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**Cooperation on Climate Change as a Pillar
of the Relationship Between the United
States and China**

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Abstrakt

Spolupráce v oblasti změny klimatu se ve druhém období presidenty Obamy ukázala jako velmi perspektivní pro zlepšení vztahu mezi Spojenými státy a Čínou. Tato práce zkoumá, jak se vyvíjela spolupráce v oblasti změny klimatu a vyvozuje, že ve správných podmínkách má na bilaterální vztah pozitivní vliv. Aby bylo toho zlepšení trvalejšího rázu, je vhodné, aby se spolupráce v oblasti změny klimatu rozšířila i do sféry národní bezpečnosti, konkrétně jako spolupráce a společná cvičení při záchranných akcích.

Abstract

Cooperation on climate change in the second term of president Obama showed to have potential for improvement of the relationship between the United States and China. This paper analyses how the climate change cooperation developed and concludes that under right circumstances it has positive influence on the bilateral relationship. In order to make the improvement more lasting, the climate change cooperation should take into account national security considerations, specifically the parties should collaborate and jointly exercise on humanitarian assistance and disaster relief operations.

Klíčová slova

Klimatická změna, Spolupráce, Spojené státy, Čína, Národní bezpečnost

Keywords

Climate Change, Cooperation, United States, China, National Security

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V Praze dne 30. 7. 2017

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Poděkování

Na tomto místě bych rád poděkoval PhDr. Janu Hornátovi za velkou pomoc při tvorbě práce, a také své rodině a přátelům, kteří mě při psaní podporovali.

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Introduction

The United States and China have a very dynamic relationship. On one hand they are rivals in an arena dominated by the U.S., the superpower working to preserve the status quo. On the other hand China is a great power on the rise, seeking to assert its growing geopolitical and economic importance and broaden its sphere of influence. On the other hand they are major partners and greatly benefit from mutual trade. The relationship has two very different tractions, both partnership and rivalry. This work strives to highlight a path the U.S. and China can take together towards the former. Nevertheless currently we must acknowledge that the Asia-Pacific is slowly turning into a chessboard and although open hostilities are unlikely, it is apparent where on the chessboard each chess piece stands. The primary area of contestation is the South China Sea, which seems to be of high importance for China and is a target of its power projections. The South China sea disputes create significant tensions that are emphasized by Beijing's assertiveness. Local allies and partners of the U.S. such as Philippines raise concerns about China's activities and the U.S. is not likely to leave the area and its allies.

The newly formed U.S. maritime strategies put more efforts in expressing assertiveness of the U.S. The way they are formulated is not hostile, but it neither encourages cooperation. The special place and the region with the primary focus of U.S. Navy is the Indo-Asia-Pacific area. One of the main concepts which the document introduces is the "all domain access", which means the U.S. Navy will strive for freedom of operation in the domains of cyberspace and electromagnetic spectrum. It is not hard to imagine such goals could be easily seen as confrontational towards the Chinese anti-access and area-denial concepts and therefore more adversarial approach altogether. Moreover, China was for the first time labelled as a security concern. In a similar manner the U.S. Navy expressed determination to maintain forward naval presence, which a point that can hardly be viewed as positive by other nations. This principle has been so far defended, or, more precisely, demonstrated, by freedom of navigation operations (FONOP) and military exercises.¹

¹ Geoffrey Till, "The New U.S. Maritime Strategy: Another View From Outside," *Naval War College Review* 68, no. 4 (Autumn 2015): 38-40.

There were always tensions between the U.S. and China mostly stemming from the difference in system of governance, however these developments suggest that the situation in South China Sea is currently of the highest importance and is contributing to the tension the most. On the other hand there are also areas where the U.S. – China relationship is turning for the better, particularly climate change cooperation. Climate change cooperation presents a unique opportunity for significant improvement of the bilateral relationship between China and the U.S. Firstly, there already is a precedent, since the two largest emitters of CO₂ collaborated and led the international community into accepting the provisions of the Paris Agreement while leading by example, as both the U.S. and China made significant commitments before the 2015 Paris Conference. Secondly, climate change cooperation is a non-zero-sum game. When all involved parties reach an agreement, everyone wins. Climate change incentivizes cooperation, because the climate change adaptation and mitigation efforts are the more effective the more players is involved. Similarly an argument can be main that new ideas that are a result of climate change collaboration are encouraged to be spread to other members of the community, again to make the effort more effective.

The timeframe of this paper will begin in 2008 with the U.S. – China environmental cooperation initiated, surprisingly for many, by George W. Bush, whose administration was not considered environmentally friendly after the U.S. withdrew from the Kyoto Protocol. The research will finished with the 2015 Paris Agreement and therefore map mostly the achievements of Obama administration. There have been significant developments in approach to climate change and climate change treaties that came with the new administration, however given the popolar support for climate change mitigation efforts and the fact that climate change became a partisan issue in the U.S. as will be further discussed in the following chapter, the Trump administration will be treated as an episode, not a permanent change of direction.

The thesis of this work is that climate change is can be a pillar of the relationship between the United States of American and People's Republic of China. That is illustrated by scope the U.S. – China climate change cooperation in recent years that gradually grew into a large enterprise comprising several working groups and close intergovernmental contacts. Similarly we can argue that there is a correlation between the climate change cooperation and stoppage of FONOPs to South China sea between 2012 and 2015. Given the increased tensions based on rivalry in South China Sea and its

increased militarization, this paper makes a connection between climate change and national security considerations, as joint exercises on humanitarian assistance and disaster relief between the militaries can ease the tensions and increase trust between the U.S. and China, while minimizing the danger of unintended escalation in case of uncoordinated humanitarian intervention of military personnel.

This work is organized into four chapters. The first chapter discusses theoretical foundations that were used and highlights how these theoretical foundations impacted the final conclusions. There are three theoretical frameworks this paper uses, each is discussed individually. Firstly it is the concept of global commons which illustrates how to address climate change related problems. The second concept is international socialization and a way social influence shapes choices of a country with focus on China. Lastly, this paper uses the concept of environmental cooperation as an instrument for conflict solution, which is transformed to better fit the purposes of this work to environmental cooperation as an instrument for improving bilateral and multilateral relationships.

The second chapter deals with climate change and maps the beginnings of global climate change adaptation and mitigation initiatives. For the thesis of this work to be viable, climate change must be recognized as a scientific fact, therefore the first chapter serves as an analysis of the evidence that confirms such notion. Similarly, the first chapter illustrates how citizens of both the United States and China perceive climate change and evaluates whether there is a positive environment for governments of both countries to engage in global climate change initiative and bilateral cooperation.

Bilateral cooperation is also the subject of the third chapter. The primary subject of the third chapter is analysis of the bilateral cooperation between the U.S. and China and how it developed since the administration of George W. Bush based on joint statements, official releases and overall cooperation. It shows how fruitful the cooperation was since 2013 as both countries eventually managed to give the world enough confidence to sign the Paris Agreement.

The last chapter strives to include national security considerations into the conversation. The U.S. considers climate change to be a severe threat to national and international security. China did as well, but in 2010 Beijing changed its opinion. Nevertheless this chapter aims to illustrate that climate change cooperation based on national security considerations is vital for improvement of the bilateral relationship. Given the properties of climate change, it is likely that there will be a need for more

frequent humanitarian assistance and disaster relief operations, close cooperation on these operations has a potential for significant improvement of the relationship and also prevent possible escalation of the situation in case of uncoordinated intervention of two rival militaries.

Methodology and Literature Review

This work is a qualitative analysis of the viability of the idea of climate change cooperation as a pillar of the U.S – China relationship. It works with a great number of primary sources and official reports in order to have uncompromised data and to be able to evaluate official position of both governments on various issues with regards to climate change. To achieve its goals, this paper works with three theoretical frameworks. Firstly is the global commons. The global commons enable to understand climate change as a problem that incentivizes actors too cooperation based on a simple premise. Exploitation of the atmosphere gives countries all the material benefits while the costs of doing so are shared among all, therefore it is only a fraction. Unilateral action is then illogical, because upon taking the burden of reduction of carbon emissions, the country in question pays the full price of abatement while gaining only a fraction of the benefits. That is how climate change facilitates cooperation. Secondly, this work takes into consideration the theories of international socialization. Since the U.S. is a global leader and a prominent member of various international institutions, this paper works primarily with China's international socialization and analyses social influences that have impact on decision-making of China's leadership with focus on climate change. Last theoretical approach is environmental cooperation as an instrument for conflict solution. This approach has very vague definition, utilization and results, therefore it was modified for the purposes of this work to be less ambitious but more fitting, as it provides a framework on how climate change cooperation can lead, if not to a solution of a conflict, to better bilateral relationship.

It is not possible to evaluate every single resource that was used in this work and not to lose focus, therefore only a selected few will be discussed now. The first work to discuss is *The China Challenge: Shaping the Choices of a Rising Power* by Thomas J. Christensen (2015). Thomas J. Christensen is a respected academic and a professor at Princeton University with specialization on China. He also served as a Deputy Secretary of State for East Asian and Pacific Affairs under the Bush 43

administration. His book and all the questions it raised was central for this work as it provided inspiration for further research. The next work that provided a number of helpful ideas for this paper is *Global Commons, Domestic Decisions: The Comparative Politics of Climate change* by K. Harrison and L. McIntosh Sundstrom (2010). It provided this work with theoretical foundations and helped to form the link between climate change and the prospect for cooperation. Similarly this paper works with number of authoritative studies, such as the *Climate Change 2014 Synthesis Report* by Intergovernmental Panel on Climate Change, which based on research of thousands of scientists and a review of the international community concluded that climate change is a scientific fact, which validated the basic premise for this work. Analysis of primary sources was crucial, therefore a significant time is dedicated to joined U.S. – China proclamations, such as *The U.S. – China Ten-Year Framework for Cooperation on Energy and Environment* (2008), *Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and Environment* (2009), or *Joint Statement on Climate Change* (2013). Because this work is also connecting climate change and national security considerations, it includes reports of the DoD, the U.S. Navy, but also official documents released by Chinese government. Lastly this paper works with trusted news outlets that sometimes provide invaluable information, such as *The Economist*, *The Guardian*, *The Diplomat* and *Foreign Policy*.

Theoretical foundations

Global Commons

The first theoretical framework this work utilizes is the concept of global commons. Susan J. Buck defines global commons as resource domains to which all nations have legal access.² Global commons discussions are frequently concerned with a discourse on the ecological consequences of the lack of local level governance that sets rights and rules for managing local resources and which is not applicable on a global scale because of an absence of some sort of a world government. The definition of global commons is also periodically expanded based on scarcity of resources and technological progress. To illustrate, the scope global commons can be broadened with

² Susan J. Buck, *The global Commons: An introduction* (Washington, D.C.: Island Press, 1998), 6.

depletion of fisheries, as well as invention of air travel or a new technology that opens a new exploitable or utilizable sphere. In the environmental frame of global commons, they are mostly defined by danger of degradation, depletion or destruction. In case of climate change, the scarcity issue is manifested in inability of the atmosphere to absorb more carbon dioxide without causing an increase in global temperature by 2°C, which will cause dangerous global climate alterations. The perceived danger that comes from adhering to status quo inevitably leads some actors to seek global governance of the global commons. In the absence of central power, this is achieved by setting up of institutions. The function of the commons governance is not to redistribute resources, but to regulate behaviour, although at least initially some redistribution might be required if the new set of norms and rules is to be universally accepted.³ This conception is indeed applicable to climate change and the adaptation and mitigation efforts. China, among others, felt that developed nations already used up its fair share of the CO₂ released into the atmosphere, therefore the main burden lies with them, while the developing nations should be entitled to equal share of not yet realized emissions.

According to Harrison and Sundstrom, climate change represents Garrett Hardin's "tragedy of the commons" on a global scale. The nations of the world are overexploiting the atmosphere of our planet, because it is easy. They gain all the material advantages from activities that contribute to global warming, but suffer only a fraction of the environmental costs. Contrastingly mitigation of negative effects and reduction of emissions, if done unilaterally, means that the country pays the full price for the effort, but gains only a fraction of the benefits.⁴ Therefore if there is an incentive to address climate change, the initiator needs to seek cooperation with other countries and set up some sort of international institutional framework. This framework needs to set the rules for each individual member and these unique rules in consequence need to be acceptable for the entirety of the members.

However the global commons concept does not necessarily apply equally for each actor. Some researchers argue that large emitters, which China and the U.S. are, have unique incentives to engage in unilateral action, because they can have a meaningful impact on the outcome, but the cost of action is large on the domestic scene.

³ John Vogler, "Global Commons Revisited," *Global Policy* 3, no. 1 (2012): 61-63.

⁴ Kathryn Harrison and Lisa McIntosh. Sundstrom, *Global Commons, Domestic Decisions: The Comparative Politics of Climate Change (American and Comparative Environmental Policy)* (MIT Press, 2010), Kindle Edition.

For this reason, large emitters usually assign decisive weight to an opinion of domestic constituencies.⁵ These considerations are compatible with behaviour of both the U.S. and China with slight derivations as neither of them embarked the climate change initiative just for the sake of global commons. Beijing was using its unique position to gain benefits and show its stature over the last two decades, while the U.S., although there was a momentum created by three consequent administrations, never truly embarked the idea and the climate change was never accepted by Congress, mostly out of irrational fear of Chinese competition.

Despite a few irregularities, the concept of global commons serves as a theoretical framework for this work. The tragedy of the commons serves as an incentive for the two largest emitters to cooperate, because otherwise in an example of great power rivalry, if only one is involved the other risks falling behind. In early 2000s, there was a fear that if a country agrees to limit its emissions, it also jeopardizes its potential growth. However with global cooperation on green technologies, not being involved means a risk of technological stagnation in this area. Since it appears that Earth's atmosphere is slowly reaching the stage when it is no longer able to absorb emitted carbon dioxide without dangerous raise of global temperature by 2°C, the two largest emitters are incentivized to cooperate both bilaterally, to serve as an example and show its status of great world powers, and on multilateral basic to effectively address the climate change and share the burden with the whole world. This approach is partially conditioned by positive domestic conditions, especially in case of China, therefore this work will also focus on showing that the domestic conditions are suitable for climate change cooperation.

International Socialization and Social Influence

Another theoretical framework this paper works with is international socialization and social influence in the context of China's behaviour when it comes to climate change. This section is different because the U.S. – China relationship is approached from two different points of view and is specifically focused on China and its conduct within the global community. The United States is discussed only marginally, however it plays an equally important role. The reason why China is

⁵ Kathryn Hochstetler and Eduardo Viola, "Brazil and the politics of climate change: beyond the global commons," *Environmental Politics* 21, no. 5 (2012): 769.

discussed extensively is because it is an actor which is interacting with the international community in a different way than most other actors. Correspondingly, the U.S. is usually the initiator and the guarantor of a great number of global initiatives, it is also the representative of the developed world China strives to join. For that reason this paper considers the U.S. to be the actor that can use observations about China's international socialization to facilitate China's integration into global community. That would be accomplished through pattern recognition of Beijing's behaviour in an environment of international institutions and the global community, resulting in the U.S. taking an appropriate course of action derived from understanding of China's motives. Based on this understanding, as the leading member of the international community, the U.S. can form and adjust the new initiatives, such as the climate change adaptation and mitigation, with regards to China's needs to make the collaboration easier. Obama administration applied this approach in years leading to the Paris Agreement, as will be further discussed in later chapters.

China's behaviour in context of dealing with climate change is partially compatible with the theory of social influence, as argued by Alastair Iain Johnson, who describes it as a "sensitivity to international image, hence a desire to maximize the normatively accepted markers of high-status actor, combined with the institutional environment conducive to the attribution of such status," which was in several instances displayed by China's leadership. In addition to role theory, which has been used to explain the instances when countries chose to abide by norms or moral principles that were in contrast with realpolitik practise, the theory of social influence as suggested by Johnson focused on the role of status maximization in cooperative behaviour.⁶ In like manner, some aspects of theories on international socialization offer an insight into China's role in international organizations and attempts of the U.S. to influence Beijing. According to the not yet firmly established theories of international socialization this diplomatic influence is and its goal is to change mind of others through noncoercive means, such as persuasion or shaming, into accepting new facts, norms and causal understanding of particular issues. This was happening during the Clinton administration when the engagement with China was seen as a way of teaching Beijing about rules of international relations.⁷ This sentiment was taken a step further after the

⁶ Alastair Iain. Johnston, *Social states: China in international institutions: 1980-2000* (Princeton, NJ: Princeton University Press, 2008), 75-6, 197.

⁷ *Ibid.*, 2.

2005 influential speech of the then-Deputy Secretary Robert Zoellick. He suggested that Washington should take up a quest to make China a responsible stakeholder in the matter of global issues to counter China's free-riding on its status of a developing country. Beijing frequently found itself in "Club of One,"⁸ which was a situation when Beijing stood against majority of the international community as for instance is the case of North Korea.

Specifically applied to climate change, international socialization and social influence help to explain China's gradual acceptance of the concept. At first, Beijing viewed the climate change initiative with suspicion, but eventually China became a leader of global climate change adaptation and mitigation efforts. It needs to be recognized that China has distinctly pragmatic approach to deal with the global community, as will be developed below, therefore there needed to be favourable domestic conditions before China decided to pursue the climate change initiative. Nevertheless favourable domestic conditions do not explain why China felt incentivized to become a leader of the initiative. That can be explained by international socialization and social influence. Climate change was from the start an endeavour supported by prestige of rich and developed Western democracies, especially the European Union, and also by the two latest Democratic presidents in the White House. China was lured by incentives, persuasion and after Copenhagen, also by shaming. Moreover the climate change leadership signifies stature and prestige which China as a country sensitive to international image later embraced. To better illustrate China's behaviour the following subchapter will analyze China's behaviour within international institutions with focus on climate change, which is also relevant for the U.S. – China cooperation because of the close interconnection of bilateral and multilateral aspects of climate change.

China's behaviour in international institutions

China endured what it considers a century of humiliation. Starting with the Opium War, parts of China were slowly taken away by foreign powers, usually wealthy ports like Hong Kong, Shanghai, but also the production heartlands, as Manchuria. The century of humiliation ended with establishment of People's Republic of China, when the country was united and all foreign influences chased away. The humiliation by the Western Powers and Japan became a part of Chinese national identity and a tool for the

⁸ Ann Kent, "China's International Socialization: The Role of International Organizations," *Global Governance* 8, no. 3 (July & aug. 2002): 346, JSTOR.

Communist Party of China to use usually when it needs to whip up nationalistic sentiment. The heritage of colonialism means that today China is extremely sensitive to even a slightest hint that it might be forced to behave according to wishes of another country and not necessarily its own.⁹ It heavily influenced the way China as a nation perceives itself in the world and likewise it had an effect on its foreign policy, which was further shaped by Chinese history of being a part of the Second World and its persisting authoritative regime. For this reason China's attitude to international community and international institutions is strongly influenced by moral principles it adheres to, the most important being absolute sovereignty, the rights to national self-determination and independence.¹⁰ The best example of acting based on this principle is China's opposition to Responsibility to protect principle of 2005, which China effectively blocks, with few exceptions as Libya 2010, and is with direct contrast with principles advanced by Beijing.¹¹

The interaction within international organizations and community is different for China than for liberal democracies, because cooperative behaviour and acceptance of interdependence that stems from international collaboration is more costly. That is because for liberal democracies, cooperation and interdependence are usually compatible with domestically observed standards and goals, while interdependence for China can mean instability, danger to authority of CCP leaders and conflict with domestic culture.¹² That is why China is always cautious or even defensive when it comes to new initiatives of the global community. Contrastingly to Beijing's adherence to moral principles, China always strives to preserve an environment that is beneficial to its foreign policy goals and enhancing its international status. The interaction within international institutions is a source of prestige, status and domestic legitimacy, especially if China manages to negotiate favourable conditions. And because of its unique conditions, Beijing very often does. A large portion of this negotiation power comes from the fact that China is a permanent member of the Security Council. Because of its uniqueness, otherness, China often finds itself leveraging the veto power, usually by actually or implicitly threatening to use it. In other cases, China uses its growing economic power to assert its interests. Similarly, China often uses its status of a

⁹ Thomas J. Christensen, *The China Challenge: Shaping the Choices of a Rising Power* (New York: W.W. Norton & Company, 2016), xv.

¹⁰ Kent, "China's International Socialization," 347.

¹¹ Christensen, *The China Challenge*, 59.

developing nation to get benefits in areas where claiming those benefits is morally objectionable.¹³ However with the Paris agreement, China accepted its role in climate change initiative, even though there was plenty of space to manoeuvre that would allow China not to make any commitments without significantly damaging its reputation. In case of carbon emissions, as a developing country China could still argue that it is entitled to the same emission volume as the developed countries used during their development or argue with the fact that it is still emitting close to three times less CO₂ per capita compared to the U.S. Despite that China agreed to peak its emissions in 2030.

Overall China's interaction with the international community can be characterized as pragmatic. Although Beijing leadership follows a few strong principles especially when it comes to sovereignty, it rarely resorts to being an obstacle in questions of global importance by for instance using the Security Council veto power. On the contrary, China is often willing to use its unique position as a developing country with a reach of a great world power, just as well as its position on the other side of the aisle from the West in a number of global issues to let itself be lured into cooperation. Similarly, China is willing to compromise if it leads to elevating its international status, in which case Beijing tones down its foreign policy realism.¹⁴ When it comes to participation and leadership in global environmental projects, since the 1990s, China is distinctly concerned with its stature, prestige and the perceived image of China by other countries. This played a role in different spheres of international negotiation as well, as for instance during the process of creation of the Non-proliferation Treaty when China stopped opposing the treaty and eventually signed in fear of being isolated. However the status in environmental policy issues became prominent, as China intended to have its voice heard. Therefore China's participation in global environmental initiatives was on the rise to show the world that China is entitled to a level of participation equal to its great power status.¹⁵

¹² Kent, "China's International Socialization," 348.

¹³ *Ibid.*, 346.

¹⁴ *Ibid.*, 358.

¹⁵ Johnston, *Social states*, 133-134.

Environmental Cooperation

The last theoretical approach applied in this work is a concept of environmental cooperation as an instrument for conflict solution. This idea appeared in the 1990s as an attempt to find new ways of conflict solution. It is based on a notion that conflict and cooperation can coexist and collaboration on management and use of environmental resources can lead to better communication, interaction and subsequently increase trust between the two actors in conflict. The theory gained recognition and some aspects of it were implemented within area of focus of international institutions, however its real world application remains highly questionable and there are weaknesses in its theoretical foundations.¹⁶ Because of the imperfections of the concept of environmental cooperation as an instrument for conflict solution as well as its partial applicability to the U.S. – China relationship, which is not conflicting, the concept was modified and toned down in its aspirations for the purposes of this work. Instead of having an ambition of conflict solution based on environmental cooperation, the theory is applied in a form of cooperation enhancement based on climate change cooperation. The basic elements of the theory remain the same, the collaboration on mitigation of the negative impacts of climate change will lead to improved interaction and communication between the U.S. and China, which will in turn increase trust between them, resulting in overall healthier relationship.

While combining the above theoretical approaches, this work also strives to present climate change cooperation as a form of collaboration with a strong potential for improving bilateral and multilateral relationships. Firstly, there are no losers in this interaction. If the international community decides to collaborate on reduction of CO₂ emissions under agreed conditions, every member will benefit from prevention of rise of global temperature. Similarly joint research of green technologies is likely to be shared to all committed members, which is a logical course of action as the motive behind the research is to mitigate climate change, because it is an imperative to have as many countries on board as possible for the mitigation to be effective. We can also contrast the climate change cooperation with trade and economic interdependence, which is arguably the most important aspect of the U.S. – China relations. Trade however does not always facilitate improvement of the bilateral relationship, as is

¹⁶ Šárka Waisová, Nikola Klímová, and Lenka Kudláčková, *Environmentální spolupráce jako nástroj řešení konfliktů: aktéři, podmínky vzniku a fungování* (Praha: Libri, 2016), 2.

apparent for instance from the relations between Turkey and Russia. The economic interdependence can exist even in environment of political conflict and geopolitical rivalries.¹⁷ Given the nature of climate change cooperation and the commitments countries need to make in order to join the global initiative, it can be argued that climate change cooperation does not thrive in the environment of constant geopolitical rivalry and political conflict. It needs favourable conditions to exist, but once the cooperation is launched, it has a strong potential to improve the bilateral relationship and amend the differences. This can be illustrated by for instance by the fact that Obama administration ceased all Freedom of Navigation Operations (FONOP) to South China Sea from 2012 to 2015. The causal link is impossible to prove, however there is likely to be a correlation between the suspension of FONOPs and efforts of the Obama administration to get China to sign the Paris Agreement.¹⁸

Global Climate Change Initiative

The environment and weather are the ultimate agents of change. Uprisings, rebellions, revolutions, coups, wars, massive migrations, but also adaptation and development of new technologies, those all were either directly or indirectly caused by changing or unusual weather conditions at some point in history. Climate change promises strong deviations from common patterns of nature, signifying increase of temperature, more frequent natural disasters like tornadoes, floods, draughts, change of habitat, elevation of sea levels. With this in mind, it is possible to argue that the years ahead of us will not be as stable as many of us expect in the post-Cold War world. We may not experience catastrophic wars, nevertheless climate change is likely to fuel significant alteration in social structures of many countries. Climate change is an issue that was discussed on many occasions and in many different environments. It has often become a subject of debates and by time even political clashes between the conservatives and liberals. The integrity of the idea of climate change caused by human endeavours was called into a question, nevertheless nowadays it can be argued that climate change is accepted as an undeniable scientific fact. The debate about human

¹⁷ Ziya Öniş and Şuhnaz Yılmaz, "Turkey and Russia in a shifting global order: cooperation, conflict and asymmetric interdependence in a turbulent region," *Third World Quarterly* 37, no. 1 (2015): 89.

activity and carbon emissions fuelling the climate change is still continuing, but it was pushed aside by the acceptance of the change itself as the international community agreed on a necessity of a multilateral commitment to combat global warming, as will be developed further in following lines.

The efforts to mitigate negative impacts were initiated by United Nations Framework Convention on Climate Change (UNFCCC) that entered into force in March 1994.¹⁹ These efforts are supported by the leading international body for assessment of climate change, the Intergovernmental Panel on Climate Change (IPCC) founded in 1988 by United Nations Environment Programme and the World Metrological Organization. IPCC is the world's most authoritative institution in the context of climate change research, as it employs thousands of researchers and climate change specialists from all over the world and it works under auspices of the United Nations. The IPCC is currently a host for 195 member countries whose government participate in review process and plenary Sessions.²⁰ Along the plenary Sessions, the organization has several working groups, each dealing with different aspect of climate change. The IPCC releases a number of different reports and studies, however those all culminate in Assessment Reports, authoritative documents that contains results of years of research that serves as a basis for international negotiation about climate change mitigation. The latest two Assessment Reports were released by IPCC in 2007 and 2014.²²

Because the goal of this work is to show that climate change can serve as a pillar of the U.S. – China relationship, the basic premise is that both parties acknowledge the existence of climate change as a global problem which must be addressed. For that purpose, based on a research of IPCC and its latest Assessment Report, this paper asserts a claim that climate change is an undisputable scientific fact. According to the IPCC report, warming of the climate system is unequivocal and the human influence is clear.²³ Given the existence of climate change denial, especially

¹⁸ Michael Paul, "The United States, China and the Freedom of the Seas Washington's FONOPs Conflict with Beijing," *German Institute for International and Security Affairs*, March 2016, 2.

¹⁹ "First steps to a safer future: Introducing The United Nations Framework Convention on Climate Change," United Nations Framework Convention on Climate Change, , accessed July 4, 2017, http://unfccc.int/essential_background/convention/items/6036.php.

²⁰ The 46th Session will take place in Montreal, Canada in September 2017.

²¹ "Organization," Intergovernmental Panel on Climate Change, , accessed June 9, 2017, <https://www.ipcc.ch/organization/organization.shtml>.

²² "Climate Change 2014 Synthesis Report," Intergovernmental Panel on Climate Change, 2015, , accessed May 23, 2017.

"Climate Change 2007 Synthesis Report," Intergovernmental Panel on Climate Change, 2007, , accessed May 23, 2017.

²³ "Climate Change 2014 Synthesis Report," 2.

present with the U.S. Republican party and the current administration,²⁴ it must be noted that the denial is never based on scientific evidence. The most prominent argument among the climate change deniers is that climate change is not caused by human activity, therefore it is needless to address it. However even beyond the conclusions of the IPCC, there is a broad scientific consensus that climate change is very real,²⁵ and it indeed is anthropogenic.²⁶

Furthermore, to provide a better grasp on climate change and to illustrate why the international cooperation matters, we will shortly focus on its negative impacts, which are often mentioned in documents and statements released by the Obama administration that will be thoroughly discussed in following chapters. Evidence of climate change impacts is the strongest for natural systems. There are changes in precipitation, melting of snow and ice that is altering hydrological systems and these changes are affecting quality and quantity of water resources. Animals of all sorts have shifted their ranges, seasonal activities and patterns of migration. In agriculture, climate change is already negatively affecting crop yields. Moreover, the climate change is causing increasing frequency of extreme weather and climate events, such as heat waves, daily temperature extremes, heavy precipitation events which implies greater risks of flooding at regional scale. Furthermore it causes the widely discussed rising sea levels.²⁷

When climate change adaptation and mitigation efforts were ignited with creation of the UNFCCC, no one knew how long it would take until the international community reaches an agreement. Although there is still some work ahead, the success of Paris Agreement overshadows both the Kyoto Protocol and Copenhagen Accord. The Paris Agreement is a major milestone of more than 25 years long effort to introduce a viable legally binding treaty to address the climate change on a global scale. All signatories of the Paris Agreement made several commitments. Firstly, they agreed to keep global temperature increase below 2°C above the pre-industrial levels while pursuing efforts to limit the increase to 1.5°C above pre-industrial levels. Secondly, the parties agreed that in order to achieve the temperature goal, all of them must reach

²⁴ Clare Foran, "Donald Trump and the Triumph of Climate-Change Denial," *The Atlantic*, December 25, 2016, accessed July 4, 2017, <https://www.theatlantic.com/politics/archive/2016/12/donald-trump-climate-change-skeptic-denial/510359/>.

²⁵ "Scientific consensus: Earth's climate is warming." NASA: Climate Change. Accessed July 12, 2017. Scientific consensus: Earth's climate is warming.

²⁶ "Climate Change 2014 Synthesis Report," 5.

²⁷ "Climate Change 2014 Synthesis Report," 7-8.

peaking of the greenhouse gas emissions as soon as possible to a level that our planet can naturally absorb anthropogenic emissions in the second half of the century. Thirdly, the Paris Agreement establishes nationally determined contributions (NDC) which are binding commitments to limit emissions and each country sets these goals for itself. The progress is to be reported every five years and each successive NDC must represent a progression compared to the last one. Developed countries should take the lead via economy-wide reduction targets while developing countries should continue enhancing their mitigation efforts.²⁸ The Paris Agreement is a landmark, however it is only the beginning of a shift towards a world with sustainable CO₂ emissions, since only some elements of the treaty are legally binding.²⁹ So far 155 parties have ratified the Paris Agreement and it entered into force in November 2016, since the requirement of at least 55 countries representing 55 percent of global emissions for the treaty to enter into force was fulfilled.³⁰

The U.S., China, the environment and climate change

China is currently dealing with significant environmental issues, most evident being the high levels of air pollution, especially the area between Beijing and Shanghai. According to some estimates, breathing Beijing's air is equivalent to smoking 40 cigarettes a day. The Economist called it "airpocalypse".³¹ That was certainly a wakeup call for the Chinese government. Fortunately for Chinese citizens, since 2013 China started to take the environmental problems seriously and several plans have been formed to deal with the situation.³² China experienced rapid growth and it can be speculated that some governmental officials turned a blind eye to evident violations of environmental regulations in order to maintain good results. The disregard of environmental policies burst out in 2014, as was illustrated by thousands of dead pigs

²⁸ "Summary of the Paris Agreement," United Nations Framework Convention on Climate Change, , accessed June 14, 2017, <http://bigpicture.unfccc.int/#content-the-paris-agreemen>. "The Paris Agreement," United Nations Framework Convention on Climate Change, , accessed June 25, 2017, http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf.

²⁹ Helen Briggs, "What is in the Paris climate agreement?" BBC, May 31, 2017, , accessed July 2, 2017, <http://www.bbc.com/news/science-environment-35073297>.

³⁰ "The Paris Agreement Status," United Nations Framework Convention on Climate Change, , accessed June 25, 2017, http://unfccc.int/paris_agreement/items/9485.php.

¹³ "Mapping the invisible scourge," The Economist, August 15, 2015, , accessed July 3, 2017, <http://www.economist.com/news/china/21661053-new-study-suggests-air-pollution-even-worse-thought-mapping-invisible-scourge>.

³² "China wants to clear the air with a market-based approach to pollution," The Economist, September 24, 2015, , accessed June 29, 2017, <https://www.economist.com/news/china/21666081-most-promising-part-programme-its-promise-involve-public-china-wants-clear>.

floating in water reservoirs supplying cities with drinking water.³³ There certainly is a correlation between degradation of the environment and support for climate change friendly policies, which is the case in China. The Chinese are one of the least concerned nations when it comes to climate change. Only 18% of them considers climate change to be a very serious problem. However 71% of Chinese support that China should limit greenhouse gas emissions as a part of an international agreement.³⁴ These results show that although the Chinese are not concerned with dangers of climate change, they care about their environment and agree that climate change adaptation and mitigation policies have a positive impact on the environment. Even though China was investing heavily into green technologies since before the Copenhagen Conference, as of 2015 low-carbon growth were one of the top priorities.³⁵

We can see that the environment and its state is a topic of special importance in China and the government is taking resolute steps to remedy the situation. Several studies have been conducted on the topic of environmental damage and air pollution. Furthermore, the president Xi Jinping carried out a huge crackdown on corrupted officials in 2015, as the corruption was rampant.³⁶ Of course, there is no way of determining how many of the individuals charged of corruption were guilty and to what extend is this crackdown a power struggle. Nevertheless corruption and the neglect of environmental protection go hand in hand, it is not hard a to imagine a situation where a local official accepts a bribe in exchange for turning a blind eye to environment damaging activities. From that we can conclude that the anti-corruption crackdown could be to some extent beneficial for environmental protection.

When it comes to climate change, China is an active participant of the talks. Its environmental problems are closely connected to it and, to certain extent, both of these issues overlap. Before the 2015 UN climate change conference, China released the latest scientific study of the impacts of the global warming on China and there is an intense

³³ Jennifer Duggan, "Dead pigs floating in Chinese river," *The Guardian*, April 17, 2014, , accessed June 15, 2017, <http://www.theguardian.com/environment/chinas-choice/2014/apr/17/china-water>.

³⁴ Bruce Stokes, Richard Wike, and Jill Carle, "Global Concern about Climate Change, Broad Support for Limiting Emissions," *Pew Research Center's Global Attitudes Project*, November 05, 2015, , accessed April 11, 2017, <http://www.pewglobal.org/2015/11/05/global-concern-about-climate-change-broad-support-for-limiting-emissions>.

³⁵ Geoff Dombicki, "The Convenient Disappearance of Climate Change Denial in China," *Foreign Policy*, May 31, 2017, , accessed June 1, 2017, <http://foreignpolicy.com/2017/05/31/the-convenient-disappearance-of-climate-change-denial-in-china/>.

³⁶ Stephen McDonnell, "Xi Jinping: Chinese president's anti-corruption push gives hope to some, but rings alarm bells for others," *ABC News*, August 10, 2015, , accessed June 17, 2017, <http://www.abc.net.au/news/2015-08-11/xi-jinpings-chinese-corruption-drive-under-scrutiny/6686280>.

research when it comes to global warming's influence on agriculture, as China aims to be self-sustainable without a need to rely on foreign markets.³⁷ Overall Chinese government takes climate change seriously and is currently a leading nation in terms of renewable energy investment and innovation. Beijing also pledged to cut its greenhouse gas emissions per unit of gross domestic product by 60-65% from 2005 levels, as well as increase the share of non-fossil fuels consumption to about 20% by 2030.³⁸

The position of the U.S. may seem a little conflicted, nevertheless president Obama put efforts to combat climate change one of the centrepieces of his policies for his last year in office. That is not surprising given the fact that it would be difficult for him to push some more controversial or domestic agenda lame duck president. He issued an executive order that calls for federal government to reduce greenhouse gas emissions by 40% compared to 2008 levels over the next decade, he also set a target for increasing the government's use of renewable energy.³⁹ Trying to do something about climate change requires international cooperation, therefore Obama's actions in home were a prelude to give U.S. any leverage on international field, as any U.S. involvement in talks without leading by example would be seen as hypocritical and consequentially fruitless.

There was an expected backlash against Obama's environmental policies and although this work is not a place to discuss the partisan divisions in the U.S., comparing arguments of both sides would surely bring interesting results. According to Pew Research Center, climate change unfortunately became a deeply partisan topic. The differences between conservative Republicans and liberal Democrats are stunning. To illustrate, only 15% of conservative Republicans believe that Earth is warming mostly due to human activity, while among liberal Democrats the number is 79%. The conservative Republicans are also very distrustful of scientists and generally do not think that scientists can be trusted to provide full and accurate information on causes of climate change.⁴⁰ The fact that climate change became a partisan issue made the situation extremely complicated and unless Americans find a way to convince their

³⁷ Chris Buckley, "The Findings of China's Climate Change Report," *The New York Times*, November 30, 2015, , accessed July 6, 2017, <http://www.nytimes.com/2015/12/01/world/asia/china-climate-change-global-warming.html>.

³⁸ Jennifer Duggan, "China makes carbon pledge ahead of Paris climate change summit," *The Guardian*, June 30, 2015, , accessed May 9, 2017, <http://www.theguardian.com/environment/2015/jun/30/china-carbon-emissions-2030-premier-li-keqiang-un-paris-climate-change-summit>.

³⁹ Pam Hunter, "Obama Order Calls for More Greenhouse Gas Cuts," *ENR: Engineering News-Record* 274 (April 6, 2015): , accessed April 16, 2017, EBSCO.

⁴⁰ Cary Funk and Brian Kennedy, "The Politics of Climate," Pew Research Center, October 04, 2016, , accessed July 30, 2017, <http://www.pewinternet.org/2016/10/04/the-politics-of-climate/>.

conservative counterparts to trust science, the impasse is likely to remain. Fortunately even despite this deep division, there is still an overall support for climate change policies, as 45% of Americans considers climate change to be a very serious problem and 69% supports limiting greenhouse gas emissions through some sort of international agreement.⁴¹

As stated above, the Trump administration will be treated as an episode in the long period of climate change mitigation efforts. However, if we move past the highly questionable climate change denial, the Paris Agreement still remains controversial for the U.S. The reason for that is that Obama administration took an unprecedented course of action and the President joined the Paris Agreement via an executive order without seeking approval of the Senate. What is more, the Obama administration planned to bypass the GOP controlled Congress from the start and during the Paris Agreement negotiation the White House tried to adjust the treaty to fall into category of *sole executive agreement*, to be adoptable just via the executive order. That is however still disputable, therefore the Paris Agreement might need to be ratified by the Senate after all. Moreover Obama ensured that there is an unusually long four-year withdrawal provision in order to prevent successive administrations from reversing the course. If Trump decides to withdraw from the Paris Agreement, it will take effect after four years, therefore his potential successor can stop the process. In all honesty, the critics of Obama's approach are fully justified to raise objections. Why should the United States of America be denied the opportunity to submit the treaty to internal treaty-ratification process, which is usually conducted through presenting the treaty to the legislature when all other liberal democracies are entitled to do so?⁴²

The U.S. and China are the two largest producers of carbon dioxide. Both states are suspicious of each other and it was unlikely that one would unilaterally make any major. However there is a consensus on this issue between China and the U.S. and on 25th of September 2015 the states issued a joint statement on climate change, which reaffirmed a common stance on Paris conference, countermeasures to climate change and strengthening of cooperation. So far both states have established cooperation in several areas as data collection, sustainable forestry or low-carbon cities. They also pledged to offer financial support to other developing countries to reduce greenhouse

⁴¹ Stokes, Wike, and Carle, "Global Concern about Climate Change."

emissions and emphasized the need for low-carbon transformation of the global economy.⁴³ The following chapter will explore climate change cooperation between the U.S. and China since the initiation of Strategic Economic Dialogue by George W. Bush.

The U.S. – China Cooperation on Climate Change

Climate change cooperation between the U.S. and China started to play a prominent role in the second term of George W. Bush as a president of the United States. It was not focused on climate change adaptation and mitigation directly, therefore we can say that Bush 43 planted the roots. With Chinese president Hu Jintao, Bush formed Strategic Economic Dialogue (SED) that along with Strategic Dialogue became the backbone of the U.S. – China relationship. Within the framework of SED, Washington and Beijing set up the Ten-Year Framework for Cooperation on Energy and Environment, which because of its large scope and interconnecting high level officials and ministries of both countries created a foundation for what later became a close and productive relationship. When Barack Obama became president, he continued and expanded all of these initiatives and elevated the bilateral environmental cooperation into a centerpiece of global initiative against negative impacts of climate change. The Chinese leadership was not yet willing to take the full burden of climate change abatement, therefore getting China on board was a challenge. Nevertheless in the end both countries ended up signing the 2015 Paris agreement. This chapter will discuss the progress of the U.S. China climate change cooperation and analyze the most crucial developments, with the exception of the Paris Agreement, which was thoroughly analyzed in the previous chapter and although it is a successful culmination of several years of work, its importance lays in its global significance and it is rather a continuation of established policies in the bilateral relationship between the U.S. and China rather than a new development. Nevertheless this chapter will illustrate how the climate change initiative serves as a pillar of the U.S. – China relations.

⁴² Eugene Kontorovich, "The U.S. can't quit the Paris climate agreement, because it never actually joined," *The Washington Post*, June 1, 2017, accessed June 15, 2017, <https://www.washingtonpost.com/news/volokh-conspiracy/wp/2017/06/01/the-u-s-cant-quit-the-paris-climate-agreement-because-it-never-actually-joined>.

⁴³ Junfeng Li and Chen Ji, "China and U.S. Unite for a Greener World," *China Today* 65, no. 1 (January 2016): , accessed February 26, 2017, EBSCO.

Strategic and Economic Dialogue

George W. Bush and Hu Jintao set up the Strategic Economic Dialogue (SED) in September 2006 to create a framework for bilateral economic dialogue in a time when economic relations between the U.S. and China were steadily becoming more and more complex. This biannual forum was the first of its kind and facilitated contact between officials of highest levels and was aimed at searching for solutions of long-term challenges.⁴⁴ In 2004 in the same spirit the Presidents also set up the Strategic Dialogue, which enabled closer coordination on strategic issues.⁴⁵ The goal of this initiative was to make China a “responsible stakeholder” in international affairs, based on Robert Zoellick’s strategic approach to the U.S. – China relations as the Secretary of State.⁴⁶ In 2009 Barack Obama continued and expanded his predecessor’s initiative a level further to include overall strategic considerations and established Strategic and Economic Dialogue (S&ED) The Dialogue was split into two tracks, Strategic Track and Economic Track. Beijing and Washington agreed to deepen cooperation in counterterrorism, law enforcement, science and technology, education, culture and health and also to resume and expand consultations on non-proliferation and other international security topics. The two sides also agreed to improve and develop military-to-military relations and a number of exchange programs. The S&ED was designed to tackle a wide array of issues including practical cooperation in energy, the environment and climate change, building on China-US Ten Year Energy and Environment Cooperation Framework, collaborate on renewable and clean energy technologies and energy efficiency.⁴⁷ The S&ED had very strong and positive impact on the U.S. – China relations. It delivered several agreements that include expansion of air services, tourism, emissions trading regime, bilateral investment treaty, strengthened cooperation on intellectual property rights protection and policies that are designed to help China’s

⁴⁴ "Fact Sheet Creation of the U.S.-China Strategic Economic Dialogue." U.S. Department of the Treasury. Accessed February 7, 2017. <https://www.treasury.gov/press-center/press-releases/Pages/hp107.aspx>.

⁴⁵ "China, U.S. to hold 5th round of strategic dialogue." Embassy of the People's Republic of China in the United States of America. Accessed January 21, 2017. <http://www.china-embassy.org/eng//zmgx/zmgx/Military%20Relationship/t398343.htm>.

⁴⁶ Dennis Wilder, "The U.S.-China Strategic and Economic Dialogue: Continuity and Change in Obama's China Policy," Brookings, July 28, 2016, , accessed May 4, 2017, <https://www.brookings.edu/articles/the-u-s-china-strategic-and-economic-dialogue-continuity-and-change-in-obamas-china-policy/>.

⁴⁷ "Statement On Bilateral Meeting With President Hu Of China," The White House, April 1, 2009, , accessed March 3, 2017, <https://obamawhitehouse.archives.gov/the-press-office/statement-bilateral-meeting-with-president-hu-china>.

economy to a pattern of sustainable growth.⁴⁸ Some of these policies were conceived by Bush Administration, however Obama significantly increased the scope of the cooperation, especially beyond the economic sphere. The S&ED proved to be very effective at establishing deeper and better connection between China and the United States. It significantly improved the practices set up by SED, as it enabled high-level, interagency process that focused on cooperation with Chinese counterparts on strategic issues and set concrete steps in motion. Before S&ED, Beijing never used the phrase “climate change” in official talks.⁴⁹ Secretary Clinton made climate change and clean energy one of the main priorities of the Dialogue and the partnership was created not only on a governmental level, but also between private actors and academic institutions.⁵⁰

The U.S. – China Ten-Year Framework for Cooperation on Energy and Environment

The next important step was The U.S. – China Ten-Year Framework for Cooperation on Energy and Environment (TYF) formed in June 2008 at the fourth meeting of the U.S. – China Strategic Economic Dialogue. It was expanded a year later by the Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and Environment (MOU). The TYF was a crucial first step in environmental cooperation between the United States and China. Nowadays the provisions of the TYF and achievements of Bush administration in general in the field of environment protection are being underestimated, however the TYF is in fact quite complex agreement that lays out several detailed action plans. Those are Clean Air, Clean and Efficient Transportation, Clean, Efficient and Secure Electricity, Clean Water, Protected Areas/Nature Reserves, Wetlands Conservation as well as EcoPartnerships. All of those action plans had a detailed roadmap and all of them included interagency cooperation on a level of departments and ministries. As an addition, the MOU specified the role of the TYF and established a new dialogue and cooperation mechanism on climate change. Similarly, the MOU added some action plans of its own, as the Energy Efficiency

⁴⁸ Mercy A. Kuo, "Assessing The US-China Strategic And Economic Dialogue," *The Diplomat*, July 20, 2016, , accessed June 5, 2017, <http://thediplomat.com/2016/07/assessing-the-us-china-strategic-and-economic-dialogue/>.

⁴⁹ *Ibid.*

⁵⁰ Wilder, "The U.S.-China Strategic and Economic Dialogue."

Action Plan into the dialogue and set the basis for future climate change adaptation and mitigation efforts.⁵¹ The MOU has a special significance, because it added climate change to the discussion. Climate change was for the first time described as being among the greatest challenges facing the United States and China. Furthermore, it was also the first time both nations agreed that “cooperation on climate change, clean and efficient energy and environmental protection can serve as a pillar of the bilateral relationship, build mutual trust and respect, and lay the foundation for constructive engagement between the United States and China for years to come, while also contributing to multilateral cooperation.”⁵² Thus along with the MOU’s improvements, the TYF became a foundation of the U.S. – China cooperation on climate change. In this sense, the MOU is also a representation of Obama’s take on the Bush administration’s policies, which he continued and expanded, the same way the Obama administration handled SED. Most of the action plans and the interagency cooperation were already in place when Barack Obama became president. However, he also elevated the endeavour from a simple environmental cooperation into a completely new level. Obama added climate change into the discussion and envisioned a way climate cooperation would lead to better relations between Washington and Beijing. The initiative was given new sense of significance and urgency, which was also likely based on a need for cooperation of both largest emitters for the upcoming multilateral negotiations in Copenhagen. It was a win-win solution with, on the one hand, potential for strengthening relations with China and on the other hand facilitating the necessary base for multilateral action on climate change, a strategy Obama used the same way 2014 in before the Paris Conference to assure the world that China and the U.S. are on board.

The 2009 Copenhagen Conference

The following significant development in the U.S. – China collaboration on climate change was the 2009 United Nations Climate Change Conference in Copenhagen, which is usually considered a failure. There were some advancements, however absence of commitments to emission reductions doomed it to be just another

⁵¹ "U.S.-China Ten-Year Framework for Cooperation on Energy and Environment." U.S. Department of State. Accessed July 31, 2017. <https://www.state.gov/e/oes/eqt/tenyearframework/>.

⁵² "U.S.-China Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment." U.S. Department of State. Accessed January 14, 2017.

step to a meaningful legally binding agreement. Reportedly, China insisted all figures, even those not applying to China, to be stripped from the final Copenhagen accord. Beijing also insisted on removal of language suggesting that Copenhagen is a first step on a road to a legally binding treaty. Nevertheless there was one positive outcome, China agreed to limit its carbon footprint by 40-45% by 2020, however only in terms of carbon emitted in proportion to output. The number appears very reasonable, nevertheless it is definitely not as progressive as it sounds. In other words it means that China pledged to reduce the rate at which its emissions rise in correlation with GDP. Therefore it is not an overall reduction, only a slower increase.⁵³

Provisions of the Copenhagen Accord were thoroughly discussed in previous chapter, therefore in this section it will be analyzed through the lens of the U.S. – China relations. The reason why George W. Bush considered the Kyoto Protocol to be of no use was because it granted an exempt to developing countries, including China. He knew that without China on board, the Protocol will not only be a failure globally, but will also never be ratified at home.⁵⁴ That is a sensible approach given the fact that China was the largest CO₂ emitter by 2005⁵⁵ with projections for its emissions to steeply rise, as well at the post-Cold War rivalry and overall attitude towards China in the grounds of the Congress. To illustrate, Barack Obama did not even try to present the Paris Agreement to Congress for ratification although China was on board, therefore we can conclude that without China being bound by the same or very similar commitments, there was no hope at all.

A month before the Copenhagen Conference, China's chief negotiator, Xie Zhenhua, had a speech in Beijing. The language he used is very telling of Chinese position at the time. It showed that Beijing was supportive of cutting emissions and green policies and Mr. Xie talked for example about "remarkable reduction of CO₂ emission per unit GDP in 2020 compared with that of 2005," 15% of total primary

<http://web.archive.org/web/20150302024448/https://www.state.gov/r/pa/prs/ps/2009/july/126592.htm>.

⁵³ "China's thing about numbers," *The Economist*, January 02, 2010, , accessed May 19, 2017, <http://www.economist.com/node/15179774>.

⁵⁴ Thomas J. Christensen, *The China challenge: shaping the choices of a rising power* (New York: W.W. Norton & Company, 2016), 240.

⁵⁵ "CO₂ time series 1990-2015 per region/country." EDGAR - GHG (CO₂, CH₄, N₂O, F-gases) emission time series 1990-2012 per region/country - European Commission. Accessed March 16, 2017. <http://edgar.jrc.ec.europa.eu/overview.php?v=CO2ts1990-2015&sort=des5>.

energy consumption coming from non-fossil sources and more.⁵⁶ That surely added to the overall hopeful atmosphere that was surrounding the expected Copenhagen Conference, however the important message in Mr. Xie's speech was different. After suggestion for each country to implement the UNFCCC and Kyoto Protocol, he mentions that the global community should "adhere to the principle of common but differentiated responsibility."⁵⁷ This statement shows that Washington and Beijing were heading for an impasse from the beginning, as China was not ready to be taken outside of the privileged position of developing countries in the negotiation, something necessary for the U.S. to ratify the treaty at home and also something highly desirable to make the treaty viable.

Why then, was the Chinese behaviour so severe? The minor reason is that Chinese delegates were upset with one of the provisions of the proposed treaty, which was transparent verification of the emission goals, which China vigorously opposed. At one point, Secretary Clinton and President Obama attempted to force China into accepting independent verification by setting up \$100 billion fund for developing countries in exchange for letting others verify the progress. That put pressure on Beijing, because most developing countries were happy to make that trade. However China viewed it with high suspicion as a threat to its sovereignty and what is more, it threatened to officially reveal the fact that Beijing does not have absolute control over the regions and some of the reporting systems in place in China are far from accurate. In the end, this provision was omitted from the final accord and developing countries were only compelled to self report their emissions every two years.⁵⁸

The major reason for the dissenting stance was the fact that China, despite some environmental progress and newly implemented green technologies⁵⁹, was not ready to risk a slowdown of its booming economy for sake of global action against climate change. There were also traditional irrational voices suggesting that rich nations

⁵⁶ "Speech at the Opening Ceremony (Xie Zhenhua)," Ministry of the Environmental Protection, PRC, March 20, 2010, , accessed April 8, 2017, http://english.mep.gov.cn/Events/Special_Topics/AGM_1/2009agmpp/speech09/201605/t20160524_344774.shtml.

⁵⁷ Ibid.

⁵⁸ John Lee, "How China Stiffed the World in Copenhagen," Foreign Policy, December 21, 2009, , accessed February 24, 2017, <http://foreignpolicy.com/2009/12/21/how-china-stiffed-the-world-in-copenhagen/>.

⁵⁹ Geoff Dembicki, "The Convenient Disappearance of Climate Change Denial in China," Foreign Policy, May 31, 2017, , accessed June 1, 2017, <http://foreignpolicy.com/2017/05/31/the-convenient-disappearance-of-climate-change-denial-in-china/>.

conspire against China to limit its growth⁶⁰, however the truth is that Beijing did not want to announce a peak year for its emissions. The world was licking its wounds caused by the global economic crisis which largely avoided China and the country was still rapidly growing. The main Chinese climate change negotiator Xie Zhenhua gave a speech at Beijing University a month after the Copenhagen Accord, where he explained his country's stance. Firstly he pointed out that because China is in an era of rapid industrialization and urbanization, its CO₂ emissions will continue to grow, therefore it is willing to agree on reductions per unit of GDP. Secondly, Mr. Xie said that 60-70% of total energy use comes from coal and low-carbon technological foundation is at poor level. Thirdly he asserted the rather paranoid attitude suggesting that the West wants to maintain its dominant position, seeking to limit China's economic development. Lastly Mr. Xie also confirmed Beijing's negative position on external checks.⁶¹

There was a strong tension between American and Chinese delegations at Copenhagen. China was very defensive and according to some commentaries, it was sabotaging the negotiation while trying to blame the U.S. for the failure. At one point, when Barack Obama was supposed to negotiating with Chinese prime minister Wen Jiabao, Beijing sent a second-tier official in an obvious diplomatic snub.⁶² It seems that the spirit of negotiation was poisoned from the start. The simplest explanation is that China was not ready for a commitment that would appease the U.S. Congress. The disenchantment on Chinese side was severe, not with climate change itself, but with requirements made by the West. After the Copenhagen Conference, climate change was even removed from national security consideration, which did not change until this day.

The 2013 Joint Statement on Climate Change

In April 2013 the U.S. and China issued a Joint Statement on Climate Change. This statement was an important moment in a history of climate change mitigation efforts, because the U.S. and China finally began working together. Since they are the

⁶⁰ Damian Carrington, Jonathan Watts, and Suzanne Goldenberg, "China's fears of rich nation 'climate conspiracy' at Copenhagen revealed," *The Guardian*, February 11, 2010, , accessed April 27, 2017, <https://www.theguardian.com/environment/2010/feb/11/chinese-thinktank-copenhagen-document>.

⁶¹ "Xie Zhenhua's Speech at Peking University, Guanghua College of Management, January 2010," *ChinaFAQs*, February 22, 2010, , accessed May 28, 2017, <http://www.chinafaqs.org/library/xie-zhenhuas-speech-peking-university-guanghua-college-management-january-2010>.

⁶² Mark Lynas, "How do I know China wrecked the Copenhagen deal? I was in the room | Mark Lynas," *The Guardian*, December 22, 2009, , accessed March 11, 2017, <https://www.theguardian.com/environment/2009/dec/22/copenhagen-climate-change-mark-lynas>.

two largest emitters of CO₂ in the world, any initiative is set for a good start with both of them on board. Moreover, so far it appears that the global anti-climate change initiative can continue with just one of the duo involved, albeit it is certainly helpful that it is China, who is by far the largest emitter being responsible for almost a third of global emissions of CO₂, although it has to be mentioned that China is doing quite well in comparison with the U.S. when it comes to emissions per capita.⁶³

The statement was released by both the U.S. Department of State and China's embassy in the United States. It highlights that both countries recognize the increased danger posed by climate change and an inadequate global response. The statement reports the following: "The two countries took special note of the overwhelming scientific consensus about anthropogenic climate change and its worsening impacts, including the sharp rise in global average temperatures over the past century, the alarming acidification of our oceans, the rapid loss of Arctic sea ice, and the striking incidence of extreme weather events occurring all over the world."⁶⁴ What is important to note here is that the statement recognizes climate change as man-made global problem and that the urgent rhetoric is based on "overwhelming scientific consensus". The Joint Statement calls for immediate action on global scale based on the U.S. – China partnership, and the initial goal is to "elevate the climate change challenge as a higher priority". To this end the United States and China announced creation of the Climate Change Working Group (CCWG) under the auspices of Strategic and Economic Dialogue (S&ED). The main purpose of the CCWG was to advance cooperation on technology, research, conservation and alternative and renewable energy. In the spirit of elevating the status of climate change as a threat, the CCWG was put on a faster track through the next scheduled S&ED in summer 2013.⁶⁵ It was headed by Xie Zhenhua for the Chinese and Todd Stern for the American side, both to become chief negotiators for their countries in Paris Climate Change Conference in 2015.

To be more specific, the cooperation was aimed at enhancing climate change mitigation efforts through appropriate ministerial channels and partnership between public and private entities. Similarly, the CCWG should strive to find new ways to push

⁶³ Viz grafy v příloze.

⁶⁴ "Joint U.S.-China Statement on Climate Change." U.S. Department of State. Accessed February 22, 2017.
<https://web.archive.org/web/20170111092822/https://www.state.gov/r/pa/prs/ps/2013/04/207465.htm>.

⁶⁵ Ibid.

boundaries of the field and is to report all findings to leaders of S&ED. The most relevant language in the context of this work appears at the end of the Joint Statement. There both sides acknowledge “the significant and mutual benefits of intensified action and cooperation on climate change” and the most importantly, the Joint Statement concludes with an argument that “working together both in the multilateral negotiation and to advance concrete action on climate change can serve as a pillar of bilateral relationship, build mutual trust and respect, and pave the way for a stronger overall collaboration.”⁶⁶ The Joint Statement recreated the spirit of cooperation that was destroyed with the Copenhagen negotiation. The policies initiated by President Bush with TYF and transformed by MOU were reignited and channelled through the establishment of CCWG. The global initiative of climate change adaptation and mitigation once again became one of the main pillars of the U.S. – China relationship.

Until the Trump administration, the CCWG submitted eight Reports to the Strategic and Economic Dialogue. The first one⁶⁷ was delivered as expected for the 2013 S&ED in July and the eighth one⁶⁸ in June 2016. Given the fact that the CCWG and its Reports are a record of the closest cooperation on climate change between Beijing and Washington, the following section will analyze how the CCWG and S&ED progressed from the first to the last submission of the Report. The first CCWG Report adopts similar language as the Joint Statement, except this time it appears to be more tailored to fit the agenda of both actors. The Joint Statement had the same wording we can find in most proclamations about climate change, however the first Report is much more specific. To be precise, the overall impression is that the first Report is worded in a way that would make the idea of climate change collaboration more appealing for China. As was discussed in previous chapter, the shift of Chinese leadership from viewing climate change mitigation efforts as a Western conspiracy to a staunch supporter of the initiative was caused by large part by the devastation of Chinese environment during the era of steep economic rise, which caused severe environmental problems and obscene levels of air pollution. That in turn led to steadily increasing public outrage, which very problematic for the CCP, because material well being is one

⁶⁶ Ibid.

⁶⁷ "Report of the U.S.-China Climate Change Working Group to the Strategic and Economic Dialogue," Embassy of the People's Republic of China in the United States of America, , accessed March 6, 2017, <http://www.china-embassy.org/eng/zmgxss/t1059409.htm>.

of the sources of its legitimacy. Likewise from the principle of the issue suppressing citizens protesting because of air pollution more complicated for the CCP than a crackdown based on political premise.

Therefore the first Report contains distinctly Chinese problems, such as intensified urban smog, air pollution and to a lesser extend floods and droughts in “our most productive agricultural areas”⁶⁹, which is arguably more dangerous for China, as much of its main agricultural regions is concentrated along the three major rivers, unlike in the U.S. where major agricultural regions are spread all over the country. Smog and air pollution is not something traditionally discussed in context of climate change adaptation and mitigation and for example the 2007 IPCC Synthesis report does not mention it, which supports the argument that it was specified to make the bilateral initiative easier to pursue at home for Chinese negotiators. However that does not make it completely arbitrary, there is a direct and logical link between climate change and air pollution, since the worst activities when it comes to CO₂ emissions are also the worst offenders when it comes to air pollution. We just need to keep in mind that the CCWG was a joint entity and in 2013, China was the side which still needed a little more of convincing, not the U.S., which was fully on board under Obama administration. For that reason we can conclude that those specific issues were added to the first report to make the climate change initiative more appealing for Beijing leaders and pointing out this direct link was an effective way to help get China on board.

The first Report opens with achievements of both nations in the field of climate change adaptation and mitigation as well as future goals and reaffirming the benefits of the cooperating listed in the Joint Statement, as well as acknowledging the fact that both the U.S. and China have a major role in global efforts to address climate change, and their bilateral cooperation on climate can be of a substantial influence on the global initiative. The proclaimed goal for China is building of an “Ecological Civilization”, which is supposed to be achieved by pursuing green, circular and low-carbon

⁶⁸ "Report of the U.S.-China Climate Change Working Group to the 8th Round of the Strategic and Economic Dialogue," U.S. Department of State, , accessed February 22, 2017, <https://web.archive.org/web/20170114214905/https://www.state.gov/e/oes/rls/rpts/258282.htm>.

⁶⁹ "Report of the U.S.-China Climate Change Working Group to the Strategic and Economic Dialogue." Embassy of the People's Republic of China in the United States of America. July 13, 2013. Accessed June 31, 2017. <http://www.china-embassy.org/eng/zmgxss/t1059409.htm>.

development. Similarly, the United States progresses its goals by promoting renewable energy, energy efficiency and by reducing emissions from various sources.⁷⁰

After listing the steps taken since the 2009 Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment, the first Report issued CCWG's initial recommendations for the S&ED which were divided into five spheres of focus. The first recommendation was to reduce emission from heavy-duty and other vehicles, which was to be accomplished by enhanced fuel efficiency standards, clean fuels and vehicle emission control technologies and promotion of efficient and clean freight. Secondly, the CCWG argued for implementation of smart grid technologies, which are supposed to improve efficiency and reduce waste. Thirdly the Report discusses the fact that the U.S. and China combined account for more than 40 percent of global coal consumption, thus the advice is to collaborate on carbon capture, utilization and storage, a complex enterprise that significantly reduces emissions from coal combustion by storing or reusing CO₂ so it does not enter the atmosphere.⁷¹ It requires a sizeable investment and is still in development, therefore the Report announces that China and the U.S. will cooperate to push the carbon capture technology from research to commercial scale demonstration. The fourth recommendation of CCWG is an effective collection and management of greenhouse gas emissions data and lastly it is energy efficiency in building and industry. Reportedly the cooperation was already on the way under the Energy Efficiency Action plan of the U.S. – China Ten Year Framework for Cooperation on Energy and the Environment. In closing remarks the Report pledges to enhance and deepen policy dialogue on all aspect in order to enable the U.S. and China to work closely with other countries on the crucially important post-2020 climate agreement that was scheduled to be completed in 2015.⁷²

As stated above, so far there are eight CCWG Reports covering three years of climate change cooperation between the U.S. and China. To see how the cooperation developed, what new programs were implemented and which goals accomplished, the following section will analyze the eighth and last Report submitted in June 2016. The Report opens with a strong statement: "Climate change is a pillar of the U.S. – China bilateral relationship." While we must keep in mind that the CCWG, although

⁷⁰ Ibid.

⁷¹ https://www.ipcc.ch/pdf/special-reports/srccs/srccs_wholereport.pdf 3

⁷² „Report of the U.S.-China Climate Change Working Group to the Strategic and Economic Dialogue."

sanctioned by both Washington and Beijing, is still a group of individuals who are likely to have a positive view of the enterprise and therefore are likely partially biased. Nevertheless it signals that there has been a significant progress between the first and the last report and the idea of climate change being a pillar of the relationship is indeed vital based on three years of collaboration. Moreover the Report was conducted after signing of the Paris Agreement in December 2015, which surely reflected on the Report and is described as “enduring legacy of the U.S. – China partnership.”⁷³ The CCWG highlights the role of both Barack Obama and Xi Jinping in bringing climate change to negotiating table and stresses the importance of sustained, long-term action that is required to confront the threat of climate change. What is more, the CCWG expanded the scope of its activities quite significantly over the three years. It now supports initiatives in nine sectors up from five, it facilitates engagement on hydrofluorocarbons (HFC), which are greenhouse gasses that have separate negotiation from CO₂ and the Paris Agreement. Furthermore it works on Enhanced Policy and Domestic Policy Dialogues, where representatives of both countries meet and to advance further policies concerning the Paris Agreement and also implementation of concrete domestic policies. Under coordination by the U.S. Department of State and the National Development and Reform Commission of China, the CCWG became involved with a number of interagency actors, such as the U.S. Environmental Protection Agency (EPA), the Department of Transportation, Energy and their Chinese counterparts.. That illustrates that the scope of climate change cooperation rapidly expanded and became very interconnected. The CCWG facilitated contact between ministries, civil society and private partners on both sides through action initiatives and served as a high level forum.⁷⁴

Since it would be redundant to list all the different initiatives of the eighth Report, it will be sufficient to say that the scope of the CCWG initiatives greatly expanded and given the significant involvement of number of governmental agencies on both sides, it can be argued that it was well received. Upon considering that climate change mitigation is a long term project, we must acknowledge the significant advances the CCWG achieved in such a short time span. The smart grid section was expanded

⁷³ Report of the U.S.-China Climate Change Working Group to the 8th Round of the Strategic and Economic Dialogue."

⁷⁴ Report of the U.S.-China Climate Change Working Group to the 8th Round of the Strategic and Economic Dialogue."

and renamed to Electric Power Systems Initiative, which helped set up smart grid demonstration projects at University of California and Tianjin Eco-City project. The Heavy duty and other vehicles section coordinated exchange of expertise and experience between the EPA and Chinese Ministry of Environmental Protection. Furthermore, the CCWG set up a great number of workshops for various different areas and it expanded its scope to deal with climate change and forests, low-carbon cities and green ports and vessels.⁷⁵

The CCWG is an extension and expansion of the policies set up by TYF. After the setback of Copenhagen, it represents the positive effects of climate change cooperation. Without doubt the work of CCWG through S&ED brought the world closer to the Paris Agreement and re-established the proper communications channel necessary for the scale of the intergovernmental talks. It helped to set up joint research, academic collaboration, personnel exchanges and training, contact between relevant ministries and officials. It is also a medium that enabled the cooperation on climate change to have an overall positive impact on the U.S. – China relations. Through all the contacts, initiatives and information sharing it built a mutual trust and understanding, which was crucial for eliminating the negative impact of the Copenhagen negotiation. Combined with other influences it was one of the primary enablers for cooperation between the U.S. and China on the Paris Agreement.

The U.S. – China Joint Announcement on Climate Change was released in November 2014. Climate change was recognized as one of the greatest threats to humanity and therefore presidents Obama and Xi agreed on the importance of strengthening bilateral cooperation and assured the world that both countries will be working together along with the rest of the world to adopt a protocol or legal instrument applicable to all parties present at the United Nations Climate Change Conference in Paris in 2015. To that end the Presidents announced how their countries will deal with climate change in the post-2020 era. The U.S. proclaimed it will cut its emissions by 26-28% below its 2005 level in 2025, while China declared that it intends to peak CO₂ emissions around 2030 and increase share of non-fossil fuels in primary energy consumption to around 20% by the same year.⁷⁶ That was the most important part of the

⁷⁵ Ibid.

⁷⁶ "U.S.-China Joint Announcement on Climate Change." White House. November 11, 2014. Accessed February 16, 2017. <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>.

Announcement and it was made to “inject momentum” to the upcoming global negotiations in Paris. Without doubt, assurance from two largest contributors to global emissions sent a powerful message that the upcoming conference is taken seriously and signalled that both the U.S. and China are willing to strike an agreement that goes beyond empty proclamations. In addition both parties reaffirmed the audience about bilateral cooperation supported by the fact that both Presidents put their names behind it, which also sent a positive message about their personal investment in the endeavour. To materialize this sentiment the statement mentions strengthening of policy dialogue and practical cooperation, which includes advanced coal technologies, nuclear energy, shale gas and renewable energy, all through expanding existing vehicles, as the U.S. – China Climate Change Working group, which was discussed extensively in this chapter. Lastly, the 2014 Announcement also mentions that action against climate change will enhance international and national security, nevertheless it was not included in China’s national security considerations, at least not directly, as will be discussed in another chapter. In an accompanying Fact Sheet, the White House points out that the Chinese declaration was the first time Beijing agreed to peak its CO₂ emissions. Moreover China’s 20% of total energy consumption coming from non-fossil fuels is close in scale to what the U.S. produced in total in 2014. The White House expected that its ambitious plan will set the U.S. on a trajectory to achieve 80% reduction by 2050. Overall both countries agreed to expand joint clean energy research and development, advance major Carbon Capture, Use and Storage demonstrations, launch Climate-Smart/Low-Carbon Cities Initiative and enhance cooperation on hydrofluorocarbons.⁷⁷

The Landmark U.S. – China Joint Announcement on Climate Change

As it stands, the U.S. – China Joint Announcement on Climate Change is not only a key milestone in the U.S. – China cooperation on climate change, but also a milestone in global climate change adaptation and mitigation efforts. For the first time China surrendered a concrete date for when it plans to peak its carbon emissions. The obvious question at hand is: why now? What is changed in the five years since the Copenhagen Conference? There was a number of changes, the most significant one

⁷⁷ "FACT SHEET: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation." The White House. November 11, 2014. Accessed March 21, 2017. <https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/fact-sheet-us-china-joint-announcement-climate-change-and-clean-energy-c>.

being Xi Jinping becoming the President of China in 2013. However for the purposes of this work, the most crucial change was a slowdown of Chinese economy. The global financial crisis of 2008 did not have the same effect on China as on most other countries. Its own closed financial system was not directly affected, however because the global trade was weakened, Chinese exports plummeted by 20% over the next year, the biggest annual fall in recorded history. Upon realization of the vulnerability of China because of its reliance on exports, the new leadership launched an economic reform and Xi Jinping launched policies to transform Chinese economy from an export-reliant economy to a new model of sustainable growth based on growth of service sector, consumer spending and private entrepreneurship.⁷⁸ The stellar growth of Chinese economy over the past decades was in part enabled by cheap workforce and disregard for environmental standards. Either way, it was unsustainable, because as the economy grows and catches up with the more advanced economies, the cheap workforce that was fuelling the exports is proportionately disappearing, as the population becomes more affluent. That one of the reasons why economies that are considered advanced or rich grow in modest numbers.

China was not ready in 2009 to face this issue, therefore the CCP leadership decided not to accept proposals of the West in Copenhagen. There was not yet a consensus on the transformation of Chinese economy that came with Xi Jinping in late 2012 and when he became a president a year later. That was when China reversed track on climate change and took up cooperation with the Obama administration. The Joint Statement on Climate Change, the CCWG was set up and in November 2014 China agreed for the first time to peak its emissions. There has been a huge progress on climate change cooperation between the U.S. and China since 2013 in large part thanks to the effort of CCWG which amended the Copenhagen setback and put the very progressive ideas pronounced in TYF and MOU back on track, with some significant enhancements that led to the 2015 Paris Agreement.

As we can see, there is a direct correlation between China's stance on an international action against climate change and transformation of Chinese economy. For that reason we can conclude that China displayed realist behaviour in its dealing with climate change, mostly catering to its own needs. However it would not be fair to label

⁷⁸ Arthur R. Kroeber, *Chinas Economy: What Everyone Needs to Know* (New York, NY: Oxford University Press, 2016), 210-27.

China opportunistic. We must not forget that in 2015 Chinese CO₂ emissions per capita were still almost three times lower than those of the United States.⁷⁹ Furthermore much of its economy relied on carbon intensive activities and 60-70% of its energy came from burning coal. Expecting China to take the world on its back was not reasonable, especially considering the fact that its main rival was still emitting significantly higher amount of CO₂ per head even after years going through the cycle of industrialization and urbanization, while the Congress till refuses to act and even the Paris Agreement had to be accepted through an executive order.

Considering these realities, it could be argued that Obama in the end did not influence the way China approached climate change, because it simply followed needs of its economy. However that is however not entirely true. Upon the experience of 2009, Obama administration learned realized the China is stature-sensitive country and if the climate cooperation is to succeed, China must consider itself as one of the leaders of the initiative. At Copenhagen, China felt humiliated and attacked by the West, whereas at the Paris Conference, China was the winner.⁸⁰ Furthermore through SED and S&ED the Bush and Obama administration created an enormous network of intergovernmental contacts that enabled Xi Jinping to follow the pattern of environmentally friendly policies and embark the global change initiative right away while significantly improving relations with the United States in the process. It was a win-win situation. As mentioned earlier, the primary reason why Bush disliked the Kyoto Accord was because China had privileged position as a developing country, which made it impossible to ratify the Accord in the U.S. Congress and because China was the largest emitter, it was doomed to fail. Obama administration had this in mind as well and in Copenhagen Obama and Secretary Clinton unsuccessfully tried to push China to accept higher global responsibility. That however changed as China reached a stage when it was comfortable with taking up the climate challenge and join the developed countries in combating climate change. The Joint Statement establishing the CCWG showed the importance of climate change cooperation and its positive effects on

⁷⁹ "CO₂ time series 1990-2015 per capita for world countries." EDGAR - GHG (CO₂, CH₄, N₂O, F-gases) emission time series 1990-2012 per region/country - European Commission. Accessed March 25, 2017. http://edgar.jrc.ec.europa.eu/overview.php?v=CO2ts_pc1990-2015&sort=des9.

⁸⁰ Geoff Dembicki, "The Convenient Disappearance of Climate Change Denial in China," *Foreign Policy*, May 31, 2017, , accessed June 1, 2017, <http://foreignpolicy.com/2017/05/31/the-convenient-disappearance-of-climate-change-denial-in-china/>.

the relationship between the U.S. and China. Improving upon the interagency framework created by TYF, the frequent contact of counterparts of various ministries, officials, academics and private entities as well as various joint research projects, action plans and workshops formed a network of personal contacts and spirit of cooperation. This level of collaboration and coordination is unparalleled and is caused by the fact that climate change is a global common. Everyone benefits from combating climate change, there are no losers. Combating climate change promotes collaboration and creation of new technologies which are to be shared, as rich countries share the commitment to support the poorer ones.

Climate Change in National Security Considerations

The Department of Defense treats climate change as a national security issue. This stance has some opponents and not all nations share Department of Defense's (DoD) vision. Contrastingly, Beijing has rather volatile approach to climate change, as we will see further in this chapter. Whatever is the case, the fact is that most militaries are expected to be able to deal with disaster relief operations. Since this paper is based on scientifically well founded predictions of the effects of climate change, it works on a premise of increased frequency and intensity of natural phenomena which have negative effects on humanity. The U.S. is the champion on this field and its humanitarian assistance and disaster relief (HA/DR) missions have global scope and prestige. China was historically focused more inwards in this regard, both because it lacked capabilities to effectively provide HA/DR overseas and its often tensed relations with neighbours. However, firstly after the humiliation in 2004 when China was unable to provide any large scale disaster relief to Indonesia while the U.S. did, which resulted in significant improvement of U.S. – Indonesian relations and re-establishment of military contacts and secondly after the 2008 blizzards that affected large parts of China and caused serious damage, the PLA vigorously increased the scope of its HA/DR missions and it became integral part of its doctrine.⁸¹ This chapter will illustrate how climate change and its effects facilitate cooperation for U.S. and China's militaries and that is cooperation. Because of increased Chinese assertiveness as well as HA/DR capabilities, coordination of HA/DR operations is highly desirable and has a potential to change the development of the U.S. – China relations from rivalry to partnership.

In many countries, militaries have an influence on domestic political scene. Given the vastness of the U.S. and China's armed forces, it is safe to assume that voices of the militaries will be heard in discussion about any topics that are concerned with national security, including climate change. Not only that, but one must also consider the fact that defense forces of any nation are significant consumers of national resources, especially in fossil fuels, therefore an impact of potential climate change mitigation policies on the military always has to be kept in mind. Moreover, the militaries themselves have high stakes in properly evaluating the changes of strategic environment in which they operate that will be brought by climate change. There are three main areas that the militaries need to consider with regards to climate change. Firstly it is the danger to military installations posed by natural phenomena, primarily rising sea levels. Secondly the militaries have to take into account that with a rise of global temperatures, new areas will become available for geopolitical contest, first and foremost the new sea routes in the Arctic. Lastly, armed forces might be called upon to help in case of natural disasters.⁸²

The United States of America

Although climate change became more broadly discussed amongst the public only relatively recently, the U.S. military has been taking notice since the 1990s. For the first time it appeared as a topic in an official discourse at the National Security Council in 1997, although not in direct relation to U.S. military. Later, the administration of G. W. Bush questioned the merit of climate change, therefore it was sidelined in the official narrative, at least until the final year of his second term. Pentagon has adopted a similar stance, with a small exception of a widely circulated study dealing with climate change and its impact on national security it commissioned in 2003.⁸³ Only in 2008 did the National Defense Authorization Act establish a requirement for the military to take "the effect of climate change on Department of Defense facilities, capabilities and missions" into consideration.⁸⁴ The sole exception was the U.S. Navy, which issued a

⁸¹ https://fas.org/programs/ssp/nukes/2008DefenseWhitePaper_Jan2009.pdf

⁸² Climate change and the military in China, Russia, the United Kingdom and the United States - 44

⁸³ Climate change and the military in China, Russia, the United Kingdom and the United States - 45

⁸⁴ <https://www.gpo.gov/fdsys/pkg/CRPT-110hrpt477/pdf/CRPT-110hrpt477.pdf>

report in 2007 via the CNA research organization, which stated potential military challenges posed by the climate change and established a task to tackle the issue.⁸⁵

Major development came with the new administration under Barack Obama. It put climate change on a list of major issues for the U.S. military with U.S. National Security Strategy in May 2010, which established climate change as a dangerous, severe and urgent global problem, which will cause new conflicts over refugees and resources and will bring famine, drought and natural disasters. The DoD took notice and in the 2010 Quadrennial Defense Review climate change had an important place, having an impact on U.S. military facilities and capabilities and shaping the environment, roles and missions that the military undertakes.⁸⁶ Similarly, in 2010 the U.S. Navy adopted a "Climate Change Roadmap", which was a four year long survey on how to best adapt to climate change.

When it comes to evaluation of the actuality of the threat of global warming, the U.S. Navy Climate Change Roadmap from 2010 concludes that "climate change is a national security challenge with strategic implications for the Navy." Similarly, the report agrees with the forecasts which many opponents of climate change deem too farfetched, that is the pressure it will put on nations with weak economies and political institutions, having a destabilizing effect. The Navy does validate climate change as a likely source of future conflict, but labels it is a potential contributing factor. In the same manner it is continually endangering U.S. military installations and also access to natural resources worldwide. The report concludes that climate change will have a deciding effect the type, scope and location of future U.S. Navy missions.⁸⁷ The report was aimed primarily as a research of options and to lay out future course of action. It set out to make the Navy capable of fully functioning in changing climatic conditions and contributing to climate change mitigation efforts, making sure the threat of climate change is not underestimated and that the nation is informed about questions pertaining to why and how the Navy is addressing climate change. Lastly, the U.S. Navy also recognizes that it will be the primary global force when it comes to responding to natural disasters around the world.

In 2011 a study was conducted by the National Committee on National Security Implications of Climate Change for U.S. Naval Forces. The study is very

⁸⁵ Climate change and the military in China, Russia, the United Kingdom and the United States – 46

⁸⁶ Climate change and the military in China, Russia, the United Kingdom and the United States - 46

⁸⁷ <http://www.navy.mil/navydata/documents/CCR.pdf> 2-3

complex and one of the major arguments it brings on the table is that the U.S. cannot deal with climate change just in scope of the U.S., but has to take into account its allies in the Asia-Pacific area, for which it is responsible. The study put forward many recommendations and there are many that this text can identify with, as they are clear examples of how climate change and national security considerations serve as a foundation for healthy bilateral and multilateral relationships. Firstly, the report is urging the U.S. to join UNCLOS. The recommendation is made mainly on a basis of upcoming Arctic negotiation, however remaining outside of UNCLOS is problematic even when it comes to climate change. Signing UNCLOS would grant the U.S. more legitimacy to operate in international waters and EEZs of other nations, because UNCLOS serves as an assurance that the U.S. intends to play by the rules under the framework of multilateral institutions. The U.S. could no longer be looked at as simply a destabilizing factor which does not feel like playing by the rules in the eyes of non-allied nations. Furthermore, receiving HA/DR from armed forces of a member of UNCLOS is surely easier to accept than from a non-member. Signing UNCLOS would make all these processes including multilateral exercises, coordination and cooperation more streamlined and simpler to achieve.

Secondly, the report recommends strengthening partnerships and cooperation, which will be beneficial to all sides. This includes bilateral and multilateral training and exercising with other partner nation navies, search and rescue and HA/DR operations.⁸⁸ In other words, development and expansion of partnerships with non-traditional partners like Russia or China is highly desirable. As discussed above, these efforts are improving the level of preparedness of all parties involved, streamlining communication and coordination, which all translate into a better bilateral relationship. The logic of this process is simple, increased cooperation means higher frequency and more intimate nature of personal contacts, successful cooperation opens doors for future combined efforts, which all improves trust on a national level.

The report also puts forward the latest example of what the future of HA/DR operations might look like and what lessons to take from the 2010 Haiti earthquake. Again, the most crucial and desirable development is coordination in all aspects of

⁸⁸ "National Security Implications of Climate Change for U.S. Naval Forces ." 2011. <http://image.guardian.co.uk/sys-files/Environment/documents/2011/03/10/PrepubAllClimateChange110218.pdf>., section 4-9.

HA/DR operation, from governmental and military cooperation to NGOs.⁸⁹ HA/DR operations are the main pillar of anti-climate change efforts in national security considerations. With increased frequency of extreme weather conditions combined with rapid militarization of the South China Sea, it is not only desirable to develop multilateral coordination of HA/DR operations, but rather required. In the same spirit, the report highlights the U.S. Navy hospital ships. Arguably, they are the best representation of Navy's soft power, as they are capable of supporting HA/DR missions around the world with unmatched capacity and effectiveness.⁹⁰ Indeed, both USNS Mercy and USNS Comfort vastly surpass all their foreign counterparts. It is very unlikely that their assistance would be refused as they can save thousands of lives. Coordination of all forces involved in HA/DR operations with the hospital ships is necessary, therefore full effectiveness of their deployment is partially conditioned by previous multilateral exercises.

The U.S. hospital ships and The Pacific Partnership

Both USNS Mercy and USNS Comfort illustrate what a valuable asset these hospital ships are for Pentagon. Together, the sister ships were deployed only once and it was to support the U.S. operations during the Persian Gulf War. Comfort was deployed a few more times, lastly during the Haiti earthquake during the Operation Unified Response. It appears that USNS Comfort has been assigned to missions focused on The Americas and Africa while USNS Mercy has been assigned to missions in Asia-Pacific. USNS Mercy's second and last mission was the Operation Unified Assistance in 2004. Since then it sailed out only as a part of the Pacific Partnership missions. The Operation Unified Assistance was key for the U.S., since it enabled Washington to realize the how important and beneficial can humanitarian missions supported by U.S. Navy hospital ships for relationship with local countries. USNS Mercy became a symbol of how the U.S. can help other countries in distress. The U.S. saw the opportunity to politically reengage with Indonesia by deploying the hospital ship and so the USNS Mercy was activated for the first time since the Operation Desert Storm on its first humanitarian mission. When USNS Mercy arrived to Indonesian shores, it became clear that for the next time its services are needed, there has to be better coordination.

⁸⁹ Ibid., section 4-3.

⁹⁰ Ibid., section 2-3.

Because of confusion between the DoD and the Indonesian government, Mercy wasted five days before it was permitted to operate.⁹¹ In the end, the deployment of USNS Mercy was an incredible humanitarian success and the ship became a symbol of American assistance. However things could have been even better had Mercy arrived sooner, therefore a need for closer collaboration became apparent, which led to establishment of Pacific Partnership.

The Pacific Partnership is an annual training and readiness mission orchestrated by the U.S. Pacific Fleet. It developed as a result of the 2004 Operation Unified Assistance that covered further bellow. "Building on the success and goodwill this operation generated in the region, U.S. Pacific Fleet sent the hospital ship USNS Mercy back to the region for five months in 2006."⁹² USNS Mercy returns to the region every two years under the Pacific Partnership mission and last time it was involved in 2016 with 600 personnel.⁹³ According to Adm. Harry Harris, commander of U.S. Pacific Fleet, the "Pacific Partnership trains all participants to be ready to provide humanitarian aid in the region of the world that is all too familiar with cyclones, earthquakes, typhoons, volcanic eruptions and tsunamis."⁹⁴ The Pacific Partnership developed into a big enterprise that includes medical care, veterinary services, construction projects and infrastructure development.⁹⁵ The tremendous success of the Operation Unified Assistance had great impact on DoD's planning in the region and the fact that it developed into an annual humanitarian exercise shows that Washington was ready to capitalize on its use of its significant soft power. To illustrate what the Pacific Partnership means for the DoD ,the 2011 exercise is estimated to cost more than \$20 million, even though the USNS Mercy was not present. Despite that the U.S. military insists that such missions are central to Washington's national interests.⁹⁶ The Pacific partnership barely ever covered not only by mainstream media, but also by think tanks

⁹¹ Bruce A. Elleman, "Waves of Hope. The U.S. Navy's Response to the Tsunami in Northern Indonesia," Naval War College, Center for Naval Warfare Studies, February 2007. 80-81.

⁹² "Pacific Partnership History." Commander, U.S. Pacific Fleet. Accessed February 14, 2017. <http://www.cpf.navy.mil/pacific-partnership/2013/history/>.

⁹³ Prashanth Parameswaran. "US Kicks Off Asia's Largest Annual Humanitarian Mission." The Diplomat. May 12, 2016. Accessed March 6, 2017. [http://thediplomat.com/2016/05/us-kicks-off-asias-largest-annual-humanitarian-mission.](http://thediplomat.com/2016/05/us-kicks-off-asias-largest-annual-humanitarian-mission/) /

⁹⁴ From U.S. Pacific Fleet Public Affairs. "10th Pacific Partnership mission prepares to renew regional ties." Commander, U.S. Pacific Fleet. March 12, 2015. Accessed January 19, 2017. <http://www.cpf.navy.mil/news.aspx/010399>.

⁹⁵ "Pacific Partnership History."

⁹⁶ Eddie Walsh, "Pacific Partnership Series," The Diplomat, June 3, 2011, , accessed February 3, 2017, <http://thediplomat.com/2011/06/pacific-partnership-series/>.

and academics. Nevertheless it might be the most significant soft power tool the United States has at its disposal for Asia-Pacific and it was used as much as possible to a great effect.

The Obama administration released a number of reports dealing with climate change, however one of the most prominent was the DoD FY 2014 Climate Change Adaptation Roadmap, which, following the Quadrennial Defense Review of 2010 definitely reaffirmed climate change as a national security issue for the whole U.S. military. It was a step that illustrated how seriously the Obama administration took it and it meant that climate change gained more significance in the U.S. and became treated with increased respect. In 2014, the U.S. Navy finished with its four year survey and research into climate change and its dangers towards national security that was announced in the Navy's 2010 Climate Change Roadmap, therefore we can conclude that some of the conclusions were implemented into the DoD report. The 2014 Roadmap confirmed some of the predicted negative effect of climate change, which reportedly had been becoming being observed at U.S. military installations both domestic and overseas. Primarily, the DoD acknowledges that its extraordinary capabilities to provide unmatched and rapid assistance can be called upon with increased frequency. However, for the purposes of this work, the most important section deals with collaboration with external stakeholders on climate change challenges. It is a logical course of action, because some climate change mitigation efforts require whole governments to be involved, given the geographical spread of U.S. military activities and installations.⁹⁷

The DoD released scheduled Quadrennial Defense Review (QDR) in the same year, 2014. It is the latest installment of this high profile report at the time of writing of this work. It shows similar sentiment as the Climate Change Adaptation Roadmap and labels climate change for a "significant challenge for the United States and the world at large." Interestingly, when discussing climate change, QDR highlights China along with India and Brazil in connection with their economic growth.⁹⁸ It is implied that these countries should be on high alert when it comes to dangers posed by climate change. This remark can be a little confusing, however it seems the DoD planners intended to

⁹⁷ "2014 Climate Change Adaptation Roadmap." Office of the Assistant Secretary of Defense (. June 2014. Accessed February 9, 2017. http://www.acq.osd.mil/eie/Downloads/CCARprint_wForward_e.pdf.

⁹⁸ "2014 Quadrennial Defense Review." Department of Defense. http://archive.defense.gov/pubs/2014_Quadrennial_Defense_Review.pdf, 8.

point out that the economic growth is linked with urbanization, which leads to increased population density in already highly populated places. That in turn means increased danger posed by increased frequency of extreme weather conditions caused by climate change to even larger portions of population. It is likely the DoD had Chinese and Indian coastal industrial centers in mind. The last remark about climate change and also an important point in context of this work was the DoD arguing that climate change “creates both a need and an opportunity for nations to work together,” and that the DoD is working on improving HA/DR capabilities within the department and with allies and partners of the U.S.⁹⁹ This position was confirmed in July 2015 in the DoD’s report to the Congress on National Security Implications of Climate-Related Risks and a Changing Climate, where Congress demanded DoD to identify climate-related risks for each Combatant Command and how the Combatant Commands respond to those risks.¹⁰⁰ We have to wait until 2018 to see how these attitudes changed with the new Administration, nevertheless so far we can argue that as far as the U.S. military goes, all requirements for healthy cooperation on mitigation of negative effects of climate change are in place. As long as there is political will in Washington, nothing seems prevent Americans from engaging in collaboration with China in order to develop better relationship based on trust and personal contacts.

With Obama’s intention to build international support for climate change just a few months before the Paris Conference, he made a speech to the U.S. Coast Guard Academy graduate students. After the usual witty remarks, Obama moved to discuss the climate change. He summed up evidence we have about human caused climate change and the fact the planet is warming up, he talked about the climate change denial in Washington and the consensus among the scientific community, intelligence¹⁰¹, homeland security, military leaders and the Coast Guard that climate change is already happening. However the core of Obama’s speech seems to be reaffirming the world that the U.S. takes climate change as a serious threat to global security and an immediate threat to U.S. national security. To this end, he sees confronting climate change as a pillar of the American global leadership. To illustrate his point, Obama links climate

⁹⁹ Ibid., 25.

¹⁰⁰ "NATIONAL SECURITY IMPLICATIONS OF CLIMATE-RELATED RISKS AND A CHANGING CLIMATE." Department of Defense. July 23, 2015. Accessed February 24, 2017. <http://archive.defense.gov/pubs/150724-congressional-report-on-national-implications-of-climate-change.pdf>.

change to drought in Nigeria that led to a rise of Boko Haram, similarly to drought in Syria to caused low crop yield, high food prices and the subsequent unrest resulted in the Syrian War and lastly he attributes Typhoon Haiyan in the Philippines, one of the worst cyclones ever recorded, to climate change. He also seems to realize a need for more frequent HA/DR missions caused by extreme weather conditions.¹⁰²

As the 2018 QDR was mentioned and it yet remains to be seen whether the anti-climate change trend set by Obama's administration will continue, there seems to be a strong consensus in the DoD, former officers various national security experts about the threat to national security posed by climate change.¹⁰³¹⁰⁴ The then commander of the U.S. Pacific Fleet, Samuel Locklear said in 2013 that climate change is the biggest threat to U.S. national security in the region.¹⁰⁵ Currently we can already see tensions between the DoD and Trump's White House when it comes to climate change, as current Secretary of Defense James Mattis is supportive of the conception embraced by Obama's administration.¹⁰⁶ That suggests that even though Trump's administration reversed the course on climate change and aims to withdraw from the Paris Agreement, nothing will change for the DoD and climate change will continue to be treated as a national security issue. The question is whether the DoD will be able to effectively continue with its mission, as the Congress specifically forbade the resources allocated to the DoD by FY2017 National Defense Authorization Act to be used to fulfill most of

¹⁰¹ "Implications for US National Security of Anticipated Climate Change." National Intelligence Council. September 21, 2016. Accessed February 23, 2017.

¹⁰² "Remarks by the President at the United States Coast Guard Academy Commencement." The White House. May 20, 2015. Accessed March 15, 2017. <https://obamawhitehouse.archives.gov/the-press-office/2015/05/20/remarks-president-united-states-coast-guard-academy-commencement>.

¹⁰³ "Event Recap: Hill Briefing on Climate Change and the Risks to National Security | ASP." American Security Project. May 03, 2017. Accessed February 18, 2017. <http://www.americansecurityproject.org/event-recap-hill-briefing-on-climate-change-and-the-risks-to-national-security/>

¹⁰⁴ Oliver Milman, "Military experts say climate change poses 'significant risk' to security," The Guardian, September 14, 2016, , accessed February 5, 2017, <https://www.theguardian.com/environment/2016/sep/14/military-experts-climate-change-significant-security-risk>.

¹⁰⁵ JAY DIRECTO, "Admiral Samuel Locklear, commander of Pacific forces, warns that climate change is top threat - The Boston Globe," BostonGlobe.com, March 09, 2013, , accessed March 21, 2017, <http://www.bostonglobe.com/news/nation/2013/03/09/admiral-samuel-locklear-commander-pacific-forces-warns-that-climate-change-top-threat/BHdPVCLrWEMxRe9IXJZcHL/story.html>.

Andrew Revkin, "Trump's Defense Secretary Cites Climate Change as National Security Challenge," ProPublica, March 16, 2017, , accessed February 3, 2017, <https://www.propublica.org/article/trumps-defense-secretary-cites-climate-change-national-security-challenge>.

the provisions of Obama's executive orders 13653 and 13693 aimed at combating climate change.¹⁰⁷

People's Republic of China

Chinese position on climate change as a national security issue is more complicated. There is no sense of progression, as with the U.S. military approach under Obama administration. The Central Military Commission's (CMC)¹⁰⁸ stance on climate change was generally in line with the official Beijing's narrative and in the same manner, at least until months leading up to the Paris Agreement, remained quite opportunistic when it comes to interpretations of the issue. It is however almost impossible to tell. In January 2009 the PRC (People's Republic of China) State Council Information Office released a document then called Chinese National Defense in 2008.¹⁰⁹ It is a white paper projecting China's stance on national security issues published approximately every one or two years. It is approved by the CMC, Ministry of National Defense and State Council, therefore it is a formulation of national security strategy with the highest authority.¹¹⁰ Although China acknowledged the existence of climate change already, the 2009 white paper was the first time it was mentioned as a national security problem, and even though it was specifically mentioned only once, the whole document puts significant importance to disaster relief, which is discussed very thoroughly in the document. That is because in 2008, China experienced severe blizzards that affected large areas and caused serious damage. To better imagine the scale, note that according to the reports, 80 million people were affected and 300 thousand soldiers and 1.1 million reservists were involved in disaster relief operations.¹¹¹

In the most recent iteration of the national security white paper called China's Military Strategy in 2015, there is no mention of climate change, which means it was lastly mentioned in

¹⁰⁷ "National Defense Authorization Act for Fiscal Year 2017." Congress. May 25, 2016. Accessed April 28, 2017. <https://www.congress.gov/bill/114th-congress/house-bill/4909/text#toc-H9D7674DF11FD4181B42ACC4D008B879F>.

¹⁰⁸ The powerstructure of Chinese military can be confusing, however it is safe to say that deciding organ is the Central Military Commission. People's Liberation Army is direct subordinate of the CMC, therefore the Ministry of National Defense is a department with very little power.

¹⁰⁹ "China's National Defense in 2008." Information Office of the State Council of the People's Republic of China. January 2009. Accessed May 7, 2017. https://fas.org/programs/ssp/nukes/2008DefenseWhitePaper_Jan2009.pdf.

¹¹⁰ "Highlights from China's New Defense White Paper, "China's Military Strategy"." U.S.-China Economic and Security Review Commission. June 1, 2015. Accessed January 15, 2017. https://www.uscc.gov/sites/default/files/Research/Issue%20Brief_Highlights%20from%20Chinas%20New%20Defense%20White%20Paper_Campbell_6.1.15.pdf.

¹¹¹ "China warns of more bad weather." BBC News. February 02, 2008. Accessed March 4, 2017. <http://news.bbc.co.uk/2/hi/asia-pacific/7223694.stm>.

the 2010 document.¹¹² We will have wait for the latest one to be issued by the PRC Information Office, which, following the trend, can be expected to be delivered by 2018. However given Beijing's radical shift in approach towards climate change from climate change being western conspiracy to aspirations on global climate change mitigation efforts leadership in recent years, it is reasonable to expect that the upcoming national security white paper will at least mention it. What is more complicated to predict is whether the PLA will assign climate change the same importance in national security considerations as the DoD, or it will remain a briefly mentioned second grade non-traditional security issue.

Despite the volatility of Chinese take on climate change, similarly as in the U.S. case, there are continuous calls to treat it as a national security issue, especially among the academics, like Zhang Haibin.¹¹³ Generally the biggest fear is based on predictions of increasing frequency of extreme weather conditions and the fact that most of China's largest economic and population centres lie in coastal areas, which are bound to be affected by rising sea levels. That translates into coastline retreat, which could have devastating consequences for China for many reasons, but the one most likely to be considered by the CCP (Chinese Communist Party) is resetting maritime boundaries, not to mention impact on all the installations in South China Sea.¹¹⁴ That being said, the general consensus is to categorize climate change as either completely detached from security issues, or to classify it as a "non-traditional security issue". There are also opinions that China treats climate change as an economic problem, rather than national security one.¹¹⁵ That however does not explain why it was added into the 2008 and 2010 white papers and then omitted. One possible explanation is rivalry with the U.S., which will be explained bellow.

The way the CMC handled the climate change is quite illustrative of Beijing's opportunism on the matter, as will be illustrated further. After the disastrous blizzards of 2008, climate change and mainly disaster relief operations were given high priority in national security considerations. That however gradually changed as the Obama administration gathered traction on combating the effects of climate change and eventually the mentions of the phenomenon were dropped from Chinese white papers. It seems likely, because at the time of

¹¹² "China's National Defense in 2010." Information Office of the State Council The People's Republic of China . March 2011. Accessed April 27, 2017. http://www.nti.org/media/pdfs/1_1a.pdf?_=1316627912.

¹¹³ Haibin Zhang, "Climate Change and China's National Security," Catham House, October 17, 2012, , accessed March 6, 2017, <https://www.chathamhouse.org/sites/files/chathamhouse/Session%20Five%20-%20Professor%20Zhang%20Haibin.pdf>.

¹¹⁴ Wilson VornDick, "Why Climate Change Could be China's Biggest Security Threat," The Diplomat, August 19, 2015, , accessed February 22, 2017, <http://thediplomat.com/2015/08/why-climate-change-could-be-chinas-biggest-security-threat/>.

¹¹⁵ VornDick, Wilson. "Why Has Sea Level Rise Not Been Securitized by the PLA?" Jamestown. July 31, 2015. Accessed April 31, 2017. <https://jamestown.org/program/why-has-sea-level-rise-not-been-securitized-by-the-pla/> /

the first adoption of the term into the 2008 white paper, climate change mitigation efforts in the U.S. had much lower priority under the Bush 43 administration, therefore by joining the initiative, the Chinese had no reason to feel that they are bowing to U.S. leadership. Furthermore, there was the U.S. – China squabble at the Copenhagen conference late 2009, which surely had an effect on removing climate change from national security considerations, given the fact that a part of Chinese leadership considered some of the propositions at the conference hostile towards China. In a like manner, given the swift shift in Chinese stance towards the climate change initiative a few months before the Paris Agreement, we can expect that it will be given higher priority than before in national security consideration, especially now that China aspires to be the global leader of climate change mitigation efforts, replacing the U.S.

Nevertheless, one aspect is shared by both militaries, and that is the humanitarian and natural disaster relief. The 2015 China's Military Strategy white paper states: "China's armed forces will continue to take an active part in international disaster rescue and humanitarian assistance, dispatch professional rescue teams to disaster-stricken areas for relief and disaster reduction, provide relief materials and medical aid, and strengthen international exchanges in the fields of rescue and disaster reduction."¹¹⁶ The humanitarian assistance and disaster relief is one of the pillars of military strategy considerations with regards to climate change for both the U.S. and China, even if the Chinese military establishment is yet to add a mention of it in their latest proclaimed strategy. If the prognoses of the negative effects of climate change, as among many others increased cyclone intensity,¹¹⁷ turn out to be true, we can expect militaries to be involved in HA/DR maneuvers more frequently in the future.

The military involvement in HA/DR brings very interesting geopolitical dynamics, especially when it comes to current U.S. – China relations. In 2004 a catastrophic earthquake and the subsequent tsunami that affected the whole eastern part of Indian Ocean killed 230 thousand people. In the aftermath of the disaster, there was no one better equipped to provide relief than the U.S. Navy. As a consequence of the Operation Unified Assistance and the tremendous help provided by the U.S., relations between Indonesia and the U.S. vastly improved.¹¹⁸ The Operation was a major success and psychological victory for the U.S. The vastness of material and psychological support provided by the U.S. completely overshadowed China's efforts. The move to send USNS Mercy backed by the enormous presence of USS Abraham Lincoln which served as a communication hub and a base of operations was simply unmatchable for Beijing. The Operation Unified Assistance gave a tremendous boost to prestige

¹¹⁶ "China's Military Strategy." The State Council Information Office of the People's Republic of China. May 26, 2015. Accessed March 1, 2017. <https://news.usni.org/2015/05/26/document-chinas-military-strategy>.

¹¹⁷ "Climate Change 2007 Synthesis Report," Intergovernmental Panel on Climate Change, 2007, , accessed May 23, 2017, 8.

of the U.S. and it assured all allies and partners that they can count on Washington while displaying the enormous power of U.S. armed forces to all others.¹¹⁹

This episode is a sore spot and a wakeup call at the same time for the Chinese. Beijing had no capacity at all to even come close to the scale of the relief provided by the U.S. For China, with its rising geopolitical aspirations and ambitions to become a local powerhouse, it was a humiliating moment. It can be argued that the inability to provide any substantial disaster relief was one of the incentives for the massive modernization the Chinese military is still undergoing. What makes it even more frustrating is that this upset came at a time when the U.S. was suffering diplomatically after Bush's unilateral Iraq tour and Washington's prestige was weakened. It was an excellent time for Beijing to improve its relations with surrounding countries and elevate its overall status as a local power at the cost of the U.S. Instead the U.S. Navy led by USS Abraham Lincoln arrived, dominated the scene and turned the natural disaster into a diplomatic victory for Washington. If China ever wants to rival the massive U.S. presence in its backyard, it will have to develop soft power tools that can match the investment made by the U.S. every year within the Pacific Partnership operations, or join the effort for mutual benefit.

It comes as no surprise that China wants to avoid being in such a position in the future. That's primarily because the disaster relief actions improved the perception on the presence of U.S. forces in the region by previously unimaginable margins. The popular approval of the U.S. operations among the nations of eastern Indian Ocean provides unquestionable legitimacy for presence of the U.S. military in the area, which is something China is very anxious about. We can safely assume that next time such a disaster occurs, Beijing will be as proactive as possible and will strive for its HA/DR operations not to be thwarted by their U.S. counterparts.

Similarly we must not disregard the fact that some sort of a large scale natural disaster is bound to happen and given the tremendous population density in the area, likely with tragic consequences. Last natural disaster on even bigger scale happened in China's own Tangshan province in 1976. The death toll is estimated at almost 700 thousand people. At the time, China refused to accept international humanitarian aid. The question is, whether it could afford to do so in today's world. Probably yes, but at a significant cost of political capital on both domestic and international scene. Accepting aid when the country is capable of dealing with the problem on its own is a win-win situation. However refusing aid while not being able to provide sufficient disaster relief could be a very dangerous gamble for the CCP. With this in mind, imagine what would happen if a very strong earthquake combined with a tsunami hit Taiwan. The HA/DR operations would be accompanied with vigorous negotiation and would have a

¹¹⁸ Elleman, "Waves of Hope," 101.

¹¹⁹ *Ibid.*, 104.

potential to cause real geopolitical problems. For all those reasons, China had a strong incentive to develop an effective disaster relief force capable of operating outside of mainland China.

Lastly, the HA/DR have a potential to become a source of competition. As with the mentioned example of a natural disaster in Taiwan that would require foreign assistance, we could find ourselves in a situation where two rival militaries are competing for the provision of relief. That would be a complex situation to solve, as it is likely the Taiwanese would strongly oppose the presence of PLA on their soil, while being afraid of Beijing's reaction to letting the U.S. troops take over. And likewise, Beijing would strongly oppose the presence of U.S. forces on the island.

As we can see, HA/DR operations can go both ways. However we can conclude, that instead of a potential for Mexican stand-off, cooperation is the desirable outcome. And in this instance, climate change indeed has a strong potential to incentivize coordination and cooperation. The effects of climate change are reportedly going to cause intensified impact and frequency of various events that can be classified as natural disasters, especially in countries like Philippines, Indonesia and others, which are less developed and will be affected by raising sea levels. That means the likelihood of a need for urgent disaster relief also increases. Extensive HA/DR actions with more actors involved will require strong coordination among them. Since China will surely strive to avoid the debacle that occurred in 2004, not to mention its increased assertiveness in recent years, it is likely that both China and the U.S. will feel significant pull to harmonize disaster relief forces of their militaries. Given the unspoken fact that most Chinese and American military operations are aimed against each other, a phenomenon that pushes those forces towards cooperation is positive in terms of U.S. China relations, although not so much for the citizens of affected areas. Interestingly enough, this development is by no means conditioned by any disaster. The main fuel behind the potential improved cooperation is the sole acknowledgement of climate change and the process of its mitigation. So even in the highly unlikely event of the vast majority of scientific community being wrong or in case of luck that would be any major environmental disaster not occurring in midterm future, the cooperating of forces dedicated to HA/DR of both militaries would be beneficial for the relationship, increasing trust and a frequency of man to man contacts.

Conclusion

Climate change is happening and human activity significantly stresses its negative impacts. That is a scientific fact. In either case after experiencing oil shocks, air and water pollution and others, the world is finally ready to embrace renewable energy and green technologies. The same goes for the United States and China, the two countries which combined amount to 40% of global CO₂ emissions. The important thing is that even though there are some obstacles along the way, as climate change becoming a partisan issue in the United States, the cooperation between the U.S. and China can still bring positive results. Because of the tragedy of the commons, climate change incentivizes cooperation. Once the international community agrees that exploitation without remedy is no longer viable, the climate change cooperation can start. The principle problem in early negotiation on climate change cooperation between the U.S. and China was the fact that China is a developing country. However it is also a country with the largest population and additionally the largest overall emitter of the carbon dioxide. If combined with the traditional rivalry, the scenario where Congress would ratify a treaty in which China was given a free pass was simply unthinkable. Even when China in 2014 in cooperation with the White House finally announced its commitment to peak emissions in 2030, Obama administration still did not dare to bring the treaty to the Republican Congress. Nevertheless even though Obama had to push the Paris Agreement through an executive order, he achieved a great progress on climate change cooperation with China.

Obama based his climate change cooperation policy towards China on the foundation of TYF which was initiated by George W. Bush in 2008 as a platform for environmental cooperation. With the MOU Obama enhanced the cooperation with climate change and intended to strike a deal during the Copenhagen Conference, however unsuccessfully. China's leaders were not yet ready to make any significant commitment and they were also strongly against letting anyone else monitor Chinese emissions. The slowdown of Chinese economy in the 2010s which was partially caused by the 2008 economic crisis helped Beijing to realize that China's economy is in dire need of structural reforms. The transition from export economy fuelled by cheap workforce and environmental exploitation to an economy with strong service sector set China not only on a path of sustainable development, but also made Beijing more inclined to join the climate change initiative. Since 2013 and the creation of CCWG both countries closely cooperated on climate change mitigation policies and became leaders of Paris negotiation. This development signifies at least in the period between late 2012 and 2015, climate change was the backbone of the relationship between the United States and China. Even the FONOPs to South China Sea were stopped. And although this close cooperation was a build up for the 2015 Paris Agreement, with this precedent there is no reason why climate change cooperation, an effort

that will take at tens of years to conclude and even after that will require constant verification, cannot continue to be one of the pillars of the bilateral relationship.

When discussing climate change cooperation in national security considerations, there is a way for climate change cooperation to enhance the bilateral relationship between the U.S. and China, as was thoroughly elaborated in chapter four. If both countries acknowledge that climate change will bring more frequent extreme weather and climate conditions, it means there will be a need for more frequent HA/DR operations. Collaboration on HA/DR operations is highly desirable. Not only will more people be saved, it also helps to prevent situations of unplanned contact of two military forces. As suggested in the fourth chapter, a situation in which Taiwan was stricken by a natural disaster with catastrophic results, who would provide disaster relief? The U.S. Navy or PLA? We can only imagine how such a situation would play out, however there is an undeniable risk of escalation. After the debacle of 2004 when China was unable to provide any meaningful disaster relief during the Indian Ocean earthquake and tsunami in 2004 and the blizzards in China in 2008, PLA was assigned to train on disaster relief situations, therefore there is a risk that China will try to assert its power through sending unwelcomed disaster relief forces. For the above mentioned reason, HA/DR coordination between the U.S. and China is highly desirable. The U.S. already has similar programme in place, the Pacific Partnership. This annual exercise started after the success of the 2004 Operation Unified Assistance and it is a training and readiness mission orchestrated by the U.S. Pacific Fleet. Every two years the mission is joined by USNS Mercy. The Pacific Partnership is a display of the enormous soft power the U.S. possesses based on demonstration of hard power capabilities. If the Pacific Partnership were to be joined by China, it would be translate into significantly improved bilateral relationship between the U.S and China.

The goal of this work was to show that cooperation on climate change was and can continue to be a pillar of the U.S. – China relations. Under the favourable domestic and international conditions, it is certainly possible. The both the populace and the leadership must see the benefits that result from climate change adaptation and mitigation efforts. Similarly, climate change needs to be recognized by majority of the population. As we can see with Chinese citizens, they do not feel threatened by the climate change, but by a large majority support an international treaty that reduces carbon dioxide emissions. Because of the overexploitation of Chinas environment that fuelled the unprecedented growth in past decades, the Chinese developed increased strong environmental awareness. The situation in the United States is more complicated given the intricacies of partisan politics, however much larger number of Americans feel threatened by climate change and about the same number is in favour of an international treaty. The leadership of both countries is also favourable to climate change policies. We can argue that with Bush 43 administration and its absolute neglect of climate change from 2001 to 2007, China is actually very progressive in climate change policies and

low-carbon technologies. As we can see, the conditions for climate change cooperation to thrive and continue improving the relationship are in place. Now there only needs to be the will not to let the achievements that culminated in the Paris Agreement go in vain.

Summary

Based on the theoretical concept of global commons, this paper shows that climate change cooperation incentivizes involved parties towards collaboration. The Obama administration illustrated that the climate change cooperation can be a pillar of the relationship between the United States and China. In the period between 2012 and 2015 when the cooperation was thriving because both countries assumed global leadership in talks leading up to the Paris Agreement and the Climate Change Working Group was formed. This paper also came to a conclusion that national security considerations cannot be omitted when discussing climate change cooperation, especially if the prognosis of increased frequency and intensity of extreme weather conditions turns out to be true. For that reason the U.S. and China should develop a structure of joint humanitarian assistance and disaster relief exercises to improve collaboration and build mutual trust.

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Attachments

