# 1NC vs Homestead DA

### 1NC – Off

#### Biotech industry strong now

Cancherini et al. 4/30 [(Laura, Engagement Manager @ McKinsey & Company, Joseph Lydon, Associate Partner @ McKinsey & Company, Jorge Santos Da Silva, Senior Partner at McKinsey & Company, and Alexandra Zemp, Partner at McKinsey & Company), “What’s ahead for biotech: Another wave or low tide?“, McKinsey & Company, 4-30-2021, https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/whats-ahead-for-biotech-another-wave-or-low-tide] TDI

Belying this downbeat mood, biotech has in fact had one of its best years so far. By January 2021, venture capitalists had invested some 60 percent more than they had in January 2020, with more than $3 billion invested worldwide in January 2021 alone.5 IPO activity grew strongly: there were 19 more closures than in the same period in 2020, with an average of $150 million per raise, 17 percent more than in 2020. Other deals have also had a bumper start to 2021, with the average deal size reaching more than $500 million, up by more than 66 percent on the 2020 average (Exhibit 3).6

What about SPACs?

The analysis above does not include special-purpose acquisition companies (SPACs), which have recently become significant in IPOs in several industries. Some biotech investors we interviewed believe that SPACs represent a route to an IPO. How SPACs will evolve remains to be seen, but biotechs may be part of their story.

Fundamentals continue strong

When we asked executives and investors why the biotech sector had stayed so resilient during the worst economic crisis in decades, they cited innovation as the main reason. The number of assets transitioning to clinical phases is still rising, and further waves of innovation are on the horizon, driven by the convergence of biological and technological advances.

In the present day, many biotechs, along with the wider pharmaceutical industry, are taking steps to address the COVID-19 pandemic. Together, biotechs and pharma companies have more than 250 vaccine candidates in their pipelines, along with a similar number of therapeutics. What’s more, the crisis has shone a spotlight on pharma as the public seeks to understand the roadblocks involved in delivering a vaccine at speed and the measures needed to maintain safety and efficacy standards. To that extent, the world has been living through a time of mass education in science research and development.

Biotech has also benefited from its innate financial resilience. Healthcare as a whole is less dependent on economic cycles than most other industries. Biotech is an innovator, actively identifying and addressing patients’ unmet needs. In addition, biotechs’ top-line revenues have been less affected by lockdowns than is the case in most other industries.

Another factor acting in the sector’s favor is that larger pharmaceutical companies still rely on biotechs as a source of innovation. With the top dozen pharma companies having more than $170 billion in excess reserves that could be available for spending on M&A, the prospects for further financing and deal making look promising.

For these and other reasons, many investors regard biotech as a safe haven. One interviewee felt it had benefited from a halo effect during the pandemic.

More innovation on the horizon

The investors and executives we interviewed agreed that biotech innovation continues to increase in quality and quantity despite the macroeconomic environment. Evidence can be seen in the accelerating pace of assets transitioning across the development lifecycle. When we tracked the number of assets transitioning to Phase I, Phase II, and Phase III clinical trials, we found that Phase I and Phase II assets have transitioned 50 percent faster since 2018 than between 2013 and 2018, whereas Phase III assets have maintained much the same pace. There could be many reasons for this, but it is worth noting that biotechs with Phase I and Phase II assets as their lead assets have accounted for more than half of biotech IPOs. Having an early IPO gives a biotech earlier access to capital and leaves it with more scope to concentrate on science.

#### Lack of IP protection makes medical innovation prohibitively risky and expensive

Grabowski et al 15 [(Henry, Professor of Economics, member of the faculty for the Health Sector Management Program, and Director of the Program in Pharmaceuticals and Health Economics at Duke University) “The Roles of Patents and Research And Development Incentives In Biopharmaceutical Innovation,” Health Affairs, 2/2015] JL

The essential rationale for patent protection for biopharmaceuticals is that long-term benefits in the form of continued future innovation by pioneer or brand-name drug manufacturers outweigh the relatively short-term restrictions on imitative cost competition associated with market exclusivity. Regardless, the entry of other branded agents remains an important source of therapeutic competition during the patent term.

Several economic characteristics make patents and intellectual property protection particularly important to innovation incentives for the biopharmaceutical industry. **5** The R&D process often takes more than a decade to complete, and according to a recent analysis by Joseph DiMasi and colleagues, per new drug approval (including failed attempts), it involves more than a billion dollars in out-of-pocket costs. **6** Only approximately one in eight drug candidates survive clinical testing. **6**

As a result of the high risks of failure and the high costs, research and development must be funded by the few successful, on-market products (the top quintile of marketed products provide the dominant share of R&D returns). **7**,**8** Once a new drug’s patent term and any regulatory exclusivity provisions have expired, competing manufacturers are allowed to sell generic equivalents that require the investment of only several million dollars and that have a high likelihood of commercial success. Absent intellectual property protections that allow marketing exclusivity, innovative firms would be unlikely to make the costly and risky investments needed to bring a new drug to market.

Patents confer the right to exclude competitors for a limited time within a given scope, as defined by patent claims. However, they do not guarantee demand, nor do they prevent competition from nonidentical drugs that treat the same diseases and fall outside the protection of the patents.

New products may enter the same therapeutic class with common mechanisms of action but different molecular structures (for example, different statins) or with differing mechanisms of action (such as calcium channel blockers and angiotensin receptor blockers). 9 Joseph DiMasi and Laura Faden have found that the time between a first-in-class new drug and subsequent new drugs in the same therapeutic class has been dramatically reduced, from a median of 10.2 years in the 1970s to 2.5 years in the early 2000s. 10 Drugs in the same class compete through quality and price for preferred placement on drug formularies and physicians’ choices for patient treatment.

Patents play an essential role in the economic “ecosystem” of discovery and investment that has developed since the 1980s. Hundreds of start-up firms, often backed by venture capital, have been launched, and a robust innovation market has emerged. **11** The value of these development-stage firms is largely determined by their proprietary technologies and the candidate drugs they have in development. As a result, the strength of intellectual property protection plays a key role in funding and partnership opportunities for such firms.

#### MRNA solves a litany of diseases, but continued innovation is key

Gupta 5/7 [(Swati, vice president and head of emerging infectious diseases and scientific strategy at IAVI, a nonprofit scientific research organization that develops vaccines and antibodies for HIV, tuberculosis, emerging infectious diseases (including COVID-19) and neglected diseases, PhD and MPH from Yale University) “The Application and Future Potential of mRNA Vaccines,” Yale School of Public Health, 5/7/2021] JL

The implications of mRNA technology are staggering. Several vaccine developers are studying this technology for deployment against rabies, influenza, Zika, HIV and cancer, as well as for veterinary purposes. Its potential utility is based upon its being a “platform technology” that can be developed and scaled rapidly. Given that only the genetic code for a protein of interest is needed, synthetically produced mRNA vaccines can be made rapidly, in days. Other vaccine approaches involve growing and/or producing proteins in cells, a process that can take months. Messenger RNA vaccines are generally regarded as safe, since they do not integrate into our cells’ DNA and naturally degrade in the body after injection. They also can be safely administered repeatedly, as we are seeing with the two-dose regimen for both the Pfizer-BioNTech and Moderna vaccines.

Despite the current success of mRNA vaccines for COVID-19, scientists continue to work on making the technology better. A number of laboratories are testing more thermostable formulations of mRNA vaccines, which currently must be kept at freezing or ultra-cold temperatures. Others are investigating second-generation vaccines that will only require a single shot, and “universal” coronavirus vaccines that could protect against future emerging coronaviruses. Messenger RNA vaccines that target a broad range of different diseases, all in one shot, are also in development; this approach has the potential to greatly simplify current vaccination schedules.

Taken together, these advantages and potential future developments position mRNA vaccines as an increasingly important technology in our arsenal of tools against infectious disease outbreaks, and are likely to be critical to fighting future epidemics and pandemics. Global partnerships like the Coalition for Epidemic Preparedness and Innovation (CEPI), tasked with facilitating the development of vaccines to stop future epidemics, have called for vaccines to be able to be tested in the clinic within months after a new pathogen is identified. With the latest discoveries in mRNA technology, we are well on our way to this goal; the ability of this platform technology to be transformative is no longer a hope, but more likely to be a reality in the very near future.

#### Disease causes extinction – that was the 1ac extinction scenario

### 1NC – Off

#### CP Text: the United States should

#### -invest $25 billion into 25 production lines dedicated solely to COVID-19 vaccines to boost global vaccine production managed by the Biomedical Advanced Research and Development Authority.

#### -distribute 8 billion doses of COVID vaccines using an equitable distribution framework prioritizing developing countries in the Global South.

#### The CP solves the entirety of the case and does it faster.

Stankiewicz 21 Mike Stankiewicz 5-6-2021"Opinion: For just $25 billion, the U.S. could jump-start a project to quickly vaccinate the entire world against COVID" <https://www.marketwatch.com/story/for-just-25-billion-the-u-s-could-jump-start-a-project-to-quickly-vaccinate-the-entire-world-against-covid-11614898552> (a press officer in Public Citizen's communication's department, where he focuses on legislative policy and health-orientated advocacy)

Despite wealthy countries such as the U.S. ramping up COVID-19 vaccination efforts, it still may take years to vaccinate the world, especially poorer countries, and the economic and humanitarian impacts could be devastating. But an injection of just $25 billion into global vaccine production efforts by the U.S. government could save millions of lives and help prevent economic disaster. The most up-to-date numbers paint incredibly different futures between wealthy and low-income countries. At the current rate of vaccination, analysts predict that developing countries, including almost all of Southeast Asia, may not reach meaningful vaccine coverage until 2023. Comparatively, President Joe Biden has promised that the U.S. will have enough vaccine doses to inoculate every adult within the next three months. Increased fatalities And as wealthy countries such as the U.S. are starting to see lower death, transmission and hospitalization rates, low-income countries are experiencing increased hardship and fatalities. Countries such as Hungry are being forced to tighten restrictions as infection rates increase, and deaths in Africa have spiked by 40% in the past month, according to the World Health Organization (WHO). No country can be left behind in this global pandemic, and the U.S. is in a unique position to make sure every country gets the ample amount of vaccines they need. Public Citizen research has found that just a $25 billion investment in COVID-19 vaccine production by the U.S. government would produce enough vaccine for developing countries, potentially shaving years from the global pandemic. Public Citizen estimates that 8 billion doses of National Institutes of Health-Moderna MRNA, +1.98% vaccine can be produced for just over $3 per dose. To bolster production and supply the necessary 8 billion doses, it would take $1.9 billion to fund the necessary 25 production lines. Another $19 billion would pay for materials and labor, and $3 billion would compensate Moderna for making technology available to manufacturers in other countries. An additional $500 million would cover costs to staff and run a rapid-response federal program that provides technical assistance and facilitates technology transfer to manufacturers and works with the WHO’s technology hub**.** In total, vaccinating the world would cost less than 1.4% the total of Biden’s $1.9 trillion COVID relief plan. But such a program also needs to be properly managed to be successful. To help facilitate these efforts, the Biden administration should also designate the government’s Biomedical Advanced Research and Development Authority (BARDA) to lead the world-wide vaccine manufacturing effort. BARDA has the necessary experience to coordinate an initiative of this scale with the WHO, building on its partnership to build pandemic flu manufacturing capacity in developing countries after the bird-flu scare of 2006. Widespread vaccines would help U.S. economy These efforts would dramatically increase access to vaccines in developing countries and speed up global vaccination by years, saving countless lives. But allowing the current vaccine supply crisis to continue is not just inhumane, it is also not in our own economic interest to do so.

### 1NC – Off

#### WTO is near consensus on fisheries subsidies – success will require continued focus, flexibility, and cooperation among members

WTO 7/15 [(World Trade Organization) “WTO members edge closer to fisheries subsidies agreement,” News and Events, 7/15/2021] JL

During an all-day meeting with 104 ministers and heads of delegation, WTO members pledged to conclude the negotiations soon and certainly before the WTO's Ministerial Conference in early December, and to empower their Geneva-based delegations to do so. Members also confirmed that the negotiating text currently before them can be used as the basis for the talks to strike the final deal.

“I feel new hope this evening. Because ministers and heads of delegation today demonstrated a strong commitment to moving forward and doing the hard work needed to get these negotiations to the finish line. I applaud you for this. In 20 years of negotiations, this is the closest we have ever come towards reaching an outcome — a high-quality outcome that would contribute to building a sustainable blue economy,” said Director-General Ngozi Okonjo-Iweala.

“One fundamental conclusion that I draw from your interventions today is that members are ready to use the text as the basis for future negotiations. A second takeaway from today was that there is universal agreement about the importance of the food and livelihood security of artisanal fishers in developing and least developed countries. The prospect for a deal in the autumn ahead of our Ministerial Conference has clearly improved.”

The UN Food and Agriculture Organization estimates that one-third of global fish stocks are overfished and most of the rest is fully exploited. This is up from 10% in 1970 and 27% in 2000. Depleted stocks threaten the food security of low-income coastal communities, and the livelihoods of poor and vulnerable fishers who must go further and further from shore only to bring back smaller and smaller hauls.

Each year, governments hand out around $35 billion in fisheries subsidies, two-thirds of which go to commercial fishers. These subsidies keep at sea vessels which would otherwise be economically unviable. World leaders in 2015 made a fisheries subsidies agreement by 2020 part of the Sustainable Development Goals and trade ministers reaffirmed this pledge in 2017.

The negotiations on fisheries subsidies disciplines have been ongoing for nearly 20 years. Although there has been recent progress thanks to the intensive work that led to the development of the negotiating text on which members are working, the lack of political impetus in the talks to close the remaining gaps inspired Director-General Okonjo-Iweala to call this meeting of ministers.

Among the thorniest issues to resolve has been how to extend special and differential treatment to developing and least developed country WTO members while preserving the overall objective of enhanced sustainability of the oceans. Ministers said that the livelihoods and food security of poor and vulnerable artisanal fishers in developing and least developed countries were of great importance, as was preserving the sustainability objective of the negotiations.

Amb. Santiago Wills of Colombia, who chairs the Rules Negotiating Group overseeing the fisheries subsidies negotiations, said he had received some valuable inputs from the discussions. He now has greater clarity on the path forward and the next steps that would be required to harvest an agreement. He will be consulting with the Director-General and WTO members about charting the path forward for the next stage of the talks.

“I am very heartened by the responses and messages that we have heard today. What we sought from ministers today was political guidance to help close these negotiations soon. And we did hear that guidance. We have been given the ingredients to reach a successful conclusion; a commitment to finish well ahead of our Ministerial Conference a text that can be the platform for this final stage of the negotiations and fully empowered heads of delegations in Geneva. This represents a real success,” said Amb. Wills.

The Director-General said that delegations needed to prepare for an intensive period of line by line negotiations.

“As we enter this new phase of text-based discussions, the responsibility to conclude these negotiations is truly in the hands of members. To get from here to an agreement, it will be your job to find the necessary trade-offs and flexibilities. A successful outcome by MC12 is ultimately your responsibility,” she said. “The world is watching. The fisheries subsidies negotiations are a test both of the WTO's credibility as a multilateral negotiating forum and of the trading system's ability to respond to problems of the global commons.  If we wait another 20 years, there may be no marine fisheries left to subsidise — or artisanal fishing communities to support.”

#### IP disputes fragment WTO unity and trade off with subsidies negotiation

Patnaik 3/12 [(Priti, journalist in Geneva, Switzerland, master’s in Development Studies from The Graduate Institute in Geneva and a master’s in Business and Economic Reporting from New York University) “Could Vaccine Nationalism Spur Disputes At The WTO?” Geneva Health Files, 3/12/2021] JL

To protect domestic manufacturers and constituencies, countries may resort to filing disputes, if only to send a signal to other members, experts believe. To be sure, this is not only about vaccines. Going forward, export restrictions on raw materials can have implications for therapeutics as well. So the threat of a dispute may be a tool to deal with competition for scarce medical products during the pandemic, experts say.

Although trade restrictive measures are short-sighted and not a preferred policy option, governments see them as powerful instruments to meet political goals, to send a message to domestic stakeholders, sources said.

“My hunch is that all countries are sort of sitting on both sides of the fence. On the one hand, governments would like to maintain the discretion and the ability to impose export restrictions if they need to or if they think they need to. Whether that is medical products or personal protective equipment. On the other hand, everybody dislikes it when other countries impose export restrictions. So I think there is enough of an incentive for countries to sit down and negotiate,” one legal expert noted.

Sources also pointed to political declarations last year where WTO members came together and said that they would not impose restrictive trade measures. “In order to be constructive, countries decided that they were going to signal to members that will not introduce exports restrictive measures even though it may be expedient to do so,” one trade expert said. The way out, some feel, is to find solution to placing limits on export restrictions.

It is not just trade restrictive measures that could result in trade disputes. The heated political discussions on the TRIPS waiver at WTO is also aggravating the potential for disputes, according to experts involved in litigations in international trade in Geneva. Therefore these ostensibly independent processes, can catalyse disputes.

“The waiver discussion is very heated and it is aggravating the discussion on the EU's export restrictions. If the waiver succeeds, then the opposing members cannot do anything about it. So they will be looking at other ways to beat up on behavior they do not like on the COVID-19 front,” one trade law expert said.  Do not rule out disputes against supporters of the TRIPS waiver proposal, in case the waiver is adopted, the source added.

In their statement at the WTO General Council meeting last week, the EU said, “In order to ensure that vaccines and their ingredients are not directed to export destinations in unjustified volumes, the European Union had no choice but to introduce a transparency mechanism on Covid-19 vaccine export transactions.” The EU has said that the measures are WTO-consistent.

It added “Since the entry into force of the scheme on the 1 February, we have received 150 requests for export authorisation. All of them have been accepted. I repeat, all of them.” This week, the European Commission extended transparency and authorisation mechanism for exports of COVID-19 vaccines.

The EU is also a part of the Ottawa Group proposal on Trade and Health that also spells out commitments towards export restrictions. (See also *E.U. Exports Millions of Covid Vaccine Doses Despite Supply Crunch at Home*)

“Members bring disputes all the time, even when they know that it's going to take a long time to get a result and often they bring a dispute as leverage for negotiations. Filing a dispute does not mean they are looking for a solution. It does not mean the dispute will be litigated all the way to the end,” a trade lawyer said.

It could also result in a negotiated arrangement, like it was in 2001 in the U.S.-Brazil case. “Why did the U.S. bring a case against Brazil? It gave them leverage in negotiations, and to satisfy domestic stakeholders,” the lawyer added.

The impasse at the Appellate Body may not be a deterrent for countries to dissuade countries from bringing a dispute, some believe.

“The Appellate Body not being functional is not a problem. Countries have recourse to Article 25 under the Dispute Settlement Understanding (DSU) that provides for ‘expeditious arbitration as a alternate means to dispute settlement’,” a source involved in the WTO litigation process said. (The EU, for example, is a signatory to the Multi-party interim appeal arbitration arrangement, MPIA.)

While disputes may take up precious energy and resources of members already stretched in fighting to address the pandemic, it may likely be a strategy to address trade protectionism. Not all agree.

“I think the law is not really an answer here, I hate to say that because I'm a lawyer. But I really don't think the law is an answer because the law is so generically drafted right that and it's politically so sensitive. Which WTO panel will tell a member that restricting vaccines is not legitimate? It will ultimately harm the legitimacy of the trading system,” the person added.

#### Overfishing causes SCS war – WTO agreement solves

Cohen and Floyd 1/27 [(Sam, J.D. student at Harvard Law School, BA in history from Yale University, surface warfare officer in the U.S. Navy, and Steve, joint J.D./LL.M. in national security law at Georgetown University Law Center, lieutenant commander in U.S. Naval Intelligence) “Water Wars Special: How IUU Fishing Increases the Risk of Conflict, Lawfare, 1/27/2021] JL

The Food and Agriculture Organization of the United Nations has classified one-third of the world’s marine fisheries as overfished. The impact of unsustainable fishing is especially acute in the South China Sea, where coastal fisheries have lost 70 to 95 percent of their stocks since the mid-20th century and catch rates have declined by 70 percent throughout the past two decades. Furthermore, the sea’s coral reefs, which nurture critical feeding grounds for fish stocks, decline by 16 percent every 10 years. As traditional fishing grounds prove less fruitful, fishermen venture farther from shore and operate in contested areas. Indeed, when China faced dwindling coastal stocks in the 1990s, Beijing embarked on a massive shipbuilding effort; and President Xi Jinping continues to exhort Chinese fishermen to “build bigger ships and venture even farther into the oceans and catch bigger fish.” Such efforts incentivize IUU activity, heighten competition for increasingly scarce resources and feed an escalating cycle that accelerates stock depletion.

In the South China Sea, with its kaleidoscope of disputed claims, China’s excess capacity and IUU fishing practices exacerbate a particularly volatile environment. Depleted fishing stocks force fishermen to operate further from shore and increase the chance of violent encounters. Filipino authorities have intercepted Chinese boats illegally fishing off Palawan, and Philippine President Rodrigo Duterte claimed that Chinese fishermen intentionally rammed a Filipino fishing boat and left its crew stranded in the sea in 2019. Three years earlier, the Chinese Coast Guard rammed an Indonesian patrol boat attempting to interdict Chinese fishermen. As the Vietnamese government actively encourages fishermen to contest China’s expansive maritime claims, the Chinese Coast Guard expelled nearly 1,200 fishing boats from the northern half of the South China Sea last summer. During one such encounter, a Chinese Coast Guard vessel repeatedly rammed a Vietnamese fishing boat and sent its 17-person crew overboard. It’s true that fishing subsidies did not create the region’s historic animosities. But the activities these subsidies support add fuel to an already smoldering fire.

Dwindling stocks of fish, unsustainable practices and IUU fishing constitute a global crisis and increase the risk of maritime conflict. But this risk can be mitigated through international cooperation: A World Trade Organization (WTO) agreement on fishing subsidies would address a fundamental cause of these fishing-related problems and create a binding legal framework through which members could seek relief.

#### SCS conflict draws in the US and goes nuclear – extinction

Carter 20 (John Carter has been an economics and finance journalist for more than 40 years. Prior to joining the South China Morning Post, he worked for Market News International for more than 33 years, first as Washington Bureau Chief, then as European Managing Editor in Frankfurt, Germany and finally as Asian Managing Editor working out of Beijing, Global Impact newsletter: escalating conflict in the South China Sea, https://www.scmp.com/economy/article/3102323/global-impact-newsletter-escalating-conflict-south-china-sea)

If you want to start a world war, a good way to do it is to mix the escalating conflict between two of the world’s greatest military powers with the grievances of a half-dozen smaller countries over territorial claims. That’s the current situation in the South China Sea, the massive body of water that stretches more than 4,000km (2,485 miles) from mainland China in the north to Indonesia in the south – about the same distance between London and Chicago. China has claimed the vast majority of the South China Sea as its exclusive territory, including areas claimed by six other governments – Brunei, Indonesia, Malaysia, the Philippines, Taiwan, and Vietnam – that consider them part of their own exclusive economic zones. A map of the conflicting claims can be seen in this graphic presentation, while the history of China’s territorial disputes, including in the South China Sea, is explained in this video. China considers the South China Sea one of its “core” interests, of equal importance as Taiwan, Tibet and Xinjiang, meaning it is ready to go to war to defend it. It has marked the territory by a “nine dash line” on its maps, and even on its passports, angering its neighbours. China needs the oil and mineral wealth hidden beneath the South China Sea to supply its rapid economic recovery, as well as the fishing catch needed to feed the country’s 1.4 billion stomachs. An international tribunal ruled in 2016 that China did not have the right to claim the South China Sea as its sovereign territory, a ruling that China has pointedly rejected. To secure this vast sea area, China has turned uninhabited atolls and half-submerged rock formations into forward military bases, as personally directed by President Xi Jinping. Regular Chinese sea patrols monitor the area, driving away fishing boats from other nations from what it considers its exclusive fishing area. The intrusion of China into what other Asian nations consider their sovereign territory has caused tensions in the region to ratchet up, with the 10 members of the Association of Southeast Asian Nations (Asean) increasingly pushing back, at times with violent confrontations. The US has flatly rejected Chinese claims to the South China Sea, and has dramatically stepped up its military presence in the area. Each side has warned the other of the dangers of further escalation, with the US sanctioning Chinese firms that helped build China’s island outposts. Rarely a week goes by without a US warship sailing near Chinese held outputs as part a “freedom of navigation” exercise, shadowed by Chinese vessels the entire way. Confrontations have brought warships from both nations within a few metres of each other, a dangerous situation that could easily get out of hand. Tensions have ratched up recently, with the Chinese and US navies holding exercises in the region at the same time. In a provocation move, the Chinese test fired several of its “aircraft carrier killer” missiles in a clear warning to the US to back off its “interference” in the South China Sea. And some Asean nations are starting to push back against Chinese “intrusions” into their territorial waters, threatening to draw the US deeper into local disputes, though the group as a whole is trying to avoid picking sides in the US-China confrontation. The latest incident occurred this week, with Indonesia’s foreign ministry lodging an official protest after a Chinese coastguard ship spent two days sailing through Indonesia territorial waters. Chinese military commands have been ordered not to shoot first in any confrontation with the US military, but with heavily armed warships and planes constantly patrolling the area, even a small error in judgment could lead to a shooting war. And with the US presidential election less than two months away, there is no sign that tensions between two of the world’s largest militaries will de-escalate any time soon.

#### Overfishing collapses biodiversity

DUJS 12 [(Dartmouth Undergraduate Journal of Science, official open access science journal of Dartmouth College, publishing original scientific research, multidisciplinary review articles, and science news) “The Threats of Overfishing: Consequences at the Commercial Level,” 3/11/2012] JL

According to marine ecologists, overfishing is the greatest threat to ocean ecosystems today (1). Overfishing occurs because fish are captured at a faster rate than they can reproduce (2). Advanced fishing technology and an increased demand for fish have led to overfishing, causing several marine species to become extinct or endangered as a result (3, 4). In the long-term, overfishing can have a devastating impact on ocean communities as it destabilizes the food chain and destroys the natural habitats of many aquatic species (2).

In the past, fishing was more sustainable because fishermen could not access every location and because they had a limited capacity for fish aboard their vessels. Today, however, small trawlers and fishing boats have been replaced by giant factory ships that can capture and process extremely large amounts of prey at a given time (2). These ships use sonar instruments and global positioning systems (GPS) to rapidly locate large schools of fish (1). Fishing lines are deployed with thousands of large hooks that can reach areas up to 120 kilometers deep. The trawling vessels and machines can even reach depths of 170 kilometers and can store an extraordinarily large volume of fish. Each year, these huge trawling ships comb an area twice the size of the United States. They use massive nets 50 meters wide with the capacity to pull the weight of a medium-sized plane (2). They also have several plants for processing and packing fish, large freezing systems, fishmeal processing plants, and powerful engines that can carry this enormous fishing gear around the ocean. Because these ships have all the equipment necessary to freeze and tin fish, they only need to return to their base once they are full. Even when the ships are filled, however, the fish are often transferred to refrigerated vessels in the middle of the ocean and are processed for consumption later (4). As such, industrial fishing has expanded considerably and fishermen can now explore new shores and deeper waters to keep up with the increased demand for seafood. In fact, it has been reported by the United Nations Food and Agricultural Organization (FAO) that over 70 percent of the world’s fisheries are either ‘fully exploited’, ‘over exploited’ or ‘significantly depleted’ (5). The annual total global catch of fish is 124 million metric tons, which is equivalent in weight to 378 Empire State Buildings (2).

Fishing gear is often non-selective in the fish it targets. For example, any fish that are too big to get through the mesh of a net are captured. Therefore, overfishing does not only threaten the species of fish that is targeted for food, but also many non-target species. As a result, these other species, including marine mammals and seabirds, are accidentally caught in the fishing gear and killed (6). For example, for every ton of prawn caught, three tons of other fish are killed and thrown away. Those in the trade refer to this practice of inadvertent catching of other species as bycatch (4). The FAO has pointed out that about 25 percent of the world’s captured fish end up thrown overboard because they are caught unintentionally, are illegal market species, or are of inferior quality and size. Many of the fish caught this way include endangered and over exploited species, 95 percent of which are eventually thrown away (2). Bycatch is not just limited to just unwanted fish, but rather affects all types of marine life, including whales, dolphins, porpoises, fur seals, albatrosses, and turtles. For example, tuna fisheries are indirectly responsible for the deaths of an estimated one million sharks annually due to bycatch. Small cetaceans, such as dolphins and porpoises, are also targets of bycatch as they are often caught in fishing nets. In fact, hundreds of dolphin corpses are washed up on the beaches of Europe every year, bringing attention to the growing scale of this problem (6).

Many modern fishing methods are also irreversibly destructive. For example, bottom trawling, a technique that uses extremely wide nets armed with heavy metal rollers, can crush everything in the path of the gear, destroying fragile corals, smashing rock formations, and killing several tons of fish and animals as bycatch (7). As such, these practices can wreak havoc on delicate marine ecosystems.

Not surprisingly, it has been reported that industrial fishing takes between only 10 and 15 years to wipe out a tenth of whichever species it targets (2). In fact, several marine species have already been fished to commercial extinction, and this number is rapidly increasing (1). One of the reasons for this is that the regulation of fishing vessels and the fishing industry is universally inadequate. Roughly two-thirds of the ocean is free of laws and fishing vessels only follow the laws ratified by their country of origin. However, most fishing countries have not ratified any international convention to protect the sea or marine life (2). Moreover, fishing factory ships and companies are given access to fisheries before the long–term impact of their fishing practices is understood (1).

Today, the number of fish caught worldwide is actually shrinking as the fishing industry is in decline from many years of overfishing (2). The year 1988 was the first time in human history that global wild fish catches dropped and they have continued to fall ever since. In European waters, four out of every five known fish stocks are already beyond safe biological limits (7). Illegal and unreported fishing have also contributed a great deal to the depletion of the oceans and continues to be a serious problem.

A new study conducted by the International Union for Conservation of Nature (IUCN) found that 5 out of the 8 tuna species are at risk of extinction (8). All three species of bluefin tuna, for example, are threatened with extinction and are at a population that makes their recovery practically irreversible (2). The IUCN has also reported that freshwater fish are among the most endangered species, with more than a third facing extinction. Not surprisingly, among those at the greatest risk are species like the Mekong giant catfish, the freshwater stingray, and the European eel, which are used to make some of the most expensive caviars. The Mekong giant catfish is the closest to extinction, with as few as 250 left. Overfishing has reduced the numbers of Mekong freshwater stingray by over 50 percent in Southeast Asia and has reduced the giant Mekong salmon carp population by over 90 percent (9).

As previously mentioned, shark populations have also been greatly affected by overfishing. There are already more than 135 species of shark on the IUCN’s list of endangered animals and more are being added each year. For example, the number of scalloped hammerhead shark has decreased by 99% over the past 30 years. Other species recently added to the endangered list include the smooth hammerhead, shortfin mako, common thresher, big-eye thresher, silky, tiger, bull, and dusky (10). Besides being caught as bycatch, sharks are now also being targeted by commercial fishermen for their fins which can fetch a substantial price on the Asian food market. Sharks are particularly vulnerable to exploitation because they have long life spans, are exceptionally slow to mature (taking as long as 16 years in some cases), and are relatively unprolific breeders (11). Recent reports suggest that over fishing has caused a 90% decline in shark populations across the world’s oceans and up to 99% along the US east coast, which are some of the best managed waters in the world. Because sharks are at the top of the food chain, a decline in their numbers has devastating consequences on marine ecosystems (10).

Overfishing impacts not just the particular species that is exploited, but also damages other species of fish and disrupts local ecosystems. The stability of ecological communities depends largely on the interactions between predators and prey (12). Thereby, the balance of the food chain is disturbed when certain species are removed. As a result, many ocean species are disappearing and losing their habitats. The evolutionary process of marine species is also being altered, causing cycles of premature reproduction and relative decreases in the size of fish across generations. As predators diminish, the populations of smaller fish escalate because they were previously the food source of the bigger fish. In addition, the disappearance of these species affects many other species, like seabirds and sea mammals, which are vulnerable to the lack of food (2).

A recent study found that overfishing is also decreasing the genetic diversity of fish worldwide. Diversity is projected to be reduced further if overfishing continues at the same rate (13). This has serious effects on nutrient recycling in marine ecosystems because fish species vary widely in their rates of nitrogen and phosphorus excretion. As such, altering fish communities creates divergent nutrient recycling patterns and disrupts the functioning of the ecosystem. Recently conducted studies in lakes affected by overfishing show that loss of species contributes to a decline in nutrient recycling and destabilizes the ecosystem (14).

While it is often overlooked for other environmental issues, overfishing has historically caused more ecological extinction than any other human influence on coastal ecosystems, including water pollution (5). Unfortunately, due to a lack of data, the extent of this damage has only recently been recognized (15).

#### Continued biodiversity loss causes extinction

Carrington 18 [(Damian, the Guardian's Environment editor) "Humanity has wiped out 60% of a animal populations since 1970, report finds," The Guardian, 10/29/18] TDI

Humanity has wiped out 60% of mammals, birds, fish and reptiles since 1970, leading the world’s foremost experts to warn that the annihilation of wildlife is now an emergency that threatens civilisation.

The new estimate of the massacre of wildlife is made in a major report produced by WWF and involving 59 scientists from across the globe. It finds that the vast and growing consumption of food and resources by the global population is destroying the web of life, billions of years in the making, upon which human society ultimately depends for clean air, water and everything else.

“We are sleepwalking towards the edge of a cliff” said Mike Barrett, executive director of science and conservation at WWF. “If there was a 60% decline in the human population, that would be equivalent to emptying North America, South America, Africa, Europe, China and Oceania. That is the scale of what we have done.”

“This is far more than just being about losing the wonders of nature, desperately sad though that is,” he said. “T**his is** actually now jeopardising the future of people. Nature is not a ‘nice to have’ – it is our life-support system.”

“We are rapidly running out of time,” said Prof Johan Rockström, a global sustainability expert at the Potsdam Institute for Climate Impact Research in Germany. “Only by addressing both ecosystems and climate do we stand a chance of safeguarding a stable planet for humanity’s future on Earth.”

Many scientists believe the world has begun a sixth mass extinction, the first to be caused by a species – Homo sapiens. Other recent analyses have revealed that humankind has destroyed 83% of all mammals and half of plants since the dawn of civilisation and that, even if the destruction were to end now, it would take 5-7 million years for the natural world to recover.

The Living Planet Index, produced for WWF by the Zoological Society of London, uses data on 16,704 populations of mammals, birds, fish, reptiles and amphibians, representing more than 4,000 species, to track the decline of wildlife. Between 1970 and 2014, the latest data available, populations fell by an average of 60%. Four years ago, the decline was 52%. The “shocking truth”, said Barrett, is that the wildlife crash is continuing unabated.

Wildlife and the ecosystems are vital to human life, said Prof Bob Watson, one of the world’s most eminent environmental scientists and currently chair of an intergovernmental panel on biodiversity that said in March that the destruction of nature is as dangerous as climate change.

“Nature contributes to human wellbeing culturally and spiritually, as well as through the critical production of food, clean water, and energy, and through regulating the Earth’s climate, pollution, pollination and floods,” he said. “The Living Planet report clearly demonstrates that human activities are destroying nature at an unacceptable rate, threatening the wellbeing of current and future generations.”

The biggest cause of wildlife losses is the destruction of natural habitats, much of it to create farmland. Three-quarters of all land on Earth is now significantly affected by human activities. Killing for food is the next biggest cause – 300 mammal species are being eaten into extinction – while the oceans are massively overfished, with more than half now being industrially fished.

Chemical pollution is also significant: half the world’s killer whale populations are now doomed to die from PCB contamination. Global trade introduces invasive species and disease, with amphibians decimated by a fungal disease thought to be spread by the pet trade.

The worst affected region is South and Central America, which has seen an 89% drop in vertebrate populations, largely driven by the felling of vast areas of wildlife-rich forest. In the tropical savannah called cerrado, an area the size of Greater London is cleared every two months, said Barrett.

“It is a classic example of where the disappearance is the result of our own consumption, because the deforestation is being driven by ever expanding agriculture producing soy, which is being exported to countries including the UK to feed pigs and chickens,” he said. The UK itself has lost much of its wildlife, ranking 189th for biodiversity loss out of 218 nations in 2016.

The habitats suffering the greatest damage are rivers and lakes, where wildlife populations have fallen 83%, due to the enormous thirst of agriculture and the large number of dams. “Again there is this direct link between the food system and the depletion of wildlife,” said Barrett. Eating less meat is an essential part of reversing losses, he said.

The Living Planet Index has been criticised as being too broad a measure of wildlife losses and smoothing over crucial details. But all indicators, from extinction rates to intactness of ecosystems, show colossal losses. “They all tell you the same story,” said Barrett.

Conservation efforts can work, with tiger numbers having risen 20% in India in six years as habitat is protected. Giant pandas in China and otters in the UK have also been doing well.

But Marco Lambertini, director general of WWF International, said the fundamental issue was consumption: “We can no longer ignore the impact of current unsustainable production models and wasteful lifestyles.”

### 1NC – Off

#### CP: Member nations of the World Trade Organization should reduce intellectual property protections for medicines except Remdesivir.

#### Remdesivir patents are key to profits that enable continued production and future innovation

Mossoff 20 [(Adam, Professor of Law at Antonin Scalia Law School, George Mason University, teaches a wide range of courses at the law school, including property, patent law, trade secrets, trademark law, remedies, and internet law, Visiting Intellectual Property Fellow at the Heritage Foundation, JD from the University of Chicago Law School) “US Should Not Confiscate Gilead's Remdesivir Patent,” Law360, 8/21/2020] JL

These politicians allege that since the U.S. helped pay for some of remdesivir's clinical trials, the federal government can use its march-in power in a 1980 law to appropriate Gilead's patent and license it to generic manufacturers to lower the price and increase availability of the drug.  
  
At first glance, their argument may seem appealing. Unfortunately, the state AGs' letter is another example of populist rhetoric contrary to both law and reason. The state AGs clearly don't understand the law in question — or the drug development process. If they succeed, this would sanction government theft of patents that will chill innovation and harm patients.  
  
First, consider how their proposal rests on a foundation of sand.  
  
The 1980 law they cite, the Bayh-Dole Act, was not enacted for the purpose of government confiscation of patents. Congress enacted this law to facilitate universities and other research institutions to obtain patents and then license their innovations in the marketplace. Before 1980, no one knew who owned inventions if one cent of federal funding was used in the basic research that led to the patent. As a result, life-saving innovations sat on the shelf in the university lab.  
  
Bayh-Dole changed this. As former Sen. Bob Dole, R-Kan., recently observed, his legislation spurred the licensing of new innovations, promoted thousands of startups, and led to massive economic growth. It contributed to the explosion in new drugs over the past 40 years that have turned what were once death sentences into manageable conditions — from cancer to diabetes to hepatitis.  
  
Bayh-Dole does authorize a march-in power for the federal government to take patents and license them under very limited conditions. Contrary to the state AGs' claim, this is not an authorization for the federal government to confiscate patents merely to lower a price by expanding production. The National Institutes of Health has repeatedly stated that "the extraordinary remedy of march-in is not an appropriate means of controlling prices."  
  
Since 1980, bipartisan administrations have consistently rejected lobbying efforts to use the march-in power for the purpose of lowering prices of drugs. They did so for one simple reason: Bayh-Dole does not authorize it.  
  
But there's a more basic legal problem with the state AGs' letter: Bayh-Dole doesn't even apply to remdesivir. The company readily acknowledges working with universities and the U.S. military in testing the drug, but it was invented by and patented by Gilead researchers. The chief patent counsel for the U.S. Army Medical Research Institute of Infectious Diseases, or USAMRIID, which assisted Gilead in some of the later-stage testing, recently stated that its contributions did "not qualify USAMRIID as a joint inventor of the compound."  
  
Remdesivir is an example of the miracle drugs created by the modern biopharmaceutical sector. Researchers at Gilead labored for more than a decade and ultimately the company will spend more than a billion dollars in R&D expenditures on the drug. This is typical of the average time and R&D expenditures that lead to all life-enhancing drugs today.  
  
The federal government's total funding of remdesivir's testing, and the additional funding provided in response to the COVID-19 pandemic, ranged from $30 million to $70 million. These federal monies are a minuscule fraction — approximately 3% to 7% — of the total $1 billion plus in private investments ultimately made by Gilead in this life-saving medicine. For this, the state AGs would have the federal government confiscate Gilead's entire patent.  
  
This is not what Bayh-Dole was intended to do, as Dole has made clear. It was not enacted to justify confiscation of the patents that this law made possible in the first place. It was especially not enacted to justify confiscation simply to lower prices given massive disparities in federal funding versus private funding of the R&D in a life-saving drug.  
  
The politicians and activists lobbying since February for the government to invoke its march-in power for any COVID-19 drugs do a disservice to innovators and to the American patients who benefit from the fruits of their inventive labors.  
  
If the government can twist the Bayh-Dole law and arbitrarily decide when to confiscate patents, companies like Gilead will no longer risk billions of dollars and decades of research in creating miracle drugs like remdesivir. We will never see cures for diseases like Alzheimer's and ultimately for pandemics like COVID-19.

#### Remdesivir substantially reduces COVID mortality – turns case

Antrim 7/27 [(Aislinn, assistant editor at Pharmacy Times, BA in journalism from the University of North Carolina) “Remdesivir Associated With Reduction in Mortality Rate in Hospitalized Patients with COVID-19,” Pharmacy Times, 7/27/2021] JL

Three analyses of large, retrospective, real-world data sets have found that remdesivir was associated with a reduction in mortality rates in patients hospitalized with COVID-19, according to a Gilead press release. Remdesivir is indicated for hospitalized adults and pediatric patients 12 years of age and older and weighing at least 40 kg for the treatment of COVID-19.

The 3 data analyses include 98,654 patients who were hospitalized with COVID-19. Two of the studies observed treatment trends and outcomes in the United States using the HealthVerity and Premier Healthcare databases, whereas the third analysis compared clinical outcomes in patients receiving a 10-day treatment course of remdesivir in the extension phase of the SIMPLE-Severe study.

“Clinical trials help us understand the efficacy and safety profile of a treatment, but their size can limit our ability to assess all potential aspects of a treatment’s effect due to low event rates in the trials,” said Robert L. Gottlieb, MD, PhD, a cardiologist at the Baylor University Medical Center, in a press release. “Large real-world datasets with greater sample sizes and robust methodologies can be helpful to assess treatment effects in both the overall patient population and in clinically relevant subsets of patients.”

This reduction in mortality was observed across a spectrum of baseline oxygen requirements, and the results were consistent at different timeframes over the course of the pandemic and across geographies, according to the researchers. Two of the studies also found that patients who received remdesivir had a significantly increased chance of discharge from the hospital by day 28.

The analysis of data from HealthVerity matched 24,856 patients treated with remdesivir 1:1 with matched controls between May 1, 2020, and May 3, 2021. Researchers found that in the overall population, patients receiving remdesivir had a statistically significant 23% lower mortality risk compared with patients in the control arm, regardless of baseline oxygen requirement.

Investigators also observed a significantly greater likelihood of discharge by day 28 in patients who completed a full 5-day course of remdesivir compared with patients in the control arm. This result was most pronounced in patients with lower oxygen requirements at baseline.

Similarly, an analysis of data from the Premier Healthcare Database found that patients treated with remdesivir had a significantly lower risk of mortality at days 14 and 28 compared with patients who did not receive remdesivir. Patients who received remdesivir and either no oxygen, low-flow oxygen, invasive mechanical ventilation, or extracorporeal membrane oxygenation (ECMO) at baseline had a significantly lower risk of 14-day mortality.

A significant reduction in mortality was also seen at day 28 for these same groups of patients, and patients on high-flow oxygen at baseline who received remdesivir also had significantly lower 14-day mortality. At 28 days, the difference in mortality in patients receiving high-flow oxygen at baseline was not statistically significant.

The SIMPLE-Severe study evaluated hospitalized adult patients with severe COVID-19. Investigators found that in the overall population, treatment with remdesivir was associated with a statistically significant 54% lower mortality risk at 28 days compared to patients who were not treated with remdesivir, regardless of baseline oxygen requirements.

Furthermore, patients who completed a full 10-day course of treatment had a significantly shorter time to discharge within 28 days, compared to patients who did not receive remdesivir. The result for time to discharge was not significant for patients receiving mechanical ventilation or ECMO at baseline.

Finally, in the double-blind, placebo-controlled ACTT-1 clinical trial, investigators noted a trend toward reduced mortality at day 29 among patients who were treated with remdesivir compared with placebo, although this result was not statistically significant.

Researchers also conducted a post-hoc analysis with no adjustment for multiple testing and determined that patients who required low-flow oxygen at baseline and who received remdesivir achieved a statistically significant 70% reduction in mortality at day 29, although this reduction was not statistically significant in the other groups.

## 1NC – Case

### WTO Cred

#### Can’t solve – Meyer id issues like the judge crisis as things that the WTO need to fix, not at things that are solved by the plan. Even if the WTO looks good doesn’t solve that they have 0 judges and countries won’t supply them.

#### The US has structurally undermined WTO legitimacy – every WTO ruling gets vetoed

Baschuk 2/22 [(Bryce, reporter for Bloomberg Economics based in Geneva, Switzerland, has been published in Bloomberg, the Washington Times, United Press International and National Public Radio) “Biden Picks Up Where Trump Left Off in Hard-Line Stances at WTO,” Bloomberg, 2/22/2021] TDI

President Joe Biden’s administration dashed hopes for a softer approach to the World Trade Organization by pursuing a pair of his predecessor’s strategies that critics say risk undermining the international trading system.

The U.S. delegation to the WTO, in a statement Monday obtained by Bloomberg, backed the Trump administration’s decision to label Hong Kong exports as “Made in China” and said the WTO had no right to mediate the matter because the organization’s rules permit countries to take any action to protect their “essential security interests.”

“The situation with respect to Hong Kong, China, constitutes a threat to the national security of the United States,” the U.S. delegation said. “Issues of national security are not matters appropriate for adjudication in the WTO dispute-settlement system.”

Prior to 2016, WTO members generally steered clear of defending their trade actions on the basis of national security because doing so could encourage other nations to pursue protectionist policies that have little or nothing to do with hostile threats.

That changed in 2018, when the Trump administration triggered a cold war-era law to justify tariffs on foreign imports of steel and aluminum. In response, a handful of U.S. trade partners, including Canada, the EU, and China filed disputes at the WTO and a ruling in those cases is expected later this year.

Since then, more nations -- including Saudi Arabia, India, Russia and others -- have cited the WTO’s national-security exemption in regional trade fights, leading trade experts to warn that such cases could erode the organization’s ability to mediate disputes.

The Biden administration on Monday said the U.S. has consistently argued that national-security disputes are not subject to WTO review because it would infringe on a member’s right to determine what is in its own security interests.

In spite of the U.S. objection, the WTO granted Hong Kong’s dispute inquiry and will establish a panel of experts to deliberate the matter and render a decision, which could take two to three years.

At the same meeting, the Biden administration said it would not agree to appoint new members to the WTO’s appellate body, a seven-member panel of experts who until 2019 had the final say on trade disputes involving billions of dollars worth of international commerce.

The Biden administration said it could not do so because the U.S. “continues to have systemic concerns” with the functioning of the appellate body as have all previous administrations over the past 16 years.

Though the statement was not entirely unexpected, it confirms America’s bipartisan frustration with the functioning of the WTO appellate body and the new administration’s willingness to block new panelists until changes can be agreed.

Once Katherine Tai is confirmed as the U.S. Trade Representative, her office “looks forward to working with” WTO Director-General Ngozi Okonjo-Iweala to tackle the problems with WTO dispute settlement, including the unresolved issues over appellate-body overreach, USTR spokesman Adam Hodge said in an email. “These are long-standing, bipartisan concerns that we hope our trading partners will work with us to address,” he said.

The Trump administration broke precedent when it refused to consider any nominees to fill vacancies on the panel until there weren’t enough to sign off on new rulings. As a result, the WTO’s dispute-settlement system has been critically damaged because WTO members are now free to veto any adverse dispute rulings by appealing them into a legal void created by the appellate body’s paralysis.

#### Alt causes to WTO disunity

EP 5/20 [(European Parliament, legislative branch of the European Union) “Getting a patent waiver is not enough, says WTO chief to Trade Committee,” European Parliament News: Press Releases, 5/20/2021] JL

She said: “Getting the intellectual property rights waiver for vaccines will not be enough”. She listed three other routes: reducing export restrictions and reinforcing supply chains for vaccines, working with manufacturers to expand production, including in emerging countries with idle capacity such as Indonesia, South Africa, Thailand or Bangladesh, and transferring the necessary technology and expertise to produce the complicated vaccines.

“The IP waiver is a hot issue on which I cannot take sides. But we need more flexibility and automatic access for developing countries, and at the same time we have to protect research and development,” added the head of the World Trade Organisation (WTO).

MEPs also raised questions on trade and sustainability, including the proposed carbon border-adjustment mechanism and its compatibility with WTO rules.

“I think everything is in the design; its implementation is going to be quite important. But we don’t have that yet, so we cannot say [whether it is compatible], the director-general said.

MEPs asked about the ongoing WTO negotiations over fisheries subsidies that the director-general hopes will be concluded by the end of the year, and about the now defunct dispute settlement mechanism in the WTO.

“We cannot make new rules at the WTO when our system of adjudication on those rules doesn’t work. We need to go to the [Twelfth Ministerial Conference] with an idea for a new system,” Dr Okonjo-Iweala responded to the latter issue, calling for Parliament’s assistance in reaching out to the United States Congress to scout for a common understanding on the Appellate Body.

#### No internal link – none of your evidence is contextual to WTO IPP disputes, alt causes to challenges to the US-China relationship – tariffs, Taiwan, fighting over resources in Africa

#### Or, they collaborate in the squo

Myers 10/7 [(Steven Lee, the Beijing bureau chief for The New York Times. He joined The Times in 1989 and has previously worked as a correspondent in Moscow, Baghdad and Washington. He is the author of “The New Tsar: The Rise and Reign of Vladimir Putin,” published by Alfred A. Knopf in 2015.) “Despite Tensions, U.S. and China Agree to Work Together on Climate Change” The New York Times, 10/7/2021. https://www.nytimes.com/2021/04/17/world/asia/china-us-emissions.html] BC

SEOUL — The United States and China have said they will fight climate change “with the seriousness and urgency that it demands” by stepping up efforts to reduce carbon emissions, a rare demonstration of cooperation amid escalating tensions over a raft of other issues.

The agreement, which included few specific commitments, was announced on Saturday night, Washington time, after President Biden’s climate envoy, John Kerry, visited China for three days of talks in which the negotiators managed not to be sidetracked by those disputes.

“It’s very important for us to try to keep those other things away, because climate is a life-or-death issue in so many different parts of the world,” Mr. Kerry said in an interview on Sunday morning in Seoul, where he met with South Korean officials to discuss global warming. “What we need to do is prove we can actually get together, sit down and work on some things constructively.”

The agreement comes only days before Mr. Biden is scheduled to hold a virtual climate summit with world leaders, hoping to prod countries to do more to reduce emissions and limit planetary warming to 1.5 degrees Celsius above preindustrial levels. Many scientists now argue that warming must be kept below that threshold to avert catastrophic disruptions to life on the planet.

China’s leader, Xi Jinping, is among those who have been invited to the virtual summit. While he has yet to publicly accept the invitation, the agreement with Washington appeared to make his participation more likely.

On Friday, Mr. Xi said China remained committed to climate goals he had announced last fall, including a promise that its carbon emissions would peak before 2030. At the same time, Mr. Xi suggested that the world’s most advanced nations had a responsibility to take the lead in making deeper cuts.

In what seemed to be a retort to the United States, he warned that the climate issue should not be “a bargaining chip for geopolitics” or “an excuse for trade barriers.”

“This is undoubtedly a tough battle,” Mr. Xi said in a conference call with President Emmanuel Macron of France and Chancellor Angela Merkel of Germany, according to an account of the meeting issued by the Chinese foreign ministry.

“China is sure to act on its words, and its actions are sure to produce results,” he went on. “We hope that the advanced economies will set an example in momentum for emissions reductions, and also lead the way in fulfilling commitments for climate funding.”

#### No extinction – it takes 12 degrees without adaptation

Farquhar et al 17 [Sebastian Farquhar (PhD Candidate in Philosophy at Oxford and Project Manager at Future of Humanity Institute), John Halstead (climate activist and one of the co-founders of 350 Indiana-Calumet), Owen Cotton-Barratt (PhD in pure mathematics at Oxford. Previously worked as an academic mathematician and as Director of Research at the Centre for Effective Altruism), Stefan Schubert (Researcher at Department of Experimental Psychology at University of Oxford), Haydn Belfield (Associate Fellow at the Leverhulme Centre for the Future of Intelligence. He has a background in policy and politics, including as a Senior Parliamentary Researcher to a British Shadow Cabinet Minister, as a Policy Associate to the University of Oxford’s Global Priorities Project, and a degree in Philosophy, Politics and Economics from Oriel College, University of Oxford), Andrew Snyder-Beattie (Director of Research at the Future of Humanity Institute at Oxford, Holds degrees in biomathematics and economics and is currently pursuing a PhD in Zoology at Oxford), Existential Risk: Diplomacy and Governance, Global Priorities Project (Bostrom’s Institute), 2017-01-23, https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf] TDI

The most likely levels of global warming are very unlikely to cause human extinction.15 The existential risks of climate change instead stem from tail risk climate change – the low probability of extreme levels of warming – and interaction with other sources of risk. It is impossible to say with confidence at what point global warming would become severe enough to pose an existential threat. Research has suggested that warming of 11-12°C would render most of the planet uninhabitable,16 and would completely devastate agriculture.17 This would pose an extreme threat to human civilisation as we know it.18 Warming of around 7°C or more could potentially produce conflict and instability on such a scale that the indirect effects could be an existential risk, although it is extremely uncertain how likely such scenarios are.19 Moreover, the timescales over which such changes might happen could mean that humanity is able to adapt enough to avoid extinction in even very extreme scenarios. The probability of these levels of warming depends on eventual greenhouse gas concentrations. According to some experts, unless strong action is taken soon by major emitters, it is likely that we will pursue a medium-high emissions pathway.20 If we do, the chance of extreme warming is highly uncertain but appears non-negligible. Current concentrations of greenhouse gases are higher than they have been for hundreds of thousands of years,21 which means that there are significant unknown unknowns about how the climate system will respond. Particularly concerning is the risk of positive feedback loops, such as the release of vast amounts of methane from melting of the arctic permafrost, which would cause rapid and disastrous warming.22 The economists Gernot Wagner and Martin Weitzman have used IPCC figures (which do not include modelling of feedback loops such as those from melting permafrost) to estimate that if we continue to pursue a medium-high emissions pathway, the probability of eventual warming of 6°C is around 10%,23 and of 10°C is around 3%.24 These estimates are of course highly uncertain. It is likely that the world will take action against climate change once it begins to impose large costs on human society, long before there is warming of 10°C. Unfortunately, there is significant inertia in the climate system: there is a 25 to 50 year lag between CO2 emissions and eventual warming,25 and it is expected that 40% of the peak concentration of CO2 will remain in the atmosphere 1,000 years after the peak is reached.26 Consequently, it is impossible to reduce temperatures quickly by reducing CO2 emissions. If the world does start to face costly warming, the international community will therefore face strong incentives to find other ways to reduce global temperatures.

### Pandemic

#### Can’t solve future pandemics – patents on mRNA external to COVID meds

#### COVID inevitable even with vaccines – antibodies fade and high transmissibility

Zhang 20 [(Sarah, staff writer at The Atlantic, winner of a 2018 AAAS Kavli Science Journalism Silver Award) “The Coronavirus Is Never Going Away,” The Atlantic, 8/4/2020] JL

The coronavirus is simply too widespread and too transmissible. The most likely scenario, experts say, is that the pandemic ends at some point—because enough people have been either infected or vaccinated—but the virus continues to circulate in lower levels around the globe. Cases will wax and wane over time. Outbreaks will pop up here and there. Even when a much-anticipated vaccine arrives, it is likely to only suppress but never completely eradicate the virus. (For context, consider that vaccines exist for more than a dozen human viruses but only one, smallpox, has ever been eradicated from the planet, and that took 15 years of immense global coordination.) We will probably be living with this virus for the rest of our lives.

Back in the winter, public-health officials were more hopeful about SARS-CoV-2, the coronavirus that causes COVID-19. SARS, a closely related coronavirus, emerged in late 2002 and infected more than 8,000 people but was snuffed out through intense isolation, contact tracing, and quarantine. The virus was gone from humans by 2004. SARS and SARS-CoV-2 differ in a crucial way, though: The new virus spreads more easily—and in many cases asymptomatically. The strategies that succeeded with SARS are less effective when some of the people who transmit COVID-19 don’t even know they are infected. “It’s very unlikely we’re going to be able to declare the kind of victory we did over SARS,” says Stephen Morse, an epidemiologist at Columbia University.

If not, then what does the future of COVID-19 look like? That will depend, says Yonatan Grad, on the strength and duration of immunity against the virus. Grad, an infectious-disease researcher at Harvard, and his colleagues have modeled a few possible trajectories. If immunity lasts only a few months, there could be a big pandemic followed by smaller outbreaks every year. If immunity lasts closer to two years, COVID-19 could peak every other year.

At this point, how long immunity to COVID-19 will last is unclear; the virus simply hasn’t been infecting humans long enough for us to know. But related coronaviruses are reasonable points of comparison: In SARS, antibodies—which are one component of immunity—wane after two years. Antibodies to a handful of other coronaviruses that cause common colds fade in just a year. “The faster protection goes away, the more difficult for any project to try to move toward eradication,” Grad told me.

This has implications for a vaccine, too. Rather than a onetime deal, a COVID-19 vaccine, when it arrives, could require booster shots to maintain immunity over time. You might get it every year or every other year, much like a flu shot.

Even if the virus were somehow eliminated from the human population, it could keep circulating in animals—and spread to humans again. SARS-CoV-2 likely originated as a bat virus, with a still-unidentified animal perhaps serving as an intermediate host, which could continue to be a reservoir for the virus. (SARS also originated in bats, with catlike palm civets serving as an intermediate host—which led officials to order the culling of thousands of civets.) Timothy Sheahan, a virologist at the University of North Carolina at Chapel Hill, wonders if, with SARS-CoV-2 so widespread across the globe, humans might be infecting new species and creating new animal reservoirs. “How do you begin to know the extent of virus spread outside of the human population and in wild and domestic animals?” he says. So far, tigers at the Bronx Zoo and minks on Dutch farms seem to have caught COVID-19 from humans and, in the case of the minks, passed the virus back to humans who work on the farm.

The existence of animal reservoirs that can keep reinfecting humans is also why scientists don’t speak of “eradication” for these viruses. The Ebola virus, for example, probably comes from bats. Even though human-to-human transmission of Ebola eventually ended in the West African epidemic in 2016, the virus was still somewhere on Earth and could still infect humans if it found the right host. And indeed, in 2018, Ebola broke out again in the Democratic Republic of the Congo. Ebola can be contained through contact tracing, isolation, and a new vaccine, but it cannot be “eradicated.” No one is quite sure why SARS has never reemerged from an animal reservoir, but this coronavirus could well follow a different pattern.

#### Waivers don’t improve vaccine supply or distribution, but do allow for poorly made vaccines that undermine vaccine confidence

Delgado 5/25 [(Carla, health & culture journalist who’s written for Insider, Architectural Digest, Elemental, Observer, and Mental Floss) “Experts Say Patent Waivers Aren't Enough To Increase Global Vaccination,” Verywell Health, 5/25/2021] JL

“Waiving intellectual property rights for COVID-19 vaccines is likely to only have a modest impact on global vaccine supply,” William Moss, MD, executive director of the International Vaccine Access Center at the Johns Hopkins Bloomberg School of Public Health, tells Verywell. “A vaccine IP waiver is not in itself likely to lead to increased vaccine production in less developed countries because much more needs to be in place to increase the global vaccine supply.”

For several countries outside of the U.S. that have the necessary equipment to produce mRNA vaccines effectively and safely, the IP waiver can be of great help. However, many more countries lack this capacity, and this move still leaves them behind.

“The majority of the world’s countries lack the capacity to produce and distribute COVID-19 vaccines, and especially at the scale required to get this pandemic under control,” Richard Marlink, MD, director of the Rutgers Global Health Institute, tells Verywell. “They need funding, manufacturing facilities, raw materials, and laboratory staff with the technological expertise required.”

We've already seen what can go wrong with substandard vaccine manufacturing. In April, the Food and Drug Administration (FDA) inspected the Emergent BioSolutions factory in Baltimore and consequently shut down their production after concerning observations, which include:3

The factory was not maintained in a clean and sanitary condition.

Waste handling was found to be inadequate because generated waste was transported through the warehouse before disposal, which can potentially contaminate other areas.

Employees were seen dragging unsealed bags of medical waste from the manufacturing area across the warehouse.

Peeling paint, paint flecks, loose particles/debris were observed. There were also damaged floors and rough surfaces that cannot be properly cleaned and sanitized.

Employees were seen removing their protective garments where raw materials were staged for manufacturing.

They reportedly spoiled about 15 million doses of the Johnson and Johnson COVID-19 vaccine, and more than 100 million doses are on hold as regulators inspect them for possible contamination.4

“Vaccines are complex biological products, much more complex than drugs, and need to be produced by manufacturers and in facilities with the highest quality control standards,” Moss says. “Adverse events associated with a poorly made or contaminated batch of vaccines would have a devastating impact on vaccine confidence.”

In a statement last October, Moderna announced that they will not enforce their COVID-19-related patents against those who will make vaccines during this pandemic.5 While waiving some vaccine patents may allow third-party manufacturers to make and sell COVID-19 vaccines, the transfer of skills and technology that will allow them to manage production isn't very simple.

For instance, a spokesperson for Pfizer said that the Pfizer-BioNTech vaccine required 280 different components sourced from 86 suppliers across various countries. Manufacturing the vaccine would require highly specialized equipment and complex technology transfers.6

“Technology transfer also would need to be a critical component to expand vaccine manufacturing by other companies as an IP waiver is insufficient to provide the ‘know how’ needed to manufacture mRNA or adenovirus-vectored COVID-19 vaccines,” Moss says. “And supply chains for the reagents, supplies, and equipment would be needed.”

Interested manufacturers would need to have the proper equipment to test the quality and consistency of their manufacturing. At present, the World Health Organization (WHO) has plans to facilitate the establishment of technology hubs to transfer "a comprehensive technology package and provide appropriate training" to manufacturers from lower- and middle-income countries.7

While waiving vaccine patents is necessary, it's likely not enough. Additionally, negotiations about it are still ongoing. Even though the U.S. supports the waiver of COVID-19 vaccine patents, other countries like the United Kingdom, Japan, and Germany oppose it.8

It's also important to remember that manufacturing vaccines is only one step of the process of vaccinating the global population—distributing it is yet another hurdle.

“Many countries are counting on COVAX, a global collaboration to distribute COVID-19 vaccines more equitably around the world,” Marlink says. “The single largest supplier to COVAX is in India, where exports have been suspended since March due to the country’s COVID-19 crisis.”

#### TRIPs waiver is a symbolic gesture that prevents vaccine production and distribution

Ikenson 6/25 [(Dan, former director of the Cato Institute's Herbert A. Stiefel Center for Trade Policy Studies, MA in economics from George Washington University) “Stop Blaming Patents For The World’s Low Vaccination Rates,” Forbes, 6/25/2021] JL

The premise of the need for a TRIPS waiver is simply absurd. It serves to divert attention from the failures of governments to protect their citizens with smart public health policies and, importantly, to demonize intellectual property protections more broadly. Governments are already free to waive IP protections and to engage in compulsory licensing in times of health crises but have not done so because patents are not the bottleneck. The bottlenecks result from limited global expertise in the highly technical process of producing the vaccine, the dearth of production facilities and capacity to ramp up production at existing facilities, the tight supply of crucial pharmaceutical ingredients (including vials, bags, and other components), and the limited distribution channels through which the proper handling of vaccines at proper temperatures can be assured.

To be sure, global health officials and biopharmaceutical companies have been working to resolve these real bottlenecks—a process that has benefited significantly from the fact that U.S. officials have more bandwidth to devote more attention and other resources to these matters precisely because U.S. vaccination efforts have been successful. And why have they been successful? In large measure, they have been successful because intellectual property protections have bred expectations of future intellectual property protections, which has invited and enabled an accumulation of R&D investment, infrastructure, and expertise in the United States.

The effort to surmount these real impediments to producing, distributing, and injecting vaccines is not made any easier by a symbolic waiver of IP protections—and may be made more difficult. The volume of vaccines necessary to ending the pandemic requires governments and public health officials to coordinate and focus on ramping up the capacity to produce and distribute, and to safeguard against the squandering of pharmaceutical ingredients by ensuring those inputs are channeled to producers with expertise in manufacturing and distribution. On the contrary, suspending IP protection might encourage novice firms with no expertise to end up wasting limited, essential ingredients.

#### Waivers antagonize drug-makers and manufacturers which reduces vaccine production

Furlong 4/21 [(Ashleigh, health care reporter for POLITICO, based in London, former reporter at the science policy publication Research Fortnight who covered biomedical research policy) “Why waiving patents might not boost global access to coronavirus vaccines,” Politico EU, 4/21/2021] JL

Lifting IP rules may make it pretty straightforward to make some types of drugs where technology transfer isn’t important, said ‘t Hoen. For example, during the pandemic, both Hungary and Russia have issued compulsory licenses for remdesivir, with both countries then producing the drug. But that’s not true for vaccines.

A vaccine patent prevents another company from producing the same product. But even without a patent in the way, the company that produced the vaccine holds an enormous amount of relevant know-how that it's not going to turn over for free. So when drugmakers make deals with other manufacturers to produce their vaccine, they transfer this knowledge along under strict agreements. For example, AstraZeneca reached a licensing agreement with the Serum Institute of India last June that ensured that SII treats AstraZeneca as a priority customer in return for access to the technology behind the Oxford/AstraZeneca vaccine.

Compulsory licensing may also be an over-hyped solution, aside from removing the possibility of being sued for patent infringement, says Guilherme Cintra, director of innovation policy at the International Federation of Pharmaceutical Manufacturers and Associations, a pharma lobby. It could actually be "an antagonistic move," he added. "In a way it removes trust, and undermines the possibility of engaging in good faith to build up manufacturing."

#### The plan alienates pharma companies and doesn’t solve lack of vaccine purchasing

Glassman 5/6 [(Amanda, executive vice president and senior fellow at the Center for Global Development, research focuses on priority-setting, resource allocation and value for money in global health, former director for global health policy at the Center from 2010 to 2016, former deputy director of the Global Health Financing Initiative at Brookings and carried out policy research on aid effectiveness and domestic financing issues in the health sector in low-income countries, MSc from the Harvard School of Public Health) “Big Pharma Is Not the Tobacco Industry,” Barrons, 5/6/2021] JL

In fact, several of them did just that in the pandemic: invested their own money to develop patented manufacturing technologies in record time. Those technologies are literally saving the world right now. Public funding supported research and development, but companies also brought their own proprietary ingenuity and private investments to bear toward solving the world’s singular, collective challenge. Their reward should be astronomical given the insane scale of the health and economic benefits these highly efficacious vaccines produce every day. Market incentives sent a clear signal that further needed innovation—greater efficacy, single doses, more-rapid manufacturing, updated formulations, fast boosters, and others—would be richly rewarded. Market incentives could also have been used to lubricate supply lines and buy vaccines on behalf of the entire world; with enough money, incredible things can happen.

But activist lobbying to waive patents—a move the Biden administration endorsed yesterday—sends exactly the opposite signal.

It says that the most important, valuable innovations will be penalized, not rewarded. It tells innovators, don’t bother attacking the most important global problems; instead, throw your investment dollars at the next treatment for erectile disfunction, which will surely earn you a steady return with far less agita.

It is worth going back to first principles. What problem are we trying to solve? We have highly efficacious vaccines that we would like to get out to the entire world as quickly as possible to minimize preventable disease and deaths, address atrocious inequities, and enable the reopening of society, trade, and commerce. Hundreds of millions of people have been plunged into poverty over the past year; in the developing world, the pandemic is just getting started.

What is the quickest way to get this done? Vaccine manufacturing is not just a recipe; if you attack and undermine the companies that have the know-how, do you really expect they’ll be eager to help you set up manufacturing elsewhere? Is the plan to march into Pfizer and force its staff to redeploy to Costa Rica to build a new factory? Do the U.S. administration or activists care that this decision could take years to negotiate at the World Trade Organization, and will likely be litigated for years thereafter? Does it make sense to eliminate the incentive for private companies to invest in vaccine R&D or in the response to the next health emergency? And if the patent waiver is only temporary and building a factory takes months or years, will anyone bother to do so, even if they could?

No, none of it makes sense. Worse still, we could solve the policy problem more easily by harnessing market incentives for the global good by ponying up cash to vaccinate the entire world. No confiscation necessary.

The big problem is that countries have not bought enough vaccine to inoculate most of their populations. Covax, buying on behalf of 91 lower-income countries, is only collecting enough funding to cover 20% of their population. In many parts of the world, such as the Middle East, sub-Saharan Africa and some countries in Latin America, we see very low levels of vaccine prepurchasing. We have seen this week that the government of India had not ordered enough vaccine to cover its own population, for example, resulting in export bans on its domestic vaccine manufacturers; nor has it approved the Pfizer vaccine. Our collective focus instead must be to make the market: to set up advance purchase agreements to establish demand via country cooperation, Covax, and the multilateral development banks.