# Greenhill Dubs Neg vs Loyola IB

# 1NC

### 1

#### **Interp – “medicines” treat or cure, whereas vaccines** prevent – o/w on specificity since it’s about the COVID vaccine

Vecchio 7/22 (Christopher Vecchio, [CFA, Senior Strategist,], 7-22-2021, “Delta Variant Concerns Won't Cripple Markets, US Economy“, DailyFX, accessed: 8-9-2021, https://www.dailyfx.com/forex/video/daily\_news\_report/2021/07/22/market-minutes-delta-variant-concerns-wont-cripple-markets-us-economy.html) ajs

Let’s stick to the facts. The COVID-19 vaccines are not medicines, which by definition “treat or cure diseases.” Vaccines “help prevent diseases,” an important distinction. Why does this matter? Because data coming out of some of the world’s developed economies with high adult vaccination rates suggest that the vaccines are working as intended: tail-risks have been reduced, with hospitalizations and deaths falling relative to the recent spike in infections (which have been occurring primarily among the unvaccinated at this point). Put another way, vaccines are like a Kevlar vest for the immune system; while they don’t make you bulletproof, they dramatically increase the odds of surviving an adverse event.

#### Vaccines are medical interventions – not medicines

Elbe 10 (Stefan Elbe, [director of the Centre for Global Health Policy and a professor of international relations at the University of Sussex. He is the author of Strategic Implications of HIV/AIDS, Security and Global Health, and Virus Alert: Security, Governmentality, and the AIDS Pandemic.], 5-3-2010, “Security and Global Health” Polity Press, accessed: 8-9-2021, https://books.google.com/books?id=PKMoMJrSsksC) ajs

Yet here too we must be careful not to overlook other types of medical intervention simultaneously pursued by the 'social' arm of modern medicine at the population level. Vaccines in particular continue to be particularly important medical interventions that repeatedly surface in a variety of different health security delib- erations. Strictly speaking, vaccines are not medicines because they consist of small concentrations of disease-causing microbes (or their derivatives) used to enhance a person's immuno-response to a future infection. As a public health measure, vaccines have therefore also been largely sidelined in the existing medicalization literature. Yet, generally speaking, vaccines too can be considered as medical inter- ventions. That is certainly how the World Health Organization views them, pointing out that 'vaccines are among the most important medical interventions for reducing illness and deaths' available today (WHO 2009a). Whereas pills and other therapies mark the tools of clinical medicine, vaccines play a crucial part in the arsenal of 'social' medicine and public health. Developing and rolling out of new vaccines against a range of current (and future) diseases therefore represents further evidence of how the rise of health security is also encouraging security to be practised through the introduction of new medical interventions in society.

#### Violation –

#### Negate –

#### 1] Limits – expanding the topic to preventative treatment or medical interventions allows anything from surgery to medical devices to education strategies or mosquito repellent to prevent malaria. Destroys core generics like innovation which are exclusive to disease curing – core of the topic is about proprietary information. A big case list with no unifying generics destroy neg prep – disincentivizes in depth topic research and leaves the neg behind.

#### 2] Precision – WHO definitively outweighs on common usage and quals and views vaccines as medical interventions which proves we’re right and consistent with topic lit – debates should mirror international medical consensus.

#### Precision o/w – anything else justifies the aff arbitrarily jettisoning words in the resolution at their whim which decks negative ground and preparation because the aff is no longer bounded by the resolution.

### 2

#### Carbon border tax coming now and key to solving warming.

Kellard 1/28 Neil Kellard [Dean, Professor in Finance, Essex Business School, University of Essex] “Why the EU’s proposed carbon border levy is an important test for global action on climate change” January 28, 2021 <https://theconversation.com/why-the-eus-proposed-carbon-border-levy-is-an-important-test-for-global-action-on-climate-change-154041> SM

In the more than two decades since the Kyoto Protocol was adopted, national policies on climate change have had dangerously and disappointingly little effect on global emissions.

Within the current economic system, perhaps the most ambitious attempt to reduce emissions has been the EU’s emissions trading system (or ETS). In operation since 2005, the ETS covers more than 11,000 heavy-energy-using power stations, factories and airlines, representing around 40% of the EU’s greenhouse gas emissions. The scheme operates via a cap-and-trade principle where an EU-wide cap on emissions means that firms must buy allowances, essentially paying for their polluting activities.

Yet although the ETS has had some success in reducing emissions, finance professor Panayiotis Andreou and I recently showed that the scheme is under-penalising those who pollute the most – primarily because the price of allowances has typically been too low.

The current price of an allowance to emit greenhouse gases is around €33 per tonne, a price already much higher than the average over the life of the ETS. However, to meet EU climate change targets, this price will need to be more like €40 by 2030 and close to €250 in 2050. Given the substantial costs this will impose on EU firms, either to pay for allowances or to invest in low carbon technologies, companies based outside the EU will have a hefty competitive advantage unless they face similar regulatory controls in their own countries.

This is why the European Commission, the EU’s executive branch, plans to present its carbon border levy in June 2021 as part of its Green Deal planning. Frans Timmermans, the first vice-president of the European Commission, recently stressed that:

It’s a matter of survival of our industry. So, if others will not move in the same direction, we will have to protect the European Union against distortion of competition and against the risk of carbon leakage.

Although its details are still undecided, the carbon border levy is expected to charge imports into the EU at an amount related to the emissions trading system price. As commission official Benjamin Angel notes, this could mean setting a carbon amount per product and multiplying it by the ETS price. For example, given production of each tonne of steel typically generates around 1.9 tonnes of CO₂ emissions, if we assume an ETS price of €30 then a firm would pay €57 extra to import it.

Having such a levy in place would send a strong signal to EU firms that potentially expensive investments in environmentally beneficial technologies would not result in undercutting, either by non-EU rivals that enjoy looser regulations, or by firms relocating to outside the EU – the so called “carbon leakage” that Frans Timmermans mentions.

Combining the EU ETS with a border levy is a sensible and workable strategy, providing a long-term context for firms that encourages the reduction of emissions by pricing in the pollution they produce. The benefits of a border levy may also spill over to outside the EU in at least one of two ways. First, and most obviously, non-EU firms that wish to export into Europe will be encouraged to reduce emissions to limit their charge. Secondly, other governments and regulatory authorities will be watching closely to see if the approach is workable and this could see the spread of cap-and-trade agreements more globally.

#### The plan revitalizes WTO credibility and generates momentum

Meyer 6/18 [(David Meyer is the Editor of CEO Daily and a senior writer on Fortune’s European team. Author of the digital rights primer, Control Shift: How Technology Affects You and Your Rights. “The WTO’s survival hinges on the COVID-19 vaccine patent debate, waiver advocates warn,” Fortune, June 18, 2021. <https://fortune.com/2021/06/18/wto-covid-vaccines-patents-waiver-south-africa-trips/>] TDI

According to some of those pushing for the waiver—which was originally proposed last year by India and South Africa—**the WTO's future rests on what happens next.** "The credibility of the WTO will depend on its ability to find a meaningful outcome on this issue that truly ramps-up and diversifies production," says Xolelwa Mlumbi-Peter, South Africa's ambassador to the WTO. "Final nail in the coffin" The Geneva-based WTO isn't an organization with power, as such—it's a framework within which countries make big decisions about trade, generally by consensus. It's supposed to be the forum where disputes get settled, because all its members have signed up to the same rules. And one of its most important rulebooks is the Agreement on Trade-Related Aspects of Intellectual Property Rights, or TRIPS, which sprang to life alongside the WTO in 1995. The WTO's founding agreement allows for rules to be waived in exceptional circumstances, and indeed this has happened before: its members agreed in 2003 to waive TRIPS obligations that were blocking the importation of cheap, generic drugs into developing countries that lack manufacturing capacity. (That waiver was effectively made permanent in 2017.) Consensus is the key here. Although the failure to reach consensus on a waiver could be overcome with a 75% supermajority vote by the WTO's membership, this would be an unprecedented and seismic event. In the case of the COVID-19 vaccine IP waiver, it would mean standing up to the European Union, and Germany in particular, as well as countries such as Canada and the U.K.—the U.S. recently flipped from opposing the idea of a waiver to supporting it, as did France. **It's a dispute between countries, but the result will be on the WTO as a whole**, say waiver advocates. "If, in the face of one of humanity's greatest challenges in a century, the WTO functionally becomes an obstacle as in contrast to part of the solution, **I think it could be the final nail in the coffin"** **for the organization**, says Lori Wallach, the founder of Public Citizen's Global Trade Watch, a U.S. campaigning group that focuses on the WTO and trade agreements. "If the TRIPS waiver is successful, and people see the WTO as being part of the solution—saving lives and livelihoods—**it could create goodwill and momentum to address what are still daunting structural problems."** Those problems are legion.

#### Lack of WTO legitimacy is key – the threat of disputes deters action.

Ashurst 7/16 Ashurst [A progressive global law firm] Proposed EU Regulation on CBAM, July 16 2021, <https://www.ashurst.com/en/news-and-insights/legal-updates/proposed-eu-regulation-of-cbam-published/> SM

Next steps for the Commission's proposal

Following publication of the detailed proposal for the CBAM, it will need to go through the ordinary legislative procedure, which involves being reviewed and modified by the European Parliament and the Council. This process will provide Member States with the opportunity to introduce significant changes.

Future developments

While only a proposal, the draft CBAM regulation also contains a reporting and review mechanism. Here, the draft CBAM regulation obliges the Commission to report before the end of the transitional period on the application of the CBAM, with a view to extending the scope of CBAM to indirect emissions and goods other than those listed in Annex I.

How might the proposal be challenged?

The CBAM is controversial outside the EU. Commentators have already started to map out potential challenges to it. In principle, these challenges follow two distinct routes:

that the CBAM breaches international obligations; and/or

that the CBAM breaches EU domestic law.

The main international route would be a WTO challenge by another WTO member government. As the WTO dispute settlement process is a government-to-government process, business would need to either lobby a government to bring a WTO Dispute Settlement Understanding (DSU) case, or, in certain jurisdictions, use formal processes (e.g. section 301 of the U.S. Trade Act of 1974) to stimulate a government to bring a case that it would not otherwise bring.

The obvious candidates are countries such as Brazil, India, Australia, China and Russia, all of which will be affected by the CBAM.

The WTO DSU process is currently functioning poorly since the US has refused to appoint new Appellate Body (AB) members, so the AB cannot function. This may have influenced the EU's decision to publish the draft regulation at this time, and until new AB members are appointed the prospect of the CBAM being held, definitively, to be incompatible with WTO obligations appears slim.

#### Otherwise, countries dispute through the WTO

Brooks 7/21 “Trade experts positive on EU’s CBAM, despite risk of rich nation-poor nation rift”, July 21 2021 Cristina Brooks [Senior Journalist, Climate & Sustainability, IHS Markit] <https://ihsmarkit.com/research-analysis/--trade-experts-positive-on-eus-cbam-despite-risk-of-rich-nati.html> SM

In addition to EU due process, the CBAM will face international challenges. World Trade Organization (WTO) rules were not drafted to accommodate climate change policies, so countries slapped with new charges on exports may challenge the CBAM via a WTO dispute settlement case.

Stephen Woolcock, a lecturer in international political economy at the London School of Economics, told Net-Zero Business Daily there are several ways of challenging the CBAM. "If the EU were to introduce the measure, other countries would challenge this, and you then go through a dispute settlement mechanism. The WTO appellate body, if you like 'the international trade court,' would then rule on whether this is complying with the WTO rules," he said.

However, he said it seems likely countries will discuss it in other forums since the US under the Trump administration blocked appointees to the WTO's appellate body. "So, we don't have a functioning appellate body in the WTO at the moment," said Woolcock.

#### WTO-compliant carbon border measures are practically impossible – even the “domestic taxes” route fails. Prefer our ev – it doesn’t matter if WTO compliance is theoretically possible if it’s not pragmatically possible.

Meyer and Tucker 21 “A Pragmatic Approach to Carbon Border Measures” Timothy Meyer [Professor of Law; Director, International Legal Studies Program at Vanderbilt, J.D. and Ph.D. in jurisprudence and social policy from Berkeley], and Todd N. Tucker [Director of Governance Studies at the Roosevelt Institute, PhD and MPhil from the University of Cambridge] World Trade Review (July 2021), 1–12 <https://www.cambridge.org/core/journals/world-trade-review/article/pragmatic-approach-to-carbon-border-measures/B0D224B3A59E9433D10E74DE6D40A0FD> SM

3. CBMs and the WTO

This variation in domestic authority and the resulting diversity of approaches to decarbonization has two consequences. First, it makes it likely that at least some countries interested in pursuing aggressive domestic decarbonization measures will have difficulty doing so in a way that can easily be married to a CBM that complies with the WTO’s primary rules. Second, it makes it virtually impossible to have a common CBM across countries that complies with those primary rules. The divergence in domestic approaches means that the domestic carbon price – whether explicit or implicit, i.e., calculated from the cost of complying with environmental regulations – will almost surely vary across countries. As a result, barring speedy and successful negotiations, the WTO-consistency of any CBM is likely to hinge on flexibilities, that have not been interpreted in a manner sufficiently deferential to national regulators.

3.1 The GATT’s Primary Rules

The GATT, the WTO’s chief agreement governing trade in goods, contains three main sets of primary obligations: 1) limits on tariffs; 2) a prohibition on import or export restrictions other than tariffs; and 3) a prohibition on discrimination against imports, a category that contains many permutations.40 The most blunt forms of a CBM will violate one of the first two sets of rules. A ban on imports from countries with weak climate laws would run afoul of the prohibition on import restrictions. A simple tariff on carbon-intensive products would violate a country’s tariff bindings.41

What is left are domestic taxes, either assessed on imported products behind the border or ‘charge[s on imports] equivalent to an internal tax’, 42 and regulations. At first glance, this looks quite promising. In recent years, prominent trade lawyers have argued that a non-discriminatory carbon tax, one applicable to both imports and domestic products, would be consistent with WTO rules.43 Just as a domestic sales tax or VAT can be assessed on imports consistent with WTO rules, a country with a domestic carbon tax could apply a charge to imports either ‘equivalent’ to the domestic tax (if the import charge was viewed as a tariff) or not ‘in excess of’ the domestic tax (if viewed as an internal tax). Similarly, product standards, such as energy efficiency standards, could be applied in a nondiscriminatory fashion to both imports and domestic products. Both President Biden’s Build Back Better initiative and the EU’s Green Deal are likely to feature new regulations of this kind.

In theory, then, nondiscriminatory taxes and regulations offer a path to WTO-consistent border measures. In reality, this path is more likely a mirage for many countries. As we have explained above, neither a US-wide nor an EU-wide carbon tax is politically feasible. Moreover, as Hillman notes, for any number of reasons governments might prefer taxes (or regulations) on production or the use of inputs, such as taxes on the generation of energy or the use of fossil fuels, to taxes on products.44 Under WTO rules, only taxes on products (so-called indirect taxes) can be adjusted at the border via nondiscriminatory measures. Deciding whether taxes on production processes or inputs are really taxes on products raises a host of novel questions under WTO law.45

Even if a CBM qualifies for analysis under nondiscrimination rules, its fate is uncertain at best. The WTO’s nondiscrimination rules require that an internal tax on imports be similar to or not in excess of the tax on ‘like’ domestic products, while regulations must offer imports treatment ‘no less favorable’ than that afforded ‘like’ domestic products.46 In various cases over the years, WTO members and panels have urged that either the standard for ‘likeness’ or the standard of treatment take into account regulatory purpose of a measure when that purpose is unrelated to national origin.47 Unfortunately, though, the Appellate Body (AB) declined to adopt such an ‘aim and effect’ test or anything similar. Instead, the current test for ‘like’ products focuses on the commercial relationship between products.48 Otherwise identical products – such as cement, steel, or chemicals – that differ only in the amount of carbon emitted during the production process would probably be found ‘like’ under this test.

The standard of treatment applicable to regulations covering products determined to be ‘like’ has a similar commercial flavor. The AB has said that a measure that disrupts the ‘equality of competitive opportunities’ among like products accords less favorable treatment, even if the distinction among products has nothing to do with national origin and has a legitimate regulatory basis.49 Because the entire purpose of a CBM is to disadvantage otherwise identical products based on how much carbon is emitted during production, some scholars have argued that a CBM will almost certainly run afoul of GATT nondiscrimination rules.50

These core issues present a challenge even to an ideally designed CBM. Government measures are, however, rarely designed on the basis of ideals alone. Instead, they typically include exceptions, variances, or differential treatment designed to ensure sufficient political support for the measure. While a comprehensive examination of all the ways a CBM might violate WTO rules is beyond the scope of this article, suffice it to say that a whole host of more technical, but not less weighty, issues present ripe targets for potential challengers: whether to adjust the price of imports, or also exports; whether to apply the CBM to all countries, or whether to exempt developing countries; whether to apply the CBM to only direct emissions for a given product, or also the indirect emissions that went into making it; and whether to calculate embedded emissions on a shipment-by-shipment level (or more distantly from the widget itself, such as on the basis of country averages).

The EU’s latest proposal illustrates some of these problems. First, the European CBM would provide importers a credit for any carbon price paid in their home market. It would not, however, give them credit for the cost of complying with decarbonization regulations in their home market.51 Two firms that pay equivalent carbon costs – one via an explicit carbon pricing mechanism and the second an implicit price via regulation – are thus treated differently. This is discriminatory, while failing to reward what the European Commission states as the goal of its CBM: global decarbonization.52 Both the GATT’s primary nondiscrimination rules, as well as the nondiscrimination rule applicable to the GATT’s general exceptions via the chapeau of article XX, would likely require the EU to take account of the implicit price of carbon in all countries if it does so for one. Doing so would create a significant administrative burden, with no guarantee that any ostensibly neutral formula to evaluate the implicit price of carbon across countries will ultimately hold up under review.53 Second, EU producers will benefit from the ability to trade emissions permits in private markets, and pay spot prices daily for doing so, while importers will be forced to buy permits from government at averages of past prices.54 Finally, the details on how verification of emissions will work, and how those procedures compare to the procedures that apply to domestic manufacturers, creates another possible basis for a discrimination complaint.

All of these difficulties apply to any single nation’s CBM. A common CBM presents an additional wrinkle. To be consistent with the WTO’s primary rules, countries imposing a common CBM would likely have to impose similar carbon costs on domestic producers. For example, the EU’s proposal requires importers to purchase permits for the amount of carbon emitted during the production of a product, with the price of the permits tied to the price of such a permit under the ETS. Under WTO rules, the United States could not impose a carbon tariff in the same amount as the EU’s price of a permit unless the cost of carbon in the United States were at least as high as the cost of carbon in the EU. Charging a higher tariff than the United States charges on its own domestic products would amount to discrimination. And while this difficulty could in principle be solved by setting the CBM equal to the lowest price charged in any member country, such an approach has several disadvantages. For example, determining those prices in countries, like the United States, that do not have an explicit carbon pricing system is possible but difficult. Worse, a lowest common denominator approach would reduce the environmental effectiveness of the system as a whole. As a result, a common carbon tariff is likely to leave at least some members exposed to claims that the common CBM is more stringent than their domestic decarbonization measures.

#### Warming causes extinction

**Pester 21** (Patrick, staff writer for Live Science. His background is in wildlife conservation and he has worked with endangered species around the world. Patrick holds a master's degree in international journalism from Cardiff University in the U.K. and is currently finishing a second master's degree in biodiversity, evolution and conservation in action at Middlesex University London. Citing **Luke Kemp, a research associate at the Centre for the Study of Existential Risk at the University of Cambridg**e in the United Kingdom AND **Michael Mann, PhD, distinguished professor of atmospheric science at Penn State**. “Could climate change make humans go extinct?” [https://www.livescience.com/climate-change-humans-extinct.html August 30](https://www.livescience.com/climate-change-humans-extinct.html%20August%2030), 2021)DR 21

According to Mann, a global temperature increase of 5.4 degrees Fahrenheit (3 degrees Celsius) or more could lead to a collapse of our societal infrastructure and massive unrest and conflict, which, in turn, could lead to a future that resembles some Hollywood dystopian films.

One way climate change could trigger a societal collapse is by creating food insecurity. Warming the planet has a range of negative impacts on food production, including increasing the water deficit and thereby reducing food harvests, [Live Science previously reported](https://www.livescience.com/58891-why-2-degrees-celsius-increase-matters.html). Food production losses can increase human deaths and drive economic loss and socio-political instability, among other factors, that may trigger a breakdown of our institutions and increase the risk of a societal collapse, according to a study published Feb. 21 in the journal [Climatic Change](https://go.redirectingat.com/?id=92X1590019&xcust=livescience_us_1191050396230939400&xs=1&url=https%3A%2F%2Flink.springer.com%2Farticle%2F10.1007%2Fs10584-021-02957-w&sref=https%3A%2F%2Fwww.livescience.com%2Fclimate-change-humans-extinct.html).

Related: [Has the Earth ever been this hot before?](https://www.livescience.com/65927-has-earth-been-this-hot-before.html)

Past extinctions and collapses

Kemp studies previous civilization collapses and the risk of climate change. Extinctions and catastrophes almost always involve multiple factors, he said, but he thinks if humans were to go extinct, climate change would likely be the main culprit.

"If I'm to say, what do I think is the biggest contributor to the potential for human extinction going towards the future? Then climate change, no doubt," Kemp told Live Science.

All of the major [mass-extinction events](https://www.livescience.com/mass-extinction-events-that-shaped-Earth.html) in Earth's history have involved some kind of climatic change, according to Kemp. These events include cooling during the Ordovician-[Silurian](https://www.livescience.com/43514-silurian-period.html) extinction about 440 million years ago that wiped out 85% of species, and warming during the [Triassic](https://www.livescience.com/43295-triassic-period.html)-[Jurassic](https://www.livescience.com/28739-jurassic-period.html) extinction about 200 million years ago that killed 80% of species, Live Science previously reported. And more recently, climate change affected the fate of early human relatives.

While [Homo sapiens](https://www.livescience.com/homo-sapiens.html) are obviously not extinct, "we do have a track record of other hominid species going extinct, such as [Neanderthals](https://www.livescience.com/28036-neanderthals-facts-about-our-extinct-human-relatives.html)," Kemp said. "And in each of these cases, it appears that again, climatic change plays some kind of role."

Scientists don't know why Neanderthals went extinct about 40,000 years ago, but climatic fluctuations seem to have broken their population up into smaller, fragmented groups, and severe changes in temperature affected the plants and animals they relied on for food, according to the [Natural History Museum](https://www.nhm.ac.uk/discover/who-were-the-neanderthals.html) in London. Food loss, driven by climate change, may have also led to a tiny drop in Neanderthal fertility rates, contributing to their extinction, [Live Science previously reported](https://www.livescience.com/65594-neanderthal-fertility-led-to-extinction.html).

Climate change has also played a role in the collapse of past human civilizations. A [300-year-long drought](https://www.livescience.com/38893-drought-caused-ancient-mediterranean-collapse.html), for example, contributed to the downfall of ancient Greece about 3,200 years ago. But Neanderthals disappearing and civilizations collapsing do not equal human extinction. After all, humans have survived climate fluctuations in the past and currently live all over the world despite the rise and fall of numerous civilizations.

Homo sapiens have proven themselves to be highly adaptable and able to cope with many different climates, be they hot, cold, dry or wet. We can use resources from many different plants and animals and share those resources, along with information, to help us survive in a changing world, according to the [Smithsonian’s National Museum of Natural History](https://humanorigins.si.edu/research/climate-and-human-evolution/climate-effects-human-evolution).

Related: [How would just 2 degrees of warming change the planet?](https://www.livescience.com/58891-why-2-degrees-celsius-increase-matters.html)

Today, we live in a global, interconnected civilization, but there's reason to believe our species could survive its collapse. A study published on July 21 in the journal [Sustainability](https://www.mdpi.com/2071-1050/13/15/8161/htm) identified countries most likely to survive a global societal collapse and maintain their complex way of life. Five island countries, including New Zealand and Ireland, were chosen as they could remain habitable through agriculture, thanks to their relatively cool temperatures, low weather variability and other factors that make them more resilient to climate change.

New Zealand would be expected to hold up the best with other favorable conditions, including a low population, large amounts of good quality agricultural land and reliable, domestic energy. So, even if climate change triggers a global civilization collapse, humans will likely be able to keep going, at least in some areas.

Turning on ourselves

The last scenario to consider is climate-driven conflict. Kemp explained that in the future, a scarcity of resources that diminish because of **climate change could** potentially create conditions for wars that threaten humanity. "There's reasons to be concerned that as water resources dry up and scarcity becomes worse, and the general conditions of living today become much, much worse, then suddenly, the threat of potential nuclear war becomes much higher," Kemp said.

Put another way, climate change impacts might not directly cause humans to go extinct, but it could lead to events that seriously endanger hundreds of millions, if not billions, of lives. A 2019 study published in the journal [Science Advances](https://advances.sciencemag.org/content/5/10/eaay5478) found that a nuclear conflict between just India and Pakistan, with a small fraction of the world's nuclear weapons, could kill 50 million to 125 million people in those two countries alone. Nuclear war would also change the climate, such as through temperature drops as burning cities fill the atmosphere with smoke, threatening food production worldwide and potentially causing mass starvation.

What's next?

While avoiding complete extinction doesn't sound like much of a climate change silver lining, there is reason for hope. Experts say it isn't too late to avoid the worst-case scenarios

with significant cuts to greenhouse gas emissions.

"It is up to us," Mann said. "If we fail to reduce carbon emissions substantially in the decade ahead, we are likely committed to a worsening of already dangerous extreme weather events, inundation of coastlines around the world due to melting ice and rising sea level, more pressure on limited resources as a growing global population competes for less food, water and space due to climate change impacts. If we act boldly now, we can avoid the worst impacts."

### 3

#### CP: The People’s Republic of China should:

#### - substantially increase innovation funding, production and global distribution of COVID-19 Vaccines for all current and future waves of the pandemic

#### - cooperate with allies to achieve increased production and global distribution of the COVID-19 Vaccine.

#### That solves better – IP rights don’t hinder vaccine cooperation, but manufacturing capacity is the current constraint.

– concede public funding key which guarantees counterplan solvency

* Evidence is in the context of a us proposal but could be modeled for any country with wide access

Hans Sauer 6-17 [(Deputy General Counsel, Biotechnology Industry Organization.) “Web event — Confronting Joe Biden’s proposed TRIPS waiver for COVID-19 vaccines and treatments” https://www.aei.org/wp-content/uploads/2021/06/210617-Confronting-Joe-Bidens-proposed-TRIPS-waiver.pdf?x91208&x91208] TDI

But contrary to what Lori said, **there are genuine real problems in the supply chain** that are **not caused by patents**, that are simply caused by the unavailability and the constraints on existing capacity. There is in this world such a thing as maxed-out capacity that just can’t be increased on a dime. It’s not all due to intellectual property. This is true for existing vaccines as well as for vaccine raw materials. There are trade barriers. There are export restrictions that we should all be aware of and that we need to work on. And there are very real political, I think, interests in finding an explanation for how we got to this place that absolve governments around the world from their own policy decisions that they made in the past. In the United States, again, it was the declared policy of the previous administration, as well as this one, that we would vaccinate healthy college kids and go all down the line and offer a vaccine to everybody who wants it before we start sharing any with grandmothers in Burkina Faso. That was the policy. You can agree with it or disagree with it, but that was policy. We had export restrictions in place before a lot of other countries did. And that, too, contributed to unequal access of vaccines around the world. Another thing that was predictable was that politicians and governments around the world who want to be seen as proactive, on the ball, in control, for a long time were actually very indecisive, very unsure about how to address the COVID problem, which has so many dimensions. Vaccines are only one of those. But with respect to vaccines, not many governments took decisive action, put money on the table, put bets on multiple horses, before we knew whether these vaccines would work, would be approved. And it was governments in middle-income countries who now, I think, justifiably are concerned that they’re not getting fast enough access, who didn’t have the means and who didn’t have the decision-making structure to place the same bets on multiple horses, if you will, that were placed in the relatively more wealthy, global North and global West. But there is, I think, a really good and, with hindsight, predictable explanation of how we got to this place, and I think it teaches us something about how to fix the problem going forward. **So why will the waiver not work**? Well, first of all, with complex technology like vaccines, Lori touched on it, reverse engineering, like you would for a small molecule drug, is much more difficult if not impossible. But it depends very much more than small molecule drugs on cooperation, on voluntary transfer of technology, and on mutual assistance. We have seen as part of the pandemic response an unprecedented level of collaborations and cooperation and no indication that IP has stood in the way of the pandemic response. **The waiver proponents have found zero credible examples of where IP has actually been an obstacle,** where somebody has tried to block somebody else from developing a COVID vaccine or other COVID countermeasure, right? It’s not there. **Second, the myth of this vast global capacity to manufacture COVID vaccines that somehow exists** **out there is unsubstantiated** and frankly, in my opinion, untrue. But there is no such thing as vast untapped, idle capacity that could be turned around on a dime to start making COVID vaccines within weeks or even months. This capacity needs to be built; it needs to be established. And at a time when time is of the essence to beat this pandemic, starting capacity-building discussions is helpful, but it won’t be the answer to beat this pandemic. It will be the answer if we do everything right to beating the next pandemic. And if we learn any lesson of this, and then I will stop, is that the COVID waiver as well as the situation in which we find ourselves — if anything, it’s a reminder that we definitely have to take global capacity-building more seriously than we did in the past. That is true for the global North, as well as for middle-income countries — all of whom have to dedicate themselves much more determinedly to pandemic preparedness. And there’s a need to invest both in preparedness and in public health systems that hasn’t happened in the wake of past pandemic threats. This is what we will need to do. We will need to reduce export restrictions, and we will need to rededicate ourselves to preparing for the next pandemic. As far as this pandemic goes, **there are 11 vaccines around the world that are already being shot into arms, only four of which come from the global North. How many more vaccines do we want?** I don’t know, maybe 11 is enough if we start making more of them. But there are manufacturers around the world who know how to do this — including in China, including in India, and including in Russia. All developed their homegrown vaccines, apparently without interference by IP rights, right? **So let’s make more of those. I think that’s going to be the more practical and realistic answer to solving the problem**. And we need to lean on governments to stop export controls and to dedicate themselves to more global equity.

#### China’s using absence of vaccine alternates to assert influence.

Zhao 4-29 Suisheng Zhao 4-29-2021 "Why China’s vaccine diplomacy is winning" <https://www.eastasiaforum.org/2021/04/29/why-chinas-vaccine-diplomacy-is-winning/> (Professor and Director of the Center for China–US Cooperation at the Josef Korbel School of International Studies, University of Denver)//Elmer

Chinese COVID-19 vaccines have been shipped to more than **80 countries** for market or emergency use. Among them, 53 countries received vaccines for free (including developing countries in Africa and some strategically important Asian countries such as the Philippines and Pakistan) and 27 middle-income countries paid for doses. Rolling out of vaccines to developing countries, Beijing has framed itself as **a solution to the pandemic** rather than the origin of the coronavirus. China’s advanced vaccine diplomacy stands in contrast **to the ‘me first policies’** of the **United States and the European Union**. With a shortfall in supplies, US and EU leaders have faced high infection rates and death tolls at home and feel the need to inoculate their domestic populations first. This has left the world’s poorest and most vulnerable people without vaccine supply and at risk. China has not faced these problems and can afford to send vaccines abroad. Just by showing up and helping plug gaps in the global supply of vaccines, China has g**ained ground** in vaccine diplomacy. President Xi Jinping pledged that Chinese vaccines would be provided as a global public good. But a large portion of Chinese vaccines are not free — some countries have paid Chinese vaccine makers. Still the absence of the United States and European Union from vaccine diplomacy **is not lost** on countries struggling to put shots in people’s arms. Many countries would prefer US or EU-made Pfizer and Moderna vaccines over China’s vaccines if given the choice, **yet they cannot access them**. These countries are desperate and have jumped at the opportunity to receive Chinese vaccines. Chinese companies are also more willing than their western counterparts **to strike licensing deals** to produce vaccines in foreign countries. For example, Indonesia has become a regional hub for Sinovac’s CoronaVac through its state pharmaceuticals company Bio Farma. The United Arab Emirates (UAE) chose Sinopharm because it was willing to conduct phase three clinical trials in the UAE and build native vaccine production capabilities. Sinopharm also arranged to manufacture its vaccine in the UAE for regional distribution. Beijing’s vaccine diplomacy involves propaganda to boost **perceptions of China as a generous and responsible power**. Chinese media has covered every delivery of vaccine shipment. The scene is set by a standard script. When a cargo plane lands, it is greeted by senior local leaders accompanied by Chinese ambassadors fawning over the vaccine cargo. Vaccine diplomacy has helped **increase China’s influence** and enabled it to capitalise **on new opportunities**. China has rolled vaccines out to participants of its Belt and Road Initiative (**BRI**) **and enhanced preferential access to jabs alongside investments in infrastructure and connectivity projects**. According to an April Think Global Health report, of the 56 countries to which China pledged doses, all but one were participants in its BRI. Naming it the Health Silk Road, vaccine diplomacy has provided a foothold for China’s pharmaceutical industry that has been plagued by scandals and low levels of trust at home and abroad. Making Sinovac and Sinopharm household names in foreign countries, China may change these perceptions. Although Chinese vaccine makers were among the earliest in the world to begin clinical trials and self-reported some key results, many have not published complete data in peer-reviewed journals. This has fuelled scepticism about their safety and effectiveness. Gao Fu, director of China’s Centre for Disease Control and Prevention, noted in April that Chinese vaccines were not as effective as hoped and mixing them was among the strategies being considered to boost their effectiveness. Some countries have been reluctant to greenlight Chinese vaccines. Singapore received its first shipment of Sinovac vaccines in February, but Singaporean regulators have not approved its use, moving ahead with using Pfizer and Moderna vaccines. Polish President Andrzej Duda spoke with President Xi about buying Chinese jabs in March. Yet Poland’s health authorities have recommended against using Chinese vaccines because of a lack of data. Concerns have also arisen about whether China’s production capacity is able to keep pace with an ever-expanding list of overseas customers and its domestic vaccination campaign. The Turkish government ordered 20 million doses of China’s Sinovac vaccine. But delayed shipments forced the government to repeatedly revise its vaccination timetable. Egypt purchased a total of 40 million doses of the vaccine from Sinopharm in January but had received only a tiny percentage of its vaccine order from China by the middle of April. This tension will intensify as China’s domestic demand for vaccines increases. China has continued with vaccine diplomacy in the absence of the United States and other Western countries. These countries should compete and cooperate with China to overcome bottlenecks in the global distribution of vaccines and ensure that all nations, particularly developing countries, receive the vaccines they need to finally beat COVID-19.

#### Waivers are a critical issue in the perceptual ineptness of America and the West.

Pratt and Levin 4-29 Simon Frankel Pratt and Jamie Levin 4-29-2021 "Vaccines Will Shape the New Geopolitical Order" <https://archive.is/OgDcA#selection-847.23-857.11> (Simon Frankel Pratt is a lecturer in the School of Sociology, Politics, and International Studies at the University of Bristol. Jamie Levin is an assistant professor of political science at St. Francis Xavier University in Canada.)//Elmer

While home to vaccines produced by the likes of Pfizer, Moderna, AstraZeneca, and Johnson & Johnson—all now household names and whose vaccines are considered more efficacious—governments of these states have demonstrated a **reluctance to supply doses** to much of the rest of the world at the expense of domestic vaccination rates. The United States and the U.K. have exported almost none, and the EU is clamping down. They have similarly been **unwilling to waive patents**, allowing for production of these vaccines where they are most needed. This suggests that the United States and the EU are **slow to fully exploit the geopolitical opportunities** of vaccine diplomacy or at least are not willing to do so with the same alacrity and **enthusiasm as other states**. That may change as time goes on, however, and the result will be worsened inequities within already inequitable trade relationships between these countries and the global south.

#### Chinese leadership solves existential threats.

Yamei 18 Shen Yamei 18, Deputy Director and Associate Research Fellow of Department for American Studies, China Institute of International Studies, 1-9-2018, "Probing into the “Chinese Solution” for the Transformation of Global Governance," CAIFC, <http://www.caifc.org.cn/en/content.aspx?id=4491>

As the world is in a period of great development, transformation and adjustment, the international power comparison is undergoing profound changes, global governance is reshuffling and traditional governance concepts and models are confronted with challenges. The international community is expecting China to play a bigger role in global governance, which has given birth to the Chinese solution. A. To Lead the Transformation of the Global Governance System. The “shortcomings” of the existing global governance system are prominent, which can hardly ensure global development. First, the traditional dominant forces are seriously imbalanced*.* The US and Europe that used to dominate the global governance system have been beset with structural problems, with their economic development stalling, social contradictions intensifying, populism and secessionism rising, and states trapped in internal strife and differentiation. These countries have not fully reformed and adjusted themselves well, but rather pointed their fingers at globalization and resorted to retreat for self-insurance or were busy with their own affairs without any wish or ability to participate in global governance, which has encouraged the growth of “anti-globalization” trend into an interference factor to global governance. Second, the global governance mechanism is relatively lagging behind. Over the years of development, the strength of emerging economies has increased dramatically, which has substantially upset the international power structure, as the developing countries as a whole have made 80 percent of the contributions to global economic growth. These countries have expressed their appeal for new governance and begun policy coordination among themselves, which has initiated the transition of global governance form “Western governance” to “East-West joint governance”, but the traditional governance mechanisms such as the World Bank, IMF and G7 failed to reflect the demand of the new pattern, in addition to their lack of representation and inclusiveness. Third, the global governance rules are developing in a fragmented way, with governance deficits existing in some key areas. With the diversification and in-depth integration of international interests, the domain of global governance has continued to expand, with actors multiplying by folds and action intentions becoming complicated. As relevant efforts are usually temporary and limited to specific partners or issues, global governance driven by requests of “diversified governance” lacks systematic and comprehensive solutions. Since the beginning of this year, there have been risks of running into an acephalous statein such key areas as global economic governance and climate change*.* Such emerging issues as nuclear security and international terrorism have suffered injustice because of power politics*.* The governance areas in deficit, such as cyber security, polar region and oceans, have “reversely forced” certain countries and organizations to respond hastily*.* All of these have made the global governance system trapped in a dilemma and call urgently for a clear direction of advancement. B. To Innovate and Perfect the International Order. Currently, whether the developing countries or the Western countries of Europe and the US are greatly discontent with the existing international order as well as their appeals and motivation for changing the order are unprecedentedly strong. The US is the major creator and beneficiary of the existing hegemonic order, but it is now doubtful that it has gained much less than lost from the existing order, faced with the difficulties of global economic transformation and obsessed with economic despair and political dejection. Although the developing countries as represented by China acknowledge the positive role played by the post-war international order in safeguarding peace, boosting prosperity and promoting globalization, they criticize the existing order for lack of inclusiveness in politics and equality in economy, as well as double standard in security, believing it has failed to reflect the multi-polarization trend of the world and is an exclusive “circle club”. Therefore, there is much room for improvement. For China, to lead the transformation of the global governance system and international order not only supports the efforts of the developing countries to uphold multilateralism rather than unilateralism, advocate the rule of law rather than the law of the jungle and practice democracy rather than power politics in international relations, but also is an important subject concerning whether China could gain the discourse power and development space corresponding to its own strength and interests in the process of innovating and perfecting the framework of international order. C. To Promote Integration of the Eastern and Western Civilizations. Dialog among civilizations, which is the popular foundation for any country’s diplomatic proposals, runs like a trickle moistening things silently. Nevertheless, in the existing international system guided by the “Western-Centrism”, the Western civilization has always had the self-righteous superiority, conflicting with the interests and mentality of other countries and having failed to find the path to co-existing peacefully and harmoniously with other *civilizations.* So to speak, many problems of today, including the growing gap in economic development between the developed and developing countries against the background of globalization, the Middle East trapped in chaos and disorder, the failure of Russia and Turkey to “integrate into the West”, etc., can be directly attributed to lack of exchanges, communication and integration among civilizations. Since the 18th National Congress of CPC, Xi Jinping has raised the concept of “Chinese Dream” that reflects both Chinese values and China’s pursuit, re-introducing to the world the idea of “all living creatures grow together without harming one another and ways run parallel without interfering with one another”, which is the highest ideal in Chinese traditional culture, and striving to shape China into a force that counter-balance the Western civilization. He has also made solemn commitment that “we respect the diversity of civilizations …… cannot be puffed up with pride and depreciate other civilizations and nations”; “facing the people deeply trapped in misery and wars, we should have not only compassion and sympathy, but also responsibility and action …… do whatever we can to extend assistance to those people caught in predicament”, etc. China will rebalance the international pattern from a more inclusive civilization perspective and with more far-sighted strategic mindset, or at least correct the bisected or predominated world order so as to promote the parallel development of the Eastern and Western civilizations through mutual learning, integration and encouragement. D. To Pass on China’s Confidence. Only a short while ago, some Western countries had called for “China’s responsibility” and made it an inhibition to “regulate” China’s development orientation. Today, China has become a source of stability in an international situation full of uncertainties. Over the past 5 years, China has made outstanding contributions to the recovery of world economy under relatively great pressure of its own economic downturn. Encouraged by the “four confidences”, the whole of the Chinese society has burst out innovation vitality and produced innovation achievements, making people have more sense of gain and more optimistic about the national development prospect. It is the heroism of the ordinary Chinese to overcome difficulties and realize the ideal destiny that best explains China’s confidence. When this confidence is passed on in the field of diplomacy, it is expressed as: first, China’s posture is seen as more forging ahead and courageous to undertake responsibilities ---- proactively shaping the international agendas rather than passively accepting them; having clear-cut attitudes on international disputes rather than being equivocal; and extending international cooperation to comprehensive and dimensional development rather than based on the theory of “economy only”. In sum, China will actively seek understanding and support from other countries rather than imposing its will on others with clear-cut Chinese characteristics, Chinese style and Chinese manner. Second, China’s discourse is featured as a combination of inflexibility and yielding as well as magnanimous ---- combining the internationally recognized diplomatic principles with the excellent Chinese cultural traditions through digesting the Chinese and foreign humanistic classics assisted with philosophical speculations to make “China Brand, Chinese Voice and China’s Image get more and more recognized”. Third, the Chinese solution is more practical and intimate to people as well as emphasizes inclusive cooperation, as China is full of confidence to break the monopoly of the Western model on global development, “offering mankind a Chinese solution to explore a better social system”, and “providing a brand new option for the nations and peoples who are hoping both to speed up development and maintain independence”. II.Path Searching of the “Chinese Solution” for Global Governance Over the past years’ efforts, China has the ability to transform itself from “grasping the opportunity” for development to “creating opportunity” and “sharing opportunity” for common development, hoping to pass on the longing of the Chinese people for a better life to the people of other countries and promoting the development of the global governance system toward a more just and rational end. It has become the major power’s conscious commitment of China to lead the transformation of the global governance system in a profound way. A. To Construct the Theoretical System for Global Governance. The theoretical system of global governance has been the focus of the party central committee’s diplomatic theory innovation since the 18th National Congress of CPC as well as an important component of the theory of socialism with Chinese characteristics for a new era, which is not only the sublimation of China’s interaction with the world from “absorbing and learning” to “cooperation and mutual learning”, but also the cause why so many developing countries have turned from “learning from the West” to “exploring for treasures in the East”. In the past 5 years, the party central committee, based on precise interpretation of the world pattern today and serious reflection on the future development of mankind, has made a sincere call to the world for promoting the development of global governance system toward a more just and rational end, and proposed a series of new concepts and new strategies including engaging in major power diplomacy with Chinese characteristics, creating the human community with common destiny, promoting the construction of new international relationship rooted in the principle of cooperation and win-win, enriching the strategic thinking of peaceful development, sticking to the correct benefit view, formulating the partnership network the world over, advancing the global economic governance in a way of mutual consultation, joint construction and co-sharing, advocating the joint, comprehensive, cooperative and sustainable security concept, and launching the grand “Belt and Road” initiative. The Chinese solution composed of these contents, not only fundamentally different from the old roads of industrial revolution and colonial expansion in history, but also different from the market-driven neo-liberalism model currently advocated by Western countries and international organizations, stands at the height of the world and even mankind, seeking for global common development and having widened the road for the developing countries to modernization, which is widely welcomed by the international community. B. To Supplement and Perfect the Global Governance System. Currently, the international political practice in global governance is mostly problem-driven without creating a set of relatively independent, centralized and integral power structures, resulting in the existing global governance systemcharacterized as both extensive and unbalanced**.** China has been engaged in reform and innovation, while maintaining and constructing the existing systems, producing some thinking and method with Chinese characteristics. First, China sees the UN as a mirror that reflects the status quo of global governance, which should act as the leader of global governance, and actively safeguards the global governance system with the UN at the core. Second, China is actively promoting the transforming process of such recently emerged international mechanisms as G20, BRICS and SCO, perfecting them through practice, and boosting Asia-Pacific regional cooperation and the development of economic globalization. China is also promoting the construction of regional security mechanism through the Six-Party Talks on Korean Peninsula nuclear issue, Boao Forum for Asia, CICA and multilateral security dialog mechanisms led by ASEAN so as to lay the foundation for the future regional security framework. Third, China has initiated the establishment of AIIB and the New Development Bank of BRICS, creating a precedent for developing countries to set up multilateral financial institutions. The core of the new relationship between China and them lies in “boosting rather than controlling” and “public rather than private”, which is much different from the management and operation model of the World Bank, manifesting the increasing global governance ability of China and the developing countries as well as exerting pressure on the international economic and financial institution to speed up reforms. Thus, in leading the transformation of the global governance system, China has not overthrown the existing systems and started all over again, but been engaged in innovating and perfecting; China has proactively undertaken international responsibilities, but has to do everything in its power and act according to its ability. C. To Reform the Global Governance Rules. Many of the problems facing global governance today are deeply rooted in such a cause that the dominant power of the existing governance system has taken it as the tool to realize its own national interests first and a platform to pursue its political goals. Since the beginning of this year, the US has for several times requested the World Bank, IMF and G20 to make efforts to mitigate the so-called global imbalance, abandoned its commitment to support trade openness, cut down investment projects to the middle-income countries, and deleted commitment to support the efforts to deal with climate change financially, which has made the international systems accessories of the US domestic economic agendas, dealing a heavy blow to the global governance system. On the contrary, the interests and agendas of China, as a major power of the world, are open to the whole world, and China in the future “will provide the world with broader market, more sufficient capital, more abundant goods and more precious opportunities for cooperation”, while having the ability to make the world listen to its voice more attentively. With regard to the subject of global governance, China has advocated that what global governance system is better cannot be decided upon by any single country, as the destiny of the world should be in the hands of the people of all countries. In principle, all the parties should stick to the principle of mutual consultation, joint construction and co-sharing, resolve disputes through dialog and differences through consultation. Regarding the critical areas, opening to the outer world does not mean building one’s own backyard, but building the spring garden for co-sharing; the “Belt and Road” initiative is not China’s solo, but a chorus participated in by all countries concerned. China has also proposed international public security views on nuclear security, maritime cooperation and cyber space order, calling for efforts to make the global village into a “grand stage for seeking common development” rather than a “wrestling arena”; we cannot “set up a stage here, while pulling away a prop there”, but “complement each other to put on a grand show”. From the orientation of reforms, efforts should be made to better safeguard and expand the legitimate interests of the developing countries and increase the influence of the emerging economies on global governance. Over the past 5 years, China has attached importance to full court diplomacy, gradually coming to the center stage of international politics and proactively establishing principles for global governance. By hosting such important events as IAELM, CICA Summit, G20 Summit, the Belt and Road International Cooperation Forum and BRICS Summit, China has used theseplatforms to elaborate the Asia-Pacific Dream for the first time to the world, expressing China’s views on Asian security and global economic governance, discussing with the countries concerned with the Belt and Road about the synergy of their future development strategies and setting off the “BRICS plus” capacity expansion mechanism, in which China not only contributes its solution and shows its style, but also participates in the shaping of international principles through practice. On promoting the resolution of hot international issues, China abides by the norms governing international relations based on the purposes and principles of the UN Charter, and insists on justice, playing a constructive role as a responsible major power in actively promoting the political accommodation in Afghanistan, mediating the Djibouti-Eritrea dispute, promoting peace talks in the Middle East, devoting itself to the peaceful resolution of the South China Sea dispute through negotiations. In addition, China’s responsibility and quick response to international crises have gained widespread praises, as seen in such cases as assisting Africa in its fight against the Ebola epidemic, sending emergency fresh water to the capital of Maldives and buying rice from Cambodia to help relieve its financial squeeze, which has shown the simple feelings of the Chinese people to share the same breath and fate with the people of other countries. D. To Support the Increase of the Developing Countries’ Voice. The developing countries, especially the emerging powers, are not only the important participants of the globalization process, but also the important direction to which the international power system is transferring. With the accelerating shift of global economic center to emerging markets and developing economies, the will and ability of the developing countries to participate in global governance have been correspondingly strengthened. As the biggest developing country and fast growing major power, China has the same appeal and proposal for governance as other developing countries and already began policy coordination with them, as China should comply with historical tide and continue to support the increase of the developing countries’ voice in the global governance system. To this end, China has pursued the policy of “dialog but not confrontation, partnership but not alliance”, attaching importance to the construction of new type of major power relationship and global partnership network, while making a series proposals in the practice of global governance that could represent the legitimate interests of the developing countries and be conducive to safeguarding global justice, including supporting an open, inclusive, universal, balanced and win-win economic globalization; promoting the reforms on share and voting mechanism of IMF to increase the voting rights and representation of the emerging market economies; financing the infrastructure construction and industrial upgrading of other developing countries through various bilateral or regional funds; and helping other developing countries to respond to such challenges as famine, refugees, climate change and public hygiene by debt forgiveness and assistance.

#### Solves case – China vaccinates the world.

Mallapaty 6-9 Smriti Mallapaty 6-9-2021 "China is vaccinating a staggering 20 million people a day" <https://www.nature.com/articles/d41586-021-01545-3> (She has a master of science degree in environmental technology from Imperial College London.)//Elmer

For more than a week, an average of about **20 million people** have been vaccinated against COVID-19 **every day in China**. At this rate, the nation would have fully vaccinated the entire UK population in **little more than six days**. China now accounts for more than half of the 35 million or so people around the world receiving a COVID-19 shot each day. Zoltán Kis, a chemical engineer in the Future Vaccine Manufacturing Research Hub at Imperial College London, doesn’t know of “anything **even close to those production scales**” for a vaccine. “The manufacturing efforts required in China to reach this high production throughput are tremendous,” he says. The majority of doses are of one of two vaccines, both of which have been approved for emergency use worldwide by the World Health Organization (WHO). CoronaVac — produced by Beijing-based company Sinovac — showed an efficacy of 51% against symptoms of COVID-19 in clinical trials, and much higher protection against severe disease and death. The second jab was developed in Beijing by state-owned firm Sinopharm and has demonstrated an efficacy of 79% against symptomatic disease and hospitalization. Supplying vaccines to the world China’s current vaccine production rate could potentially **make a significant dent in global demand**, says Kis; that would be “**a huge step in reducing the health-care and economic burden of the COVID-19 pandemic**”. China has already supplied 350 million doses of the two vaccines to more than 75 nations, and WHO approval should now trigger the further distribution of both vaccines to low-income countries. “China’s vaccination campaign got off to a slow start, but has rapidly picked up pace,” says Rongjun Chen, a biomaterials scientist also at the Future Vaccine Manufacturing Research Hub. As recently as mid-April, China was administering only about five million doses a day. According to an official at China’s National Health Commission, the nation aims to produce some three billion doses of COVID-19 vaccines in 2021 — and up to **five billion per year after that**. To achieve such high production rates, many things need to go according to plan across the entire production and distribution chain, from sourcing raw materials to manufacturing active ingredients, filling vials and distributing doses to vaccination centres, says Kis. “It is crucial that everything arrives at the right location at the right time.”

### Case

#### 1] Be extremely skeptical of the brink or uniqueness for this – COVID has happened for nearly two years and we have yet to see a great power conflict.

#### 2] No Correlation and best studies show COVID decreases Conflict.

Salemi 20 Colette Salemi 10-15-2020 "Does COVID-19 raise the risk of violent conflict? Not everywhere" <https://archive.is/h591O#selection-309.0-312.0> (Colette Salemi is a PhD student in applied economics at the University of Minnesota. Her research focuses on conflict, forced displacement, environmental degradation and their intersections.)//Elmer

How we did our research We **used** the Armed Conflict Location and Event Data (**ACLED**), a **database** **that counts** the **number of conflict events daily around the world**. For 2019 and 2020, ACLED includes more than 100 countries in Africa, Asia, Latin America and Eastern Europe — and tracks three categories of violent conflict: battles, violence against civilians and explosions/remote violence. We examine trends in the number of conflict events over time. To see whether the trend changes in response to covid-19, we look at what happened after the World Health Organization declared a global pandemic (March 11) or the country declared a lockdown. [Don’t miss any of TMC’s smart analysis! Sign up here for our newsletter.] The **relationship between pandemics and conflict is theoretically unclear.** In some countries, job losses from the covid-19 pandemic mean people have fewer income-generating options — that can make participation in violence seem a more viable alternative. But if **market disruptions** and reduced global demand are **driving down** the **value of natural resources** such as oil wells, then **we** may **see less conflict** over control of such resources. We then **conducted** case **studies** based **on** our knowledge of countries with high rates of violent conflict before **covid**-19. These include countries with active civil wars (such as Syria) as well as countries with violent militia groups (such as the Philippines). Conflict during the coronavirus pandemic varies greatly **Worldwide**, **we didn’t observe an increase in violent conflict**. **If anything, conflict has decreased**, as the figure below shows. **Violent conflict** between March and August 2020 **was 23 percent lower** than violent conflict during the same period in 2019. Comparing these time periods, battles are down 20 percent and remote violence and bombings are down 40 percent. But violence against civilians — the deliberate attack of unarmed noncombatants by armed groups — continued at similar rates globally.

Chart, histogram

Description automatically generated

#### 3] Cooperation and Solidarity Check.

Ide 21, Tobias. "COVID-19 and armed conflict." World development 140 (2021): 105355. (School of Geography, The University of Melbourne, 221 Bouverie St, Carlton, VIC 3053, Australia Institute of International Relations, Brunswick University of Technology)//Elmer

**COVID**-19 might also **provide** a **chance to demonstrate solidarity and good intentions**, and hence lessen grievances. The literature on health diplomacy, for example, discusses how **cooperation on** shared h**ealth challenges can increase** the **prospects for peaceful relations**. The empirical success of such efforts is so far been limited (Kelman, 2019). However, research on environmental peacebuilding has revealed that low-level, mutually beneficial cooperation can yield peace dividends in certain contexts (Ide, 2019). Furthermore, **ceasefires** **to deliver health benefits** **have** at least temporally **reduced armed conflict intensity** on several occasions **in the past** (Chattu & Knight, 2019). **In response to the pandemic** (and António Guterres’ call), **armed groups in 14 countries have announced ceasefires** to support responses to COVID-19 (Rustad, 2020).

#### 4] Actors turn inward NOT outward.

Ide 21, Tobias. "COVID-19 and armed conflict." World development 140 (2021): 105355. (School of Geography, The University of Melbourne, 221 Bouverie St, Carlton, VIC 3053, Australia Institute of International Relations, Brunswick University of Technology)//Elmer

However, **COVID**-19 might also **shape** **opportunity costs in a way** **to reduce armed conflict risks**, at least temporarily. If a **state’s capability is strained** and there is an **urgent need to deal with a health emergency**, **military offensives are** certainly **unlikely** (Price-Smith, 2009). Furthermore, existing as well as potential **rebel groups** and militias **face similar challenges** in the face of the pandemic. They need to raise money and food to supply to their fighters during an economic recession, convince their members to take part in operations rather than staying at home (to reduce infection risks and support their family or community), and deal with the logistical constraints of lockdowns and border closures. **Starting** or intensifying **attacks** **during** the **COVID**-19 crisis is **likely to decrease** the local (and international) **legitimacy** of armed groups, especially if health infrastructure is affected. The ceasefire declarations by armed conflict parties in several countries can also be interpreted as a sign that COVID-related capability and legitimacy concerns are warranted.

#### LBL 1AC Recna Warrants:

#### 1] Commander Miscalc Warrant is literally “they die” – a] other diseases like Flu also cause death and b] natural causes – chain of command solves.

#### 2] Confusion as Aggressive Cover Warrant doesn’t account for double-edged effects of pandemics.

#### 3] Zero warrant for this Proliferation Warrant – less likely in pandemics since technology and money is re-directed at social and health spending.

#### Decades of protests thump any impact

#### No terminal to terror outside of pandemic instability – we’ll impact turn it—ensures nanotech innovation that enables rapid detection and neutralization of future biological attacks

Taeyjuana Curry PhD, 3-10-2016, [phd in physics@umich] "Nanoparticles – 5 Ways These “Little Fighters” Are Making a Big Impact in the War on Terrorism," Sustainable Nano, <http://sustainable-nano.com/2016/03/10/nanoparticles-war-on-terrorism/> RE

The term “terrorism” is becoming quite ubiquitous in our everyday lives. It seems that you can hardly watch a news report, browse the internet, listen to a podcast, or tune into your favorite radio station without being made aware of the most recent terrorist attack that has happened here or abroad. The prevalence of these acts is quite disheartening. However, as a scientist in the field of nanotechnology, I can tell you that there is a bright side, or a silver lining to this particular societal cloud. In essence, “necessity is the mother of invention!” The unfortunate rise in the number of terrorist attacks around the world has resulted in many scientists in the field of nanotechnology devoting effort toward the use of nanoparticles in the fight against terrorism.

The Merriam-Webster dictionary gives the simple definition of terrorism as “the use of violent acts to frighten the people in an area as a way of trying to achieve a political goal” and the full definition as “the systematic use of terror especially as a means of coercion.”1 You can find more detailed definitions used by the Department of State and the Federal Bureau of Investigation (FBI).2 For the sake of clarity, in this post I will refer to the simpler definition, with a specific emphasis on toxic chemicals used as form of warfare agents against innocent targets.

Nanotechnology, and nanoparticles specifically, are likely not the first thing that comes to mind when most people consider the fight against terrorism. However, nanoparticles have some particularly advantageous properties that can be exploited for this very use:

Nanoparticles are very, very, very small and can have many shapes. The ability to change the size and shape of nanoparticles makes them extremely versatile, which means they can be adapted to address many types of threats associated with terrorism (more details on this later).

Nanoparticles have a high surface to volume ratio, which means they are very efficient attaching themselves to targets such as toxic chemicals meant to harm innocent people, animals, or crops, etc.

Nanoparticles can also be made to be porous (filled with holes). Porous nanoparticles can be filled with sensing and neutralization agents that make them excellent at alerting authorities to a terrorist threat, even when the threat is only present at low levels.

Nanoparticles can be packaged in different forms like solids, gels, and aerosols. This makes them potentially useful in a range of contexts for law enforcement, military, and research scenarios.

Lastly, many nanoparticle-based technologies that are focused on aiding in the fight against terrorism have the added benefit of easy disposal. For example, some solid nanoparticle-based materials that are designed to neutralize a threat substance can then simply be thrown away without needing any extra steps to make the materials safe. Moreover, in many cases there have been efforts to make all of the byproducts “green” or nontoxic to the environment.

Nanoparticle-based applications are particularly suited for two aspects of the fight against terrorism: rapid detection and neutralization of a terrorist threat. Rapid detection is the ability to accurately detect the presence of a terrorist threat, for example a chemical warfare agent, in a short time span. Neutralization is the ability to transform a toxic agent into a nontoxic form. Here are a few exciting and innovative examples from the last five years that illustrate how scientists all over the world are using the advantageous characteristics of nanoparticles to ensure that nanotechnology plays a key role in the fight against terrorism.

Rapid Detection of Threat

⇒ In 2013, Scientists from the Institute of Biophysics at the Chinese Academy of Sciences developed a system for the rapid detection of a nerve agent, Sarin. The system is based on iron oxide metal nanoparticles. It can sense the presence of the highly toxic nerve agent in a matter of minutes and the results of the test are easily read out via a color change of the test solution.3 This application is particularly cool because it provides a quick read-out that is easily interpreted.

Schematic

Schematic of a magnetic nanoparticle-based tool for the detection of toxic chemicals including the nerve agent Sarin and some toxic pesticides. The amount of the toxic chemicals present is indicated by a color change that is easily seen by the naked eye (from clear to blue, far right). (image from Liang et al., 20123)

⇒ MIT Scientists have developed protein coated carbon nanotubes for the detection of very small traces of explosives. Carbon nanotubes are very small, cylindrical tubes made out of carbon that have ultrathin walls. In this project, coating carbon nanotubes with various types of proteins from bee venom made them useful for detecting different types of explosives at the single molecule level (much more sensitive than typical methods).4,5

⇒ Scientists from Georgia Tech developed a wireless sensor prototype based on carbon nanotubes that can be used to detect the presence of improvised explosive devices or IEDs. This is extra cool because the carbon nanotubes are printed directly on paper using a common inkjet printing technology This sensor is very promising as it is low cost and can be used anywhere.6

Neutralization of Threat

⇒ FAST-ACT®, which stands for First Applied Sorbent Treatment-Against Chemical Threats, is a product offered by Timilon Technology Acquisitions LLC. The company uses NanoActive® metal oxides “for the destruction of toxic and noxious materials, including air and water pollutants, hazardous chemicals, biological organisms, odors and chemical warfare agents.” Specifically, FAST-ACT is non-flammable, non-corrosive, and can be used to significantly reduce both liquid and vapor hazards.7 It comes in many different forms (liquid, vapor, or on mitts) and can be safely used in a variety of environments. This product has been shown to be highly effective in neutralizing the chemical warfare nerve agents VX, Soman, and mustard gas. It is also very versatile as it can be safely used by the military, first responders, and scientists.8

⇒ Silica nanoparticles filled with special reactive chemicals have been successfully used in the removal of several chemical nerve and blister warfare agents including Sarin. The nanoparticles were able to absorb the toxic chemicals and neutralize them by changing them into nontoxic chemicals in only a few minutes.9 This application is an example of how scientists can take advantage of the porosity of certain kinds of nanoparticles to target them toward specific toxic chemical agents used in terrorist attacks.

⇒ Scientists from the Department of Nanoengineering at the University of California, San Diego developed self-propelled “micro-motors” for use in neutralizing an anthrax threat in natural water. The so called “micro-motors” are made of magnesium microparticles, coated with a titanium oxide shell that has gold nanoparticles embedded in it. As if self-propulsion and anthrax eradication aren’t impressive enough, the environmentally friendly micro-motors convert toxic agents into environmentally safe products, making them an especially “green” solution that can be applied to a chemical or biological warfare agent.10

Nanotechnology is quickly becoming a part of our everyday lives. More specifically, nanoparticles are now included in many consumer products including electronics, cosmetics, and medicine. The fight against terrorism, another familiar topic in many of our lives, has also been influenced by nanotechnology. Nanotechnology can make use of the best qualities of nanoparticles in a variety of ways, especially enabling rapid detection and neutralization of toxic chemical agents in various environments. I’m proud to know that some of the research done on a daily basis in scientific labs across the world is being used to positively impact global society by helping in the fight to keep innocent people safe from certain types of terrorist attacks. GO NANOSCIENCE!!!

#### Bioweapons cause extinction and are coming now

Millett 17. Millett, Ph.D., Senior Research Fellow, Future of Humanity Institute, University of Oxford; and Snyder-Beattie, M.S., Director of Research, Future of Humanity Institute, University of Oxford. 08-01-2017. “Existential Risk and Cost-Effective Biosecurity,” Health Security, 15(4), PubMed

In the decades to come, advanced bioweapons could threaten human existence. Although the probability of human extinction from bioweapons may be low, the expected value of reducing the risk could still be large, since such risks jeopardize the existence of all future generations. We provide an overview of biotechnological extinction risk, make some rough initial estimates for how severe the risks might be, and compare the cost-effectiveness of reducing these extinction-level risks with existing biosecurity work. We find that reducing human extinction risk can be more cost-effective than reducing smaller-scale risks, even when using conservative estimates. This suggests that the risks are not low enough to ignore and that more ought to be done to prevent the worst-case scenarios. How worthwhile is it spending resources to study and mitigate the chance of human extinction from biological risks? The risks of such a catastrophe are presumably low, so a skeptic might argue that addressing such risks would be a waste of scarce resources. In this article, we investigate this position using a cost-effectiveness approach and ultimately conclude that the expected value of reducing these risks is large, especially since such risks jeopardize the existence of all future human lives. Historically, disease events have been responsible for the greatest death tolls on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world's population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization. A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity's favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6 While these arguments point to a very small risk of human extinction, they do not rule the possibility out entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and the Western Abenaki (which suffered a staggering 98% loss of population).9 In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-21 Although these experiments had scientific merit and were not conducted with malicious intent, their implications are still worrying. This is especially true given that there is also a long historical track record ofstate-run bioweapon research applying cutting-edge science and technology to design agents not previously seen in nature. The Soviet bioweapons program developed agents with traits such as enhanced virulence, resistance to therapies, greater environmental resilience, increased difficulty to diagnose or treat, and which caused unexpected disease presentations and outcomes.22 Delivery capabilities have also been subject to the cutting edge of technical development, with Canadian, US, and UK bioweapon efforts playing a critical role in developing the discipline of aerobiology.23,24 While there is no evidence of state-run bioweapons programs directly attempting to develop or deploy bioweapons that would pose an existential risk, the logic of deterrence and mutually assured destruction could create such incentives in more unstable political environments or following a breakdown of the Biological Weapons Convention.25 The possibility of a war between great powers could also increase the pressure to use such weapons—during the World Wars, bioweapons were used across multiple continents, with Germany targeting animals in WWI,26 and Japan using plague to cause an epidemic in China during WWII.27