

# Bridging Giants: A Comprehensive Analysis of Sino-US Collaboration on Climate Change Solutions

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## **Abstract:**

China and the U.S. are essential to collaboration and climate change action since they are the two countries with the greatest economies and emissions of greenhouse gases worldwide. Over the past decades, China and the United States have gone through many stages of exploration, collaboration and contradiction, concerted leadership, regression, and disagreement in climate cooperation. There have been exploration experiences in the early stages of collaboration on climate issues, cooperation and contradiction in GHG emissions reduction, constant changes in U.S. climate policy, and presidential partisanship. The U.S.-China climate and environmental cooperation have been characterized by a cycle of “positive interaction - declining warmth - leading the world - setbacks - restoring warmth.” This paper focuses on a comprehensive analysis of the history, current status, and future trends of U.S.-China climate cooperation in terms of policymaking, which is of great significance to promoting global climate governance and collaboration in addressing climate change.

**Keywords:** U.S.-China Climate Diplomacy; Climate Governance; Cooperation and Competition.

## **1. Introduction**

“50.5°C, 50.3°C, 49.9°C... It’s raining fire in north India.” As the title of the India Times suggested, northern Indian states have been struck by severe heat waves. India has not been the only country suffering from extreme weather; for over a decade, the globe has reported more extreme weather, such as floods and droughts. On March 28, 2019, Ecuador president Maria Fernanda Espinosa publicly warned that there are only 11 years to avert a climate catastrophe. Ex-

treme weather is a consequence of climate change, as climate change is interconnected with human industrial activities. Climate-vulnerable countries such as Chad’s destiny have been held by more considerable industrial powers such as China and the United States. Climate change is one of the most pressing global issues today. Currently, 66 countries and regions worldwide have announced carbon neutrality targets (Energy and Climate Intelligence Unit, 2022), and international cooperation and competition around

carbon neutrality and climate governance will become more frequent. “Carbon neutrality” brings more positive signals for U.S.-China climate cooperation.

China and the United States, the two countries with the largest economies in the world in terms of greenhouse gas emissions, are collaborating on climate change mitigation. That is the main area of collaboration between the two nations and a major influence on the global climate governance process. The two biggest emerging and developed nations in the world, China and the US, are leading the way in developing clean energy. The two nations’ collaboration significantly influences the structure and course of global climate governance and the energy transition in climate and clean energy. In contrast, the Biden administration has proposed U.S.-China climate cooperation under the tone of competition with China, following the Trump administration’s “stagnation period” in diplomatic relations between the two countries. That is the foundation for the two countries re-linking and, to some extent, eases the tensions between the two major powers, which helps to deepen the common interests.<sup>[1]</sup> Climate cooperation between China and the United States is in the interests of both sides, and it is an important initiative to promote global climate governance and green, low-carbon transformation. China emphasizes that it will work with the United States to address the climate crisis by respecting each other’s core concerns and properly managing differences. Still, it is not possible to unconditionally cooperate with the United States in areas conducive to the U.S. national interests while being suppressed by U.S. containment<sup>[2]</sup>.

In the context of the above, this paper will, based on the historical review of U.S.-China cooperation in the climate field and light of U.S.-China competition and points of contradiction in the energy and climate fields, further discuss how China should grasp its positioning and direction of cooperation, and properly manage its differences. Against this backdrop, this paper will explore how China should hold its position and direction of cooperation and seek the initiative of U.S.-China climate cooperation based on properly managing the risks of U.S.-China climate competition and avoiding conflicts, as well as strengthening the dialog and expanding the direction of collaboration with the United States.

## 2. Two Biggest Polluters

From 1750 to 2022, the United States released 427 billion metric tonnes of carbon dioxide. It is ranked the number one carbon emitter in history. By contrast, China released 11.4 billion metric tonnes of carbon dioxide in 2022, ranking as the current highest carbon emitter. While being the world’s two biggest economies, their combined carbon

emission percentage almost dominated approximately 50% of the rest of the world. According to the BP Statistical Yearbook of Energy, U.S. carbon emissions peaked at 6,177 million tons in 2007; in 2022, the U.S. will emit 5,298 million tons of carbon, a 14.2 percent drop from 2017. It is not a result of how strong the U.S. climate policy is but a result of technological progress. China is developing rapidly in carbon reduction-related technologies and industries, especially in photovoltaics and power batteries. The U.S. has set up trade protection policies in this area. The Chinese industry calls on the U.S. to open its markets and strengthen industrial exchanges and cooperation<sup>[3]</sup>. President Xi describes Sino-US relations as “one of the world’s most important bilateral relationships.” The significance can be presented through the progress of climate collaboration.

## 3. Retrospec of Sino-US Climate Issues Collaboration

### 3.1 The Initiation Stage (1990-2000)

The global political consensus on addressing climate change can be traced back to the United Nations Framework Convention on Climate Change (UNFCCC) reached in 1992. The convention has made different agreements on the carbon reduction responsibilities of developed and developing countries. In more than 30 years of global climate negotiations, the United States has represented the developed countries. China has represented developing countries, and cooperation and dialogue between China and the United States have been the keys to moving the global climate issue forward<sup>[4]</sup>. Sino-US collaboration can be traced back to the 1990s when most agreements emphasized renewable energy, green energy, and energy efficiency. Climate change issues have barely been touched on. Climate issues were not discussed during the initiation stage, mainly due to China’s low industrial production capability. The US also recognized this and prioritized energy issues, ranking climate issues as less significant than energy issues.

In 1997, in cooperation with Japan, the European Union, and others, the United States facilitated talks on the Kyoto Protocol and the United Nations Framework Convention on Climate Change in Kyoto, Japan. China and the U.S. cooperate and disagree in the multilateral negotiations surrounding the Kyoto Protocol. Examples of common recognition from both sides could be seen through protocols such as the Protocol for Cooperation in Energy Efficiency and Renewable Energy Technology Development and Utilization.

### 3.2 The Growth Stage (2000-2010)

As the timeline moved to 2001, China successfully joined the World Trade Organisation (WTO). It granted China more trade opportunities. Statistics show that since 2001, China's carbon emissions have drastically increased. The US showed its concerns for potentially irreversible environmental damage by placing more pressure on China for climate action. In 2002, China and the United States signed the China-U.S. Renewable Energy Cooperation Initiative, which aims to strengthen cooperation between the two countries in the research and development of renewable energy technologies and the promotion and application of such technologies<sup>[5]</sup>. In 2011, the US embassy in China's Twitter account started to post the detected PM2.5 statistics in China, as anonymous Chinese netizens somehow reshared the post to a Chinese social platform called Weibo. It undoubtedly revealed the concern for air conditioning in China to the whole society. Since then, the rising pressure from the general public has significantly affected the party's decision to participate in more Sino-US collaborations in the future. Though it happened in the later growth stage, the Chinese government did recognize the air conditioning problem and its detrimental effect on citizens; this forced China to collaborate with the US to minimize the cost of solving this independently. The ten-year framework program is a good example of both sides' increasing concern for climate change, as clean air has been at the top of the list in this government post.

### 3.3 The Acceleration Stage (2010 onwards)

Ignoring environmental pollution in exchange for drastic economic growth can slowly lead to self-destruction. During the Obama administration, China and the U.S. have cooperated closely on climate governance<sup>[6]</sup>. The reason for this is twofold: first, at the technical and operational level, China and the U.S. have had an easier time forming a consensus on GHG emission reduction targets, the idea of shared but distinct responsibilities, and emission reduction constraint mechanisms. First, given their unique national circumstances, China and the United States have proposed differing GHG emission reduction targets, and the two nations have acknowledged and endorsed one another's goals. Secondly, although China and the U.S. cannot reach a final consensus on shared but distinct responsibilities, they can compromise and understand each other. Finally, China and the U.S. are more in agreement on the design of the binding mechanism.

During the acceleration stage, the CCP realized the urgency to develop sustainably. The establishment of China and the U.S. Climate Change Working Group (CCWG) in 2013 resulted from both sides' willingness to collaborate,

as the working group provided a platform for more frequent and convenient climate collaboration. The positive results from this working group can be seen with the beginning of China's decreasing carbon emissions. Common cooperation between the two sides was established based on peaceful diplomatic relations. It thus encouraged China and the U.S. to join the Paris Agreement in 2016 to further enhance climate collaboration on a global scale. It marks the significant success of collective action for the whole of humanity. In 2017, Donald Trump withdrew the U.S. from the Paris Agreement. In 2021, the Biden administration rejoined the Paris Agreements; following that, Washington and Beijing released joint statements regarding the climate crisis. In the remarks, both sides reaffirmed their willingness to commit to climate change and also acted as a preparation for COP26 in Glasgow.

In 2023, U.S. Presidential Special Envoy for Climate John Kerry visited China, restarting U.S.-China climate talks suspended for nearly a year. Chinese leaders emphasized and reiterated China's position. To address the climate issue, it is reasonable for us to engage in multilateralism and uphold the objectives and tenets established by the Paris Agreement and the United Nations Framework Convention on Climate Change<sup>[7]</sup>. We should accept our responsibilities and uphold the idea of common but differentiated responsibilities, whereby developed nations should lead the way in cutting emissions and meeting their financial obligations as soon as feasible, while developing countries should make contributions commensurate with their capabilities.

## 4. What, if any, might limit the Sino-US collaboration?

The US House of Representatives speaker, Nancy Pelosi, visited Taiwan in 2022. China took this as a provocation to its sovereignty. China thus unilaterally closed the collaboration channel (CCWG). In July 2023, the US special presidential envoy for climate, John Kerry, visited Beijing and reopened the CCWG. What's concerning is that if US officials visit Taiwan any more in the future, will the political disputes influence future climate cooperation? During the meetings with Chinese officials, Kerry stated, "the climate crisis must be separated from politics."<sup>[8]</sup>

The US election has shown a great possibility of Trump being re-elected. As this might impact the ongoing climate cooperation between China and the US, During his recent podcast with Elon Musk, he once again openly denied the existence of climate change. We must evaluate the possibility that Trump drastically cuts spending on climate issues and transfers it to industrial sectors instead in ex-

change for rapid economic growth.

On the other hand, China's economic decline also doubts whether China will keep its promise of implementing environmental protection policies. Take the power crisis that happened around China 2 years ago. China is highly dependent on thermal power, as the central government sets a target for carbon reduction. Given that the level of carbon emissions still exceeds the set limit at the end of the year, the regional government decided to cut off power for some time to meet the limit. That caused inconvenience and public outrage, as not after long, the central government brought back the reuse of thermal power generation to meet the public's demand for electricity. That shows how volatile China's policy could become, as it hinders the fact that sometimes the government would be willing to sacrifice necessities, such as electricity, in this case, to meet climate goals.

China also made its promise by establishing a dual carbon reduction policy, disregarding the fact that China's nuclear structure relied mainly on thermal power generation.

## 5. Cautiously Optimistic: Perspective of Sino-US Climate Cooperation

Tracing back to the 30 years of Sino-US collaboration on climate change, progress was made despite political barriers. China granted many subsidies to its green energy industry, like NEV, as this became a key part of the industry's success and acted as a strategic decision for China to transform its economic structure. Thus, the transformation process will be long-lasting and stable. As for the US, intellectuals, members of Congress, and mass citizens can also supervise and correct politicians' biases on climate change.

We can describe the world as a pendulum. The pendulum's swing always revolves around humanity's fundamental well-being and justice. The planet's future sustainability cannot be achieved without concerted action by the two largest carbon emitters on the planet, the United States and China<sup>[9]</sup>. At the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in November 2021, the United States and China issued the U.S.-China Glasgow Joint Declaration on Strengthening Climate Action in the 21st Century and 2020s. The declaration reaffirms the commitment of both countries "to address the climate crisis through their respective accelerated actions in the critical decade of the 21st century and 2020 and through cooperation in multi-lateral processes, including the United Nations Framework Convention on Climate Change". While the declaration is a promising step forward and a stabilizing influence in

providing new momentum for sustained cooperation in the future, it does not elaborate on specific plans, nor does it spell out the opportunities and challenges at the level of law-making and implementation of such plans.

## 6. Conclusion

The complexity of international relations and the severity of the current state of global climate governance further emphasize the importance of U.S.-China climate diplomacy and cooperation. As a global issue, climate change can only be effectively addressed through international cooperation. The domestic climate policies of China and the United States interact with each other, and they have a history of extensive and in-depth cooperation on climate change and a complex and sensitive conflictual relationship. For the first time, China and the United States issued a joint paper during the United Nations Climate Conference, marking important progress in U.S.-China climate cooperation. To promote the global climate governance process and address the challenges of global climate change, China and the United States should strengthen communication and coordination, enhance mutual trust and understanding, expand the areas and levels of cooperation, and seek common interests and goals. However, the prospects for promoting and deepening climate cooperation between China and the United States are complex, with both opportunities and challenges facing a directional turn.

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