# AN ECONOMIC CONFRONTATION BETWEEN US & CHINA: IMPLICATIONS ON GLOBAL CLIMATE CHANGE

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**Abstract:** Climate Change is represented as an epic threat. Climate change forecasts under a "business as usual" emissions scenario point to an average global warming of 2.4 - 6.4°C centigrade till the end of the era. The US and the People's Republic of China are considered as world's economic giants. Both powers are in a race to outdo each other. Climate Change draws in with profoundly separated geological major powers issues of a worldwide temperature alteration and is characterized by the amassed aggregate result of intentionally heightening trepidation of climate change fiascoes. It investigates how dread actuating climate change talks could bring about new types of economic conditions, mastery, and mobilize financial assets. While it analyses that the powers (US & China) performed poorly in climate change mitigation action so how does their economic rivalry impact global Climate Change? The article goes with the suggestion that the field of international relations needs to concentrate much more on the climate challenge, reconnects with its state-related philosophical traditions, and support the cultivation of a particular attitude or mindset in the discipline's research and teaching for the ensuing decades: a fierce optimism.

**Keywords**: Climate Change, Global threat, Geopolitical competition, US & China, and Mitigation policies

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#### 1. Introduction:

Climate Change is a genuine and evident threat to all mankind. Its effects can be seen today, and they can be more harmful if they are not responded to well. The greenhouse gas discharge should be less than half by 2030 and it should reach zero by 2050. Both government and Citizens need to be on the same page for a culmination of this curse of climate change. In this regard, this research article is looking into the role of superpowers in fighting against Climate Change. Today China and US are known as the biggest economies and biggest contributors of greenhouse gases in the global environment. This research is looking into their economies, their mistrusts, and their mutual agreements for the reduction of greenhouse gas emissions. It further suggests what positive role they both can play in dealing with climate change.

#### 2. Literature Review

The literature review in this research article is integrative. It conducts an integrated evaluation, analysis, and synthesis of relevant literature on a subject to produce fresh frameworks and viewpoints.

Council (2012) examines in their National Intelligence Council report named: Global Trends 2030' this report includes a study on possible issues for the United States in international affairs. One chapter of the study focuses on the report's future directions for environmental issues and their potential impacts on global affairs. As the United States' role is covered in this study, it has assisted in the conduct of additional research. Glaser (2007) Hendrix and Glaser examined various trends related to climate change in their research work named "Trends and Triggers: Climate Change, and Civil Conflict in Sub-Saharan Africa." They take into account both long-term and recent patterns related to climate change in their study. They predict in the long-term trend that there is a most probable chance of conflict to increase, whereas as the short-term trend will impact inter-annual variability.

Yoo Heo in his book Free trade and the US -China trade war (2022) give an analytical approach of Global trading system and its implications. With the application of network theory he observes the sustainability of global free trade system. He tries to evaluate four basic challenges to global trading system i-e US& China Trade war, Covid 19, Industrial Revolution and World Economic Structure. This work of Yoo Heo is good for those who want to have good understanding of US and China trade war.

<sup>&</sup>lt;sup>1</sup> Global Trends 2030:Alternative worlds, A publication of the national intelligence council(2012) https://www.dni.gov/files/documents/GlobalTrends 2030.pdf

Dieter Helm and Cameron Hepburn in their edited book *The Economies and Politics of Climate Change* examine the policies of major powers US, China and European Union to lessen the greenhouse gas discharge. It further put a question on the foundation of climate change discussions and agreements. This work proposes further work on climate change policies and institutional infrastructures.

Barrie Pittock's book titled: *Climate Change, the science, impacts, and solutions (a new and updated second edition)* is considered a valuable resource for policymakers, those who actually care about the future of our environment. This book tries to cover those aspects which have already been extensively covered by the Intergovernmental Panel on Climate Change(IPCC) in all of its four assessments report, that is, Al Gore's movie known, An Inconvenient Truth, and the most recent film by Fanny Armstrong's is, 'The Age of Stupid'. In his, work Barrie emphasizes the need to go beyond the Kyoto Protocol. In the second edition of the book where he updated information emphasizing the investments in renewable energy projects at large scale as it's implemented in California and also numerous smaller-scale activities at individual homes and businesses that are now being driven by both regulatory and market mechanisms, could act as a "primer" for the COP participants.<sup>2</sup> This book will help to convince scoundrels in politics and other related fields of climate change adaptation and mitigation where the necessity and urgency required.

In *Climate Change: The China Problem*, Michael P. Vandenbergh debates that existing agreement like Paris and Kyoto agreements on climate change are not enough to contain China and US on their Carbon dioxide emission. It further informs the reader about the 41 percent of economic dependency of the US and Europe on China. Now with this export scenario will they be able to have a mutual understanding of the issue of Climate Change. This article will help those who want to know about the economic partnership between US and China.

Peter Lee in his book titled: *Truth wars The Politics of Climate Change, Military intervention and financial crisis* focuses on analyzing the issues including climate change, and financial collapse to show how conflicting interests of states are utilizing the facts to mold people's behavior their attitudes, and related identities. He discussed all-encompassing major discussions of the twenty-first century which are fueled by the impending effects of climate change and recurrent financial crises. Lee provides a picture of an underlying power

<sup>&</sup>lt;sup>2</sup> Pittock, B A. "Climate Change: The Science, Impacts, and solutions second edition, published by CSIRO, 2009.

structure in which certain governments or leaders become important players on the international stage. A trend appears in his assessments of both Climate-gate and the blame game aspects that followed the financial crisis. Peter Lee's book Truth Wars is based on the idea that there might not be a single Truth to support any government action (or inaction) in their competing or conflicting areas.

The global environmental politics scholarship identifies non-profit think tanks linked to significant industrial funders' work as a crucial source of information for some politicians. While Private interests which are briefly mentioned in the case named: the rise of deadly drones, where Lee speaks about the industry of global defense which is an insatiable appetite for the profits of new markets. Each segment of this book offers a fair dose of doubt regarding the mainstream narratives that have taken over the world politics.

Hence this work is missing corporate and private interests while its brevity is commendable and useful in bringing these issues to public attention. This work has undoubtedly given a good introduction to the truth wars behind global politics and financial crises that affected climate change patterns all over the world.

This and the other literature which is used to understand the phenomena of Climate Change highlights the gap that Climate Change is no doubt a global threat, and everyone is conscious of the role of the US and China in this regard. Both countries have successful economies and they do depend on each other economically as well but there still remains a level of mistrust between the two. Now the ongoing work/literature is suggesting they focus on the global Climate Change threat but what will be the impact of their mutual understanding is still missing. In this research article, the focus is on their mutual work against the common threat of Climate Change and its future implications.

## 3. The power Concept in international relation

State power is a key topic of study in the field of international relations. Realists created the most important school of thinking for comprehending global power. They assert that the explanatory variable for state conduct is a reflection of the division of comparative substantial potential, which they use as a preferred definition of authority.<sup>3</sup> Liberal, institutional, and functionalist theorists, who speak of "soft" or "smart" power, contend that affinities and institutional structures determine how states exercise their power.<sup>4</sup> Marxists

<sup>&</sup>lt;sup>3</sup> Robert Owen Keohane, *Neorealism and its Critics*, Columbia University Press, 1986, Christopher Layne...

<sup>&</sup>quot;Kant or cant: The myth of the democratic peace." In Realism Reader, pp. 301-310. Routledge, 2014. John J Mearsheimer, The tragedy of great power politics. WW Norton & Company, 2001.

<sup>&</sup>lt;sup>4</sup> Robert O.Keohane and Joseph s. Nye, *Power and* Interdependence: World Politics in Transition, Boston (1977).

US and China Sonia and Mubin

emphasize the influence of social classes and economic institutions.<sup>5</sup> Poststructuralists perceive power in all forms.<sup>6</sup>

A well-known definition of power was offered by Dahl in 1957: "A has power over B to the extent that he can get B to do something that B would not otherwise do." Now this gives an understanding that fundamental idea is the expression of authority in terms of relationships that understanding both actors' desires are necessary to recognize successful power expression, and that power may be seen in specific interactions. Although this conceptual framework is crucial for comprehending international relations, measuring it is difficult. Studies that build on this notion of power based on capabilities have highlighted the significance of industrial production and military capability as measures for power.8

These capacity-based misconceptions have combined to create the idea of "hard power," which equates control over these resources with influence within the international system.<sup>9</sup> By threatening to use force, if necessary, states can use hard power to compel people to alter their behavior. In an effort to avoid being the target of hard power if they refuse, states may adjust their behavior in response to such threats.

Another school of thought in the Neoliberal movement emphasizes the value of interstate cooperation and absolute gains.<sup>10</sup> States that depend on one another for shared prosperity might develop patterns of complicated "interdependencies" as these partnerships grow.<sup>11</sup>These interdependencies, however, are not always balanced between partners, which can lead to circumstances where imbalances might be used to achieve coercive goals.

# 4. Power rankings of Major Powers

The United States is ranked 1 out of 142 nations for 2022 in the Global Firepower (GFP) evaluation. It has a power index (PwrIndx) score of 0.0453, where 0.0000 is the "ideal" result. The most recent update was on April 9, 2022.<sup>12</sup>

<sup>&</sup>lt;sup>5</sup> Wallerstein, I. "The Capitalist World-Economy" (Cambridge University Press 1979).

<sup>&</sup>lt;sup>6</sup> Foucault, M. "Power/Knowledge: Selected Interviews and Other Writings", 1972–1977 (Pantheon Books 1980); Campbell, D. "National Deconstruction: Violence, Identity, and Justice in Bosnia" (University of Minnesota Press 1998).

<sup>&</sup>lt;sup>7</sup> Moyer, Jonathan D., Collin J. Meisel, and Austin S. Matthews. "Measuring and Forecasting the Rise of China: Reality over Image." Journal of Contemporary China (2022): 1-16.

<sup>&</sup>lt;sup>8</sup> Robert A. Dahl, 'The Concept of Power' Behavioral Science (1957) 2(3) 201.

<sup>&</sup>lt;sup>9</sup> Ibid

<sup>&</sup>lt;sup>10</sup> Mearsheimer, J.J. "The False Promise of International Institutions" International Security, The MIT *Press*, 1995

<sup>&</sup>lt;sup>11</sup> Powell, R. "Absolute and Relative Gains in International Relations Theory" *American Political Science Review* (1991).

<sup>&</sup>lt;sup>12</sup> United States Military strength, Global Firepower 2022. <a href="https://www.globalfirepower.com/country-military-strength-detail.php?country\_id=united-states-of-america">https://www.globalfirepower.com/country-military-strength-detail.php?country\_id=united-states-of-america</a>

China (No. 3) keeps moving up the rankings, gaining ground on Russia (No. 2), which has held that position for a while (No.2). The country, which enjoys a clear economic and human resource advantage, has put a determined emphasis on enhancing its navy, airpower, and land warfare capabilities (mainly through domestic means). If the pattern holds, it will overtake the United States (No. 1), which is still in first place for the year, as the main global military foe.<sup>13</sup>

#### 5. Economic Confrontation of US & China

In accordance with supposed GDP and Purchasing power ability procedures, US and China are considered the two giants of world economies. The US has taken lead in terms of Supposed GDP but in 2017 China surpasses the US in Purchasing Power Ability. In supposed GDP terms both countries' financial credit is about 41.89% and according to Purchasing power ability report of 2021 it is about 34.75% they are far ahead of countries like India and Japan in the race for both Supposed GDP and Purchasing Power Ability so now the contest is only between these two countries.

In provisions of exchange rates, the US surpassed China in 2021 with 6,033 billion dollars. But in contradiction to this China surpassed the US in buying power ability which is 1.18 times more than U.S. China Gross Domestic Product was about 11% estimated by World Bank in 1960but it raises to 67% by 2019.

**Projections by IMF** 

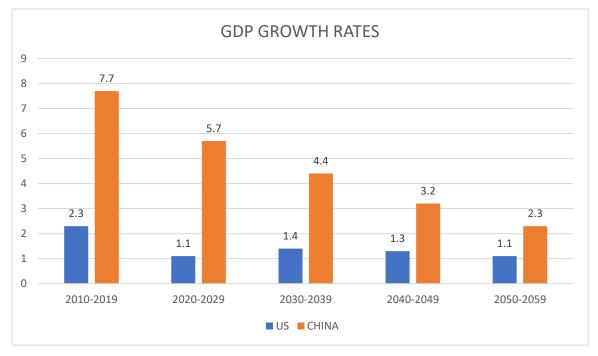
|              | Nominal GDP   |           | PPP GDP (billions |           |             | Nominal GDP |                 | PPP GDP |  |  |
|--------------|---------------|-----------|-------------------|-----------|-------------|-------------|-----------------|---------|--|--|
|              | Gro           | wth       |                   |           |             |             |                 |         |  |  |
|              | billions (\$) |           | Int. \$ )         |           | Capita (\$) |             | Capita (Int.\$) |         |  |  |
| Year         | US            | China     | US                | China     | US          | China       | US              | China   |  |  |
| US China     |               |           |                   |           |             |             |                 |         |  |  |
| 2020         | 20,932.75     | 14,722.84 | 20,932.75         | 24,142.83 | 63,416      | 10,484      | 63,416          | 17,192  |  |  |
| -3.505 2.270 |               |           |                   |           |             |             |                 |         |  |  |
| 2021         | 22,675.27     | 16,642.32 | 22,675.27         | 26,656.77 | 68,309      | 11,819      | 68,309          | 18,931  |  |  |
| 6.386 8.437  |               |           |                   |           |             |             |                 |         |  |  |
| 2022         | 24,003.70     | 18,013.40 | 24,003.70         | 28,779.53 | 71,896      | 12,763      | 71,896          | 20,392  |  |  |
| 3.515        | 5.574         | ļ         |                   |           |             |             |                 |         |  |  |
| 2023         | 24,892.61     | 19,423.48 | 24,892.61         | 31,031.00 | 74,130      | 13,736      | 74,130          | 21,945  |  |  |
| 1.410        | 1.410 5.439   |           |                   |           |             |             |                 |         |  |  |
| 2024         | 25,790.12     | 20,910.47 | 25,790.12         | 33,351.27 | 76,362      | 14,765      | 76,362          | 23,549  |  |  |

<sup>&</sup>lt;sup>13</sup> Keohane, R. and Nye, J, S. "Power and Interdependence: World Politics in Transition" (Little, Brown, and Company, 1977.

| 1.481 | 5.273               |           |           |           |        |        |        |
|-------|---------------------|-----------|-----------|-----------|--------|--------|--------|
| 2025  | 26,719.63 22,481.43 | 26,719.63 | 35,748.   | 12 78,660 | 15,855 | 78,660 | 25,212 |
| 1.607 | 5.121               |           |           |           |        |        |        |
| 2026  | 27,659.15 24,127.83 | 27,659.15 | 38,189.88 | 80,959    | 17,003 | 80,959 | 26,913 |
| 1.610 | 4.863               |           |           |           |        |        |        |

Source World Bank: Nominal, PPP, Nominal per capita, PPP per capita, International Monetary Fund

But its GDP growth is expected to continue to slow down, from an average annual peak of 7.7% growth in the years 2010–2019 to a minimum of 2.3% growth by 2050–2059, according to The Current Path. The US's economic growth also declines, hitting lows of 1.1% between 2020 and 2029 and 2050 and 2059 after decreasing to 2.3% between 2010 and 2019 and 2.3% between 2020 and 2019. These shifts are consistent with contemporary ideas of structural changes in economic growth, which forecast that future growth will presumably reduce as nations become more advanced.<sup>14</sup>



Source: J. D. MOYER Et Al.

According to the situation, expenditures related to army as a percentage to Gross Domestic Product expected to stay unchanged in China whereas in U.S it is to some extent dropping

<sup>&</sup>lt;sup>14</sup> Comparing United States and China by Economy - *StatisticsTimes.com Source World Bank: Nominal, PPP, Nominal per capita, PPP per capita International Monetary Fund*, 2021. https://statisticstimes.com/economy/united-states-vs-china-economy.php

due to ongoing economic growth trends. As compare to U.S, China has spent on its military due to measurement difficulties.<sup>15</sup>

China's economic activity according to Gross Domestic Product is higher than U.S, and this style will remain until the conclusion of the predicted period. Throughout the time horizon, it is expected that China's trade as a percentage of GDP will stay lower than it did from 2010 to 2019. In the US, trade openness likewise increased at the closure of Cold War, and between 2010 and 2029, it reached a plateau of more than Gross Domestic Product of 28%. This level is predicted by the Current Path to be roughly constant until the middle of the era and China's strategy of open Market will remain higher to U.S. for duration of the exploration.<sup>16</sup>

There are numerous ways in which the economies of the US and China are linked. As a result, the technologies that each nation has produced will not be interoperable. The two economies have begun to decouple (separate from formerly connected systems). Since there is a trade dispute between them, both nations seek ways to partially undo some of their economic restraints. At the end of the day, despite all of their differences, these two nations rely on one another to resolve significant international issues like climate change and manage the world economy.<sup>17</sup>

# 6. Economic Confrontation Impact on Global Climate Change

Climate change has become yet another serious issue. Environmental management and, more specifically, climate management have consequently emerged as global issues in the twentyfirst century. The environment for international natural administration has drastically changed as a result of the growing competition between existing world forces for resources (land, food, and fuel).18

In contrast to the United States, whose emissions have increased since the Industrial Revolution, China's emissions have decreased significantly since 1979. Trade with the rest of the world is made possible by loosening economic reforms while maintaining control over the private sector. While People's Republic of China & United States discharge about roughly most of greenhouse gas emissions which are rising the temperature of globe, making them the carbon polluters and the world's No. 1 and No. 2 particularly. The United States and China, two superpowers whose ties are worsening, must act if the world is to have any chance

<sup>&</sup>lt;sup>15</sup> Barro J.B, "Economic growth of the cross section of countries", *Quartely Journal of Economics*, (1991), 106

<sup>&</sup>lt;sup>16</sup> Hayes, A. "Trade definition in finance: Benefits and how it works" Investopedia,2022

<sup>&</sup>lt;sup>17</sup> Moyer, J, D. Meisel & Matthews, A, S. "Measuring and Forecasting the Rise of China: Reality over Image" Journal of Contemporary China: 2022

<sup>&</sup>lt;sup>18</sup> Sanjay Chaturvedi and Timothy Doyle, *Climate terror: A critical geopolitics of climate change*. London: Palgrave Macmillan, 2015.

US and China Sonia and Mubin

of halting climate catastrophe. US and China both countries declare they are serious regarding the growth of their economies by consuming less oil, coal, and gas which causes climate pollution. But disagreements among major powers pose a threat to their eventual achievement. For instance, between the years 2000 and 2011, China and India accounted for 83% of the global growth in fossil fuel byproducts. <sup>19</sup> Over the next years, a new geopolitical environment will result from the wavy character of the US-China relationship as it develops. The concentration of CO<sub>2</sub> in the atmosphere was 280 parts per million by volume in the middle of the nineteenth century (ppmv). 316 ppmv of discharges were recorded in the 1960s. They are currently at about 420 ppmv. <sup>20</sup>

The prime concerns of U.S. about People's Republic of China intimidating policies towards Taiwan, and in Southern Sea. While disagreement of US over trade and human rights, and American allegations of Chinese espionage all pose a threat to overshadow bilateral climate diplomacy.

Chinese authorities are also concerned about the Trump administration's<sup>21</sup> limitations on trade, technology, Chinese media, and students studying abroad, as well as the State Department's recent claim that crimes against China's Muslim minorities constitute "genocide."<sup>22</sup>

As Biden's climate envoy, Kerry, who served as secretary of state under President Barack Obama, while talking to the news analysts stated that "the problems" with China<sup>23</sup> "would never be traded for anything that has to do with climate."<sup>24</sup> This won't happen, I assure you. However, Kerry also referred to the environment as "a standalone problem" with China, which drew outrage from both China and some American human rights activists. The U.S. Energy Information Administration estimates that coal accounted for 58% of China's complete major energy consumption<sup>25</sup> in 2019. According to the Global Energy Monitor and the Centre for Research on Energy and Clean Air, China<sup>26</sup> increased its net coal power capacity last year by roughly the equivalent of 15 Hoover Dams, or 30 <sup>27</sup>gig watts, as government allocated monetary assistance funds to infrastructure projects during the

<sup>&</sup>lt;sup>19</sup> Robin Eckersley, "Moving forward in the climate negotiations: Multilateralism or minilateralism?" *Global environmental politics* 12, no. 2 (2012): 24-42.

<sup>&</sup>lt;sup>20</sup> Mark Maslin, Climate change: a very short introduction. OUP Oxford, 2014.

<sup>&</sup>lt;sup>21</sup> WJCLabc news, https://www.wjcl.com/

<sup>&</sup>lt;sup>22</sup> Wjclabc news, https://www.wjcl.com/

<sup>&</sup>lt;sup>23</sup> Ibid

<sup>&</sup>lt;sup>24</sup> Ibid

<sup>&</sup>lt;sup>25</sup> Energy Foundation, https://www.efchina.org/

<sup>&</sup>lt;sup>26</sup> https://www.wjcl.com/

<sup>&</sup>lt;sup>27</sup>Ibid

pandemic.<sup>28</sup> In order to increase its influence, China also finances the construction of coalfired power facilities abroad. There arose a question that if the building of coal-fired power facilities motivated on request/demand or their purpose is only to have a successful economy in difficult times. In either case, there are negative effects from the new coal plants. According to Georgetown's Lewis, "any new coal plant that China builds<sup>29</sup> is essentially locking in carbon emissions for the next 50 years."30

The ongoing discussion clearly indicates that US and China are one of the major powers and economic rivals in the world. Now the question here is that with this power ranking how will they sideline their economic difference (Which are the biggest contributor to global Climate Change) to control the common threat of Climate Change?

# 7. US & China Bilateral efforts to stop Climate Change

Their mutual connection is of exceptional tactical importance, & clean energy cooperation has emerged as its focal point. Both nations have quite distinct ideas about how the world ought to operate. While China is an autocracy and the US is a democracy, they undoubtedly desire to further that form of government.

Now as far as Climate Change is concerned, for many years, the United States and China have worked together to combat it and promote sustainable energy.<sup>31</sup> Since 2009, this partnership has significantly improved and grown, resulting in hundreds of individuals from both nations cooperating to conduct joint research, exchange knowledge and ideas, and create business schemes for the installment of supportable equipment.

Climate change became a major policy concern under the Obama administration. Developments in the Clean Electricity Plan and other laws cause a reduction in the emissions that comes from the sources of transportation and power sectors that allowed the United States to set new global climate targets. With a focus on renewed domestic policy of climate, the United States now has the mandatory duty to engage with significant countries like China in an effort to encourage them to adopt new world climate treaty.

Climate change and clean energy were key, unifying topics in the US-China bilateral relationship until recently. Both U.S and China started communication, but it's not confined to the Strategic and Economic Dialogue (S&ED) only, both countries are allowed to debate on delicate concerns politically, which are particularly over the restrictions of trade and

<sup>29</sup> Ibid

<sup>&</sup>lt;sup>28</sup> Ibid

<sup>&</sup>lt;sup>31</sup> Lewis, Joanna. "The state of US-China relations on climate change: Examining the bilateral and multilateral relationship." China Environment Series 11, no. 7-39 (2010).

US and China Sonia and Mubin

international securitization, and it is ensured that the national economies of two major powers in the world avert potential conflict by diplomatic means.<sup>32</sup> U.S decline from Paris agreement during trump Administration has prompted the People's Republic of China to express same sorrow & displeasure as many other countries across the world felt the same. In spite of the United States exit, they abide by their promise and complete its obligations under the Paris Agreement.<sup>33</sup>

# 8. Multilateral Achievements<sup>34</sup>

In 2016 there comes a shift in bilateral climate change agreements<sup>35</sup> by using bilateral connections to influence multilateral solutions. One such instance is the US intention to use bilateral accords with China for having a global environmental accord. The Montreal Protocol and the International Civil Aviation Organization<sup>36</sup> are two more crucial areas where bilateral agreements have significant effects on the fight against global climate change (ICAO)<sup>37</sup>.

# 9. The Paris Agreement<sup>38</sup>

It was decided strategically in 2014 by the US to jointly announce with China its planned indomitable support for Paris Agreement. China wanted to reach at the top of Carbon dioxide release nearby 2030 to boost its part of non-fossil fuels in primary energy consumption to about 20% by 2030, whereas there comes an announcement from U.S that they are going to reduce their releases to 26-28 % by 2025 and will try their best to lessen it to 28%. <sup>39</sup>

The united announcement had a significant global impact. It was the first time China had announced its climate ambitions so quickly and forcefully, and it was also the first time the two biggest polluters had done so together. The statement served as a catalyst for other nations to make similar announcements during the ensuing months.<sup>40</sup>

# 10. The Kigali Amendment<sup>41</sup>

33 www.csis.org

<sup>32</sup> Ibid

<sup>&</sup>lt;sup>34</sup> Lewis Jonna, The US &China Climate and Energy relationship, <a href="www.CSIS.org">www.CSIS.org</a>, <a href="https://www.csis.org/us-china-climate-and-energy-relationship">https://www.csis.org/us-china-climate-and-energy-relationship</a>

<sup>35</sup> Ibid

 $<sup>^{36}</sup>$  .Ibid

<sup>&</sup>lt;sup>37</sup> Ibid

<sup>&</sup>lt;sup>38</sup> Bergmann Max, "How to avoid a transatlantic trade war over Climate", <u>www.CSIS.org</u>, December 15 2022. https://www.csis.org/analysis/how-avoid-transatlantic-trade-war-over-climate

<sup>&</sup>lt;sup>39</sup> US – China joint announcement on Climate Change, *White House*, https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-office/2014/11/us-offi

 $https://obamaw hitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate \ ^{40}\ Ibid$ 

<sup>&</sup>lt;sup>41</sup> Lewis Jonna, The US &China Climate and Energy relationship, www.CSIS.org, https://www.csis.org/us-china-climate-and-energy-relationship

The Vienna Convention for the Protection of the Ozone Layer's protocol<sup>42</sup>, the Montreal Protocol<sup>43</sup> was considered and praised as one of the most effective agreements. Here while the latter one was not meant to be an environmental pact, dealing with a single issue can occasionally have unexpected implications, particularly while dealing with complicated one like air contamination interaction & conservatory gases. Hydrofluorocarbons (HFCs), a replacement for harmful substances which are more powerful than CO2 were developed as a result of the phase-outk8 of CFCs. At the meeting of Sunny land in June 2013, the senior leadership of both countries first discussed Hydrofluoric carbon. Between 2013 and 2016, bilateral conversations persisted and the international negotiations to propose a Montreal Protocol amendment to address HFCs gained traction. In Oct 2016 at least 197 nations agreed to phase down HFCs.

This positive development will be able to slow down the warming process to 0.5 degrees Celsius till the expiration of era and 80 billion metric tons of CO2 comparable releases by 2050.<sup>45</sup> Beginning in 2019, developed nations will start lowering their HFC use. China was placed in the first group of developing nations that would have to restrict usage in 2025, while the second group in which India was included will not start restricting releases until 2029

# 11. Carbon Offset and Reduction Scheme for International Aviation (CORSIA)<sup>46</sup>

Air travel emissions contribute around 2.5% of the world's CO2 releases, but they also release laughing gas and vapor trails, which together might more than treble the impact of aviation on global warming. <sup>47</sup> A major reason why the Kyoto Protocol and the Paris Agreement did not include aviation emissions was the difficulty of managing cross-border emissions.

Presidents Obama and Xi agreed to collaborate in order to successfully conclude this year's negotiations at the ICAO to obtain an agreement with the approach to address the role of global air flying in the release of conservatory gases during their meeting in March 2016. An agreement was struck on October 6, 2016, following intense bilateral discussions between US

<sup>44</sup> Heath, Eric A. "Amendment to the Montreal protocol on substances that deplete the ozone layer (Kigali amendment)." *International Legal Materials* 56, no. 1 (2017): 193-205.

<sup>&</sup>lt;sup>42</sup> "International Christian University Repository", *icu.repo.nii.ac.jp*, https://icu.repo.nii.ac.jp/?action=pages\_view\_main&active\_

<sup>&</sup>lt;sup>43</sup> Ibid

<sup>&</sup>lt;sup>46</sup> Hailstone jamie, "Why A lack of mistrust could scupper Climate Change Consensus", Oct, 28,2022, https://www.forbes.com/search/?q=Paris%20Agreement&sh=18aca815279f

<sup>&</sup>lt;sup>47</sup> Jessica F. Green, The world is about to get tough on aviation emissions, *Washington Post*, https://www.washingtonpost.com/news/monkey-cage/wp/2016/10/14/the-world-is-about-to-get-tough-on-avia

& China and extensive mutual consultations among affiliated countries. According to ICAO (CORSIA) resolution, nations must limit aviation emissions to levels seen in 2020 by 2027. Although the regulations are optional until 2027, nations are urged to sign on before that time. In 2016, almost more than 65 states had freely given their consent to join this scheme.<sup>48</sup>

#### **Recommendations**

There are many opportunities for cooperation in the battle against climate change, but it can only be possible with advanced governmental backing in both countries while knowing the fact that they have a high level of mistrust against each other. There are some recommendations to the senior leadership in both China and the US to overcome the obstacles in the way of cooperation on Climate Change.

## Respect each other's viewpoints.

Both countries have different perspectives regarding climate issues due to their different historical accounts and circumstances. No one of them is willing to differ in their opinion so they can solve these differences by standing in the way of pragmatic collaboration. Successful bilateral handling of divergent viewpoints can contribute to the success of multinational climate change negotiations.

# Construct a clean energy infrastructure for cooperation.

Clean energy, a crucial aspect of combating climate change, offers a more appealing political framework for bilateral collaboration between US & China than climate change itself. Clean energy fosters cooperation in more established policy and bureaucratic communities and reduces ideological conflict. Emphasizing clean energy can assist emphasize advantages in linked fields, such as national security, local air pollution reduction, economic growth, and recovery.

## One or two significant headline initiates

The United States and China should set ambitious goals when it comes to their cooperation in addressing climate change. It's crucial to get the public's attention. Initiatives to electrify vehicle fleets, increase building energy efficiency, begin preliminary plans for carbon capture and storage, and assemble a lot of helpers from every nation as a workforce in the new Clean Energy Force are some candidates for headline programs.

# Emphasize joint technological development

Both countries have complementary strengths in developing technology, there should be an announcement of one and more significant joint technology development projects in them as

<sup>&</sup>lt;sup>48</sup> John K. Veroneau, Timothy P. Stratford & Ashwin Kaja, Trump-XI Kick off Economic Relations, *The Global Watch*, https://www.globalpolicywatch.com/2017/04/trump-xi-kick-off-economic-relationship/

well. Both parties will need to work together to address the concerns of the other on complex problems such as the protection of intellectual property, contract enforcement, and concessionary finance.

# **Conclusion:**

A new age of great power confrontation has already begun as the United States' position is being challenged by China's rise in several dimensions and locations. The growing alliance will have an impact on both the local and global landscape in the upcoming years. As compared to the US, Chinese abilities are increasing day by day and generated a lot of debate. while it is asserted that a relative capability change has already occurred. The intimidating scale and circulating time-constrained, mitigation and adaptation of climate change are impractical without the heavy-lifting state's capacity or as a national body to inspire behavioral change accordingly.

Without cooperation and mutual faith in each other's commitments, it will be virtually hard to achieve the rapid carbon reductions required to avert the worst effects of climate change. While during the Trump administrative period, the United States was supposed to utilize China's emissions as justification for not acting, while in the past, China cited historical US emissions as justification for not taking any action. The United States will most probably transmit its power sector to an emissions-free sector within a period of 14 years and will achieve to gain a totally emissions-free economy by a time of 2050, according to Biden's vow. Enough investments in infrastructure and technology are required in the transition to a more energy-efficient economy with the help of wind power, solar energy, and other cleanerburning fuels.

Xi Jinping shared China's stunning announcement in September that it intended to achieve net-zero emissions by the time 2060.

Sooner or later, the United States will discover effective strategies to compel that rise and maintain its global leadership position, and they frequently interpret American blather on issues ranging from currency values to the reduction of fossil fuel byproducts as part of this covert American effort to keep China down and undermine its development.