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Climate change inevitable (400 ppm)

Companies are mining in the status quo, impact nonunique

Only mining inactive hydrothermal vents

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We don't have a legal standing in the South China Sea (China can't impound the US)

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Climate change inevitable (400 ppm)

400 just a number, the key benchmark is 2 degrees of warming, which we haven't hit. Methane release significantly decreases the timeframe for any chance we have of averting that.

Companies are mining in the status quo, impact nonunique

1. Not true. Walters in 2017 explains that the world's first deep sea mining operation is coming from Canada for gold and copper. UNCLOS uniquely ushers in US firms with the tech to deep sea mine, which causes the climate change impacts.

Greg Walters, xx-xx-xxxx, "World's First Deep Sea Mining Venture Set to Launch in 2019," Seeker,

https://www.seeker.com/worlds-first-deep-sea-mining-venture-set-to-launch-in-2019-232785696 7.html

The world's first deep sea mining operation will kick off in early 2019 when a Canadian firm, Nautilus Minerals Inc., lowers a trio of massive remote-controlled mining robots to the floor of the Bismarck Sea off the coast of Papua New Guinea in pursuit of rich copper and gold reserves.

The machines, each the size of a small house, are equipped with rock-crushing teeth resembling the large incisors of a dinosaur. The robots will lumber across the ocean floor on mammoth treads, grinding and chewing the encrusted seabed, sending plumes of sediment into the surrounding waters and killing marine life that gets in their way. The smallest of the robots weighs 200 tons.

Only mining inactive hydrothermal vents

1. Only active vents can be mined - <u>CBCNews writes in 2018</u> that the sites where all current contracts granted by the ISA to mine hydrothermal vents were discovered because they were active - inactive vents are difficult to find.

https://newsinteractives.cbc.ca/longform/deep-sea-mining-environment

A site such as Solwara 1, or those of seven other exploration contracts granted by the International Seabed Authority, were discovered precisely because they are active, Jamieson said in an email from a research vessel in the South Pacific.

"This is relevant because there is a growing push to ban mining activities at or near active hydrothermal vent sites, which host unique ecosystems that occur nowhere else on the planet (that we know of)," he wrote.

"Inactive or extinct deposits would be a much more [environmentally] favourable target for mining, but are much more difficult to find, and we know very little about their distribution on the seafloor"

Key mining can happen in EEZs

1. The NOAA reports Specific minerals such as iron sulfide, barium, calcium, and silicon are only found in these hydrothermal vents that form where the continental plates are spreading apart and the seafloor holds underwater mountain ranges. Because these are between continents, they don't fall under the United States' EEZs.

https://oceanservice.noaa.gov/facts/vents.html

A venting black smoker emits jets of particle-laden fluids. The particles are predominantly very fine-grained sulfide minerals formed when the hot hydrothermal fluids mix with near-freezing seawater.

These minerals solidify as they cool, forming chimney-like structures. "Black smokers" are chimneys formed from deposits of iron sulfide, which is black. "White smokers" are chimneys formed from deposits of barium, calcium, and silicon, which are white.

<u>Underwater volcanoes</u> at <u>spreading ridges and convergent plate boundaries</u> produce hot springs known as hydrothermal vents.

Scientists first discovered hydrothermal vents in 1977 while exploring an oceanic spreading ridge near the Galapagos Islands. To their amazement, the scientists also found that the hydrothermal vents were surrounded by large numbers of <u>organisms</u> that had never been seen before. These biological communities depend upon chemical processes that result from the interaction of seawater and hot magma associated with underwater volcanoes.

Hydrothermal vents are the result of seawater percolating down through fissures in the ocean crust in the vicinity of spreading centers or subduction zones (places on Earth where two tectonic plates move away or towards one another). The cold seawater is heated by hot magma and reemerges to form the vents. Seawater in hydrothermal vents may reach temperatures of over 700° Fahrenheit.

Print Edition, xx-xx-xxxx, "The unplumbed riches of the deep," Economist, https://www.economist.com/briefing/2009/05/14/the-unplumbed-riches-of-the-deep

IN TEENSPEAK, if a star such as Madonna or J.Lo is huge, that is a reference not to her size but to her popularity. Similarly, in the world of seabed geology, if a sulphide deposit is massive, it is not necessarily big, but formless and rich in metals. As it happens, seafloor massive sulphides are also huge—at least they were until recently. The collapse in commodity prices last year has diminished them a bit, but many expect their popularity to recover.

The excitement arose because oceanographers had started to find these mineral-rich deposits on the network of submerged mountain ranges that run along the seabed between continents (see map). Such ridges occur where the great plates of the Earth's crust are spreading apart, and the seafloor holds formations of hot, volcanic rock.

Subsidiaries solve

My Say, 3-4-2015, "Uncovering The Hidden Costs Of Global Expansion," Forbes, https://www.forbes.com/sites/groupthink/2015/03/04/uncovering-the-hidden-costs-of-global-expansion/

74% of these finance executives surveyed agreed that maintaining control of international activities was difficult

Even for this globally experienced group, nearly 74% of these finance executives surveyed agreed that maintaining control of international activities was difficult. In their responses, executives consistently trumpeted the importance of conducting thorough research before

establishing an office, to understand the target country's legal, regulatory and cultural environment. Those of us in the business of international expansion sometimes refer to this as the "know before you go" rule. Unfortunately, we've found that time and again U.S. companies, especially those new to the global expansion game, tend to overlook certain important factors during the due-diligence phase of expansion.

Will develop eco-friendly tech

1. Mining requires breaking up the seafloor where the bacteria resides, resulting in methane emissions. You can't mine without touching the ground. <u>Copely</u> furthers that mining in the deep-sea specifically happens in hydrothermal vents because they form chimneys that produce the mineral resources that we mine for.

Methane not bad/good response

Carbon decay

1. The way infrared absorption happens and traps heat is through the carbon/hydrogen BONDS in the methane. Carbon going from carbon 14 to carbon 12 is just changing the number of neutrons in the atom, which doesn't affect its bonding properties because neutrons are neutral. Thus, the bonds in methane regardless of what specific isotope of carbon is used are the same, meaning the absorption is the same.

Only in air for 12 years

- Still worse than carbon. Cornell explains that the climate responds slowly to changes in carbon dioxide emissions; reductions now will not influence the rate of warming over the coming 35 years but the climate system responds very quickly to changes in methane emissions; reducing methane emissions now will significantly slow the rate of global warming over the coming decades.
- 2. Furthermore, the IPCC explains in 2013 that methane is more than 100-times more powerful for the first decade after emission, 86-times over a 20-year period, and 34-times over 100 years. The shorter time periods are the most appropriate to use, given the urgency of slowing global warming over the coming 10 to 20 years.

Infrared spectroscopy

1. Literally just let me draw a diagram.

Methane feeds plankton that eats CO₂

1. This argument is stupid. The PNAS in 2017 explains that the methane they are referring to comes from SHALLOW WATER methane seeps. We're talking about deep sea

methane seeps being affected, where these plankton aren't there to counteract the effect of methane. This argument is sooooo stupid jeez.

http://www.pnas.org/content/114/21/5355 https://www.sciencedaily.com/releases/2007/11/071117121016.htm

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China poses no credible threat to the US

Economic ties means no war

1. Segal explains in 2009 that China controls the U.S. securities which finance our budget deficits and is a major source of exports, so U.S. consumers are dependent on cheap Chinese goods. The U.S. doesn't have this control the other way around. China could cut off the US without severely hurting itself. They don't have strong mutual economic ties.

Adam Segal, 11-13-2009, "The U.S.-China Economic Relationship: Separating Facts from Myths," Council on Foreign Relations,

https://www.cfr.org/expert-brief/us-china-economic-relationship-separating-facts-myths

Four, in particular, stand out, and it is important to identify them as myths to avoid misunderstandings that could adversely influence policy decisions. The fact that China has become the largest foreign holder of U.S. government securities is taken as indicating that the United States is heavily dependent on China to finance its budget deficits. Similarly, since China is a major source for U.S. imports, U.S. consumers are seen as dependent on cheap Chinese goods. In addition, the Chinese authorities have emphasized that they strongly resist external pressures to try to influence policy decisions and that economic instability in China is bad, with adverse implications for the rest of the world.

Mutually assured destruction means no war (ever)

Three war situations

- 1. China keeps building islands, an ASEAN country or US ship comes into their waters, miscommunication occurs and someone gets hurt.
- 2. China declares an air zone above the South China Sea and an accidental collision would be bad but a Chinese fighter jock could actually open fire on an American plane or vice versa.
- 3. Submarines bumping each other in the sea. Enough said.

Tensions make all these situations go from just a misunderstanding to a very likely way to escalate to war.

https://nationalinterest.org/blog/the-buzz/china-vs-america-3-ways-war-the-south-china-sea-could-start-260341

Countries don't ally with China because they conflicting interests

1. Their interest is survival and protection. China is willing to protect them in exchange for them not allying with the US and giving the US a foothold in the region. THat's what the Phillipines did and turned its back on the US following the lawsuit that changed nothing in the region.

A2 Renegotiations

China will oppose any document that the US likes

1. That's what we're telling you. In the squo, UNCLOS is the US's document, the US basically wrote it. China is trying to make it China's document, but it has so much to reverse. China and the US writing a document together would get both their interests in and resolve disputes.

Lawsuits don't matter because China doesn't respect them

- 1. China doesn't respect lawsuits because there is no consequence to them not doing so China's just says that US meddling in and trying to enforce lawsuits is hypocritical when it isn't even a party to the treaty, and all the other countries in the region just kind of go along with it because they don't trust the US that much anymore. However, when the US is a part of the treaty, that makes the US have actual complaints and legal standing, forcing China to either accept the new terms or lose major soft power because now instead of the US looking like the noncomplier, it is China.
 - a. Also the Phillipines lawsuit wasn't really a smackdown for China. China won seven out of the fourteen legal arguments brought to the case. It was more of a draw than anything else.

We don't have a legal standing in the South China Sea (China can't impound the US)

1. Yes. We just say China isn't letting us sail around in the South China Sea and BAM we have a lawsuit

China doesn't care about soft power

1. False. We tell you China's realized it can't be an international superpower on par with the US without allies which is why Xi has spent billions on improving its foreign image, but hasn't gotten that much return on investment.

Holly, 4 degrees warming (direct result of climate change), Oregon State

"The other team had questions about why they won."

"The vast majority of methane released from these reserves is consumed by archaea [single-celled microorganisms] and bacteria initially in the sediment and then in the water column as the methane is released," Thurber said. He estimated that some 90% of methane released is consumed by these organisms and so does not reach the water's surface and escape into the atmosphere.

For undersea methane reservoirs to affect global warming, Thurber said the gas would need to be released either shallow enough that there is not time for it to be consumed before it reaches the surface or in such large quantities that it overwhelms microbial communities that consume it. New methane seeps also could affect global warming if they occur in an area where the microbes that eat the methane are not yet present, he said.

While methane from the vents may not reach the atmosphere in large amounts, its consumption in the water could affect oxygen levels in the ocean. Some of the bacteria that consume methane use oxygen to break it down, and Levin said that one concern is whether methane oxidation in the water column is "using up the oxygen" in the areas where vents are found.

"Since we have a problem of ocean deoxygenation associated with climate change and warming, it could be that methane [release] is exacerbating the problem," she said.