscore the need to reduce uncertainties and ensure adequate incentives for the lengthy, costly, and risky R&D investments necessary to develop new treatments needed by patients and society to address our most costly and challenging diseases. With more than 300,000 jobs at stake between the two scenarios, the continued growth and leadership of the U.S. innovative biopharmaceutical industry cannot be taken for granted. Continued innovation is fundamental to U.S. economic well-being and the nation’s ability to compete effectively in a globalized economy and to take advantage of the expected growth in demand for new medicines around the world. Just as other countries have drawn lessons from the growth of the U.S. biopharmaceutical sector, the U.S. needs to assess how it can improve the environment for innovation and continue to boost job creation by increasing R&D investment, fostering a robust talent pool, enhancing economic growth and sustainability, and continuing to bring new medicines to patients.

#### COVID has kept patents and innovation strong, but continued protection is key to innovation by incentivizing biomedical research – it’s also crucial to preventing counterfeit medicines, economic collapse, and fatal diseases, which independently turns case. Macdole and Ezell 4-29:

Jaci Mcdole and Stephen Ezell {Jaci McDole is a senior policy analyst covering intellectual property (IP) and innovation policy at the Information Technology and Innovation Foundation (ITIF). She focuses on IP and its correlations to global innovation and trade. McDole holds a double BA in Music Business and Radio-Television with a minor in Marketing, an MS in Education, and a JD with a specialization in intellectual property (Southern Illinois University Carbondale). McDole comes to ITIF from the Institute for Intellectual Property Research, an organization she co-founded to study and further robust global IP policies. Stephen Ezell is vice president, global innovation policy, at the Information Technology and Innovation Foundation (ITIF). He comes to ITIF from Peer Insight, an innovation research and consulting firm he cofounded in 2003 to study the practice of innovation in service industries. At Peer Insight, Ezell led the Global Service Innovation Consortium, published multiple research papers on service innovation, and researched national service innovation policies being implemented by governments worldwide. Prior to forming Peer Insight, Ezell worked in the New Service Development group at the NASDAQ Stock Market, where he spearheaded the creation of the NASDAQ Market Intelligence Desk and the NASDAQ Corporate Services Network, services for NASDAQ-listed corporations. Previously, Ezell cofounded two successful innovation ventures, the high-tech services firm Brivo Systems and Lynx Capital, a boutique investment bank. Ezell holds a B.S. from the School of Foreign Service at Georgetown University, with an honors certificate from Georgetown’s Landegger International Business Diplomacy program.}, 21 - ("Ten Ways Ip Has Enabled Innovations That Have Helped Sustain The World Through The Pandemic," Information Technology & Innovation Foundation, 4-29-2021, https://itif.org/publications/2021/04/29/ten-ways-ip-has-enabled-innovations-have-helped-sustain-world-through)//marlborough-wr/

To better understand the role of IP in enabling solutions related to COVID-19 challenges, this report relies on 10 case studies drawn from a variety of nations, technical fields, and firm sizes. This is but a handful of the thousands of IP-enabled innovations that have sprung forth over the past year in an effort to meet the tremendous challenges brought on by COVID-19 globally. From a paramedic in Mexico to a veteran vaccine manufacturing company in India and a tech start-up in Estonia to a U.S.-based company offering workplace Internet of Things (IoT) services, small and large organizations alike are working to combat the pandemic. Some have adapted existing innovations, while others have developed novel solutions. All are working to take the world out of the pandemic and into the future. The case studies are: Bharat Biotech: Covaxin Gilead: Remdesivir LumiraDX: SARS-COV-2 Antigen POC Test Teal Bio: Teal Bio Respirator XE Ingeniería Médica: CápsulaXE Surgical Theater: Precision VR Tombot: Jennie Starship Technologies: Autonomous Delivery Robots Triax Technologies: Proximity Trace Zoom: Video Conferencing As the case studies show, IP is critical to enabling innovation. Policymakers around the world need to ensure robust IP protections are—and remain—in place if they wish their citizens to have safe and innovative solutions to health care, workplace, and societal challenges in the future. THE ROLE OF INTELLECTUAL PROPERTY IN R&D-INTENSIVE INDUSTRIES Intangible assets, such as IP rights, comprised approximately 84 percent of the corporate value of S&P 500 companies in 2018.4 For start-ups, this means much of the capital needed to operate is directly related to IP (see Teal Bio case study for more on this). IP also plays an especially important role for R&D-intensive industries.5 To take the example of the biopharmaceutical industry, it is characterized by high-risk, time-consuming, and expensive processes including basic research, drug discovery, pre-clinical trials, three stages of human clinical trials, regulatory review, and post-approval research and safety monitoring. The drug development process spans an average of 11.5 to 15 years.6 For every 5,000 to 10,000 compounds screened on average during the basic research and drug discovery phases, approximately 250 molecular compounds, or 2.5 to 5 percent, make it to preclinical testing. Out of those 250 molecular compounds, approximately 5 make it to clinical testing. That is, 0.05 to 0.1 percent of drugs make it from basic research into clinical trials. Of those rare few which make it to clinical testing, less than 12 percent are ultimately approved for use by the U.S. Food and Drug Administration (FDA).7 In addition to high risks, drug development is costly, and the expenses associated with it are increasing. A 2019 report by the Deloitte Center for Health Solutions concluded that since 2010 the average cost of bringing a new drug to market increased by 67 percent.8 Numerous studies have examined the substantial cost of biopharmaceutical R&D, and most confirm investing in new drug development requires $1.7 billion to $3.2 billion up front on average.9 A 2018 study by the Coalition for Epidemic Preparedness found similar risks and figures for vaccines, stating, “In general, vaccine development from discovery to licensure can cost billions of dollars, can take over 10 years to complete, and has an average 94 percent chance of failure.”10 Yet, a 2010 study found that 80 percent of new drugs—that is, the less than 12 percent ultimately approved by the FDA—made less than their capitalized R&D costs.11 Another study found that only 1 percent (maybe three new drugs each year) of the most successful 10 percent of FDA approved drugs generate half of the profits of the entire drug industry.12 To say the least, biopharmaceutical R&D represents a high-stakes, long-term endeavor with precarious returns. Without IP protection, biopharmaceutical manufacturers have little incentive to take the risks necessary to engage in the R&D process because they would be unable to recoup even a fraction of the costs incurred. Diminished revenues also result in reduced investments in R&D which means less research into cancer drugs, Alzheimer cures, vaccines, and more. IP rights give life-sciences enterprises the confidence needed to undertake the difficult, risky, and expensive process of life-sciences innovation secure in the knowledge they can capture a share of the gains from their innovations, which is indispensable not only to recouping the up-front R&D costs of a given drug, but which can generate sufficient profits to enable investment in future generations of biomedical innovation and thus perpetuate the enterprises into the future.13 THE IMPORTANCE OF INTELLECTUAL PROPERTY TO INNOVATION Although anti-IP proponents have attacked biopharmaceutical manufacturers particularly hard, the reality is all IP-protected innovations are at risk if these rights are ignored, or vitiated. Certain arguments have shown a desire for the term “COVID-19 innovations” to include everything from vaccines, therapeutics, diagnostics, and PPE to biotechnology, AI-related data, and educational materials.14 This could potentially open the floodgates to invalidate IP protection on many of the innovations highlighted in this report. However, much of the current discussion concerning IP focuses almost entirely on litigation fears or R&D incentives. Although R&D is an important aspect of IP, as previously mentioned, these discussions ignore the fact that IP protection can be—and often is—used for other purposes, including generating initial capital to create a company and begin manufacturing and, more importantly, using licensing agreements and IP to track the supply chain and ensure quality control of products. This report highlights but a handful of the thousands of IP-enabled innovations that have sprung forth over the past year in an effort to meet the tremendous challenges brought on by COVID-19 globally. In 2018, Forbes identified counterfeiting as the largest criminal enterprise in the world.15 The global struggle against counterfeit and non-regulated products, which has hit Latin America particularly hard during the pandemic, proves the need for safety and quality assurance in supply chains.16 Some communities already ravaged by COVID-19 are seeing higher mortality rates related to counterfeit vaccines, therapeutics, PPE, and cleaning and sanitizing products.17 Polish authorities discovered vials of antiwrinkle treatment labeled as COVID-19 vaccines. 18 In Mexico, fake vaccines sold for approximately $1,000 per dose.19 Chinese and South African police seized thousands of counterfeit vaccine doses from warehouses and manufacturing plants.20 Meanwhile, dozens of websites worldwide claiming to sell vaccines or be affiliated with vaccine manufacturers have been taken down.21 But the problem is not limited to biopharmaceuticals. The National Intellectual Property Rights Coordination Center has recovered $48 million worth of counterfeit PPE and other products.22 Collaborative efforts between law enforcement and manufacturers have kept numerous counterfeits from reaching the population. In countries with strong IP protection, the chances of counterfeit products reaching the market are significantly lower. This is largely because counterfeiting tends to be an IP-related issue, and these countries generally provide superior means of tracking the supply chain through trademarks, trade secrets, and licensing agreements. This enables greater quality control and helps manufacturers maintain a level of public confidence in their products. By controlling the flow of knowledge associated with IP, voluntary licensing agreements provide innovators with opportunities to collaborate, while ensuring their partners are properly equipped and capable of producing quality products. Throughout this difficult time, the world has seen unexpected collaborations, especially between biopharmaceutical companies worldwide such as Gilead and Eva Pharma or Bharat Biotech and Ocugen, Inc. Throughout history, and most significantly in the nineteenth century through the widespread development of patent systems and the ensuing Industrial Revolution, IP has contributed toward greater economic growth.23 This is promising news as the world struggles for economic recovery. A 2021 joint study by the EU Intellectual Property Office (EUIPO) and European Patent Office (EPO) shows a strong, positive correlation between IP rights and economic performance.24 It states that “IP-owning firms represent a significantly larger proportion of economic activity and employment across Europe,” with IP-intensive industries contributing to 45 percent of gross domestic product (GDP) (€6.6 trillion; US$7.9 trillion).25 The study also shows 38.9 percent of employment is directly or indirectly attributed to IP-intensive industries, and IP generates higher wages and greater revenue per employee, especially for small-to-medium-sized enterprises.26 That concords with the United States, where the Department of Commerce estimated that IP-intensive industries support at least 45 million jobs and contribute more than $6 trillion dollars to, or 38.2 percent of, GDP.27 In 2020, global patent filings through the World Intellectual Property Organization’s (WIPO) Patent Cooperation Treaty (PCT) system reached a record 275,900 filings amidst the pandemic, growing 4 percent from 2019.28 The top-four nations, which accounted for 180,530 of the patent applications, were China, the United States, Japan, and Korea, respectively.29 While several countries saw an increase in patent filings, Saudi Arabia and Malaysia both saw significant increases in the number of annual applications, with the top two filing growths of 73 percent and 26 percent, respectively.30 The COVID-19 pandemic slowed a lot of things, but it certainly couldn’t stop innovation. There are at least five principal benefits strong IP rights can generate, for both developing and developed countries alike.31 First, stronger IP protection spurs the virtuous cycle of innovation by increasing the appropriability of returns, enabling economic gain and catalyzing economic growth. Second, through patents—which require innovators to disclose certain knowledge as a condition of protection—knowledge spillovers build a platform of knowledge that enables other innovators. For instance, studies have found that the rate of return to society from corporate R&D and innovation activities is at least twice the estimated returns that each company itself receives.32 Third, countries with robust IP can operate more efficiently and productively by using IP to determine product quality and reduce transaction costs. Fourth, trade and foreign direct investment enabled and encouraged by strong IP protection offered to enterprises from foreign countries facilitates an accumulation of knowledge capital within the destination economy. That matters when foreign sources of technology account for over 90 percent of productivity growth in most countries.33 There’s also evidence suggesting that developing nations with stronger IP protections enjoy the earlier introduction of innovative new medicines.34 And fifth, strong IP boosts exports, including in developing countries.35 Research shows a positive correlation between stronger IP protection and exports from developing countries as well as faster growth rates of certain industries.36 The following case studies illustrate these benefits of IP and how they’ve enabled innovative solutions to help global society navigate the COVID-19 pandemic.

#### This sets a precedent that spills over to all future diseases – Hopkins 21:

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The Biden administration’s unexpected support for [temporarily waiving Covid-19 vaccine patents](https://www.wsj.com/articles/u-s-backs-waiver-of-intellectual-property-protection-for-covid-19-vaccines-11620243518?mod=article_inline) won’t have an immediate financial impact on the companies making the shots, industry officials and analysts said. Yet the decision could mark a shift in Washington’s longstanding support of the industry’s valuable intellectual property, patent-law experts said. A waiver, if it does go into effect, may pose long-term risks to the vaccine makers, analysts said. [Moderna](https://www.wsj.com/market-data/quotes/MRNA) Inc., [MRNA -4.12%](https://www.wsj.com/market-data/quotes/MRNA?mod=chiclets) [Pfizer](https://www.wsj.com/market-data/quotes/PFE) Inc. [PFE -3.10%](https://www.wsj.com/market-data/quotes/PFE?mod=chiclets) and other vaccine makers weren’t counting on sales from the developing countries that would gain access to the vaccine technology, analysts said. If patents and other crucial product information behind the technology is made available, it would take at least several months before shots were produced, industry officials said. Yet long-term Covid-19 sales could take a hit if other companies and countries gained access to the technologies and figured out how to use it. Western drugmakers could also confront competition sooner for other medicines they are hoping to make using the technologies. A World Trade Organization waiver could also set a precedent for waiving patents for other medicines, a long-sought goal of some developing countries, patient groups and others to try to reduce the costs of prescription drugs. “It sets a tremendous precedent of waiving IP rights that’s likely going to come up in future pandemics or in other serious diseases,” said David Silverstein, a patent lawyer at Axinn, Veltrop & Harkrider LLP who advises drugmakers. “Other than that, this is largely symbolic.”

#### Pharmaceutical innovation is key to protecting against future pandemics, bioterrorism, and antibiotic resistance.

Marjanovic and Fejiao ‘20 Marjanovic, Sonja, and Carolina Feijao. Sonja Marjanovic, Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitive biology, Imperial College London; B.Sc. in biology, University of Lisbon. "Pharmaceutical Innovation for Infectious Disease Management: From Troubleshooting to Sustainable Models of Engagement." (2020). [Quality Control]

As key actors in the healthcare innovation landscape, pharmaceutical and life sci-ences companies have been called on to develop medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also infectious diseases that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a **bioterrorism con-text**.1 The general threat to public health that is posed by **antimicrobial resistance** is also **well-recognised** as an area **in need of pharmaceutical innovation**. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and compe-tition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an **indispensable** partner in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceu-tical innovation in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is **essential** for socially responsible companies in the sec-tor.2 It is therefore unsurprising that we are seeing indus-try-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently contributing in a variety of ways. Examples include pharmaceutical companies donating existing com-pounds to assess their utility in the fight against COVID-19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating tri-als for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accel-erate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The primary purpose of such innovation is to **benefit patients** and wider **population health**. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be rela-tively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pres-sure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing com-bination product that is being tested for therapeutic poten-tial against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider how pharmaceutical innovation for responding to emerging infectious diseases can best be enabled beyond the current crisis. Many public health threats (including those associated with other **infectious diseases**, **bioterror-ism** agents **and antimicrobial resistance**) are **urgently in need of pharmaceutical innovation**, **even if their impacts are not as visible** to society **as COVID**-19 is in the imme-diate term. The pharmaceutical industry has responded to previous public health emergencies associated with infec-tious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contribu-tions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still **low**.12 There are important policy questions as to whether – and how – industry could engage with such public health threats to an even greater extent under improved innova-tion conditions.

#### Bioterror causes extinction---early response key

Farmer 17 (“Bioterrorism could kill more people than nuclear war, Bill Gates to warn world leaders” http://www.telegraph.co.uk/news/2017/02/17/biological-terrorism-could-kill-people-nuclear-attacks-bill/)

Bioterrorists could one day kill hundreds of millions of people in an attack more deadly than nuclear war, Bill Gates will warn world leaders. Rapid advances in genetic engineering have opened the door for small terrorism groups to tailor and easily turn biological viruses into weapons. A resulting disease pandemic is currently one of the most deadly threats faced by the world, he believes, yet governments are complacent about the scale of the risk. Speaking ahead of an address to the Munich Security Conference, the richest man in the world said that while governments are concerned with the proliferation of nuclear and chemical weapons, they are overlooking the threat of biological warfare. Mr Gates, whose charitable foundationis funding research into quickly spotting outbreaks and speeding up vaccine production, said the defence and security establishment “have not been following biology and I’m here to bring them a little bit of bad news”. Mr Gates will today (Saturday) tell an audience of international leaders and senior officers that the world’s next deadly pandemic “could originate on the computer screen of a terrorist”. He told the Telegraph: “Natural epidemics can be extremely large. Intentionally caused epidemics, bioterrorism, would be the largest of all. “With nuclear weapons, you’d think you would probably stop after killing 100million. Smallpox won’t stop. Because the population is naïve, and there are no real preparations. That, if it got out and spread, would be a larger number.” He said developments in genetic engineering were proceeding at a “mind-blowing rate”. Biological warfare ambitions once limited to a handful of nation states are now open to small groups with limited resources and skills. He said: “They make it much easier for a non-state person. It doesn’t take much biology expertise nowadays to assemble a smallpox virus. Biology is making it way easier to create these things.” The increasingly common use of gene editing technology would make it difficult to spot any potential terrorist conspiracy. Technologies which have made it easy to read DNA sequences and tinker with them to rewrite or tweak genes have many legitimate uses. He said: “It’s not like when someone says, ‘Hey I’d like some Plutonium’ and you start saying ‘Hmmm.. I wonder why he wants Plutonium?’” Mr Gates said the potential death toll from a disease outbreak could be higher than other threats such as climate change or nuclear war. He said: “This is like earthquakes, you should think in order of magnitudes. If you can kill 10 people that’s a one, 100 people that’s a two... Bioterrorism is the thing that can give you not just sixes, but sevens, eights and nines. “With nuclear war, once you have got a six, or a seven, or eight, you’d think it would probably stop. [With bioterrorism] it’s just unbounded if you are not there to stop the spread of it.” By tailoring the genes of a virus, it would be possible to manipulate its ability to spread and its ability to harm people. Mr Gates said one of the most potentially deadly outbreaks could involve the humble flu virus. It would be relatively easy to engineer a new flu strain combining qualities from varieties that spread like wildfire with varieties that were deadly. The last time that happened naturally was the 1918 Spanish Influenza pandemic, which went on to kill more than 50 million people – or nearly three times the death toll from the First World War. By comparison, the recent Ebola outbreak in West Africa which killed just over 11,000 was “a Richter Scale three, it’s a nothing,” he said. But despite the potential, the founder of Microsoft said that world leaders and their militaries could not see beyond the more recognised risks. He said: “Should the world be serious about this? It is somewhat serious about normal classic warfare and nuclear warfare, but today it is not very serious about bio-defence or natural epidemics.” He went on: “They do tend to say ‘How easy is it to get fissile material and how accurate are the plans out on the internet for dirty bombs, plutonium bombs and hydrogen bombs?’ “They have some people that do that. What I am suggesting is that the number of people that look at bio-defence is worth increasing.” Whether naturally occurring, or deliberately started, it is almost certain that a highly lethal global pandemic will occur within our lifetimes, he believes. But the good news for those contemplating the potential damage is that the same biotechnology can prevent epidemics spreading out of control. Mr Gates will say in his speech that most of the things needed to protect against a naturally occurring pandemic are the same things needed to prepare for an intentional biological attack. Nations must amass an arsenal of new weapons to fight such a disease outbreak, including vaccines, drugs and diagnostic techniques. Being able to develop a vaccine as soon as possible against a new outbreak is particularly important and could save huge numbers of lives, scientists working at his foundation believe.

# Universal Healthcare

## Universal healthcare CP

#### CP: The member nations of the World Trade Organization ought to implement a universal healthcare system.

#### Implementing a UHC system gets medicine to the uninsured

Goozner PhD 20

Merril Goozner (PhD and literally wrote the book on overpriced drugs, called “The 800$ pill), Winter 2020, "Insulin Should Be Free. Yes, Free.," Democracy Journal, <https://democracyjournal.org/magazine/55/insulin-should-be-free-yes-free/> // AW

Later in the year, on the eve of the second Democratic Party debate, Senator Bernie Sanders, who has made Medicare-for-All his signature policy proposal, took a busload of diabetics to Canada to purchase insulin that is one-tenth the United States price. **Sanders’s single-payer system would go beyond negotiating lower prices** as is done in Canada and other industrialized nations. **It would completely eliminate the copays and deductibles that stand in the way of many patients**—including some who are well-insured—getting the medications they need. That our health-care system fails to provide essential medicines to people who face immediate death or injury without them is morally outrageous. The pricing and access policies of profit-seeking drug companies also make that failure quite literally a human rights violation. Those companies—and the government that fails to control them—are flagrantly ignoring the World Health Organization’s constitution, which calls “the highest attainable standard of health a fundamental right of every human being.” The document, which the United States signed in 1946, also says that “understanding health as a human right creates a legal obligation on states to ensure access to timely, acceptable, and affordable health care of appropriate quality.”

#### Medicine needs to made free DIRECTLY – even after IP removal, likely new laws + industry subsidies to keep big pharma in power

Goozner PhD 20

Merril Goozner (PhD and literally wrote the book on overpriced drugs, called “The 800$ pill), Winter 2020, "Insulin Should Be Free. Yes, Free.," Democracy Journal, <https://democracyjournal.org/magazine/55/insulin-should-be-free-yes-free/> // AW

But flagrant violations of international norms have not convinced Congress to put an end to this human rights abuse. The drug industry’s protectors include virtually every member of the Republican Party, which marches in lockstep with the army of lobbyists deployed by Big Pharma. Last year, the drug industry spent $169.8 million on lobbying, more than any other industry. It’s on track to spend even more this year, having poured $129.4 million into its Washington influence machine through September, according to the Center for Responsive Politics. Despite their numerous protests, many Democratic Party leaders remain conflicted about how to solve the problem. Too many legislators buy into the industry’s assertions that high prices are necessary to incentivize innovation. Most Democrats also accept drug and insurance industry campaign contributions, making them reluctant to pursue dramatic changes in the status quo. And conflicted members are in key positions for making policy. Since the beginning of 2019, New Jersey Democratic Representative Frank Pallone, chairman of the House Energy and Commerce Committee, raised $130,700 from medical professionals and $66,500 from drug companies, which together represented nearly 13 percent of his total campaign contributions. Democrat Anna Eshoo, who chairs that committee’s health subcommittee and is a vocal defender of her Silicon Valley district’s biotech companies, raised $115,700 from Big Pharma and $106,350 from medical professionals. That is fully 26 percent of her campaign contributions so far this year. Drug and biotechnology companies are concentrated in areas (eastern Pennsylvania/New Jersey, Boston, and San Francisco/Silicon Valley) that are heavily Democratic.

# COVAX

## NC

#### Text: The member nations of the United Nations ought to

#### Collectively provide $4 billion to COVAX

#### Donate surplus vaccines to developing countries

#### Reduce export restrictions on raw materials

#### And the member nations of the World Bank ought to relax its conditions for extending loans for vaccine prepurchases. Goldberg, 5/13

Pinelopi Koujianou Goldberg, 5-13-2021, "Poor nations don’t need patent waivers to obtain enough COVID vaccines to achieve herd immunity, they just need $4 billion," MarketWatch, https://www.marketwatch.com/story/poor-nations-dont-need-patent-waivers-to-obtain-enough-covid-vaccines-to-achieve-herd-immunity-they-just-need-4-billion-11620920537, accessed 6-30-2021, ED

Still, three critical challenges remain. First, closing the pre-purchase gap of 350 million vaccines will requires an additional $4 billion—a trivial cost relative to the potential benefit of achieving world-wide immunity. Providing this support, either through additional funding for the COVAX AMC facility or by sending surplus vaccines to developing countries as soon as possible, should not be too difficult or costly for high-income countries to manage. Second, the World Bank needs to relax its conditions for extending loans for vaccine pre-purchases. Currently, such loans can be used only for vaccines approved by three stringent regulatory authorities (SRAs) in three different regions. Among these are Japan and certain Western countries, which naturally prioritize approval of vaccines intended for their own populations. They have little incentive to grant emergency-use authorization to alternative vaccines that have shown high efficacy in Phase 3 clinical trials, such as Bharat Biotech’s Covaxin (India), and Gamaleya’s Sputnik V (Russia), and Sinovac Biotech’s CoronaVac (China). Extending the list of national regulators classified as SRAs would go a long way toward increasing lending for vaccine purchases. Finally, existing vaccine manufacturers will be unable to meet their production targets if vaccine nationalism gives rise to export restrictions on critical inputs and raw materials. We saw such behavior early in the pandemic with respect to personal protective equipment, but the resulting export restrictions proved short-lived. One hopes the same will be true for vaccines. International cooperation and coordination will be crucial in the coming months. There are many ways for advanced economies to assist poorer countries in vaccinating their populations as soon as possible. But relaxing patent protections—however appealing the idea may be in other contexts—is not one of them. The focus should be on providing additional funding and less restrictive lending for preordering vaccines, and on funneling surpluses from high-income countries to the rest of the world.

#### Covax donations solve vaccine inequality. UNICEF 21

UNICEF, 21 - ("COVID-19 vaccines: 5 reasons why dose donations are essential," UNICEF, late May 2021 (no specific date given), accessed 7-1-2021, https://www.unicef.org/coronavirus/covid-19-vaccines-why-dose-donations-are-essential)//ML

But there is currently a limited number of vaccines, so it’s critical to prioritize vaccinations to save lives and to protect public health services in all countries. The [COVAX Facility](https://www.unicef.org/coronavirus/covax) – the global COVID vaccine equity scheme – represents a pathway toward addressing the imbalance in vaccine access between high and low-income countries. But COVAX is undersupplied.¶ G7 leaders will be meeting in June 2021 with a potential emergency stop-gap measure readily available: dose donations. G7 countries and other well-supplied nations immediately donating additional available doses to COVAX is a minimum, essential and emergency stop-gap measure, and it is needed right now.¶ 5 things to know about why dose donations are essential:¶ More than 1.4 billion doses of the COVID-19 vaccine had been administered by late May 2021, yet less than 1 per cent of global supply is reaching low-income countries. While we need even more vaccines to meet demand, there are enough doses available among well-supplied countries to reach the world’s most vulnerable people right now.¶ The longer the virus continues to spread unchecked, the higher the risk of more deadly or contagious variants emerging – placing everyone at risk. While well-supplied countries are vaccinating their entire adult populations against COVID-19, others with very poor vaccination coverage are witnessing dangerous surges in infection rates and the emergence of new variants. The recent deadly spike in India could be a precursor to what will happen across the region, and globally, if this inequity prevails.¶ Millions of children in poorer countries are at the risk of developing preventable diseases due to the pandemic disrupting routine immunization services. Donating doses now could help resume life-saving services in these countries. ¶ The donation of COVID-19 vaccines from well supplied countries is one of the only ways to increase the number of doses available to COVAX right now. It’s a practical solution to ensure that as many people as possible can access vaccines in every corner of the world as fast as possible in the months ahead.¶ Well-supplied countries can donate while still meeting commitments to their own populations. According to an analysis by Airfinity, G7 nations and ‘Team Europe’ group of European Union Member States together will soon have enough vaccine doses to be able to collectively donate more than 150 million to some of the most vulnerable populations in the world if they donated just 20 per cent of their available supply over June, July and August.

#### A TRIPS waiver for Covid takes too long---only vaccine donations solve. Fabricius 6/25

Peter Fabricius [institute for security services consultant], 6/20 - ("South Africa: Is Ramaphosa Tripping Over a TRIPS Waiver?," allAfrica, 6/25/2021, accessed 6-30-2021, https://allafrica.com/stories/202106260001.html)//ML

His fervour is prompting some suspicion that the waiver campaign is an ideological issue for South Africa and others on the left - who have always been suspicious of big pharma - rather than an objective solution to a crisis. That's because a TRIPS waiver cannot possibly rescue Africa from the immediate grips of the pandemic.¶ Even the mRNA project in South Africa would take at least around 12 months before manufacture can begin, WHO Chief Scientist Soumya Swaminathan said. And this would be with voluntary licensing and full technological cooperation and training from the patents' owners. Manufacturing vaccines from scratch and without that cooperation through a TRIPS waiver would take much longer.¶ The only immediate remedy is a vigorous campaign to pressure rich countries to donate vaccines¶ Yogesh Pai, Assistant Professor at the National Law University in Delhi, said the TRIPS waiver proposal was 'simplistic' in assuming that allowing the formulae of companies making vaccines to be copied would automatically enable other manufacturers to produce COVID-19 vaccines quickly.¶ Pai said most complex technologies, such as vaccines, comprised not only the knowledge, which is patented to prevent copying. It also involved undisclosed information and know-how about quality control measures for production and clinical data required for regulatory clearances.¶ An intellectual property waiver wouldn't give another company access to this deeper level of know-how. Only a cooperative agreement in which the technology owner helped the new manufacturer produce the vaccines could do this, Pai suggested.¶ Prashant Yadav, an expert on medical supply chains at Harvard Medical School, told ISS Today that it would probably take two to three years to produce a vaccine via a TRIPS waiver. First, the waiver would need to be secured, and then the necessary processes worked out without the help of the original developer.¶ Can Africa wait that long? At the launch of the mRNA project this week, Michael Ryan, Head of the WHO's Health Emergencies Programme, stressed that manufacturing COVID-19 vaccines in Africa, while commendable, wouldn't address the immediate crisis. The only solution was for rich countries to stop hoarding vaccines immediately. 'It will be a catastrophic moral failure at global level if we do not do that,' Ryan warned.¶ Yadav says the urgent strategy should be reallocating doses purchased by countries that don't need them and expanding vaccine production through voluntary licensing and tech transfer from the originator companies.¶ Of course, Ramaphosa could be right in suspecting that rich countries aren't altruistic enough to donate their 'surplus' vaccines, and so Africa and the rest of the global south must become more self-reliant.