2021.12.31.

NAFI I Research Report I 21-20

Climate Change and International Politics:
U.S.-China Relations and International Climate Cooperation

Edited by **Haein Cho**

National Assembly Futures Institute

Research Report 21-20

Climate Change and International Politics:

U.S.-China Relations and International Climate Cooperation

NATIONAL ASSEMBLY
FUTURES INSTITUTE

Editor and Contributors

Project Manager and Editor

Haein Cho Associate Research Fellow (National Assembly Futures Institute)

Research Partners

Taedong Lee (Yeonsei University, Department of Political Science and International Studies)

Steivan Defilla (Currently, Tianjin University APEC Sustainable Energy Center, former senior energy advisor for Swiss Economics Minister)

Ripu Bhanjan Singh (former USAID Greening the Grid (GTG) Initiative)

Mochammad Faisal Karim (BINUS University, Department of International Relations)

Vladimir Likhachev (Institute Economics and Regulation of Infrastructure industries)

PREFACE

Climate change is a global challenge that calls for collective actions from the international community. Extreme weather conditions and natural disasters caused by climate change have been exacerbated, putting threats to industrial activities and our national security. The growth of climate-induced risks and public concern has led to climate change centered in political debates at international level. Diverse bilateral and multilateral channels have been actively used to discuss the way forward in international cooperation to combat climate change. The Republic of Korea has taken a leadership role this year in advancing international actions by hosting multilateral climate summit P4G, setting the ambitious NDC (Nationally Determined Contributions) target and passing the bill to mandate carbon neutrality.

The United States (U.S.) and China, the world's top two greenhouse gas (GHG) emitters, are responsible for more than 40% of global emission in total. The bilateral dialogue and action plans made between two countries on climate change highly affect international climate governance. Now that the U.S. rejoined the Paris Agreement and China pledged to be carbon neutral by 2060, it is important to examine the changing dynamics between the U.S.-China regarding climate change to catalyze the commitment of the global communities to take climate actions.

Against this background, the Center for International Strategy (CIS) at the National Assembly Futures Institute (NAFI) investigates perception of the U.S.-China relations in other countries and their national climate action plans from which we identify strategies for the Republic of Korea

to contribute to strengthening the global response to the threat of climate change.

I would like to express my sincere gratitude to Dr. Haein Cho and Dr. Jungmi Cha for engaging outstanding global researchers and expanding our collaborative research activities. Moreover, I truly appreciate the global research partners who demonstrated a high level of engagement to share their expertise. I hope this report offers insights into future pathways to international cooperation to tackle climate change and achieve global carbon neutrality.

We thank you for your continued interest and support for the global collaborative research at the CIS, NAFI.

December 2021
President of the National Assembly Futures Institute
Hyeon Kon Kim

List of Tables

Executive summary

Climate change is a global phenomenon that has borderless effects, meaning that it requires international cooperation and collective efforts from around the world. Thus, the two biggest greenhouse gas emitters, the United States and China, are always at the center of discussions on international climate cooperation.

Bridging the divide between the two nations is key to global climate cooperation. In this sense, this year was remarkable insofar as the two made ambitious promises to battle against climate change. China took a very proactive approach by pledging to achieve carbon neutrality by 2060, and the United States (US) returned to the Paris Agreement and made an executive order to stop fossil fuel subsidies. Above all, in April 2021, the US and China jointly announced a commitment to global cooperation for climate change.

The European Union (EU) welcomed the return of the US to the Paris Agreement, and encourages cooperation between China and the US. It is yet not known to what extent the EU, China, and the US share common ground in the field of trade rules that would allow such protection to be introduced. The EU shares with China the fight against poverty, which is expected to give rise to a common understanding of how to bridge financing gaps.

India, as the third largest emitter of greenhouse gas emissions in the world, has discussed the competition in climate leadership between the US and China. While the Biden administration makes efforts to reclaim the US's leadership on climate action, China and India are stepping up and becoming global climate leaders. India's

2070 net zero pledge puts pressure on the US and China to act more ambitiously to deliver on their stated commitments.

As a middle-power country, Indonesia considers the motivations of the two countries as inseparable from economic and geostrategic interests. They expect to see productive competition rooted in the current rivalry, tension, and competitiveness between the two countries. Indonesia regards China as a role model in terms of balancing economic growth and environmental protection. Indonesia plans to use multilateral platforms to cooperate and become involved with diverse international counterparts for climate change cooperation.

Russia indicates that despite the rivalry between the US and China, there certainly are shared intentions for bilateral cooperation toward climate change actions. Both countries could benefit from this, and Russia could still continue to express its interest in cooperating with the US and China to address diverse climate-related areas. Russia agrees that climate change requires international-level efforts. Thus, multilateral venues such as the United Nations (UN), G20, EU, and BRICS, and bilateral actions with the US or China are highlighted.

Korea has the chance to lead climate change efforts at an international level in both bilateral and multilateral settings. Given that carbon pricing would be applied, there is an emphasis on maintaining the resilience of the US–Korea supply chain. Similarly, strengthening trade ties with China is key for both economic development and low-carbon transitions. Moreover, building partnerships with neighboring countries through multilateral platforms and regional cooperation would be necessary not only to resolve trade issues, but also to foster international climate cooperation.

국 문 요 약

1 서론

❑ 기후변화 대응 국제협력을 위해 미국과 중국의 기후변화 정책과 양국의 기후변화 협력 양상을 이해하고 이에 대한 정책적 방향을 모색해야함

- **본 연구는 미국과 중국의 기후변화협상을 바라보는 국제적 시선과, 국가별 국제협력 추진 현황 및 방향을 살펴보고 한국의 전략도 제언하고자 함**
  - 미국과 중국을 제외한 주변 국가 중 전 세계 온실가스 배출량 순위 상위 9위권에 속하는 인도, 러시아, 인도네시아, 유럽연합을 선정
  - 국가별 기후변화 대응 전략을 종합적으로 살펴봄으로써 미래 다자간 기후변화 협력의 방향을 예측하는 기초자료로 활용 가능

2 미중 기후변화 관계에 대한 국제적 시선

❑ 조사 대상 국가 모두 미국과 중국의 기후변화 협력의 중요성과 양국이 더욱 적극적으로 기후변화 대응에 노력해야 함을 강조

- **선진국 그룹의 대표적 국가인 미국과 개발도상국 그룹의 중국 간의 논의는 기후변화 국제협상에서 첨예하게 드러나는 선진국과 개발도상국간 갈등 해결의 돌파구가 될 것으로 기대**
  - 양국 간 기후변화 대응과 관련된 합의점을 찾기는 쉽지 않지만, 기후위기를 인정하고 저탄소 경제 달성이라는 공동의 목표를 중심으로 함께 노력해 나가는 것이 기후변화 국제협력의 핵심이 될 것

❑ 조사 대상 국가 모두 미국, 중국과 다자-양자 기후변화 협력 활성화 방안을 모색하고 추진하고 있음

- **유럽 연합**
  - 미국과 유럽은 산업의 저탄소화, 중국과 유럽은 에너지 빈곤문제 해결이라는 공통적 목표를 갖고 있으며, 미국-중국-유럽 간에는 녹색성장을 위한 무역체제를 세우는 도전 과제를 공유하고 있기에 다자-양자 기후변화 협력 활동을 활발히 진행해 왔고 계획되어 있음
- **인도**
  - 미국과 중국은 기후변화 국제협력의 리더쉽 경쟁중이며, 양국은 화석연료 의존도를 상당량 감소시키겠다는 의지를 표현했음. 인도는 화석연료 사용의 최고치에 도달하진 않았지만, 곧 두 나라와 같이 화석연료 사용량 감소를 선언하리라 예상됨. 이러한 관점에서 세 국가가 기후 정의, 공정한 전환을 위해 협력할 필요가 있음
- **인도네시아**
  - 미국과 중국이 기후변화 대응에서 생산적인 경쟁을 할 필요가 있음. 인도네시아는 중국을 롤모델로 삼아 경제 성장과 기후변화 대응 해결에 노력 중임.
  - 인도네시아는 양자협력, 남남협력, 다자간협력의 장을 만들고 적극적으로 활용하며 기후변화 국제협력에 앞장서갈 것임
- **러시아**
  - 기후변화 국제협력의 중요성을 인지하고 있으며 UN, G20 등의 다자간 협력 또는 미국, 중국과의 양자 협력을 통해 국제협력에 기여할 것임을 강조. 미국, 중국과 함께 기후변화 뿐만 아니라 기후변화로 일어나는 다양한 이슈들을 논의하고 공동으로 해결하고자 함

3 결론

❑ 기후변화를 둘러싼 미국과 중국의 대응을 살피며 국제질서에 미칠 영향을 예측해보고, 기후변화에 대한 국제적 대처뿐만 아니라 국내 지속가능한 저탄소 경제로 전환을 위한 기후 전략과 계획을 만들어가는 것이 중요

- **지속적인 기후변화 국제협력을 위해 전 세계적 노력이 필요하고 한국은 다자간 정부간협의체나 국제기구들을 적극 활용하여 국제협력에 선도적인 역할을 해나가야 할 것**
  - 미국과 중국 간 기후변화를 둘러싼 정치적 역학 속에서 한국의 전략적 외교역량이 요구됨. 미국, 중국과 양자적 협력 뿐만 아니라 국제기구나 다자간 협의체를 활용한 다자 협력에도 적극적으로 노력해야 함
  - 무엇보다 기후변화 대응으로 무역체제가 많은 영향을 받을 것으로 보여지는 현 시점에서, 한국은 미국과 중국 뿐만 아니라 주변 국가들과도 협력구도를 형성하며 기후변화와 무역 규정이 상호 보완적으로 작용될 수 있도록 이끌어나가야 함

CHAPTER
1

Introduction

Section 1 Challenges and Opportunities for US-China Cooperation on Climate Change

1 Global Actions to Address Climate Change

The emergence of the Biden Administration in 2020 has exacerbated the competitive race between China and the United States. European Union has played a pivotal role at the international climate change stages, as Europe has adopted carbon neutrality, a "Green New Deal", and a carbon border adjustment mechanism. On the contrary, the Trump Administration firmly denied climate change, withdrew from the Paris Agreement, and disclosed the policy boosting fossil fuel industries. Taking advantage of the reduced influence of the United States in the international climate change platform, China has strived to be ahead of the game.

Competition and cooperation in climate change, especially from a geopolitical view, are likely to bring international trade issues to the table. In other words, importers, when trading products that generate enormous amounts of carbon in the manufacturing process, often impose carbon tariffs on these products. The enforced carbon border adjustment of Europe and the US enables them to harness climate change for international trade. Therefore, in order not to be a target of carbon border adjustment, China is more likely to spur the energy and industrial restructuring and at the same time to avoid being disadvantaged on the international stage.

Taking the US-China relationship into account, the two countries are more likely to choose competition over cooperation. In order to understand the present situation of the US-China cooperation and conflict regarding

climate change, in this article we discuss the climate change policy of China and that of the US and examine whether there is any likelihood that the countries can work in harmony.

2 'New Cold War' between the US and China?

The Cold War ended after the collapse of the Soviet Union in 1991. However, the unipolar system or the Pax Americana with a declaration of 'the end of history' did not last long (or did not exist). China, a fast-growing, Communist Party country, has challenged the US-dominated international system, by developing its economy, military capacities, and national strategies such as the One Belt, One Road. Four areas of the competitions (or conflicts) between the US and China should be highlighted: geopolitical confrontation, geoeconomic competition, technology competition and soft-power confrontation. Geopolitical confrontations take place in the Taiwan Strait and the South China Sea. Geoeconomic competitions occur in trade and tariff wars as well as in the One Belt, One Road. Competition over information and communication technology (ICT), semiconductor technologies, and artificial intelligence (AI) is accelerating. Confrontations over values such as democracy and human rights have become severe. New Cold War between the US and China may have already begun. However, China is somewhat different than the Soviet Union. While both are communist states seeking regional dominance and global influence, China sees the possibility of co-exist with capitalist countries in a peaceful manner. China has enjoyed unprecedented economic growth by accepting a part of the capitalistic economic system. This difference may lead to competition or even cooperation over climate change issues, rather than fierce conflicts.

3 Climate Change Policy of the Biden Administration

The Biden Administration has pitched in the international bonding for environmental changes. The main targets of the Biden Administration's environmental policy are to protect an environment compatible with economic growth. Since his first day in office, President Biden has shown his strong will on advocating environmental issues by signing the first Executive Order (EO) for "tackling the climate crisis at home and abroad." The first EO includes rejoining the Paris Agreement, which was first signed by the Obama Administration, halting the Keystone XL Project (across the US-Canada border), and reversing other projects, which were initiated by the Trump Administration.

Biden announced over the next ten years, his initiative will result in more than a 5 trillion USD investment in total, from a federal investment of 1.7 trillion USD and from leveraging additional private sectors (state, local, corporations). His EO plans to achieve 100 percent clean electricity by 2035. His plan will accomplish a net-zero emission economy by working closely with local universities and national research laboratories harnessing available data, devices, education, and tools by 2050. Carbon neutrality policy has three main branches: 1) conversion to electric vehicles, 2) reductions in greenhouse gas (GHG) emissions from electric power production by 2035, 3) reductions of methane generated by oil and gas. Biden's bold plan expects to achieve carbon neutrality by 2050 through a mitigation plan in the transportation, energy, and industrial fields.

Another very noticeable feature is that his measures would revitalize the domestic economy. His plans intend to establish a foundation of the renewable energy domestic market through not only electric and hydrogen-fueled vehicles but also wind and solar power. In the pursuit of the goals, the Buy American Executive Order (Made in All of America by all

of American Workers) invigorates the domestic economy. In short, the US spurs carbon neutrality through domestic products and services, not through imports from China or other foreign countries.

In this regard, there are a few areas in which we expect conflict to emerge between the US and China concerning climate change. First of all, the exporters emitting carbon from foreign countries including China can easily be targets of a carbon border adjustment (carbon tariff). On March 8, 2021, the United States Trade Representative (USTR) announced that the Biden Administration is reviewing a carbon border adjustment in the pursuit of climate change. Climate change is the third most major issue followed by recovery from the COVID-19 and protection of laborers among nine agendas given by the annual report (2021 Trade Policy Agenda and 2020 Annual Report). Corresponding to the domestic effort and the EU's Fit for 55 (55 percent greenhouse gas emission reduction by 2030 from 1990 levels), the US Democratic Party called for legislation establishing an import tariff on carbon-intensive products including steel, natural gas, and coal. Especially, if the US government takes a shot at China as a target for a carbon border adjustment, the relationship between the two countries will be likely to be aggravated.

The American Jobs Plan, which the Biden Administration is aggressively advancing, captures the concerning stance toward China. The administration's jobs plan aims to create jobs by investing in infrastructures such as electric vehicles, roads, ports, transportation systems, power grids, etc. The official document also alludes to tight tension and a competitive relationship with China (i.e., "position the United States to out-compete China"; "the President's plan will unify and mobilize the country to meet the great challenges of our time: the climate crisis and the ambitions of autocratic China.")

4 Climate Change Policy of the Xi Jinping Administration

In September 2020, at the 75th Session of the United Nations General Assembly, China's President Xi Jinping made a statement that China would reach net-zero emissions by 2060. China plans to reach a peak in its GHG emissions by 2030 and achieve net-zero emissions by 2060. In 2021, China announced the bill for carbon trading and has been elaborating specific details.

China's carbon neutrality policy has proceeded as a part of energy transition. The policy embodies industrial restructuring for the reduction of carbon emissions through technological innovation and market schemes. Notably, China plans to expand the carbon neutrality industry by fostering wind and solar power systems and the electric vehicle industry. It is expected to cost 130 trillion yuan every year in order to achieve industrial restructuring for carbon neutrality. China's central government plans to finance this by issuing green bonds and through other financial mechanisms.

In March 2021, China's central government announced the 14th 5-year plan covering from 2021 to 2025. China aims to kill two birds with one stone. The plan addresses "sustainability" compatible with economic development. Simply put, the focal point of the plan is "sustainable urbanization." The China government has revealed the following: 1) energy conversion and renewable energy, 2) rebalance of inequality and new urbanization, 3) infrastructure construction, 4) finances in local provinces and regions, and 5) the enforcement of central government for more powerful and sustainable development.

However, considering China's heavy reliance on coal and the political tension between the central-local government, the carbon neutrality policy

may seem impractical. Furthermore, some analysis also points out that policies do not specifically address the carbon tax, carbon credit, and the clear-cut standard set of the amount of carbon emission, and the plan does not address the coal reduction.

China, however, has taken a step ahead of climate change. While US President Trump was in his office, China has taken a vantage point to reinforce its leadership in the international arena. Recently, China formed a powerful leadership team for the sake of enforcement of its carbon neutrality policy, including Liu He, who is a Vice Premier of the People's Republic of China, He Lifeng, who is the current minister in charge of the National Development and Reform Commission, and the heads of various national departments.

Furthermore, as China is the largest carbon producer in the world, it is expected that China will be cautious of international pressure, which can be exerted in a roundabout manner such as the carbon border adjustment mechanism. In this case, the situation of the relationship between two big nations as to climate change, carbon neutrality, and international trade, can get out of hand.

5 Climate Change Cooperation or Competition between the US and China

Despite all the clouds, there is still a silver lining in terms of coordination between the two big powers. Kurt M. Campbell, a National Security Council Coordinator for the Indo-Pacific affairs, has stated climate change along with the COVID-19 are paths in which China and the US can pull together. His focal point is if the US and China handle the climate change issue as a dire matter, both countries can reap the benefits: the common interests

embody economic benefits through energy transition and risk reduction by climate change.

At the Climate Summit held on April 22, 2021, which was largely led by the US, national leaders have agreed upon expansion of investment in energy conversion, low-carbon transportation for lowering the GHG, green building, and cooperation for reaching the goals of the Paris Treaty. However, compared to the establishment and specific cooperative project (carbon capture and storage, CCSU, etc.) of the US-China Climate Change Working Group (CCWG) followed by the Obama-Xi Jinping Summit, held in 2015, the statement at the current stage and follow-up plans are less specified. Yet, the US and China drew a joint state to address climate crisis. John Kerry and Xie Zhenhua, China special envoy for climate change, announced that China and the US will cooperate in a multilateral scheme including the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, and COP26 (Glasgow) for the long-term carbon net zero policy implementation.

Climate change cooperation has to be viewed within a framework of a tug-of-war to gain the upper hand. As far as responding to climate change, however, the cooperation of two big nations, which are major producers of greenhouse gases and global superpowers, is imperative. However, it is far too predictable for them to cooperate while both China and the US dig in their heels in the ongoing conflicts such as human rights, trade, the South China Sea, ICT, Taipei issue, etc. Climate change cooperation is likely to be coordinated not by bilateral, but by multilateral cooperation through international conferences such as the Paris Agreement, etc. Therefore, when these countries reach the point that the carbon border adjustment border and a carbon market are coordinated, we can examine the likelihood of climate change cooperation. If these two countries can work

together to this end, we can manage about half of global GHG emissions.

Competition, rather than conflict, over climate change leadership may bring some positive impacts. First, competition over developing renewable energy technologies could lead to technological advancement. In addition, competition between two countries could advance quick and broad adoption of renewable energy technologies and equipment. Second, competition over climate aid could help developing countries' response to climate crisis. China and the US have made huge amount of efforts to win heart and minds of developing countries through official developmental aids (ODA). Instead of financially and technically aiding fossil fuel-based industries and energy systems, the US and China climate change aids could facilitate renewable energy transition for developing countries. Declaration and action banning ODA for fossil fuel-based power systems from the US and China, as South Korea did, will be the first step to present a concrete action rather than abstract and green washing rhetoric. Third, competition over climate mitigation would accelerate the pace of achieving carbon neutrality. This would be competition over who achieved the target faster and more effectively. In the progression principle of the Paris Agreement, each nationally determined contribution (NDC) should represent progression beyond the previous one, reflecting the highest possible ambition. As shown in the EU Fit for 55 case, China and the US could compete for compliance, or even over compliance of the international climate agreement and the NDC which were set by themselves.

CHAPTER
2

Global Perception of the U.S.-China relations on climate change

Section 1

US-China Relations on Climate Change:
Challenges and Opportunities for the European Green Deal (EGD)

1 Bilateral EU-US, EU-China, and China-US Strategies

The return of the US to the Paris Climate Agreement in February 2021 signaled to the world that the search for common solutions to climate change can resume. This search had been interrupted in 2017 when the US announced their intention to quit the Paris Agreement. The COVID-19 pandemic may have further slowed down and complicated the COP process whose 26th session had to be postponed for a year, but clearly, the absence of the US from the climate negotiations had demotivated the other parties to the Paris Climate Agreement to formulate the necessary bold policies leading to the 1.5° scenario. The absence of a major power and CO2 emitter from the negotiations was a matter of concern to the others; the absence of the US was exacerbated by the start of new disagreements between the US and China in many areas, which had further weakened the process.

On December 2, 2020, even before the new US administration took power, the EU has adopted the "New US-EU Agenda for Global Change." Its main points were:

- The transatlantic partnership should work to advance global common goods, providing a solid base for stronger multilateral action and institutions. It will support all like-minded partners to join.
- The EU and the US should pursue common interests and leverage their collective strength to deliver results on their strategic priorities.

- The EU should always look for solutions that respect common EU-US values of fairness, openness and competition—including where there are bilateral differences.

In detail, the strategy proposes the following:

- Working together for a healthier world—COVID-19 and beyond.
- Working together to protect the planet and prosperity: climate change, biodiversity, global plastics treaty, WTO-compatible carbon border adjustment mechanism (CBAM).
- Working together on technology, trade and standards: 5G/6G, cybersecurity, artificial intelligence (AI), taxation of digital economy, reforming the WTO.
- Working together towards a safer, more prosperous and more democratic world: Summit for democracy, debt restructuring, UN Sustainable Development Agenda, workers' rights, dialogue on use of sanctions, EU-US security and defense dialogue.

The EU and China had started a Partnership on Climate Change in 2005, providing for a high-level political framework for cooperation and dialogue. A second and third meeting were held in 2010 and 2015, respectively, each time accompanied by a joint statement. A fourth meeting was anticipatedly held in 2018, giving rise to a Leaders' Statement in which both sides committed to significantly intensify their political, technical, economic and scientific cooperation on climate change and clean energy, in view of the necessary world-wide transformation to a resource efficient, sustainable, low greenhouse gas emission and climate resilient economy and society, in the context of sustainable development and poverty eradication.

In March 2019, the EU has reformulated a new China strategy, in which it sees China in a multi-faceted way, comprising three distinct roles, namely (1) a partner in climate change, (2) a competitor in economic affairs, and (3) a systemic rival in governance. The EU-China strategy comprises 10 actions:

Action 1: The EU will strengthen the EU's cooperation with China to meet common responsibilities across all three pillars of the United Nations, Human Rights, Peace and Security, and Development.

Action 2: In order to fight climate change more effectively, the EU calls on China to peak its emissions before 2030, in line with the goals of the Paris Agreement.

Action 3: The EU will deepen engagement with China on peace and security, building on the positive cooperation on the Joint Comprehensive Plan of Action for Iran.

Action 4: To preserve its interest in stability, sustainable economic development and good governance in partner countries, the EU will apply more robustly the existing bilateral agreements and financial instruments, and work with China to follow the same principles through the implementation of the EU Strategy on Connecting Europe and Asia.

Action 5: In order to achieve a more balanced and reciprocal economic relationship, the EU calls on China to deliver on existing joint EU-China commitments. This includes reforming the World Trade Organisation, in particular on subsidies and forced technology transfers, and concluding bilateral agreements on investment by 2020, on geographical indications swiftly, and on aviation safety in the coming weeks.

Action 6: To promote reciprocity and open up procurement opportunities in China, the European Parliament and the Council should adopt the International Procurement Instrument before the end of 2019.

Action 7: To ensure that not only price but also high levels of labour and environmental standards are taken into account, the Commission will publish guidance by mid-2019 on the participation of foreign bidders and goods in the EU procurement market. The Commission, together with Member States, will conduct an overview of the implementation of the current framework to identify gaps before the end of 2019.

Action 8: To fully address the distortive effects of foreign state ownership and state financing in the internal market, the Commission will identify before the end of 2019 how to fill existing gaps in EU law.

Action 9: To safeguard against potential serious security implications for critical digital infrastructure, a common EU approach to the security of 5G networks is needed. To kickstart this, the European Commission will issue a Recommendation following the European Council.

Action 10: To detect and raise awareness of security risks posed by foreign investment in critical assets, technologies and infrastructure, Member States should ensure the swift, full and effective implementation of the Regulation on screening of foreign direct investment.

[Figure 1] Ten actions proposed by the EU regarding China (EU 2019)

This strategy has been taken over by the new EU Commission that took up function in November 2019. Fulfilling the pledge on improving bilateral relations, the EU and China finalized the negotiations of the Comprehensive Agreement on Investments (CAI) on December 30, 2020.

On September 16, 2021, the EU-China strategy was complemented by an EU Indo-Pacific Strategy applying to all the other Indo-Pacific partners, besides China. The strategy proposed:

Highlights of proposed EU actions:

- *Engaging with Indo-Pacific partners to build more resilient and sustainable global* ***value chains*** *by diversifying trade and economic relations, and by developing technological* ***standards and regulations*** *that are in line with our values and principles.*
- *Completing EU* ***trade negotiations*** *with Australia, Indonesia and New Zealand; resuming trade negotiations and starting investment negotiations with India; completing an Economic Partnership Agreement with the East Africa Community; assessing the possible resumption of trade negotiations with Malaysia, the Philippines and Thailand, and the eventual negotiation of a region-to-region trade agreement with ASEAN.*
- *Concluding* ***Partnership and Cooperation Agreements*** *(PCA) with Malaysia and Thailand; starting PCA negotiations with the Maldives, and bringing the EU's upcoming Partnership Agreement with the African, Caribbean, and Pacific (ACP) to full fruition.*
- *Concluding* ***Green Alliances and Partnerships*** *with willing and ambitious Indo-Pacific partners to fight against climate change and environmental degradation.*
- *Strengthening ocean governance in the region, including increasing the EU's support for Indo-Pacific countries'* ***fisheries management*** *and control systems, the* ***fight against IUU fishing*** *and the implementation of Sustainable Fisheries Partnership Agreements.*
- *Expanding the network of* ***digital partnerships*** *with Indo-Pacific partners, as well as exploring the possibility of new Digital Partnership Agreements.*
- *Stepping up implementation of the Connectivity Partnerships with Japan and India; supporting partners in establishing an appropriate regulatory environment and facilitating the mobilisation of the necessary funding to improve* ***connectivity*** *on the ground between Europe and the Indo-Pacific.*
- *Strengthen cooperation on research and innovation under* ***'Horizon Europe'****; explore the association to this programme of eligible likeminded Indo-Pacific partners such as Australia, Japan, Republic of Korea, New Zealand and Singapore.*
- *Exploring ways to ensure enhanced* ***naval deployments*** *by EU Member States to help protect the sea lines of communication and freedom of navigation in the Indo-Pacific while boosting Indo-Pacific partners' capacity to ensure* ***maritime security.***
- *Reinforcing* ***support to healthcare systems and pandemic*** *preparedness for the least-developed countries in the Indo-Pacific region, enhancing collaborative research on communicable diseases in the context of the Horizon Europe research programme.*

[Figure 2] Highlights of the EU-Indo-Pacific strategy (EU 2021)

The China-US relations on climate have taken an upturn under the Obama Presidency in 2013 but experienced a setback in 2017 when the US announced their intention to withdraw from the Paris Climate Agreement. In 2021 after the US signaled their return to the Paris Agreement, China and US released a Joint Statement Addressing the Climate Crisis on April 18, 2021, containing the following points:

- Policies, measures, and technologies to decarbonize industry and power, including through circular economy, energy storage and grid reliability, CCUS, and green hydrogen;
- Increased deployment of renewable energy;
- Green and climate resilient agriculture;
- Energy efficient buildings;
- Green, low-carbon transportation;
- Cooperation on addressing emissions of methane and other non-CO2 greenhouse gases;
- Cooperation on addressing emissions from international civil aviation and maritime activities; and
- Other near-term policies and measures, including with respect to reducing emissions from coal, oil, and gas.

Besides that, the two sides will cooperate to promote a successful COP26 in Glasgow, aiming to complete the implementation arrangements for the Paris Agreement (e.g., under Article 6 and Article 13) and to significantly advance global climate ambition on mitigation, adaptation, and support. They will further cooperate to promote a successful COP15 of the Convention on Biological Diversity in Kunming, noting the importance of

the post-2020 Global Biodiversity Framework, including its relevance to climate mitigation and adaptation.

Comparing the China-US strategy with the EU-China and EU-US strategies, the following conclusions can be drawn:

- The China-US strategy is narrower in scope than both the EU-China and EU-US strategies, which were both inspired by the much broader European Green Deal (EGD, see Annex 1) and the UN 2030 Agenda for Sustainable Development (see Annex 2).
- The China-US strategy does not include trade and related elements.
- A fortiori, the China-US strategy does not address issues such as energy poverty, a point that is being addressed in the European Green Deal, nor the broader fight against poverty that was addressed in the European predecessor strategy of the EGD, the "20-20-20" strategy, which has a prominent role in the UN 2030 Agenda for Sustainable Development.
- The China-US strategy is only about the "climate crisis," addressing the management of a (long-term) crisis.
- Besides cooperation in some forthcoming conferences, this strategy contains practically no low hanging fruit. Most of the points of the strategy are extremely valuable but require long term efforts whose main results will be seen only decades ahead.

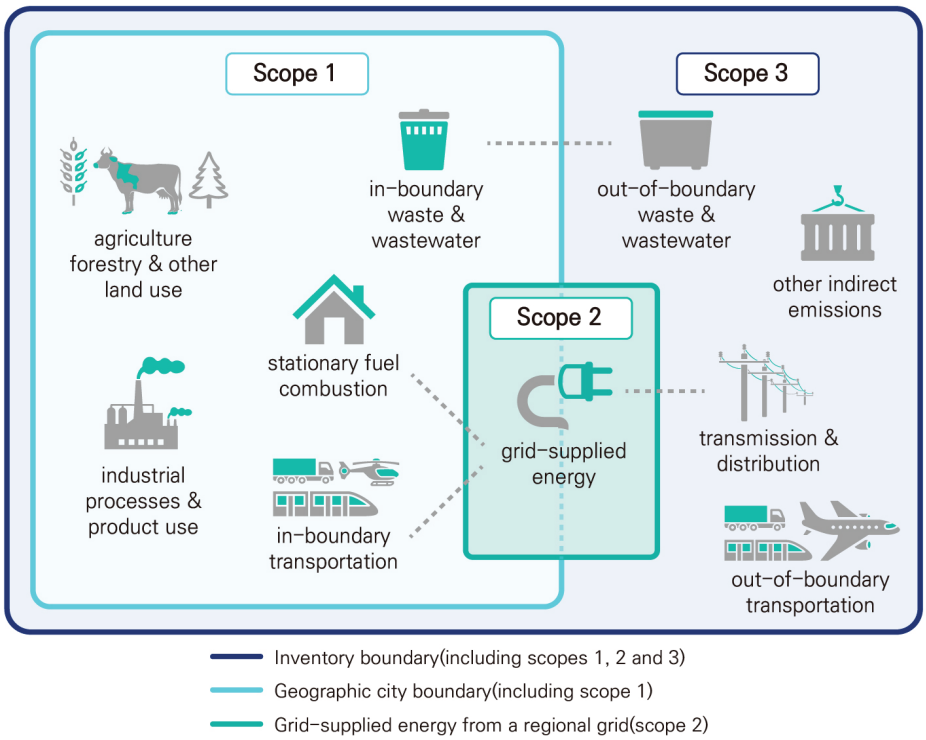
2 Principles Favoring Resilience of the European Green Deal (EGD)

The EGD is a very substantive package that is still being developed in its details (see Annex 1). Such package might easily be adversely affected by hazards and uncertainties arising from disagreements on any subject between China and the US—or indeed from any other type of hazards such as COVID-19. It might, therefore, be useful to make some reflections about principles designed to make the EGD resilient against such hazards. Hereafter some principles are stated that could be further developed and applied.

- Principle 1: Recall wherever possible the anchoring of climate policies in the UN 2030 Agenda for Sustainable Development (see Annex 2). When trying to make climate policies resilient against threats from other sources it might be useful to recall that climate policies are the visible part of a much larger iceberg called UN 2030 Agenda for Sustainable Development. The different components of this Agenda have been adopted by the UN at different conferences that all took place in 2015 and have the target year 2030. It is the first time in history that a broad agenda of this type has been adopted by the UN by consensus of all members. This Agenda is a holistic agenda, whose parts have been shaped coherently to complement each other. Furthermore, this Agenda has deep implications down to the individual lives of everybody. Lifestyles in general should change to become "1.5° lifestyles." The changes will depend on the individual initial situations: for the poor, it means bringing basic environmental, social, economic and governance achievements. For the wealthier it means adapting to zero-carbon lifestyles by participating in the "Race to Zero." There is barely anyone who can claim that nothing will change in his life.

- Principle 2: Complete the Agenda wherever possible: This Agenda is not yet complete; it has been designed as an evolutive agenda to which further elements need to be added as time goes on. At present, the completion of Art. 6 and 13 of the Paris Climate Agreement are of high importance. Furthermore, the WTO Doha Round that started in 2001 has been concluded in 2015 with virtually no progress in the linkage between trade and environment. Environmentally efficient trade is a key element to improve bankability of environmentally sustainable projects and thereby to close the financing gap of the 2030 Agenda. The discussion held around the adoption of the Addis Ababa Action Agenda which is part of the UN 2030 Agenda states the annual global annual financing need of developing economies to attain the SDGs to 1 to 1.5 trillion USD, of which 100 billion USD annually (or 0.7% of the GNI) are to be provided in form of development aid from developed economies, the rest by the private sector. While the developed economies are not on track for providing the required amounts, many developing economies also fail in setting up internal frameworks for attracting private funds and catalyzing the official development aid once it arrives.
- Principle 3: Complete the discussion about carbon border adjustment mechanisms CBAM is the means to address carbon leakage. Carbon leakage occurs if a carbon-intensive—or indeed any economic activity—is hit by carbon measures taken by an economy, especially a carbon price, so that it becomes uncompetitive at its present location. The activity may be moved to another economy where it can survive or even develop under less stringent carbon measures. Carbon leakage has the potential to disrupt the internal consensus on climate policies in any economy. While the consensus to enact bold climate policies might exist in many economies, this consensus will easily be broken if the

measures result in simple carbon leakage. The problem is that in principle the WTO does not allow treating like products differently at the border. There are, however, several ways to overcome this problem. Product labelling may be the best possible way out to differentiate products that otherwise would be considered as like products. As the Doha Round (2001-2015) has not yielded substantive results in the negotiations and consultations based on Art 31 of the Doha Ministerial declaration (Trade and Environment Chapter), the negotiations about the possibilities to introduce border measures to protect domestic production from foreign climate-dumped competition are still ahead of us. One way would be to bring the negotiations again into the WTO. The prerequisite for success is that WTO members have the political will to subordinate trade rules to the "Race to Zero." This political will should be sufficiently strong to allow at least for an Understanding, the kind of soft WTO law often used when a hard WTO agreement is not feasible. The alternative for the EU to addressing the CBAM in the WTO is to address it in Free Trade Agreements (FTA) instead. The EU has a wide range of FTAs with partners all around the world and could aim at a common understanding with most of them. Alas, the EU does not have an FTA with China nor with the US. Both are likely to question the CBAM. On the technical side, addressing carbon leakage involves improving methods for measuring scope 3 carbon intensity accounting and making them universal. Automatic tracing along the value chains supported by blockchain can be one of the ways to record the carbon footprint of goods. Scope 3 emissions include emissions embodied in manufactured goods (see fig 3, "other indirect emissions").



[Figure 3] Scope 1, scope 2 and scope 3 emissions (GPC version 1.1, 2020)

- Principle 4: Incorporate, wherever possible, new themes into the UN Agenda: Looking more generally, the UN 2030 Agenda for Sustainable Development lacks several new areas, such as cybersecurity and systemic risk. For cybersecurity or cyber resilience, no global agreement exists yet. This Agenda also lacks principles addressing systemic risk. The importance of systemic risk is easily demonstrated by the COVID-19 example. COVID-19 has shown the lack of preparedness to handle this kind of complex situation. This Agenda also lacks provisions on use and depletion of mineral resources. The emerging global clean economy is heavily relying on minerals for producing items such as solar panels, wind turbines, heat pumps, batteries, electrolyzers

and fuel cells. Basic provisions on the use and depletion of mineral resources would be a win-win solution for all participants along the whole value chains of the emerging clean economy.

- Principle 5: Further enhance internal consistency of the UN Agenda: Concerning data and accounting, this Agenda would benefit from closer integration into the System of Economic and Environmental Accounting (2012). For the time being, an explicit link exists only for biodiversity (SDG 15.9.1).

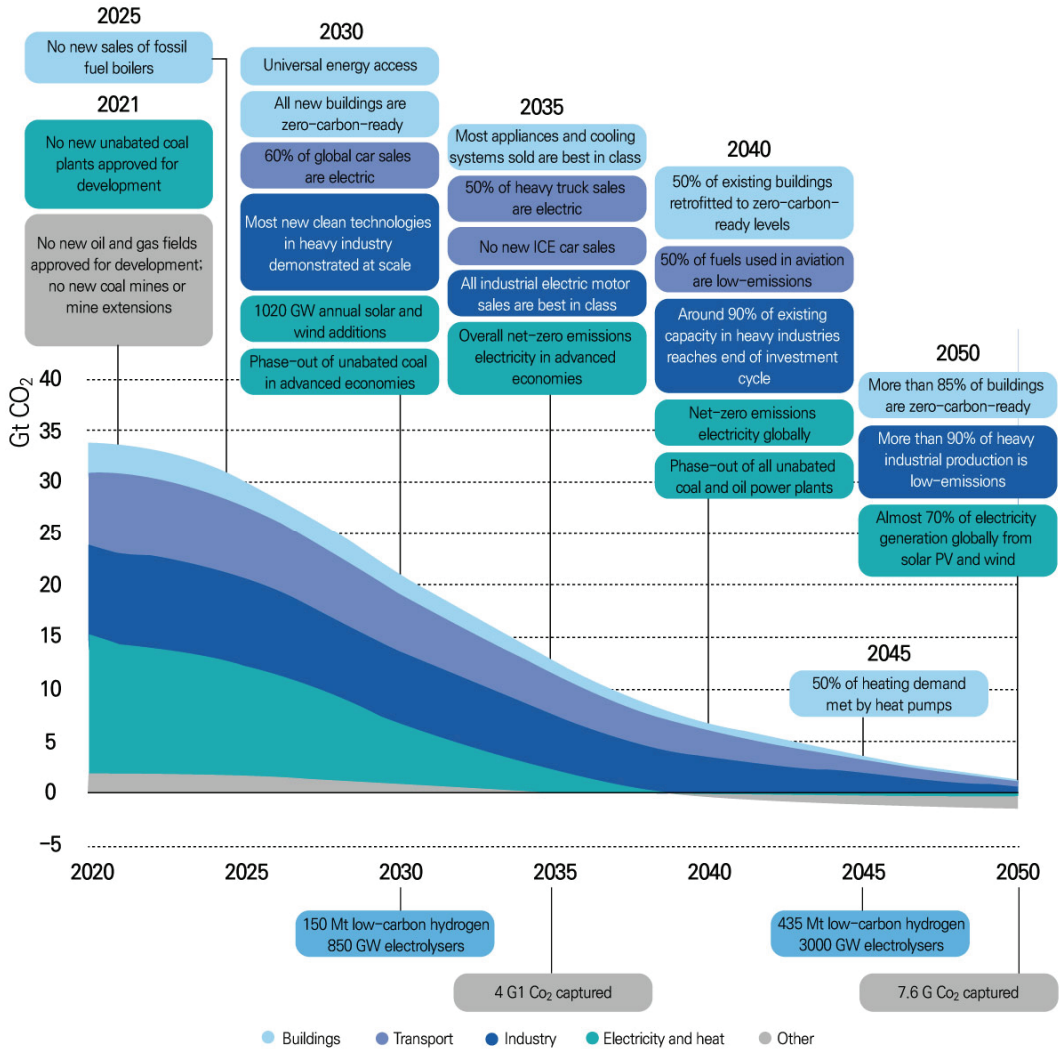
3 Conclusion: A Simplified SWOT Analysis of the EGD

A SWOT (strengths, weaknesses, opportunities, threats) analysis identifies internal strengths and weaknesses of an undertaking or a project and compares them to external opportunities and threats impacting upon it from the external context. For this paper, the undertaking or project in question is the European Green Deal (EGD), which is being analysed in relation to positive and negative impacts arising from the US-Chinese relations. This paper synthesizes the elements of the preceding sections and puts them in a simplified SWOT analysis of the European Green Deal (EGD) (Table 1). This analysis cannot pretend to be complete. A complete SWOT analysis would go beyond the scope of this paper. The EGD stands as example for any “Race to Zero” package adopted by any economy.

The internal strength of the European Green Deal is that it is broadly accepted within the European political establishment despite its broad scope. One could also say, because of its broad scope. In some cases, the scope may have been broadened precisely to allow for acceptance of key European stakeholders. Incorporating subjects such as fighting energy poverty might increase the internal acceptance of the package. The CBAM

is part of this internal EU consensus in the sense that it helped broaden the acceptability of the EGD within the EU.

The internal weakness of the European Green Deal—or indeed of any "Race to Zero"—is that it is a generation-long process. The pathway towards decarbonization is narrow and marked with many milestones. More than 400 compulsory milestones should be attained by 2050, among them the stopping of unabated coal fired plants after 2021, and of new buildings that are not zero-carbon after 2030, the stopping of sales of internal combustion vehicles by 2035, the requirement of making the global power system carbon-neutral by 2040. In this process, the fossil fuel-dependent traditionally industrialized regions will suffer losses whereas innovative smart regions will have gains; it is of foremost importance that the first ones are being assisted by the latter ones. In other words, the key weakness of any "Race to Zero" is its dependence on many stakeholders that must all be kept in consensus all along the process. The recently adopted Recommendations of the Global Commission on People-Centred Clean Energy Transition address precisely this issue.



[Figure 4] Milestones of the "Race to Zero" (IEA, 2021)

The opportunities arising for the European Green Deal or for the "Race to Zero" from harmonious US-China relations—or indeed from a harmonious global context in general—are manifold. This context is characterized by support from both, US and China, to the aims and measures of the EGD. As an example, the period that started with the

Brundtland report of 1987 and lasted until the successful conclusions of the UN 2030 Agenda for Sustainable Development in 2015 has been characterized by relatively high degree of this type of harmony. This was in sharp contrasted with the earlier Cold War. This harmony allowed the world to evolve from the general Rio 1992 principles to the deeper and more concrete UN 2030 Agenda for Sustainable Development. There were widespread economic and social benefits from this harmony which up to now may have outweighed the damage that this form of development has caused to the environment (e.g., in form of CO2 emissions). The benefits of this kind of harmony – if it continues in the future – are manifest: It would allow working towards attaining the SDGs by 2030 and defining a successor framework thereafter are self-evident. In its Net Zero by 2050 Roadmap the IEA shows that the "Race to Zero" would generate 0.4 percent annual global GDP growth that by 2050 would add an economy of the size of Japan to the world. Globally, six times more jobs would be created than lost. Another positive effect of global harmony is that the basic framework for starting the "Race to Zero" is on the table.

The external threats that the European Green Deal or the "Race to Zero" faces originate from disharmonious US-China relations in which either one or both, US and China, would prioritize and focus on the issues of a conflict and subordinate the 2030 Agenda to this conflict. One of the key threats that materializes in this case is that the global framework could not be developed further. Missing elements of this framework such as the carbon border adjustment mechanism CBAM would not be WTO compatible. The EU has no Free Trade Agreement (FTA) with US nor with China, hence the EU is deprived of such channel for addressing this kind of question. A weakened EGD might contribute to widening the financing gap. A widening financing gap would cause further conflicts and further diminish the likelihood that developed economies will attain their ODA

target. It would contribute to developing economies failing to set up their internal frameworks to catalyse ODA. Annual global investment would continue to be dominated by fossil fuel-based investment.

Internal Strengths of the EGD	Internal Weaknesses of the EGD
Broad acceptance of the European Green Deal within the European political establishment despite its broad scope. Possibly, because of its broad scope. In some cases, the scope may have been broadened precisely to allow for acceptance of key European stakeholders. CBAM contributes to the acceptance of the EGD within the EU.	The pathway towards decarbonization is a generation- long process, narrow and ornamented with many compulsory milestones. The fossil fuel-dependent traditionally industrialized regions will suffer losses whereas innovative smart regions will have gains; it is of foremost importance that the first ones are being assisted by the latter ones. Dependence on many stakeholders that must all be kept in consensus all along the process
External Opportunities of US-Chinese consent to EGD	**External Threats from US or Chinese dissent to EGD**
"Race to Zero" would generate 0.4% annual global GDP growth that by 2050 would add an economy of the size of Japan to the world. Globally, six times more jobs would be created than lost. Global harmony has allowed that the basic framework of the UN 2030 Agenda for Sustainable Development is on the table and would allow its rulebook to be completed.	Global framework would not be further developed and lack a few decisive elements. One of them is the carbon border adjustment mechanism CBAM whose WTO compatibility will not be known before it will have been discussed and decided in the WTO dispute settlement mechanism. EU does not have an FTA with China nor with the US; both could easily question the CBAM. A weakened EGD could contribute to widening the financing gap; neither developed economies nor developing economies would do enough to close it.

[Table 1] Simplifed SWOT analysis

Section 2 Global Climate Action – India, China, and United States

1 Background

Since 2015, the global climate action scene has witnessed tectonic shifts. These have been amplified by the economic and political impacts of COVID-19. 2015 was hailed as the dawn of an era of global collaboration based on early signs of cooperation amongst the US and China, along with European Union and India. It was being hoped that this collaboration could drive down emissions significantly, post the Paris Agreement. The Paris Agreement was, indeed, a shot in the arm for global climate action. It allowed each country to put forth ambitious National Determined Commitments (NDC) and created the bedrock for continued global cooperation. Fast forward it to 2021, global climate politics has witnessed unprecedented highs and lows, and COVID-19 along with its effects on international cooperation has altered these dynamics forever. Some of these are presented below:

Prime Minister Modi understands the climate crises and its challenges—and some of the economic opportunities that climate action brings for India. However, the last five years have proved that India's climate ambition is economic growth within the country and not international pressure.

COVID-19 impacts on the Indian economy has raised doubts within climate experts when the economic stimulus package announced by the Government of India was mostly "brown" and in the domains of fossil fuels.

With the Chinese announcement of a 2060 net-zero goal, there has been a significant pressure on the government of India to announce something tangible yet ambitious. In a series of opinion articles, the climate civil society or non-government organizations (NGOs) in India have argued the pros and cons of an economy-wide net-zero goal for India. In fact, a Member of Parliament (MP), Hon'ble Jayant Sinha, went to an extent to submit a Private Member's Bill to the upper house of the Parliament to discuss a net-zero goal for the country.

Having said that, India's focus will be to foster international collaboration through three of its flagship multilateral efforts, viz. the International Solar Alliance, the Coalition on Disaster Resilient Infrastructure and the LeadIT (UN Group on Industrial Transformation).

In the US, former President Trump led a hyper-nationalist agenda and withdrew from the Paris Agreement. Simultaneously, he initiated a trade war with China, decimating chances of collaboration there. He rolled back Obama era pro-climate policies and made multiple efforts to advance fossil fuels. It was because of the climate action in sub-national jurisdictions, especially states and cities, that the US held its flag upright in the climate action space.

Now under the Biden Administration, the US is back in the Paris Agreement, and it will be safe to say that global climate cooperation (led by the US) is on an unprecedented high.

Like India, China is likely to decide its climate path based on local considerations. A few recent welcome developments, however, include, the 2060 net-zero pledge by China earlier this year and the creation of the Green Belt and Road Initiative Center, housed within the Chinese Ministry of Ecology and Environment (MEE).

2 India's Perception of the US-China Climate Action

As the third largest emitter of greenhouse gas emissions in the world, India—especially under Prime Minister Modi's regime—has endeavored to bring the mantle of climate leadership to the country. The only big competitors in this field have been the US and China. During the Trump era, this mantle evidently fell in the lap of India and China, sometimes willingly and sometimes not. China's global announcement to go carbon neutral by 2060 at the UN General Assembly (2019) shook India's climate leadership edge, courtesy the formation of the International Solar Alliance. India's competition with China for climate leadership intensified further in September 2021, when China made another major announcement that it will not build any coal-fired power plants, as part of its Belt and Road Initiative (BRI). While this is an applaudable step in the direction of deep decarbonization, India certainly felt a severe blow to its "One Sun, One World, One Grid" initiative, that was being touted as the greener alternative to the BRI. Building on this, US Special Presidential Envoy for Climate John Kerry recently visited New Delhi to secure a commitment from PM Modi for ratcheting up the climate ambition. While India did not succumb to the pressure exerted by the US but is closer to consider cementing of its existing 450GW renewable energy target into the nationally determined contributions. This might appear like crystal balling but would be great for the country and the climate, in the long term.

With the re-induction of Xie Zhenhua as the Chinese climate envoy this past February, it is expected that China could make ambitious strides at COP26 in Glasgow. The creation of the AUKUS (Australia-UK-US) security pact and the reinvigoration of the Quad (India-US-Australia-Japan) alliance, do threaten China on the national and territorial security front but the optimism around Minister Zhenhua and Secretary Kerry's friendly

relationships is heartening. The US-China joint statement during the leadership summit (organized by President Biden in April 2021) was vague but contained ambitious signals for the future of US-China collaboration. These included specific mention of raising climate ambition at COP26 and setting a sunset date for fossil fuels, which are aligned to climate science. These also logically fall in the progression of recent announcements by China around carbon neutrality and greening the BRI.

Having said that, climate and geopolitical strategists like Prof. Alex Wang at UCLA are now arguing in favor of constructive competition that aligns climate science with self-interest driven economic actions. Earlier, the notion was that the world cannot solve the climate problem if the three major emitters, viz. China, US and India, do not cooperate. The evolved approach argues that if the three countries take up ambitious climate action that are in their self-interest, the deal would still be net-positive for the climate. These three countries clearly recognize that climate is the next big economic opportunity. Clean technology in the fields of infrastructure, innovation and industry is poised to be one of the biggest job creators within the coming decades. China has already taken a lead in manufacturing solar panels, batteries and much more while India has taken a lead in manufacturing of wind turbines and product assembly. The US has already announced an ambitious climate jobs plan that mimics a climate-friendly industrial policy. These actions make great economic sense and additionally provide co-benefits of better international relations and also reputational benefits (climate leadership). However, an unregulated competition could position national security at the driver's seat and threaten global peace.

The US and China have adopted different approaches to domestic climate policy. In the US, the policies are mostly neo-liberal with an impetus on

market-based mechanisms such as emission trading schemes, cap and trade etc. while Chinese policies are mostly top-down. Interestingly, both seem to have worked in their respective geographies. Both the US and China are major exporters of fossil fuels and would need to address that soon. For instance, the US needs an economically viable alternative to its natural gas exports while China needs to stop exporting coal and widening the carbon leak across borders. This cannot happen without support and transparency from financial institutions, both public and private. China has already announced a green finance plan; however, the details have not yet been released.

Currently, all three of these major emitters are undergoing an energy transition. China has positioned itself as an exporter of cleantech while India has become one of the biggest renewable energy markets in the world. The US still holds the top spot on digital technology that fuels the clean transition. Having said that, the current decade will be known for the disruptive transition away from fossil fuels. For instance, the US is already grappling with the massive transition from coal to natural gas within its power infrastructure. On the other hand, China also had to shut coal mines and inefficient steel plants. India has not announced peaking of fossil fuel consumption but will soon grapple with similar issues with little experience and limited financial capacity. In view of these, climate justice and just transition could be an opportunity for collaboration among these three countries in this decisive decade.

3 India's Political Priorities and Climate Change

In this India-specific section, it will be important to stress upon three major changes in the past few years that are driving the country's political and climate priorities. These include:

1. COVID-19 and its impacts on Indian economy, especially marginalized communities who are also very vulnerable to climate change.
2. Coal consumption by India's electricity system and the simultaneous growth of Indian renewable energy companies.
3. Innovation beyond the central/federal government to drive climate action at the local levels. These include states, cities and corporations.

In India, changes to the economy and domestic politics are crucial. Even before COVID-19-induced economic downturn, India was experiencing an economic slowdown, further aggravated by a financial crisis, reduced trade, and unprecedent levels of unemployment. Pre-COVID-19, India was the 19th largest global exporter and the 10th largest global importer. Prime Minister Modi's goal is to improve in both areas. His goal in the 2019 elections was a 5 trillion USD economy by 2024. This goal does not seem to be viable now, and the major push of the Modi government will be to articulate an economic development path.

As in other countries, Indian leadership is focused on economic stimulus in response to the COVID-19. India's stimulus policy was mostly directed toward food and income support to lower-income households. As expected by climate experts, there was also a push from coal, automobile, and other heavy industry for both direct support, rollback of charges like the coal cess, and rollback of air quality and environmental regulations.

On the hopeful side, the Indian government, especially the premier

government think tank, NITI Aayog, envisions a huge opportunity in the electric mobility revolution across the world. There has been an ambitious push towards greening India's transportation by electrifying the modes of transport. The government has invited global companies to invest in India as the next hub for the global EV revolution. This is true not just for the vehicles but also energy storage and other allied sectors. PM Modi also announced an ambitious Green Hydrogen Mission on the 75th Independence Day of the country, that recently became the 4th largest producer of renewable energy across the world.

Having said that, international dialogues are less likely to be influential with the Modi government. PM Modi has positioned himself as a global leader, with a friendly relationship with the US. His focus is on unemployment, the migrant crisis, and economic growth. This points towards a direction that India might not take an outright net-zero target to achieve a leadership role at UNFCCC global meetings. However, India's focus will and should be to achieve near-term emissions, especially from sectors like electricity (from coal), transport and heavy industries.

It is expected that the Modi Government will try and achieve the NDCs pledged in Paris as a matter of national pride. At the September 2019 UN Climate Action Summit, PM Modi announced a highly ambitious renewable energy target of 450 gigawatts (GW) by 2030 and launched the Coalition for Disaster Resilient Infrastructure, with an initial commitment of 70 million USD. The latter will highlight India and other developing country vulnerabilities to climate-induced changes. PM Modi is putting an enormous amount of emphasis on the International Solar Alliance (ISA). Recently, the reigns of the ISA were handed over to the former Chief of The Energy and Resources Institute (TERI) and the Director General of Indian Bureau of Energy Efficiency, Dr. Ajay Mathur. The ISA and the allied One Sun, One

World, One Grid (OSOWOG) initiative are both being seen as a direct counter to China's BRI.

Coal is still king in India. The country's coal dependence and its intricate labyrinth related to politics and heavy industries could be an impediment to India's climate ambitions. According to a study by Center for Social and Economic Progress (CSEP), coal provides about half of India's commercial primary energy supply today and is the dominant fuel for power production. Coal India Limited is the world's largest coal mining company and is 75 percent owned by the Government of India. The dominance of coal for energy in India is difficult to address due to affordability for 100 million-plus small consumers; coal employs 1.5 million people; and roughly 40 percent of railway revenue is from shipping coal, which helps subsidize passenger transport. Power generation in India dominates coal consumption, but textiles, cement, and steel also directly consume coal.

There exist significant distortions in India's energy market too. For instance, there is significant cross-subsidy from commercial and industrial electric customers that is passed on to residential customers against the market backdrop of emerging low-cost, large-scale renewable power. In other words, commercial and industrial sectors pay more to subsidize residential power rates. They could pay less than the current rates if they self-generate or purchase new power from specific renewable energy sites, including getting space on transmission lines to transmit this low-cost power. Efforts like RE100 by The Climate Group and corporate power purchase agreements work by the World Business Council on Sustainable Development is noteworthy.

It is no small feat that India has already achieved one of its NDC goals i.e., non-fossil installed energy capacity. It recently achieved 100GW of installed renewable capacity to become the fourth largest market for

renewables in the world. If India can rapidly grow renewables, the opportunities for cross-border energy trade become significant. By 2030, India would have more electric generation than it could consume, which opens export opportunities to Nepal, Bhutan, and Myanmar. This export market may be another driver for PM Modi to support implementation of India's highly ambitious goal and is closely linked with the International Solar Alliance and One Sun, One World, One Grid.

Like the US, Indian states are leading the way in the clean energy transition. Gujarat, under then Chief Minister Modi, led the renewables revolution of the country and is a front runner in the field along with other states like Karnataka, Rajasthan and Tamil Nadu. This is not just for the renewables but also for other energy efficiency improvements and even the electric transport revolution. Indian states are independent units; however, given the current regime, they function more as the implementation arms of central government.

In India, states are where the most interesting discussions on utility tariff structures and distribution utility planning are happening. These create opportunities—or impose new barriers—for grid-scale energy efficiency, demand response, renewable energy, and battery storage. Getting these policies and market structure right is also critical to distributed renewables as well as electric vehicle (EV) deployment and charging infrastructure. Innovations for building and equipment codes for efficient new buildings and retrofit of existing buildings is also likely to be pioneered in key Indian states.

4 India's Influence on the US, China Climate Actions and Vice-Versa

The threesome of US, China and India watch each other very closely when it comes to announcing their commitments to climate action. Historically, how much India and China commit themselves to cutting emissions depends critically on how far the United States go in implementing their carbon reduction plans. Particularly, what these three do on energy is massively important as they together (along with EU) produce two-thirds of the world's greenhouse gas emissions and possess two-thirds of existing nuclear power plants. When it comes to establishing national policies on fighting climate change, different regions face off against one another in China and India. It is a dance familiar to Americans, who are used to the political tango between climate-conscious states like California and New York on the one hand, and pro-fossil fuel states like West Virginia and Texas on the other.

At present, Biden-Harris Administration is pulling all efforts together to project US as the leader in climate action. However, the dents Trump-Pence administration made by finally pulling out of the Paris accord has tarnished the image of US as the climate leader to a large extent. And it takes longer to flip the perception. Hence, it is clear who the leaders are here: in the face of U.S. inaction, China and India have/are stepped/stepping up.

The welcoming step at the ongoing COP 26 in Glasgow has been the joint statement of cooperation between US and China to work together on climate change issues to keep the rising temperatures well within reach. The skepticism cannot be ignored with President Xi's absence from the summit regarded as the 'big mistake' in the words of President Biden. India

on the other side trumped everyone when Prime Minister Modi announced 2070 net neutrality targets for India. It certainly puts pressure on US and China to step-up and act and live up to their commitments and credible delivery. At the global stage, any of these big guns cannot afford to falter and lose credibility which is a positive news from a climate action standpoint.

Section 3 Indonesia's Perception, Prospects and Strategy towards global climate cooperation

1 Indonesia's Perception of the US-China Relations on Climate Change

As a middle power country, Indonesia tries to ensure that its economic and political interests will not depend on the United States or China. Indonesia has consistently hedged against these two countries and attempted to reduce the tension of rivalry between them, especially in Southeast Asia. This policy is carried out by conducting institutional engagement through regional forums at the Southeast Asian level. In addition, Indonesia has always prioritized ASEAN as a regional organization to balance the United States and China.

In the context of tackling climate change, most Indonesian policymakers would see the motivations of the two countries as inseparable from economic and geostrategic interests. The issue of climate change will reduce world GDP, but the mitigation process will also impact various kinds of economic activities in both countries. As a large GHG emitting country, the mitigation process carried out will not only spend a lot of investment funds but also reduce the competitiveness of countries undergoing the transition process because this effort will hit the industrial sector that emits high carbon.

From Indonesia's perspective, developed countries are expected to be at the forefront in carrying out mitigation actions and play a more significant role in helping developing countries. In this case represented by the United

States, the leadership of developed countries is highly expected to assist developing countries in technology transfer related to mitigation and adaptation to climate change. Developed countries are believed to be able to do this because they have significant financial resources to conduct research that produces anticipatory programs against the damage caused by climate change.

Meanwhile, developing countries would be more likely to pay more attention to economic development than concern themselves with how to mitigate climate change. Therefore, the leadership of developed countries is expected to inspire developing country governments to take part in the issue of climate change. In this context, China is viewed ambivalently by Indonesia, considering its position as part of a developing country. As a developing country, Indonesia sees China as a role model in balancing the demands of economic development and efforts to mitigate climate change's impact. Indonesia does not yet see China as a partner in cooperation in technology transfer efforts in mitigating the effects of climate change.

Since 2010, President Barack Obama and President Susilo Bambang Yudhoyono have made a strategic cooperation agreement that creates deeper cooperation in overcoming the issue of climate change. With the signing of the Paris Agreement and the return of the United States as a country that agreed to the Paris Agreement, Indonesia and the United States began to intensify cooperation to achieve net-zero carbon emissions. This is in line with the policies of President Biden that will make the “war on climate change” a priority and rejoin the Paris Agreement.

The climate change issue should be seen within a strategic lens. Currently, China is also increasingly issuing policies related to climate change. This has brought about a tremendous change in the dynamics of Chinese diplomacy. On the issue of climate change, China has big

ambitions to achieve its carbon-neutral target by 2060. This is an extraordinary effort for a country that relies heavily on coal. China has gone green, including through electricity and solar energy technology. Meanwhile, Indonesia's target is still in achieving a 29 percent emission reduction by 2030. This figure is still very far from China. So, regarding climate change, China positions itself as a developing country that actively contributes positively as a role model to other developing countries. Doing so, China continues to try to embrace Indonesia.

At the same time, the United States had lost its leadership on the issue of climate change with the election of Donald Trump. Under the Biden Administration, the US will strive to become a leader in this climate change issue. Given these two critical aspects of climate change, the US and China's underlying cooperation in terms of climate change is driven more by its strategic rivalry rather than joint collaboration.

Under the Biden administration, the official statement of the US is that it is ready to work with Beijing on climate issues, even as the US confronts China over other pressing issues such as Beijing's crackdown in Hong Kong and Xinjiang, military operations against Taiwan and in the South China Sea, and China's economic coercion on US allies. However, if we look at the Biden administration's interim foreign policy strategy China is framed as the US competitor to challenge a stable and open global power. On the other hand, China also took a similar stance. It signals they want a constructive relationship while pursuing their interests.

However, debates on human rights have bogged down talk of a climate deal between China and the US. Recently, Washington accused Beijing's solar industry of forced labor practices against the Uighur Muslim minority in Xinjiang. According to the South China Morning Post, Beijing reportedly rejected Kerry's proposal to accelerate China's climate efforts. One includes

a public commitment to a global warming limit of 1.5 degrees Celsius targeted in the 2015 Paris Agreement. China also does not have a definite timeframe for reducing carbon emissions before 2030. China has reportedly ignored US requests for a moratorium on the country financing coal projects overseas. Meanwhile, the US has imposed sanctions on Chinese solar companies for allegedly violating human rights in Xinjiang.

It is unlikely that China-US climate cooperation as a whole is enhanced given increasingly heated Sino-US relations. China and the US are the two top countries in the world that produce air pollution. The respective countries produced 10 million and 5.4 million tonnes of carbon dioxide in 2019.

For Indonesia, greater cooperation between the US and China will positively impact Indonesia's effort in combating climate change issue. However, there is one issue brought by the US in its pressure toward China that may hurt Indonesia's economy. This is the issue of coal mining.

The fate of Indonesia's coal exports has the potential to be depressed again. This is because China has begun to prioritize the development of non-fossil energy and is trying to replace high-carbon energy with low-carbon energy and fossil energy with renewable energy. In fact, China is one of the leading markets for Indonesia's coal exports. According to the Central Statistics Agency (BPS) (2021), Indonesia's coal exports throughout 2019 were 374.94 million tons, an increase of almost 10 percent compared to coal exports in 2018 which were only 343.12 million tons. Of this amount, coal exports to China were 65.67 million tons in 2019 and 48.14 million tons in 2018.

President Biden continues to press China's bankrolling coal projects around the globe. This led China to finally make a new climate commitment to deal with global warming. He emphasized that China would

not build any more coal-fired power plant projects abroad. It is known that through Belt and Road (BRI) funding, China has invested in several electric steam power plant projects in several developing countries, including Indonesia.

2 Indonesia's Strategy towards Global Cooperation on Climate Change

President Joko Widodo (who was elected in 2014 and continues to hold office) himself has emphasized that Indonesia's presidency for the G20 in 2022 will prioritize strengthening cooperation on climate change and sustainable development. He expressed this commitment when attending the Virtual Leaders Summit on Climate from the Bogor Presidential Palace, West Java, on April 22, 2021. Indonesia's position in ASEAN is no less strategic. In 2023, Indonesia will also hold the Chair of ASEAN. "There are opportunities both within ASEAN and globally for Indonesia to demonstrate such leadership as part of the Indonesian Presidency at the G20".

Indonesia's commitment to controlling global climate change is reflected in its participation in the Paris Agreement, which was later ratified into Law No. 16 of 2016. Parties that have ratified the Paris Agreement are required to submit Nationally Determined Contributions (NDC) containing emission reduction targets of greenhouse gases (GHG) by 2030. Indonesia's NDC targets to reduce GHG emissions by 29 percent with its efforts and 41 percent with international support. There are five sectors in the NDC that play a role in reducing GHG emissions, namely energy, waste, industrial processes and product use (IPPU), agriculture, and forestry.

The long-term strategy to achieve the target "towards net-zero emission" by 2050 is to ensure that the central government can align the goals and targets of climate change control with national, sub-national and international development targets, including sustainable development goals (SDGs). Then, how the government can embrace non-party stakeholders, develop innovation, and strengthen communities to control climate change.

Actions to control climate change, mitigation and adaptation efforts need to be supported by many instruments, and funding is one of them. So far, climate change control actions are funded from various sources, especially from the state budget. Based on the Third National Communication (TNC) report to the UNFCCC Secretariat in 2017, for the period 2015-2020, Indonesia requires substantial funding to finance the implementation of adaptation and mitigation commitments in controlling climate change, amounting to 81 billion USD.

To achieve the NDC target, the state budget allocates 34 percent of the total climate financing needs or amounting to 3,461 trillion Rupiah. If Indonesia only relies on the government's budget, this budgeting will not be enough. Thus, there are several strategies developed by the government. In this case, the Ministry of Environment and Forestry and the Ministry of Finance are the focal points in funding climate change control actions.

There are four strategies developed to address the issue of financing climate change control actions. The first is a fiscal policy which is realized in the form of income, expenditure and financing. The second is to develop innovative financing instruments, such as results-based payment (RBP), Global and Retail Green Sukuk to finance green projects in the state budget, as well as the involvement of the private business world with the Government Cooperation with Business Entity through public private partnership scheme to finance infrastructure projects.

The following strategy is to increase access to funding at the global level, such as the Green Climate Fund (GCF), Global Environment Facility (GEF), and other global funding sources. In increasing access to international funding, of course, there are several things that we need to improve, such as governance, data collection, including the registry system to be able to prove validly how much GHG emission reduction has been achieved in Indonesia. The last strategy is to increase investment attractiveness, be it a private investment, business-to-business, or between governments or countries.

Therefore, in October 2019, the Indonesian government launched the Environmental Fund Management Agency (BPDLH), which has the task of managing, cultivating and distributing various kinds of financing that can support environmental protection and management efforts, including climate change control (Kahfi, 2019).

BPDLH has managed existing funding sources such as a revolving fund facility sourced from reforestation funds previously managed by the Public Service Agency under the Ministry of LHK. BPDLH also manages funds from the RBP from the GCF, the Indonesia-Norway REDD bilateral cooperation. Later, there will also be the Forest Carbon Partnership Facility, the BioCarbon Fund, and so on.

In addition, Indonesia will strengthen the use of South-South and Triangular Joint Work (SSTC) as a platform to increase climate change cooperation. Currently, SSTC prioritizes the field of economic and technical cooperation as one of its main objectives to improve the economic growth of each southern country. Under President Joko Widodo, the improvement of Indonesia's status to become a lower-middle-income country was emphasized by the mandate to strengthen the South-South and Triangular Joint Work (SSTC). President Joko Widodo has determined increasing the

implementation of SSTC as one of the priorities in his government. In particular, the 2015-2019 Medium-Term Development Plan (RPJMN) emphasizes the need for Indonesia to increase its role in SSTC as part of the struggle to build international cooperation and a more just, equal and mutually beneficial world order.

The Indonesian government's policy to make South-South Cooperation as one of the foreign policy instruments is also in accordance with current global conditions where the world has entered the 2030 Sustainable Development Agenda. In 2015, the international community has agreed on the Addis Ababa Action Agenda, adopted the Sustainable Development Agenda 2030 (Sustainable Development Goals) and agreed to the Paris Agreement. The three multilateral achievements emphasize the implementation of an effective global partnership to address the issue of economic inequality, sustainable use of resources, infrastructure and climate change.

3 Implication for the Future Global Cooperation and Global Climate Governance

The political-economic rivalry between the United States and China has influenced the discussion of cooperation around climate change around the world. From Indonesia's perspective, it is even possible that the tension between the two countries will distort existing international cooperation. Given this issue, the global climate change governance should not only be driven by these two countries. The so-called middle powers should be able to set up the agenda and contribute to managing global climate governance.

This can be seen in the way how Indonesia has been actively involved at the international level as one of the ratifying countries of the Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. The Government of Indonesia has ratified the Climate Change Convention through Law Number 6 of 1994 concerning Ratification of the United Nations Framework Convention on Climate Change and is included in a Non-Annex I country. is bound by obligations and has the right to take advantage of the various opportunities of support offered by the UNFCCC or the United Nations Framework for achieving the objectives of the convention.

Indonesia has also demonstrated its essential role at the world level as the host of COP13 in 2007 in Bali, which among others produced the Bali Action Plan, which places the important role of Indonesia's forests through the implementation of the REDD+ (Reducing Emissions from Deforestation and forest Degradation) scheme as well as by the production of the IFCA (Indonesia Forest Climate Alliance) study. The Bali Action Plan, among others, agreed on the existence of "Policy Approaches and Positive Incentives for REDD+ in Developing Countries" that would allow for solutions to deforestation in developing countries so that it can be reduced but still be able to continue its national development.

Indonesia's commitment and contribution were again demonstrated by ratifying the Paris Agreement in New York on April 22, 2016, where Indonesia signed the Paris Agreement in New York. As a ratifying country, Indonesia is committed to reducing greenhouse gas emissions and taking active steps to prevent climate change. The Paris Agreement also positions forests as the key to reducing greenhouse gases. This is due to the ability of forests to absorb greenhouse gases. This position is implied from the provisions of Article 5 of the Paris Agreement, which encourages states

parties to implement and support an agreement-based framework for activities related to reducing emissions from deforestation and forest degradation and conservation and forest management based on sustainability principles.

The Indonesian government has also issued Law No. 16 of 2016 concerning the Ratification of the Paris Agreement. The Government of Indonesia has committed to a national commitment towards a low-carbon and climate-resilient development direction, with climate change adaptation and mitigation as an integrated and cross-sectoral priority in the National Development agenda. The commitments became the basis for the preparation of Indonesia's First Nationally Determined Contribution (NDC) document which was submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in November 2016. Indonesia's First NDC outlines Indonesia's transition to low emissions and climate resilience in the future.

NDC is used as a reference for implementing climate change mitigation commitments with a plan to reduce emissions by 2030 by 29 percent to 41 percent if with international support, with the proportion of emissions for each sector which includes: forestry (17.2 percent), energy (11 percent), agriculture (0.32 percent), industry (0.10 percent), and waste (0.38 percent). As for adaptation, Indonesia's commitments include increasing economic resilience, social security and livelihoods, as well as ecosystem and landscape resilience. in protecting food, water and energy resources.

In addition, climate management also requires the design of transformations such as the transition from non-renewable energy to renewable energy. Fiscal policy and tax policy are also very important instruments in dealing with climate change.

In the first period, Indonesia's NDC target is to reduce emissions by 29 percent with its own efforts and up to 41 percent if there is international support from business as usual by 2030. This effort is planned to be achieved, among others, through the forestry sector, energy, waste, industrial process and product use, and agriculture. Indonesia's NDC commitment for the next period is determined based on the next performance review. As of this writing, the official UNFCC website has only published Indonesia's first NDC document.

The government's first strategy is to strengthen the use of fiscal policy. The first thing that the Widodo Administration did in its economic policy was to remove fuel subsidies. Removing this subsidy is not a populist policy that makes many domestic actors protest against the government. However, this policy is the beginning of the government's efforts to make the Indonesian economy less dependent on fossil fuels. This provides incentives for economic players to be able to focus on developing business in the renewable energy sector.

The Indonesia's Minister of Finance also revealed that the formation of the Coalition of Ministers of Finance for the climate change agenda is very important in achieving the Paris Agreement, especially through fiscal and financial policies. This instrument is very important because it can create balance and can also provide very strong incentives.

The support of this coalition by international financial institutions such as the IMF and the World Bank will make it an effective forum for its members to exchange experiences to understand policy challenges, as well as to exchange knowledge. This is because tackling climate change requires three important factors, namely financing, technology and knowledge.

The need for a coordination mechanism between climate change funding in Indonesia is increasingly considered important so that steps to achieve

the Nationally Determined Contribution (NDC) target are more effective and efficient. In October 2020, the Fiscal Policy Agency, Ministry of Finance (BKF) as the National Designated Authority Green Climate Fund (NDA GCF) initiated an opening meeting to discuss the idea of a coordination mechanism among climate change funding mechanisms in Indonesia. This meeting was intended to synergize efforts in achieving the NDC target. At the third meeting of the coordination mechanism discussion forum on April 7, 2021, climate finance institutions in Indonesia discussed the characteristics of each funding institution. Each institution has its own characteristics, both in terms of governance, project cycles, financial instruments, and sector targets.

International climate finance such as the GCF, the Global Environment Facility (GEF), and the Adaptation Fund (AF) are alternative sources of funding for multilateral cooperation that are highly considered. Unfortunately, although the potential funds for Indonesia are very large, the funds disbursed are still very small. Initial findings from this study show several strategies from the donor side that can overcome these obstacles, one of which is strengthening the information dissemination strategy regarding the standards required by each fund and their characteristics so that project proponents can adapt to their needs.

The Climate Change Funding Mechanism Coordination Forum is trying to initiate to develop a climate change funding platform. The hope is that climate finance institutions in Indonesia can synergize the funding area through the exchange of information that is transparent and accessible to the public. In this follow-up meeting, each climate finance institution discussed the trends and track record of channeling their funds.

Climate change funding agencies also share information on the funding areas of focus. International funding such as GCF, GEF, and AF to date still

has a broad focus, which is in accordance with the NDC and National Mid-Term Development Plan. While other funding such as Indonesia Climate Change Trust Fund, BPDLH, and SDG Indonesia One, which is managed by PT. SMI places a more specific focus on programs based on marine, forestry, and infrastructure. This can be seen from several projects implemented in 2020, as well as work plans for the next few years.

Domestically, the government has proposed the imposition of a carbon tax to the Working Committee (Panja) of the Draft Law on the Fifth Amendment to Law Number 6/1983 concerning General Provisions and Tax Procedures (RUU KUP) to parliamentarians. The aim is to broaden the tax revenue base and minimize the environmental effects of carbon emissions. In line with the transition effort, the government's plan to set a tariff on carbon emissions through the imposition of a carbon tax is considered as one of the progressive steps in supporting efforts to overcome the world climate crisis. As of October 2021, the bill has already been ratified into the law.

Not only is it a source of new taxes that are predicted to be able to boost state revenues, carbon taxes are also very useful in efforts to reduce the carbon footprint that is harmful to the world's climate. From an economic perspective, there is potential for carbon tax revenues in the first year of implementation, which is around 29 trillion Rp. to 57 trillion Rp. or 0.2-0.3 per cent of GDP, assuming a tax rate of around 5-10 USD per tCO2, which covers 60 percent of energy emissions.

In general, the carbon tax itself is imposed on various forms of gas emissions that cause greenhouse effects such as carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4) with rates adjusted to the needs and conditions of a country. For Indonesia itself, in the Macroeconomic Framework and Fundamentals of Fiscal Policy (KEM-PPKF) of the 2022 state

budget, the government designs two alternatives in the carbon tax imposition scheme, namely first, collecting carbon taxes through existing instruments such as excise, income tax (PPh), value-added tax, Sales Tax on Luxury Goods borne by the Government, or non-tax state revenue (PNBP). Second, collect a carbon tax through a new instrument that will be adjusted later.

The rejection of the carbon tax levy plan came especially from the entrepreneur group because it was considered to increase production costs so that in the end it would increase the prices of goods and services and worsen the business climate. On the other hand, support came from various parties such as members of the DPR, academics and civil society organizations.

Section 4 The Russian view on Global Climate Policy during US-China decoupling

Russia's strategy for low-carbon development to 2050 refers to the Intergovernmental Panel on Climate Change that manifests almost linear increase in temperature since the 1970s. This is associated with a growth in concentration level of greenhouse gases in the atmosphere due to an increase in their anthropogenic emissions. The task of preserving the climate is common for all countries. To unite efforts, the UN Framework Convention on Climate Change was adopted in 1992, and in follow up the Kyoto Protocol (since 1997) and the Paris Agreement (since 2015) are being implemented. The response of most states to climate challenges and threats is the transition to "green" sustainable development trajectory with low greenhouse gas emissions. This is associated with a significant increase in investing in development and implementation of low-carbon and carbon-free technologies. As a result, a slowdown, and then a decrease in demand for hydrocarbons, the emergence of new trade restrictions in the form of carbon taxes and duties tied to the carbon footprint of products would be potentially adopted. In such conditions, Russia states its adherence to the global goals of low-carbon development.

Recently, Russia has adopted a number of normative acts that promote non-carbon development, in parallel several strategic programs are being under development.

In early August 2021, the Russian government, by the order of the Prime Minister Mr. Mikhail Mishustin, began creating working groups "to adapt the Russian economy to global energy transition"—that is, to reduce the

demand for traditional fuel in combination with development of alternative energy.

It should be noted that the decision to create the working groups was made in June taking into account the background of China's plans to combat climate change and the EU's radical initiatives to protect its market from "dirty" goods.

The working groups will have to prepare a forecast up to 2050 and set targets for the 2030 horizon, linking the long-term strategy with current activities. As part of this activity, the RF Ministry of Economic Development will be responsible for working with the regions within the framework of the energy transition, analytics and regulation. It will also be responsible for green financing and partially for international cooperation (along with the Ministry of Foreign Affairs and the Ministry of Natural Resources).

Russia considers the climate issue as one of the directions in its long-term plans in the field of international cooperation with all leading countries. Priority areas for cooperation in the field of low-carbon development are considered by the UN, the G20, the European Union, BRICS, and by individual countries—primarily the United States and China.

The Russian government and expert community do not have access to view the relations between the United States and China in the field of climate policy. Russia believes that despite the growing rivalry, the United States and China are sending right common signals on cooperation in the fight against climate change. A joint statement released in mid-April 2021 following a meeting between John Kerry, the US President's Special Envoy for Climate Issues, with his Chinese counterpart, Xie Zhenhua, showed that both governments could try to take an advantage in cooperation on climate policy to prevent their relationship to worsen.

In the international situation that has developed in mid-2021, Russia

prefers to develop cooperation with the United States and China, proceeding from the specifics of relations with these countries in a broad aspect.

1 The Russia-China Cooperation

In the context of the general and systemic degradation of Russian-American relations and the deployment of a strategic confrontation between the People's Republic of China (PRC) and the United States, the partnership between Russia and China continues to deepen. Russian-Chinese cooperation is not conditioned by confrontation with Washington and is not directed against third countries. It is based on similar views between Moscow and Beijing on key international problems under growing external pressure. Strategic coordination between them is reaching new heights.

The Chinese Foreign Minister Wang Yi said that in Russia in 2020, Chinese relations in all spheres have reached the highest level in history: strategic cooperation between Russia and China "has no end, has no exclusion zones, has no upper limit." Moscow and Beijing continue to promote engagement at the global level, especially during such turbulent times. On March 1, 2021, the Ministry of National Defense of the PRC expressed its readiness to cooperate with Russia, including in the field of military equipment, technologies and training. On March 23, 2021, immediately after the Sino-American Summit in Alaska, Russian Foreign Minister Sergei Lavrov visited China for the first time since the beginning of the COVID-19 epidemic. The Foreign Ministers of the Russian Federation and the PRC signed a Joint Statement on Certain Issues of Global Governance in Modern Conditions, which defined and clarified human

rights, the concepts of democracy and multilateralism, as well as the principles of international law as understood by Russia and China. This marked the systematization of common ideas and concepts of the two countries in the field of global governance.

Regular contacts at all levels, especially at the highest levels, also allow the parties to constantly improve the partnership model to effectively resist external pressure in the context of geopolitical confrontation. Although the Western foreign policy community voices opinions about the danger of Russian-Chinese rapprochement and the advisability of attracting Moscow to its side in order to reduce the strategic space of China, in the conditions of confrontation and absence of mutual trust between the Russian Federation and the United States, the implementation of such a scenario in the foreseeable future, according to Russian experts' assessments, seems unlikely. At the same time, according to Chinese assessments, the goal of US policy is to prevent Russia from becoming a military ally of China in the Asia-Pacific region and to prevent the deepening of Russian-Chinese technological cooperation, convincing Moscow that ties with the West will allow Russia to avoid dependence on Beijing. However, the United States does not expect Russia to change course in the short term, and is oriented towards the long term in the hope that the new Russian elite will distance itself from China. Over the years, observing Russian-Chinese relations policy makers in the United States have developed an understanding of the close strategic nature of Russian-Chinese relations. "Strategic patience" is a recommended policy waiting for the coming gradual changes in Russia and China.

Rapid return of the Biden administration to a multilateral approach in foreign policy is to a large extent an attempt to correct the excesses of former President Trump's unilateralist approach. Despite the direct and

indirect statements made by President Biden's team, according to Chinese experts, the US policy towards Russia and China, regional security and global governance is still at the stage of definition.

Russia believes that strengthening bilateral cooperation in the climate sphere with China is highly advisable. In particular, it is possible to develop joint standards for "green" infrastructure, which is relevant in the light of the conjugation of the Chinese Belt and Road initiative with the Eurasian Economic Union. Large-scale infrastructure projects implemented by China within the framework of this initiative will determine the scale and nature of pollution in Greater Eurasia for decades to come, and therefore the issues of determining and observing environmental standards in their implementation are of great importance. This is especially important in the implementation of the discussed bilateral transport projects, including transport corridors of Primorye and the possible arrangement of trans-Eurasian transport routes. In the future, it is inevitable and desirable to expand exports to China of Russian nature-intensive and environmental goods and services - in particular, agricultural products, forestry, fishing industry, data center services and ecotourism. It is important that the implementation of these mutually beneficial opportunities takes place in compliance with all environmental requirements, and this requires joint work of responsible departments of the two countries. This is especially important in matters of forest export control, in the field of organizing tourist flows, in the field of certification of agricultural, forestry and fishery products, etc.

2 Russia Cooperation with the US

In the coming years, despite continuation and strengthened confrontation between US and Russia, the dialogue with the US on climate change and environmental protection seems to be a part of Russian experts' activities in one of the few areas (which also include the issue of strategic stability and nuclear nonproliferation) where selective cooperation makes sense.

For the Biden Administration, climate issues are one of the highest priorities in foreign policy: it seems to be one of the important tools for restoring the falling American authority, positioning the United States as a "benevolent hegemon," an important producer of global public goods, has an important place in Democrats' perceptions of American "global government" and how to strengthen it. In addition, this topic is important for the progressive wing of the Democratic Party, which has grown significantly in recent years and played a key role in the 2020 Democratic campaign.

It is indicative that a separate position has been established at the ministerial level - the special envoy of the US president for climate issues, to which the former secretary of state and political heavyweight John Kerry has been appointed. Thus, the problem of international cooperation on climate issues is actually removed from the subordination of Secretary of State Anthony Blinken and turns into a separate area under the government of the president himself. Mr. Kerry's goal is to return the United States to a leading position on the international climate change agenda (which they abandoned during the Trump era) and thereby "move" the position of the European Union. Given the priority of climate issues for the new President Administration, the Russian-American dialogue on ecology and climate could become one of the very few aspects of the agenda of relations between the two countries, where their cooperation is aimed not at

managing confrontational relations and preventing the worst (direct military clash, arms race), but on the positive, objective improvement of the surrounding world. At the same time, taking into account the extremely negative political atmosphere of relations, it is desirable to develop this dialogue not only and not so much in bilateral, but in various multilateral formats. In particular, Russia, the United States and China could join forces to oppose the EU's plans to introduce border carbon regulations. The United States and China are the largest (No. 2 and No. 1, respectively) exporters to the EU, including a number of carbon intensive goods, and these duties can hit them no less, and in terms of the total volume, much more than Russia. At one time, the largely consolidated position of these countries made impossible including foreign air carriers in the European system of trading greenhouse gas emissions, which the EU was going to do in 2012. That experience of interacting to defend one's own interests can be useful today.

In addition, it is advisable to develop cooperation with Washington for the protection of nature in the Arctic, where Russia and the United States are neighbors, and the rate of climate change exceeds the global rate by two to three times. Warming in the Arctic creates serious risks not only for the Arctic ecosystem, which is particularly fragile, but also for the economy and infrastructure of the Arctic countries and the population living in the Arctic latitudes, and presents significant challenges to military and military-political security. Because of the rapid reduction in ice cover of the Arctic Ocean, as stated by the US Department of Defense in 2019, the Arctic strategic approach ceases to be a natural buffer and perceived US military government as a "corridor for power projection." As a result, the general confrontation between the United States and Russia and China spills over to the region, and its militarization is accelerating. Due to its geographical proximity, the Arctic, which over the past 40 years was

perceived mainly as a region of cooperation, may become one of the central arenas of the Russian-American confrontation.

Cooperation on combating climate change, adapting to it, studying its dynamics, as well as protecting the Arctic ecosystem as a whole, can at least slow down these negative dynamics, ultimately expanding opportunities for the economic development of the Arctic regions of Russia, expanding Northern Sea Route. In addition, this cooperation provides at least a hypothetical possibility of preserving the international legal regime in the Arctic zone, which secures the right of the Arctic countries to exclusive control over the 200-mile water area. This cooperation should be developed not only in the Russia-US bilateral format, but also within the framework of the Arctic Council, the chairmanship of which passed to Russia in 2021 for a period of two years. Moreover, the European countries of the Arctic Council are the most traditional Moscow partners both on cooperation for the protection of nature in the region as a whole, and to update international law regime to the Arctic.

Let continue neighboring countries in the region keep exclusive control of their Arctic waters. Russia's cooperation with the European countries of the Arctic Council, in turn, will create more favorable preconditions for cooperation with the United States and changing their approaches to Russia in the Arctic: the Biden administration will listen more to the opinion of Europeans than to its predecessors.

Vladimir Putin and Joe Biden agreed on cooperation in the fight against climate change during their meeting in Geneva on June 16, 2021. The arrival of the John Kerry delegation to Moscow and the results of his visit is the beginning of the implementation of this agreement.

3 Summary of Russian Viewpoints

The United States joining the European "green deal" will inevitably become a powerful accelerator of decarbonization of the world energy, which will reduce the total capacity of world oil and gas markets from year to year, with all the attendant negative consequences for Russia. In any case, the main partner for Moscow in the field of green energy will not be the United States, but the member states of the European Union. Cooperation with Washington will be conducted mainly within the framework of specialized multilateral formats (G20, APEC, etc.). It is worth noting that a more favorable attitude of the new administration towards multilateral organizations such as the WTO and the G20 will create some additional opportunities for Russia outside the framework of bilateral US-Russia and China-Russia relations. It remains unclear to what extent Russia will be prepared to seize these opportunities.

CHAPTER
3

Conclusion

Section 1 Summary of Findings

Climate change is an urgent global crisis of our time. Global temperature rise is rapidly approaching the threshold of 1.5 degree above pre-industrial level which was decided to as a limit under the Paris Agreement. The last two years have shown unprecedented numbers of natural disasters due to climate change.

Climate change is a global phenomenon that has borderless effects, meaning that it requires international cooperation and collective efforts from around the world. Thus, the two biggest greenhouse gas emitters, the United States and China, are at the center of the discussions regarding international climate cooperation.

Bridging the divide between the two nations is a key to global climate cooperation. In this sense, this year was a remarkable year, because the two made ambitious promises to battle against climate change. China exhibited very proactive actions by claiming carbon neutrality by 2060 and the US re-entered into the Paris Agreement and made an executive order to stop fossil fuel subsidies. Above all, in April 2021, the US and China jointly announced a commitment to global cooperation for climate change.

The EU also welcomed the US for its return to the Paris Agreement and cooperation between China and the US. US-China climate cooperation goes beyond reducing emissions of greenhouse gases reaching out to industrial decarbonization, climate-resilient agriculture, and renewable energy deployment. It is yet not known to what extent the European Union, China and the US share common ground in the field of trade rules that would

allow such protection be introduced. The impossibility to do so would have negative effects on practically all meaningful "Race to Zero" legislations worldwide. The EU shares with China the fight against poverty. Possibly this could give rise to a common understanding of how to bridge the financing gap.

India, as the third largest emitter of greenhouse gas emissions in the world, mentioned competition on climate leadership between the US and China. Amid escalated tensions that threaten China on national and territorial security, the US and China signed on a joint statement to address climate change, which certainly has provided positive effects to encourage carbon neutrality announcements in China. The US is already grappling with the massive transition from coal to natural gas within its power infrastructure. On the other hand, China also had to shut coal mines and inefficient steel plants. India has not announced peaking of fossil fuel consumption but will soon grapple with similar issues with little experience and limited financial capacity. In view of these, climate justice and just transition could be an opportunity for collaboration among these three countries in this.

As a middle power country, Indonesia aims to reduce its economic and political dependence on the US and China. Indonesian policy makers consider the motivations of the two countries as inseparable from economic and geostrategic interests. They expect to see productive competition from current rivalry tensions and competitiveness between the two countries. This article highlighted that developed countries should exercise more responsibilities than developing countries to tackle climate change, assist developing countries in technology transfer related to mitigation and adaptation, and make financial contributions to mobilize financing in developing countries. Indonesia takes China as a role model in

balancing economic growth and environmental protection. To cooperate and involve with diverse international counterparts for climate change cooperation, Indonesia plans to use multilateral platforms such as South-South and Triangular Joint Work (SSTC). In particular, the 2015-2019 Medium-Term Development Plan (RPJMN) emphasizes the need for Indonesia to increase its role in SSTC as part of the struggle to build international cooperation and a more just, equal and mutually beneficial world order.

Russia's strategy for low-carbon development to 2050 was developed taking into account international climate action plans including China and the EU. Russia agrees that climate change requires international level efforts. Thus, multilateral venues such as the UN, G20, EU, and BRICS, and bilateral actions with the US or China are highlighted. Despite the rival relationship between the US and China, there certainly is shared intention in bilateral cooperation for climate change actions and both countries could benefit from this. Russia also has interest in cooperating with the US and China to cover diverse climate-related areas.

Section 2 International Climate Cooperation Strategies of Korea

Korea possesses chances to lead climate change efforts at the international level through both bilateral and multilateral settings.

1 Korea and United States

Starting with Biden's global climate summit in April 2021 where leaders of countries including Brazil, Canada and Japan convened, John Kerry, US Special Presidential Envoy for Climate, traveled to Korea to meet with Korea's Foreign Minister in Seoul. The Biden Administration has made efforts to regain the position as a global leader for climate change, which is what they lost during the Trump Administration.

Not only did the US urge countries to take actions but they also vowed to reduce emissions by at least 50 percent by 2030. More ambitious pledges were made by Canada, Japan and India to reduce emissions and increase renewables. Korea mentioned that it would stop public financing for coal-fired power plants abroad for emission reduction pledges.

In May 2021, the White House posted a fact sheet regarding the US-Korea Partnership. According to the document, the US pledged to deepen cooperation with Korea to address issues in the Indo-Pacific region. The areas to cooperate are wide from development of zero-emission vehicles to decarbonize the power sector. Leveraging financing for deep emission reductions, they would support developing countries and promote the flows of private and public funds for a

low-carbon economy. Moreover, for geopolitical centrality in the Southeast Asia region, new development cooperation between USAID and the Korea International Cooperation Agency in Southeast Asia was discussed. This is expected to promote Association of Southeast Asian Nations (ASEAN) centrality in the region and to reinforce national security against increasing climate risks. Other international platforms including OECD foster the ties between the US and Korea to end financing coal-fired power plants abroad.

Similar to the EU's carbon border adjustment plans, the US is also considering employing a "polluter import fee," which is expected to help fund Biden's 3.5 trillion USD recovery package. California has actually applied similar types of measures to certain imports of electricity. Although the US has a certain level of experience in a few regions and acknowledges the value of this mechanism, the complexity of the process is a hurdle in introducing it to the entire country. In July, companion bills were introduced in the Senate and the House of Representatives to impose a "border carbon adjustments" fee on imports of carbon-intensive goods into the United States.

According to the recent virtual forum held by Center for Strategic and International Studies (CSIS) on supply chain resilience, the two countries' ties will be strengthened due to battery and chip industries. The semiconductor sector is increasingly important not only because it is keenly related to national security issues due to the usage of semiconductors for high-tech weapons, but also because the semiconductor manufacturing industry accounts for a significant amount of carbon. Given that, both countries need active discussions regarding the US-Korea supply chain from the view of climate change and the creation of a US-Korea supply chain task force should be discussed. Bilateral cooperation between these two countries in manufacturing and supply chains ensuring sustainability is needed.

2 Korea and China

Both Korea and China are carbon-intensive countries where 28 percent, 58 percent of the energy mix is coal in 2019, respectively. The two countries' reliance on the carbon intensive industry has brought economic success. At the P4G Seoul Summit in 2021, Korea announced it would stop public financing for overseas construction of coal-fired power plants. China recently made a pledge to stop supporting coal-fired power plant projects abroad at the United Nations General Assembly in September 2021.

The decision to end dependency on coal brings our attention to the alternatives including renewable energy development, energy distribution and low-carbon technology development. Both countries have not provided details yet regarding how to bring the end to coal, but this is certainly where two countries could cooperate. There are substantial amounts of potential to increase investment into renewables and batteries for collaborative research between China and Korea.

Moreover, given that the EU's carbon border adjustment mechanism would be applied soon, two countries' prior discussion on trilateral cooperation with Japan on carbon trading should certainly be revived. In July 2021, China began its first carbon trading, which is the biggest in the world. Currently, carbon trading mechanisms exist in around 45 countries among which China has the biggest. The trading mechanism slightly differs across countries. The mechanism in Korea is similar to the European Union which uses an emission cap, while the Chinese mechanism employs the intensity of emissions.

The successful linkage of two ETS was between the EU and Switzerland. This was possible, as both systems are compatible applying an absolute emission cap. The wider the carbon market is, the more sectors could be

covered and the more allowances are available for compliance to compensate for emissions. If both markets could be linked, it would increase emission reduction opportunities. Above all, linked carbon markets will bring carbon prices in different countries similar to one another, which ensures reduction of carbon leakage risks. This certainly is important as carbon leakage is. However, provided that Korea and China have different carbon trading mechanisms, it is necessary to begin discussions as soon as possible to identify feasible ways to link two markets. In the case of the EU and Switzerland, they started negotiations in 2011 and the linked market came into force in 2020.

The fourth Korea-China joint committee on the climate change cooperation meeting was held in 2019 in China. Considering that the bilateral discussions on climate change with China are rarely found, it is meaningful that Korea has held the meeting continuously to share the burden and responsibilities, even if there are little meaningful deliverables or results. In the meeting in 2019, two countries agreed to pursue cooperation needed to complete the detailed guidelines for Paris Agreement implementation.

Upon the US withdrawal from the Paris Agreement during the Trump Administration, countries in Europe approached China to build strategic partnerships between the EU and China. The EU and China held a leaders' meeting in 2020. A senior EU official said "...the EU alone is clearly not enough but the EU-China together puts things in a better place. If we get China, the rest of Asia will follow." China is one of the largest trading partners of Korea. Strengthening the trade ties with China is a key not only for economic development but also for low-carbon transition.

3 Korea and International Counterparts

Successful implementation of international climate policies requires engagement with international counterparts. Korea belongs to a number of international institutions including the United Nations, G-20, Organization for Economic Cooperation and Development, Asia-Pacific Economic Cooperation forum through which Korea has strengthened its multilateral diplomatic capacity. These serve as great venues to cooperate with multiple countries and ensure international efforts to tackle climate change.

Multilateral and bilateral discussions through such venues that raise climate ambition will be meaningful and effective. In spite of the positive effects of global level efforts, there are unavoidable effects that cause international counterparts to be concerned. One example of such concerns is the position of Korea. As tensions between the U.S. and China escalated, without preparing strategies to cooperate with the two, Korea would not be able to avoid being pressed between two big countries. Thus, global institutions and alliances are certainly essential ways to balance geopolitical tensions.

Given that carbon is to be priced for international trade, countries have been motivated to reorganize supply chains that involve shifting global markets. Therefore, countries with high dependency on exports like Korea need to reinforce ties with traditional as well as new allies. Building the resilience of companies is key to achieving sustainability of the supply chain. Korea has to design climate policies that consider trade-related emissions as well as protection of domestic industries. Strengthening partnerships with neighboring countries through multilateral platforms and regional cooperation and diversifying the trade partners is the way forward to foster international climate cooperation.

This study demonstrates potentials and needs to create a new alliance for climate and trade in the region. Announcing new Southern Policy, Korea aims to expand its economic partnerships in the region. A Free Trade Agreement with Indonesia and discussions on trade agreements with India and southeast Asia are examples. Diviersification of tradining partners would not only provide economic benefits but also help countries in the region to become less vulnerable to climate change effects by promoting the use of low carbon technologies.

The National Assembly of the Republic of Korea could play an important role in engaging partners in the region to achieve climate change objectives through trade in a cooperative way. For example, the National Assembly Forum on Climate Change could initiate the cooperative movement by creating the platforms to network among countries in the region. Exchanging ideas to design and implement innovative trade that places climate change at the center, countries would open up conversations regarding reform of trade and carbon pricing in the face of CBAM. This study clearly shows that selected countries are in needs of expanding partnership through various channels. Other than the EU, Korea is the only country that has progressed on the development of net-zero targets. With advanced climate and energy policies, Korea is expected to play a leading role in promoting regional cooperation and upgrading trade agreements to leverage climate actions.

Reference

1. Research Papers, Books and Reports

2. Website

Reference

1 Research Papers, Books and Reports

Taedong Lee. 2021. 미 · 중(美 · 中) 간기후변화협력과경쟁. 우당이슈브리프no.4.

Chung-In Moon. 2021. 문정인의미래시나리오Chung-In Moon's Future Scenario: 코로나19, 미중신냉전, 한국의선택. 서울:청림출판사.

Afifa, L. (2021, April 23). Jokowi Joins Virtual Leaders Summit on Climate—News en.tempo.co. Tempo. https://en.tempo.co/read/1455462/jokowi-joins-virtual-leaders-summit-on-climate

Arkyasa, M. (2020, August 27). Indonesia Allocates Trillions to Tackle Climate Change. Tempo. https://en.tempo.co/read/1380038/indonesia-allocates-trillions-to-tackle-climate-change

Badan Pusat Statistik. (2021, October 1). Ekspor Batu Bara Menurut Negara Tujuan Utama, 2012-2020. https://www.bps.go.id/statictable/2014/09/08/1034/ekspor-batu-bara-menurut-negara-tujuan-utama-2012-2020.html

Gindarsah, I. (2012). Democracy and Foreign Policy-Making in Indonesia: A Case Study of the Iranian Nuclear Issue, 2007-08. Contemporary Southeast Asia, 34(3), 416.

Kahfi, K. (2019, October 11). Indonesia's agency set to manage funds for environmental protection efforts, carbon trading. The Jakarta Post. https://www.thejakartapost.com/news/2019/10/11/indonesias-agency-set-to-manage-funds-for-environmental-protection-efforts-carbon-trading.html

Karim, M. F., & Chairil, T. (2016). Waiting for Hard Balancing? Explaining Southeast Asia's Balancing Behaviour towards China. European Journal of East Asian Studies, 15(1), 34–61. https://doi.org/10.1163/15700615-01501002

Karyza, D. (2021, July 29). Indonesia needs $312b to make good on carbon pledge: Minister. The Jakarta Post. https://www.thejakartapost.com/news/2021/07/29/indonesia-needs-312b-to-make-good-on-carbon-pledge-minister.html

Kementerian Keuangan. (2021, April 12). Penanganan Isu Perubahan Iklim Membutuhkan Kerja Sama Global. Kementerian Keuangan. https://www.kemenkeu.go.id/publikasi/berita/penanganan-isu-perubahan-iklim-membutuhkan-kerja-sama-global/

Kemlu. (2019, April 7). Climate Change. https://kemlu.go.id/portal/en/read/96/halaman_list_lainnya/climate-change

Knickmayer, E. (2021, September 18). Advocates fear US weighing climate vs. Human rights on China. AP NEWS. https://apnews.com/article/business-religion-china-environment-and-nature-united-states-92243b29f1161b4cd4eb30fd8aa84b35

Ministry of Environment. (2021). UPDATED NATIONALLY DETERMINED CONTRIBUTION REPUBLIC OF INDONESIA. Ministry of Environment.

Wong, C. (2021, September 3). China 'tells US envoy John Kerry it will follow its own climate road map.' South China Morning Post. https://www.scmp.com/news/china/diplomacy/article/3147540/china-tells-us-envoy-john-kerry-it-will-follow-its-own-climate

World Bank. (2021). CO2 emissions (metric tons per capita) | Data. https://data.worldbank.org/indicator/EN.ATM.CO2E.PC

S. Defilla, "Energy Trade under the ECT and accession to the WTO", in Journal of Energy and Natural Resources Law (2003) 21 No. 4, 428-446;

online: http://www.tandfonline.com/doi/abs/10.1080/02646811.2003.11433344

2 Website

Global Carbon Atlas, http://www.globalcarbonatlas.org/en/CO2-emissions

UN, Sustainable Development Goals, (https://sustainabledevelopment.un.org/sdgs)

The US White House. 2020. United States Strategic Approach to the People's Republic of China ttps://gpa-mprod-mwp.s3.amazonahws.com/uploads/sites/23/2021/05/U.S.-Strategic-Approach-to-The-Peoples-Republic-of-China-Report-5.24v1.pdf

Odd Arne Westad. 2019. The Source of Chinese Conduct: Are Washington and Beijing Fighting a New Cold War. Foreign Affairs 86. 86-95.

The White House. 21. 6. 23. https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/

"The Biden Plan for a Clean Energy Revolution and Environmental Justice". 2021. 07. 26. https://joebiden.com/climate-plan/

Executive Order on Ensuring the Future Is Made in All of America by All of America's Workers 2021. 6. 23. https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/25/executive-order-on-ensuring-the-future-is-made-in-all-of-america-by-all-of-americas-workers/

UNITED STATES TRADE REPRESENTATIVE. 2021 Trade Policy Agenda and 2020 Annual Report 2021. 6. 23. https://ustr.gov/sites/default/files/files/reports/

Reuters. 2021. Democrats float border tariff for carbon intensive imports. https://www.reuters.com/world/us/democrats-float-border-tariff-carbon

-intensive-imports-2021-07-19/

"FACT SHEET: The American Jobs Plan." 2021. 6. 23. https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/

New York Time. China's Pledge to Be Carbon Neutral by 2060: What It Means. https://www.nytimes.com/2020/09/23/world/asia/china-climate-change.html

Asia Society Policy Institute 2021. 6. 23. https://asiasociety.org/sites/default/files/2020-10/Download%20the%20Paper%20%28English%29.pdf

Aju News. 21. 6. 1. https://www.ajunews.com/view/20210601105052072?fbclid=IwAR2XPWK3fPICtWNfWnXpZY4gbfX7W_GqdbpfR5KmatUQQYuCRtwlrXtsXCs

Cambell, Kurt. Foreign Affairs. https://www.foreignaffairs.com/articles/united-states/2021-01-12/how-america-can-shore-asian-order

Korea Energy Economic Institute. Key contexts and implications of the US-China Climate Change Summit http://www.keei.re.kr/web_keei/pendingissue.nsf

US State Department. 2021. https://www.state.gov/u-s-china-joint-statement-addressing-the-climate-crisis/

Financial Times. Kiran Stacey. 2021. May 24. China and US look to rekindle Paris bond to reach net zero. https://www.ft.com/content/9f1fcf91-837d-40ca-a626-d2dc29a23d88

UNFCCC. 2021. Key Aspects of the Paris Agreement. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement

APEC Integrated Urban Planning Report – Combining Disaster Resilience with Sustainability, APEC, 2021. https://www.apec.org/Publications/2021/03/APEC-Integrated-Urban-Planning-Report

APEC Sustainable Urban Development Report – From Models to Results, APEC, 2019. https://www.apec.org/Publications/2019/04/APEC-Sustainable-Urban-Development-Report---From-Models-to-Results

China-US Joint Statement Addressing the Climate Crisis (2021). http://www.china.org.cn/world/2021-04/18/content_77417219.htm

European Green Deal.
https://www.consilium.europa.eu/en/policies/green-deal/
https://www.consilium.europa.eu/en/policies/eu-plan-for-a-green-transition/
https://ec.europa.eu/clima/policies/eu-climate-action/delivering_en

New US-EU Agenda for Global Change (2020). https://op.europa.eu/en/publication-detail/-/publication/b04cdb80-35e2-11eb-b27b-01aa75ed71a1

EU: EU-China, a strategic outlook (2019). https://ec.europa.eu/info/sites/default/files/communication-eu-china-a-strategic-outlook.pdf

EU: A Comprehensive Agreement on Investments (2021). https://trade.ec.europa.eu/doclib/docs/2021/march/tradoc_159480.pdf

GPC: Global Protocol for Community-Scale Greenhouse Gas Inventories version 1.1, 2020. https://ghgprotocol.org/greenhouse-gas-protocol-accounting-reporting-standard-cities

Hot or cool 1.5 Degree Lifestyles https://hotorcool.org/future-lifestyles/

IEA Net Zero by 2050: A Roadmap for the Global Energy Sector (2021). https://www.iea.org/reports/net-zero-by-2050

ICLEI Sustainable Lifestyles (2018). https://resilientcities2018.iclei.org/program/sustainable-lifestyles/

UN System of Environmental Economic Accounting SEEA (2012). https://seea.un.org/

UN 2015, “Transforming our World. 2030 Agenda for Sustainable

Development", https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf.

UN 2015, "Financing sustainable development and developing sustainable finance", A Briefing note by the UN Department of Economic and Social Affairs. https://www.un.org/esa/ffd/ffd3/wp-content/uploads/sites/2/2015/07/DESA-Briefing-Note-Addis-Action- A genda.pdf

UNWCDRR 2015, "Sendai Framework for Disaster Risk Reduction 2015 - 2030", https://www.wcdrr.org/.

WTO Doha Ministerial Declaration 2001. https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm

Our World in Data, University of Oxford, https://ourworldindata.org/explorers/energy?tab=table&facet=none&country=CHN~KOR&Total+or+Breakdown=Select+a+source&Select+a+source=Coal&Energy+or+Electricity=Primary+energy&Metric=Share+of+total

국문초록

국문초록

기후변화는 전 지구적 문제로써, 세계 최대 온실가스 배출국인 미국과 중국의 행보는 기후변화 국제협력의 질서를 정비하는 데에 큰 영향을 미친다. 그래서 본 연구에서는, 기후변화를 둘러싼 미국과 중국의 관계를 바라보는 국제적 시선과 그에 따른 국가별 국제협력 추진 방향을 살펴보고 한국의 전략도 제언했다. 미국과 중국을 제외한 주변 국가 중 전 세계 온실가스 배출량 순위 상위 9위권에 속하는 인도, 러시아, 인도네시아, 유럽연합을 선정해 조사했다. 조사 대상 국가 모두 미국과 중국의 기후변화 협력이 중요함을 강조하며 더욱더 적극적이고 주도적인 대응 노력을 촉구했다. 선진국 그룹을 대표하는 미국과 개발도상국 그룹을 대표하는 중국 간의 논의가 선진국과 개발도상국 간 책임분담을 둘러싼 갈등 해결의 돌파구가 될 것임에 기대가 컸다. 그리고, 저탄소 경제 달성이라는 공동의 목표가 기후변화 국제협력의 핵심이 되어야 한다고 강조했다. 국가별 국제협력 추진 계획과 방향을 조사한 결과, 조사 대상 국가 모두 미국, 중국과 양자 또는 다자 기후변화 협력 활성화 방안을 모색 및 추진하고 있었다. 유럽은 미국, 중국과 친환경적인 무역체제를 세우기 위한 논의를 활발히 진행 중이고, 중국과 에너지 빈곤 문제 해결로 협력하고 있다. 인도의 경우, 화석연료 사용 감축 노력과 계획을 언급하며, 세 국가 간 기후 정의, 공정한 전환을 달성하기 위한 논의와 협력을 강조했다. 인도네시아는 중국을 롤모델로 삼아 지속적 경제성장과 기후변화 대응을 함께 달성할 방안을 모색 중이며, 양자, 남남 (South-South), 다자간 협력 장을 만들고 적극적으로 활용하는 단계이다. 러시아는 미국과 중국의 대립 구도에도 불구하고, 기후변화 대응을 위한 양자 간 협력의 의도는 분명히 있음을 설명했고, UN, G20, BRICS 등의 다자간 협력을 활용해 기후변화 국제적 논의에 적극적 참여하고 있음을 강조했다. 한국 또한 온실가스 감축 목표를 상향하고 탄소중립을 선언하며 적극적으로 국제사회 노력에 동참해왔다. 미국과 중국 간 기후변화를 둘러싼 정치적 역학 속에서 한국은 다자간 정부 간 협의체나 국제기구들을 적극적으로 활용하여 국제협력에 선도적 역할을 해나가야 할 것이다.

무엇보다 기후변화 대응으로 무역체제가 많은 영향을 받을 것으로 예상되어, 한국은 미국과 중국뿐만 아니라 주변 국가들과 협력 구도를 형성해 기후변화와 무역 규정이 상호 보완적으로 작용할 수 있도록 이끌어 나아가야 할 것이다.

Appendix

Annex 1 The European Green Deal (EGD) and its Predecessor

The EU has a tradition to address climate policy as a broad array of interrelated issues. This has already been the case of the predecessor program of the European Green Deal, namely the 20-20-20 strategy adopted in 2010. To recall its components, the 20-20-20 strategy had the following objectives, to be attained by 2020:

- 20% improvement of energy efficiency defined as both, primary energy consumption and final energy consumption compared to 1990. Target failed. The lesson to be drawn is that energy efficiency should be defined as energy intensity.
- 20% diminution of greenhouse gas emissions compared to 1990. Target attained 6 years ahead of schedule
- 20% increase of the share of renewables. Target just about attained.
- Increasing the employment rate of the population aged 20 to 64 to at least 75%. Target just about attained.
- Increasing combined public and private investment in R&D to 3% of GDP. Target clearly failed.
- Reducing school drop-out rates to less than 10%. Target just about attained.
- Increasing the share of the population aged 30-34 having completed tertiary education to at least 40%. Target attained 3 years ahead of schedule.
- Lifting at least 20 million people out of the risk of poverty and social

exclusion. Target failed.

The European Green Deal presented in December 2019 is a comprehensive set of proposals comprising, among others, the "Fit for 55" proposal presented in July 2021 which aims at cutting CO2 emissions by 55% compared to 1990 as a milestone for becoming climate-neutral by 2050.

- The "Fit for 55" proposal seeks at updating 8 existing laws, among them
- Revision of the EU emission trading scheme (EU ETS)
- Revision of the regulation on land use, land use change and forestry (LULUCF)
- Revision of the effort sharing regulation (ESR)
- Amendment to the renewable energy directive (RED)
- Amendment to the energy efficiency directive (EED)
- Revision of the alternative fuels infrastructure directive (AFID)
- Amendment of the regulation setting CO2 emission standards for cars and vans
- Revision of the energy taxation directive

and at enacting 5 new laws, among them

- New EU forest strategy
- A carbon border adjustment mechanism (CBAM)
- A Climate Action Social Facility

- ReFuelEU Aviation – on sustainable aviation fuels
- FuelEU Maritime – on greening Europe's maritime space

The "Fit for 55" proposal is at present in the legislative process. The final outcome is not yet known. Beyond the "Fit for 55" proposal, the European Green Deal addresses a whole bunch of related issues in a holistic approach:

- EU biodiversity strategy 2030: put Europe's biodiversity on a path to recovery by 2030.
- "Farm to Fork" strategy: ensure sufficient, affordable and nutritious food within planetary limits, ensure sustainable food production through, inter alia, a substantial reduction in the use of pesticides, antimicrobials and fertilisers and increase in organic farming, promote more sustainable food consumption and healthy diets, reduce food loss and waste, combat food fraud in the supply chain, improve animal welfare, ensure access to sufficient and affordable food while contributing to EU climate neutrality by 2050, ensure a fair income and strong support for primary producers, as well as the competitiveness of EU agriculture at global level.
- European industrial strategy and the circular economy action plan: The EU industry is to become an accelerator and enabler of change, innovation and growth; COVID-19 recovery should be just, built around the principles of competitiveness, single market integration, sustainability, cohesion, inclusiveness, solidarity, circularity and environmental protection and should observe social standards.
- Just Transition Mechanism (JTM): financial and technical support to the regions most affected by the move towards a low-carbon economy;

help mobilise at least EUR 65 to 75 billion over the period 2021 – 2027 granted (1) to people and communities for facilitating employment opportunities and reskilling, improving energy-efficient housing and fighting energy poverty, (2) to companies making the transition to low-carbon technology attractive to investment, providing financial support and investing in research and innovation, (3) to member states and regions investing in new green jobs, sustainable public transport, digital connectivity and clean energy infrastructure. The Just Transition Fund (JTF) is a first pillar of the JTM. It provides EUR 17.5 billion to SMEs and new firms, research and innovation, clean energy technologies and emissions reduction, re-skilling of workers and job-research assistance

- Clean, affordable and secure energy, with focus on offshore renewable energy, hydrogen and energy system integration
- EU chemicals strategy for sustainability: better protect human health, strengthen the industry's competitiveness, support a toxic-free environment
- Sustainable and smart mobility: emissions from transport have to decrease by 90% by 2050 in order to attain climate neutrality. The actions provide for the launching of the European Year of Rail 2021, a revision of road charging rules for heavy-duty vehicles, new funding under the Connecting Europe Facility to support decarbonization of transport
- Renovation wave: intensify renovation efforts in the building sector throughout Europe, decarbonizing the building sector, recovering the economy, tackling energy poverty

Annex 2 The UN 2030 Agenda for Sustainable Development

The UN 2030 Agenda for Sustainable Development is composed of two legally non-binding political declarations, namely the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, and the Sustainable Development Goals (SDGs). The SDGs are substantively linked to fourteen other global agreements which are all part of the Development Agenda. The most important of these agreements is the Paris Climate Agreement, followed by the Sendai Framework for Disaster Risk Reduction 2015 – 2030. The 14 other international agreements related to the SDGs are the following:

- Mandate of the Doha Development Round (WTO)
- World Health Organization Framework Convention on Tobacco Control
- Doha Declaration on the TRIPS Agreement and Public Health (WTO)
- Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences
- 10-Year Framework of Programmes on Sustainable Consumption and Production
- Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries
- Global Jobs Pact of the International Labour Organization
- World Trade Organization agreements, the fisheries subsidies negotiations, the Doha Development Agenda and the Hong Kong ministerial mandate

- Sendai Framework for Disaster Risk Reduction (DRR) 2015-2030
- United Nations Framework Convention on Climate Change (UNFCCC)
- Green Climate Fund
- Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology
- United Nations Convention on the Law of the Sea (UNCLOS)
- “The future we want”

Climate Change and International Politics:

U.S.-China Relations and International Climate Cooperation

Printed on	December 27, 2021
Published on	December 31, 2021
Publisher	Hyeon Kon Kim
Published by	National Assembly Futures Institute
Address	Room 222 of National Assembly Member's Hall. 1, Uisadang-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
Telephone	+82-2-786-2190
Fax	+82-2-786-3977
Website	www.nafi.re.kr
Printed by	MisaWelfare Co. (+82-2-6948-9650)

ISBN 979-11-90858-74-8 (93300)

NATIONAL ASSEMBLY
FUTURES INSTITUTE