Stranadko, Nataliya

Working Paper

EU-US climate cooperation: Challenges and opportunities for the implementation of the Paris agreement

Discussion Paper, No. 02/2021

Provided in Cooperation with:
Europa-Kolleg Hamburg - Institute for European Integration

Suggested Citation: Stranadko, Nataliya (2021) : EU-US climate cooperation: Challenges and opportunities for the implementation of the Paris agreement, Discussion Paper, No. 02/2021, Europa-Kolleg Hamburg, Institute for European Integration, Hamburg

This Version is available at:
https://hdl.handle.net/10419/228692

Europa Kolleg Hamburg
Institute for European Integration

DISCUSSION PAPER
NO.02/2021

EU–US CLIMATE COOPERATION

Challenges and Opportunities for the Implementation of the Paris Agreement

Nataliya Stranadko

The transformation from Kyoto to Paris has been analysed by international relations scholars, international law, and transnational governance theory. The international relations literature looks at the climate regime from a perspective of power distribution, state interests, institutions, and multilateral negotiations. International law theory focuses on legal analysis and design of international climate agreements. The transnational governance literature examines the participation of transnational actors at different levels of governance. However, each of these theories overlooks a bilateral trend of cooperation in a multilateral setting that arises as a part of construction or reconstruction of the international regime. Cooperation on climate change between the European Union and the United States deserves special scientific attention. Over the last 30 years of climate negotiations, these nations have met many challenges. However, these challenges currently give opportunities to revise the New Transatlantic Agenda and build a fruitful bilateral partnership and policy coordination in the area of climate change.

KEYWORDS

Bilateral cooperation, climate change, environmental treaties, European Union, global governance, soft law, subnational actors, United States of America

Content

1 Introduction

Climate change is one of the global environmental problems that involves multi-level scale, multi-actor involvement, multi-sector binding, and vertical and horizontal dimensions of interactions in the global governance system (Andonova et al., 2009; Keohane & Victor, 2011; Ostrom, 2009; van Asselt, 2014). The theory of global governance is based on the concept of multilateralism, when a large number of sovereign states are involved in cooperation on a particular worldwide problem (Keohane, 1990). But what about the role of bilateral cooperation in a multilateral world between national and subnational actors? Does this cooperation matter?

An attempt to address the problem of climate change and to build effective global climate governance was made in 1992, when the states adopted the United Nations Framework Convention on Climate Change (UNFCCC) as a key multilateral agreement, which aimed "to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (UNFCCC, 1992, p. 9). Looking for a practical mechanism of the UNFCCC implementation, in 1997, the United Nations adopted the Kyoto Protocol as a set of norms, rules, and principles that the states accepted.

However, the Kyoto Protocol's implementation has encountered several drawbacks that serve to question the effectiveness of multilateral climate agreement and global climate governance in general. Among these drawbacks are segregation of states into small groups of negotiations, top-down approaches, isolation of non-state actors from the decision making, lack of coordination and cooperation, and lack of linkage to sustainable development (Aldy & Stavins, 2009; Falkner, 2016; Gupta, 2014; von Bassewitz, 2013). After Kyoto, it was obvious that multiple states cannot negotiate alone and achieve emissions reduction targets because climate actions are rooted in domestic politics with the involvement of subnational actors (regions, provinces, and cities), which start forming their own coalitions, clubs, and networks (Bulkeley, 2010; Bulkeley et al., 2012). Even more, national and subnational actors begin to negotiate and cooperate bilaterally across borders. The outcomes of these negotiations are transnational bilateral agreements on climate change; examples include agreements signed between the state of California and European countries, as well as EU–US city-to-city partnerships formed via the International Urban Cooperation program.

Learning from the Kyoto regime, in 2015, the states adopted the Paris Agreement as a new international treaty that will begin implementation in 2021. Under the new multilateral agreement, effective climate policy is not about finding quick fixes to the emissions reduction problem, but about putting in place the structure for a long-term technological and economic transformation that covers multiple levels and sectors, and involves state and non-state actors. The phrase "cooperation and coordination on climate actions" is now fixed in the reports of the Intergovernmental Panel on Climate Change and UNFCCC's decisions. The UNFCCC Secretariat even launched a global climate action portal for coordination called the Partnerships for the Non-State Actor Zone for Climate Action.

A regime's transformation from Kyoto to Paris has been analysed by international relations scholars, international law, and transnational governance theory. The international relations literature looks at the climate regime from a perspective of power distribution, state interests, institutions, and multilateral negotiations (Kahler, 1992; Keohane, 1990; Keohane & Nye, 2001). International law theory focuses on legal analysis and the design of international climate agreements (Bodansky, 2016; Bodansky et al., 2017). The transnational governance literature examines participation and involvement of transnational non-state actors at different levels of governance (Broto & Bulkeley, 2013; Jessop, 2011; Sorensen & Torfing, 2009; Weiss, 2009). However, each of these theories overlooks a bilateral trend of cooperation in a multilateral setting that arises as a part of the construction or reconstruction of the international regime (Smith, 2005).

During the Kyoto Protocol's implementation and negotiations on the Paris Agreement under the UNFCCC, the European Union (EU) demonstrated enormous efforts and global leadership. Such leadership and efforts, as well as a modification of the features in the Paris Agreement, not only attracted a large number of nations in a short period, but what is most important, brought the biggest world emitters of greenhouse gas (GHG) emissions such as the US and China to declare commitments under the new treaty (Oberthür & Groen, 2018).

For the first time in history, the non-binding nature of GHG emissions reduction obligations under the new treaty allowed President Barack Obama to accept the Paris Agreement without a procedure of ratification by the US Senate. In the US Initial Nationally Determined Contribution (INDC), the US committed to reducing GHG emissions by 26–28% below its 2005 level in 2025.

However, in June 2017, the new US president, Donald Trump, made a historic statement that the US will cease all implementation of the non-binding Paris Agreement because of "the draconian financial and economic burdens the agreement imposes on our country." On November 4, 2019, the US government officially notified the UN Secretary-General of its decision to withdraw from the Paris Agreement. The decision took effect on November 4, 2020, according to Article 28 of the Paris Agreement. But does Trump's decision challenge EU–US climate cooperation, or does it provide an opportunity to revise the New Transatlantic Agenda and foster subnational cooperation across borders? Does Trump's decision challenge academic circles in terms of discussing imperfect rules of the Paris Agreement, or does it provide an opportunity to revise international relations theory, international law, and transnational governance theory?

Thus, this paper discusses these questions and addresses the importance of bilateral cooperation in a multilateral world between national and subnational actors in the transatlantic context. With the above guiding questions in mind, this research explores the nature of EU–US cooperation on climate change between national and transnational actors during the 2015–2020 period. The study utilizes a qualitative methods approach with content analysis followed by interviews with EU and US state and non-state actors. The thematic content analysis provided the necessary

information about the negotiation phase, created clubs and coalitions, signed bilateral and multilateral agreements, and policy instruments at the national and subnational levels between the US and the European countries. The collected information was a foundation for in-depth interviews regarding bilateral international, transnational, and national cooperation under the UNFCCC, the Kyoto Protocol, and the Paris Agreement.

This paper is organized as follows: 1) theoretical and analytical frameworks are presented outlining the current knowledge, gaps, challenges, and opportunities in the area of global climate governance and the EU and US climate policies; 2) the research design and methods of the study are then introduced, followed by 3) the results and discussion on transatlantic climate cooperation.

For the sake of this study, the term "bilateral cooperation" relates not only to cooperation between states as unitary actors but also to cooperation between state and subnational actors in the diagonal dimension of transatlantic interactions.

2 Theoretical and Analytical Framework

In the area of global climate governance, the UNFCCC, the Kyoto Protocol (1997), and the Paris Agreement (2015) are key fora for multilateral cooperation on climate change. Although there is a debate among scientists about the effectiveness of the Kyoto Protocol (Almer & Winkler, 2017; Grunewald & Martinez-Zarzoso, 2016; Ma, 2012), there is a consensus among scholars regarding the matter of designs, structures, rules, and provisions of the Paris Agreement (Aldy & Stavins, 2009; Bodansky, 2016; Buchholz et al., 2018; van der Gaast, 2017).

The literature clearly emphasizes four key differences between these two UNFCCC legal instruments. First, the Paris Agreement applies a bottom-up approach with country-driven voluntary actions instead of top-down, legally binding commitments under the Kyoto Protocol (Aldy & Stavins, 2009; Buchholz et al., 2018; van der Gaast, 2017). Second, the Paris Agreement promotes voluntary emissions reduction activity through the Nationally Determined Contributions (NDCs) from both developed and developing nations, while the Kyoto Protocol only obligated the developed states to reduce GHG emissions. Third, the Paris Agreement introduced the system of measuring, reporting, and verification (MRV) that allows countries to review the pledges (NDCs) every five years regarding their emissions scenarios (Sweet, 2016). Finally, the Paris Agreement modified and added to "common but differentiated responsibilities" the phrase "and respective capabilities, in the light of different national circumstances."

Although the Paris Agreement is designed differently, still, it is unknown if countries will effectively implement this treaty, and if they will achieve their non-binding NDCs. In the transition from Kyoto to Paris, challenges and opportunities have evolved in global climate governance and in cooperation between the EU and the US.

2.1 Global Climate Governance: Challenges and Opportunities

Looking back at the history, the theory of global governance is based on the concept of multilateralism, whereby a large number of sovereign states are involved in cooperation on a particular worldwide problem (Keohane, 1990). Climate change is one of the global environmental problems that involves multi-level scale, multi-actor involvement, multi-sector binding, and vertical and horizontal dimensions of interactions in a global governance system (Andonova et al., 2009; Keohane & Victor, 2011; Ostrom, 2009; van Asselt, 2014).

To address the climate change problem, the Kyoto Protocol (1997) obligated 37 industrialized countries and the European community to reduce GHG emissions by 5.2% over the 2008–2012 period compared with 1990. This emissions target was necessary to hold the increase in the global average temperature to below 2°C above the pre-industrial level. Joint Implementation (JI) Projects for developed countries (Annex I), a Clean Development Mechanism (CDM) for developing countries (non-Annex I), and an Emission Trading System (ETS) were developed as policy instruments and financial mechanisms to achieve the Kyoto goal. The UNFCCC Secretariat was created as the main organization to control climate policy implementation by states.

However, the first two years of the Kyoto Protocol implementation met the following challenges, which shaped climate negotiations: (a) fragmentation, (b) lack of cooperation and coordination between actors, and (c) escalation of non-state actors in a state-centric system (van Asselt, 2014). Nevertheless, these challenges give each country and the global community opportunities to revise the current global system, goals, agenda setting, and actors involved as well as to adjust policy options through various alternatives in finding solutions suitable for all actors.

Challenge 1: Fragmentation

Fragmentation means the process of breaking the established international institutions into separate parts which have been crafted in a context of three generic forces: different interests among the states, uncertainty about the implementation of commitments, and the struggle to find productive linkages (e.g., links between emission trading systems and compensation) (Keohane & Victor, 2011, p. 8). In global climate governance, a "fragmentation" (van Asselt, 2014) is described in terms of "disaggregated world order" (Slaughter, 2004), "polycentric approach" (Ostrom, 2009), "multi-level governance" (Peel et al., 2012), and "regime complex" (Keohane & Victor, 2011; 2016). In any case, the result of this process is the creation of a set of clubs and regional groups based on common interests and commitments. In this way the following groups were formed under the Kyoto Protocol: the EU Group, the Umbrella Group (industrialized countries), the African Group of Negotiators, the Arab States, the Environmental Integrity Group, the Least Developed Countries, and the Small Island Developing States.

Opportunity 1: Rising Trend of Bilateral Cooperation

A fragmentation challenge gives an opportunity for multiple bilateral cooperation or "multiple bilateralism" (Belis et al., 2018, p. 2) between state and transnational non-state actors, particularly in the period of transformation from the Kyoto regime to Paris. An explanation for such an unusual phenomenon is required under international relations theory, which traditionally applies a concept of bilateral relations only to sovereign states, and not to transnational non-state actors.

As an example, at the national level, the US and China, as well as the EU and China, have signed bilateral agreements on climate change and clean energy cooperation. In the post-Kyoto period, California has signed 63 bilateral agreements with different transnational actors, 15 of which are with Europe. Thus, international relations theory would benefit from investigating a trend of rising bilateral cooperation between state and non-state actors as a part of the construction or reconstruction of the international regime, which Smith (2005) calls "bi-multilateralism."

The emergence of multiple bilateral relations is typical of global trade governance, where bilateral agreements were signed outside of the realm of the World Trade Organization (Blum, 2008; Rao, 2012; Ruggie, 1992; Tago, 2017). However, a bilateral trend of cooperation in global climate governance differs from the global trade regime in such a way that bilateral climate agreements are signed not only between two states as unitary actors according to international relations theory, but also between state actors and transnational subnational actors (diagonal dimension of interactions), which are subjects of transnational governance theory.

Challenge 2: A Lack of Cooperation and Coordination Between Actors

A lack of cooperation and coordination appeared between fragmented groups in the horizontal dimension (between states) as a result of disagreement and conflicts of interest among developed and developing countries. To understand this lack of cooperation, one might want to review a common definition of cooperation given by the students of international relations:

Cooperation occurs when actors adjust their behavior to the actual or anticipated preferences of others, through a process of policy coordination. Policy coordination, in turn, implies that the policies of each state have been adjusted to reduce their negative consequences for the other states. (Milner, 1992, p. 467)

Looking at the Kyoto regime from a perspective of this definition of cooperation, members of each fragmented group have pursued their own rational interests based on two goals that should be achieved—mitigation (obligated GHG emissions reduction) or adaptation. Developed countries that ratified the Kyoto Protocol focused on mitigation measures by looking for the technical capacity and opportunity for JI, CDM, and EMS projects in developing nations and countries in transition economies to fulfil their mandatory emissions reduction targets. Some developed nations, like the US, did not want to adjust its climate policy on GHG

emissions reduction through legally binding targets in order to avoid a further negative impact on developing countries, particularly in Africa. In response, developing countries blamed developed states for inaction, and they required more financial resources for adaptation to climate change while also refusing to adjust their own mitigation policy. This is why negotiations in Copenhagen regarding the new treaty adoption failed because both developed and developing nations did not agree to adjust their behaviour through a process of policy coordination for mitigation and adaptation purposes. As an outcome, it was easier for developed states to allocate $100 billion per year until 2020 to help developing states with climate adaptation (Falkner, 2016; Sweet, 2016).

In addition to a lack of cooperation in the horizontal dimension, a deficit of cooperation was also observed in the vertical dimension of interaction between actors (between supranational government officials and national counterparts) (Slaughter, 2004). The national governments came to the UNFCCC Conference of Parties to negotiate on behalf of the states by announcing their positions and preferences and obligating them to implement several policies, which, in most cases, did not consider views and climate actions of subnational actors (provinces, states, regions, and cities). Returning home, national governments required from local authorities to develop policies and force private companies to reduce emissions without these local governments having the necessary institutional, regulatory, and technical capacity to do so.

Opportunity 2: The Rising Importance of Bilateral Informal Agreements

The second challenge provides an opportunity in the post-Kyoto period for intensive cooperation through bilateral informal agreements (e.g., Memorandums of Understanding), which are considered soft law instruments. From an international law perspective, multilateral and bilateral agreements are the mode of cooperation. Mitchell (2003) demonstrated the increasing role of bilateral agreements as a mode of cooperation in global environmental governance. For instance, the 74 bilateral agreements were signed from 1901 to 1945 (a rate of 1.5 per year), 227 were signed from 1946 to 1972 (8 per year), 389 from 1973 to 1992 (20 per year), and 314 from 1993 to 2002 (32 per year) (p. 439). However, international law theory mostly concentrates its attention on the analysis of multilateral agreements, and in some cases, bilateral, formal, legally binding agreements between states. It does not pay attention to informal bilateral agreements between state and transnational actors. Many scholars agree that the literature pays less attention to bilateral cooperation, to the design of bilateral agreements and their effect on the multilateral treaties (Guzman, 2005; Mitchell, 2006; Ruggie, 1992; Tago, 2017). So, international law theory would benefit through the investigation of the existence of any bilateral cooperation and informal agreements between national and subnational actors in the transatlantic context.

Challenge 3: Escalation of Non-State Actors in a State-Centric System

The lack of cooperation in the horizontal and vertical dimensions has led to the isolation of non-state actors from the national decision-making process, and to their lack of access to the information submitted by national governments to the UNFCCC Secretariat. Such a top-down approach is one of the reasons for the escalation of non-state actors, which started forming their own coalitions, clubs, and networks across borders (e.g., the NDC Partnership, the America's Pledge Initiative, the US Climate Coalition, the Global Covenant of Mayors for Climate and Energy, and the International Urban Cooperation). Most of these clubs/coalitions were created in the post-Kyoto period when negotiations on the new international climate agreement started gaining momentum.

Opportunity 3: The Rising Importance of Subnational Actors

The third challenge provides an opportunity for the important role playing of subnational non-state actors (which are below the national level). States are no longer the only actors in global climate governance, and subnational stakeholders have begun to occupy the international arena of climate negotiations and collaborating across borders. Such an escalation of non-state actors has given birth to transnational climate governance theory (Abbott, 2012; Andonova et al., 2009; Falkner, 2016), which is, according to Slaughter's (2004) logic, a part of global climate governance.

In the practical world, the importance of subnational non-state actors was highlighted in 2014, when the UNFCCC Secretariat launched a global climate action portal called Partnerships for the Non-State Actor Zone for Climate Action (NAZCA) . This portal was necessary to cover a lack of cooperation and coordination in global climate governance. It launched 149 cooperative initiatives in cross-cutting sectors (energy, transportation, agriculture, industry, urban infrastructure, waste, water, and sustainability), and it captures ambitious climate actions by non-party stakeholders (subnational regions, cities, businesses, investors, and civil society organizations) at regional, subnational, and local levels in order to help achieve commitments announced by states under the NDCs. As of today, 18,279 non-party actors represent 27,175 climate actions in 191 countries. From this number, 10,691 stakeholders are cities (59%), 243 are regions (1%), 4,052 are business companies (22%), 1,966 are civil society organizations (11%), and 1,136 are investors (6%). The phrase "cooperation and coordination on climate actions" is now fixed in the reports of the Intergovernmental Panel on Climate Change and UNFCCC's decisions. It also connects sectoral actions with the SDGs.

Each type of non-state stakeholder involved in NAZCA deserves separate scientific attention. However, for the sake of this paper, my research focuses on non-state stakeholders, which include subnational public actors (individual states, provinces, and cities) in the transnational context. In other words, this research employs

Slaughter's (2004) concept about performing both a domestic and an international role of all government officials at national, subnational, and local levels.

2.2 Why Does EU–US Cooperation Need Particular Attention?

Historically, EU–US relations have been subject to turbulence in different areas of cooperation in the global governance system. These nations had a long-standing transatlantic partnership since 1953 in building democracy and security, and facing global challenges (Bailes, 2004; Lundestad, 2008). Climate change and energy cooperation are among the challenges in a strategic EU–US partnership (Hamilton, 2010; Hamilton & Volker, 2011; Koranyi, 2011; Schunz, 2016), particularly under the Trump presidency. However, this challenge also gives an opportunity to revise the New Transatlantic Agenda that was adopted in 1995, and to build a fruitful bilateral partnership and policy coordination in the area of climate change and energy.

The EU–US cooperative relationship needs particular attention for the following reasons:

- The US and EU represent 11% of the world's population.
- The US and EU's emissions cover 14% and 9.6% of total global emissions, respectively.
- The US and EU are significant trading partners ($528 billion for US exports goods and services to the EU, and $629 billion for EU exports goods and services to the US) .
- The announcement of President Trump in 2017 to withdraw from the Paris Agreement, and inaction of his administration on climate change at the international and national levels, questioned international relations theory regarding the role of states as unitary actors in international negotiations.
- This is a rare case because for the first time in history, the US governors from different states attended the 23rd Conference of Parties on November 2017 in Bonn, Germany, and negotiated with the EU member states and other countries to support the Paris Agreement and emissions reduction targets on behalf of the US individual states in the joint coalition.
- The newly elected president of the European Commission, Ursula von der Leyen, has announced climate change and building a partnership with the US as among the top priorities for EU foreign policy over the next five years.
- The newly elected president of the United States, Joe Biden, has placed climate change as one of the key priorities of his administration's transition plan, and has declared his intention to rejoin the Paris Agreement and rebuild relations with the EU.
- In the absence of US federal support under the Trump administration, the EU–US case study demonstrates the unique phenomenon of bilateral cooperation on climate change in the diagonal dimension of interactions—

between state actors (EU member states) and transnational subnational actors (individual US states and cities) in multilateral settings.

- In the post-Kyoto period, a number of informal bilateral agreements, such as MoUs, are increasing between EU and US transnational subnational actors (e.g., California with Europe).
- According to a survey conducted over 2008–2011 at the UNFCCC Conference of Parties, the countries' delegates indicated the EU (51%) and the US (43%) as potential candidates for leadership on climate change (Parker et al., 2015; Underdal, 2017).
- All the above create exclusive circumstances in the post-Kyoto period (2013–2020)—a period of reconstruction or construction of the new climate regime—that gives foundations for the expansion of international relations theory, international law, and transnational governance theory, in terms of bi-multilateral cooperation.
- The EU–US case study on climate change is an exciting research space for the application of Smith's (2005) bi-multilateral framework explicitly designed for EU–US relations.

Cuciurianu (2014) highlighted that the future of transatlantic relations requires a detailed analysis of the elements of cooperation and coordination of the transatlantic dialogue. Meanwhile, de Botselier (2018) suggested options for the EU and its member states on how to engage with the US federal-level climate policies, and how to cooperate bilaterally with US subnational actors.

Thus, from the above perspectives, the EU–US cooperative relationship needs particular scientific attention. This is the best example for understanding reasons for bilateral cooperation on climate change at the national, transnational, and subnational levels and its impact on the multilateral climate agreement. Also, this is the best illustration of rethinking the current global climate governance system and demonstrating how to turn challenges into opportunities for the implementation of the Paris Agreement.

2.3 EU Climate Policy: What Is on the Table?

The EU demonstrated enormous efforts and global leadership during the Kyoto Protocol's implementation and negotiations on the Paris Agreement under the UNFCCC. Such leadership and efforts, as well as a modification of the features in the Paris Agreement, not only attracted a large number of nations in a short period[1], but what is most important, brought the biggest world emitters of GHG emissions such as the US and China to the commitments under the new treaty (Oberthür & Groen, 2018).

[1] After the Kyoto Protocol's adoption, it took seven years for this treaty to enter into force compared to less than one year for the Paris Agreement.

Earlier, the EU ratified the Kyoto Protocol on May 31, 2002, by having only 15 member countries (EU-15)[2]. Today, as a supranational regional entity, the EU includes 27 member states[3], taking into account that the UK left the Union in January 2020 (Brexit). One should consider that the internal EU process for ratification of international treaties requires not only approval by the European Parliament and adoption by the European Council, but it also requires ratification by all EU member states individually.

For the first commitment period under the Kyoto Protocol (2008–2012), the EU-15 was obligated to reduce GHG emissions by 8% below the 1990 level. To be able to achieve this target, a comprehensive 2020 Climate and Energy Package was developed, and the 8% reduction was divided among member states through their legally binding national targets[4].

The 2020 Climate and Energy Package[5] included three critical objectives by 2020: (a) a 20% cut in GHG emissions (from the 1990 level), (b) 20% of EU energy produced from renewables, and (c) 20% improvement made in energy efficiency. To achieve these objectives, the European Commission put in place a variety of policy instruments (e.g., the Emission Trading System (ETS)) used by member states as well as several innovative and financial supporting programs (e.g., NER 300, Horizon 2020). As a result, the EU-15 has successfully reduced GHG emissions by 11.7% from the 1990 base year (even more than the 8% established target) during the first commitment period. The EU-28 achieved their reduction target by about 19% compared to the base year, which corresponds to 23.5 gigatons of CO2 equivalent[6]. The achieved amount does not include additional reductions from the LULUCF[7] sector and international ETS.

For the second commitment period under the Kyoto Protocol (2013–2020), the EU-28 jointly with Iceland committed to reducing GHG emissions by 20% below the 1990 level, which is in line with the adopted 2020 Climate and Energy Package. The second commitment period was introduced because countries could not agree about adopting a new treaty in Copenhagen in 2009. Thus, to be able to continue climate

[2] The EU-15 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the UK.

[3] The EU-27 comprises the EU-15 member states, less the UK, plus Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Cyprus, and Malta. Cyprus and Malta did not have national targets for the first commitment period under the Kyoto Protocol.

[4] Commission Decision (2006/944/EC), 'Determining the respective emission levels allocated to the Community and each of its Member States under the Kyoto Protocol pursuant to Council Decision 2002/358/EC', December 14, 2006; Commission Decision (2010/778/EU) amending Decision 2006/944/EC, December 15, 2010; and Commission Decision (2013/644/EU) amending Decision 2006/944/EC, November 8, 2013.

[5] Commission Communication, '2020 by 2020 Europe's climate change opportunity', COM (2008) 30 final, January 23, 2008.

[6] Commission Staff Working Paper, 'Analysis of options beyond 20% GHG emission reductions: Member State results', SWD (2012) 5 final, February 1, 2012.

[7] LULUCF means land use, land-use change, and forestry, which is one of the sectors for GHGs reduction mentioned by the Intergovernmental Panel on Climate Change.

negotiations on the way to a new treaty, the UNFCCC parties agreed to take new emission reduction targets for 2013–2020 through the adoption and ratification of the Doha amendment[8] to the Kyoto Protocol. In such a case, the 2020 Climate and Energy Package once more demonstrated the leadership, efforts, and wisdom of the EU and its member states to think strategically for the long term, and not only for a short-term period to fulfil obligations under the Kyoto Protocol for 2008–2012. Further, under the second commitment period, the EU updated its Emission Trading System (ETS, phase 3), established the Florence Process[9] with California, Canada, China, and New Zealand, and linked the EU ETS with the ETS of Switzerland[10].

Besides internal cooperation and achievements among member states, the EU paid attention to the importance of its foreign policy and cooperation with other countries, particularly with the US. In the area of climate change and energy, the EU and the US work together through several bilateral platforms at different levels of governance, such as the EU–US Energy Council, Global Covenant of Mayors for Climate and Energy, the Energy Research and Innovation Program, and the International Urban Cooperation initiative.

The EU–US Energy Council was established in 2009 under the Obama administration. It aims to promote deep policy and scientific cooperation on energy security, energy markets, clean energy, and energy-efficient technologies. Climate change aspects were incorporated into this platform. The EU–US Energy Council usually met annually in Brussels or Washington, DC. However, the US presidential election in 2016 brought a challenge for EU–US cooperation under this platform. The newly elected president, Donald Trump, questioned the reality of climate change and clean energy production. In July 2018, the eighth EU–US Energy Council meeting was the first and the only meeting of this council during the Trump administration[11].

One more time, the EU accepted this challenge wisely, thinking strategically for a long-term period. The EU took this time of "frozen federal relations" to update its climate and energy policy and develop a new solution and strategies.

In this respect, the EU ratified the Paris Agreement on October 5, 2016, which allowed this international treaty to enter into force on November 4, 2016[12]. For the

[8] Doha amendment to the Kyoto Protocol, COP Report FCCC/KP/CMP/2012/13/Add.1, February 28, 2013. The Doha amendment replaced the table in Annex B to the protocol and added one more greenhouse gas for reporting—nitrogen trifluoride (NF3).

[9] The Florence Process aims to collect and share knowledge and information on the functioning of emissions trading systems worldwide, to establish a network among ETS experts, and to create a forum for interactions between policymakers and ETS experts.

[10] Linking Agreement between the EU and the Swiss Confederation on the linking of their GHG emissions trading systems, the Official Journal of the European Union, December 7, 2012. This agreement entered into force on January 1, 2020.

[11] US Department of Energy, the Office of International Affairs, https://www.energy.gov/ia/articles/eighth-meeting-us-eu-energy-council-brussels-belgium.

[12] According to Article 21 of the Paris Agreement, the treaty shall enter into force on the 30th day after the date on which at least 55 parties to the UNFCCC accounting in total for at least an estimated 55% of the total global GHG emissions have deposited their instruments of ratification, acceptance, approval, or accession.

period of commitments under the Paris Agreement (2021–2030), the EU developed the 2030 Climate and Energy Package with lessons learned from the Kyoto Protocol. The 2030 Climate and Energy Package[13] included new key objectives by 2030: (a) a cut of at least 40% in GHG emissions (from the 1990 level), (b) 32% of EU energy shared from renewables, and (c) 32.5% improvement made in energy efficiency. Several pieces of climate legislation that provide the new package's implementation are still under negotiation and public consultations among member states (e.g., the ETS (phase 4), the Effort Sharing Regulation, and the LULUCF Regulation). Thus, the EU will announce its final targets by June 2021. However, these targets will be more ambitious and will include at least a 55% cut in GHG emissions (from the 1990 level)[14].

"Frozen federal relations" with the US, new European Commission elections, and the challenge of COVID-19 became catalysts for the EU climate and energy policy. Even working remotely in their homes, EU officials were able to show leadership and agree on the 2050 Long-Term EU Strategy for reducing GHG emissions[15]. According to this strategy, Europe has the vision to become the first world climate-neutral continent by 2050 and lead its economy with net-zero GHG emissions. Further, the EU announced the European Green Deal as an ambitious action plan to make the economy sustainable by turning climate and environmental challenges into opportunities. The European Green Deal package includes (a) the European Climate Law to turn political commitment into a legal EU obligation, (b) the European Climate Pact to engage society in climate actions under the SDGs, and (c) the 2030 Climate Target Plan to reduce GHG emissions by at least 55% by 2030 under the Paris Agreement[16].

Interestingly, President Franklin Roosevelt initially launched the New Deal to help the US recover from the Great Depression. Is the name of the European Green Deal one of the strategic instruments to show leadership and foster other nations, particularly the US, to cooperate and recover from the climate and energy crisis? Only time will show how this strategic tool works out. But for now, the EU has a package on the table in terms of the European Green Deal to work collaboratively with the US on boosting the efficient use of resources by moving to a clean, circular economy, restoring biodiversity, and cutting pollution.

This package on the table was timely enough in terms of the US presidential election in November 2020. The newly elected president, Joe Biden, announced climate

[13] Commission Communication, 'A policy framework for climate and energy in the period from 2020 to 2030', COM/2014/015 final, January 22, 2014.

[14] The EU agreed to cut GHG emissions by 55% by 2030 compared with 1990. The EU will update its Climate and Energy Policy Framework and reflect the new target in the European Climate Law. See https://www.theguardian.com/world/2020/dec/11/eu-leaders-reach-deal-to-cut-emissions-by-at-least-55-by-end-of-decade.

[15] Long-term low GHG emission development strategy of the EU and its Member States, submission to the UNFCCC Secretariat, March 6, 2020, https://unfccc.int/documents/210328.

[16] The European Green Deal, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.

change as one of the top priorities of his transition plan. Shortly thereafter, the EU put on the table another transatlantic package called A New EU–US Agenda for Global Change. One of the pillars for this transatlantic agenda is "working together to protect our planet and prosperity."[17]

Currently, from the EU perspective, both nations can sit together around the table and discuss a shared transatlantic commitment to a net-zero emissions pathway by 2050, the upcoming WTO-compatible EU Carbon Border Adjustment Mechanism, the design of a regulatory framework for sustainable finance, goals for biodiversity protection, and the Global Plastics Treaty that is urgently needed ahead of the next United Nations Environment Assembly. These topics will be part of intensive and fruitful discussions in upcoming years. But what is hidden under the table of the US climate policy?

2.4 US Climate Policy: What Is under the Table?

Compared with the EU, the US does not have a long history of climate leadership and legislative architecture for GHG emissions reduction. This could be explained by different visions of US political leaders as well as different economic priorities, governance structure, political system, and culture (Bakker & Francioni, 2014; Hayes & Knox-Hayes, 2014; Hoffman, 2015).

Despite the active participation of US Vice President Al Gore in drafting the Kyoto Protocol, the US did not ratify this international treaty because of the scientific uncertainty and the negative economic consequences caused by legally binding emissions reduction targets (Carlarne, 2010). Annex I to the Kyoto Protocol did not include obligations from the rapidly developing countries, such as China and India. So, this was one of the crucial arguments to avoid the ratification of the Kyoto Protocol.

The US has continued to participate in international climate negotiations. However, the absence of federal support on climate change policy did not allow the US to move forward and demonstrate national climate leadership until 2009, when Barack Obama was elected president. The newly elected president announced a Climate Action Plan to cut carbon pollution. He was ready to negotiate and find solutions in terms of emissions reduction targets appropriate for both developed and developing countries. Active negotiations and discussions between the three biggest emitters—the US, China, and the EU—on designs, structures, rules, and provisions of the new climate treaty led to the adoption of the Paris Agreement in 2015. The non-binding nature of GHG emissions reduction obligations under the new treaty allowed President Obama to accept the Paris Agreement on September 3, 2016, without a

[17] Commission Communication, 'A new EU-US agenda for global change,' JOIN(2020) 22 final, December 2, 2020.

procedure of ratification by the US Senate. The US submitted to the UNFCCC Secretariat its Initial National Determined Contribution (INDC) and committed to reducing GHG emissions by 26–28% below its 2005 level in 2025.

However, in June 2017, the new US president, Donald Trump, made a historic statement that the US will cease all implementation of the non-binding Paris Agreement because of "the draconian financial and economic burdens the agreement imposes on our country."[18] On November 4, 2019, the US government officially notified the Secretary-General of its decision to withdraw from the Paris Agreement. The decision took effect on November 4, 2020, according to Article 28 of the Paris Agreement.

Following the US climate history and international negotiations, one can observe the changing patterns of climate governance that engages regional, national, subnational, and local levels. The individual US states adopted their legislative and institutional models to address environmental and climate change problems. The US recognized a transboundary environmental pollution effect and the impact of climate change, and it established several regional partnerships and initiatives. More than 12 ongoing regional collaborations with an involvement of state and private stakeholders started their activities during the Kyoto Protocol period (Carlarne, 2010). The most well-known of these collaborations are the Regional Greenhouse Gas Initiative, the Midwestern Greenhouse Gas Reduction Accord, and the Western Climate Initiative.

California is a leader among US states in driving significant changes, ambitions, and commitments on climate actions at the subnational level. Under California's leadership, in the post-Kyoto period, many new initiatives were created, including the Under2 Coalition (2015), the International ZEV Alliance (2015), the Governors' Accord for a New Energy Future (2016), the US Climate Alliance (2017), the America Pledge (2017), and the Transport Decarbonization Alliance (2018).

Currently, 33 US states have prepared their climate action plans with GHG emissions reduction targets to support the Paris Agreement's goal.[19] Furthermore, 15 US states have adopted legislative acts to move toward a 100% clean energy future[20].

After President Trump's decision to withdraw from the Paris Agreement, the individual US states (subnational actors) become key players in decision making and the formation of transatlantic climate cooperative initiatives. Today, a number of partnerships with the participation of the US and EU member states have been

[18] Statement by President Trump on the Paris Climate Accord, https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord (accessed on July 18, 2020).

[19] Center for Climate and Energy Solutions https://www.c2es.org/document/climate-action-plans/ accessed on October 10, 2020

[20] Center for American Progress https://www.americanprogress.org/issues/green/reports/2020/04/30/484163/states-laying-road-map-climate-leadership/ accessed on October 15, 2020

created: the NDC Partnership, the US-EU Joint Consultative Group on Science and Technology Cooperation, the Global Covenant of Mayors for Climate and Energy, and the International Urban Cooperation Program.

Interestingly, Farber (2011, p. 10) stated that according to the US constitution, only the federal government has a responsibility and control of foreign affairs through providing a unified voice abroad. Farber (2011) emphasized the three formal constitutional restrictions for the individual states to be involved in transatlantic environmental regulatory cooperation: the doctrine of the dormant commerce clause, the pre-emption doctrine, and the doctrine of foreign policy pre-emption. The scholar highlighted that US states do have the ability to enter into informal agreements (e.g., Memorandums of Understanding) that can shift other states' behaviour. However, subnational actors would have barriers to implement environmental regulations with other countries without federal support (Farber, 2011, p. 23).

Much research and analysis has been done on US climate change policy, the history, reasons for non-ratification of the Kyoto Protocol, and the importance of relations between the US president and Congress (Bailey, 2015; Fullerton & Wolfram, 2012; Pataki et al., 2008; Sussman & Daynes, 2013). But there has been little research on the EU–US bilateral cooperative relationship at the subnational level in the area of climate change.

From my perspective, Farber's logic makes sense, and federal support and leadership is an essential factor in foreign policy. However, Farber's statement is currently outdated because the new climate regime established new norms, rules, and rights for non-state actors involved. The Paris Agreement, with its bottom-up approach, recognizes cooperative initiatives at different levels of governance, where regional, state, and local actors (subnational level) have much stronger voice and rights under the current regime compared with the Kyoto dynasty. States are no longer the only actors in global climate governance, and subnational stakeholders have begun to play a significant role in the international arena of climate negotiations. Therefore, I would dispute Farber's statement regarding barriers to implement climate regulations with other countries. California is one of the examples of state leadership on developing and implementing climate regulations. Besides, entering into informal bilateral agreements with transatlantic actors is growing over time. It has a snowballing impact on neighbour states that acts to shift their behaviour to remove the barriers. Today, California has 63 informal bilateral agreements with other countries on climate and energy cooperation, 15 of which are with Europe.

Thus, the US federal government's historic inaction created a legal space that allowed many US states and cities to adopt climate laws and policies that support the Paris Agreement's goal and emissions reduction targets even without federal engagement. So, the role of US subnational actors in the international arena is underestimated in the academic and political world.

The US would benefit from having climate leadership at all levels of governance. For now, the US federal government has only one path—getting back to the climate game under the leadership of newly elected US President Joe Biden. Informed by the lessons learned from US individual states and supported by state leaders, the federal government can develop a powerful climate policy package and demonstrate joint leadership with the EU in achieving the Paris Agreement's goal. Therefore, cooperation on climate change and energy between the EU member states and US subnational actors is a specific policy tool and package that the US keeps hidden under the table. At any moment, the US can successfully put it on the table of negotiation for the new EU–US Agenda for Global Change proposed by the European Commission.

A historic challenge on climate cooperation between the US and EU under Trump's presidency can become an opportunity to revise the New Transatlantic Agenda and build a fruitful bilateral partnership and policy coordination on climate change and energy.

3 Research Design and Methods

3.1 Research Statement, Questions, and Methods

This paper argues that challenges in global climate governance provide opportunities for building an EU–US bilateral cooperative relationship at the subnational level.

The research contributes to international relations theory, international law, and transnational governance theory by demonstrating empirically the role and importance of bilateral informal cooperation in the multilateral world between national, subnational, and municipal actors in the transnational context of global climate governance using the EU–US case study.

On the assumption of the above statement, three questions need to be addressed:

1. Why do national and subnational public actors in global climate governance cooperate bilaterally even if they know multilateral cooperation already exists?
2. What type of bilateral cooperative agreements do these actors prefer, and why?
3. What challenges do European and US actors meet in building a cooperative partnership, and what opportunities do they discover through their bilateral informal cooperation?

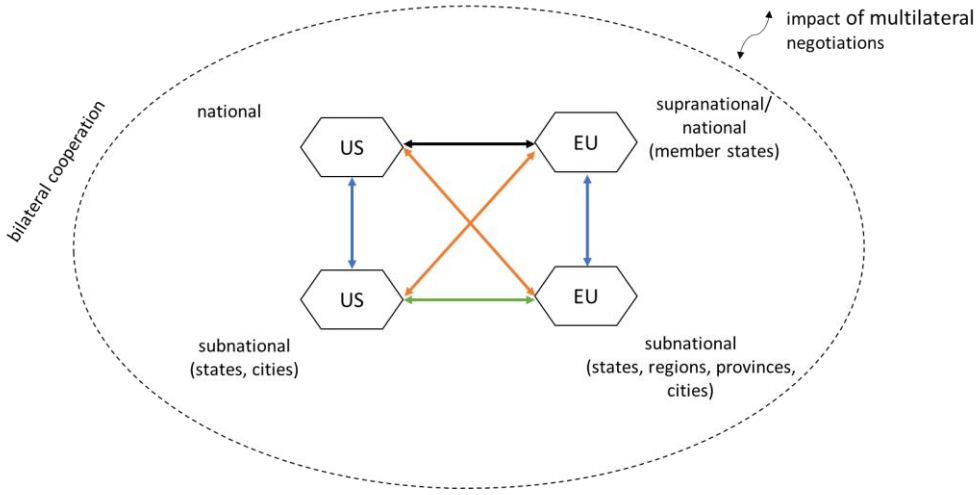
To answer these research questions, the qualitative methods approach (content analysis and interview) was utilized (Denzin & Lincoln, 2011; Glaser & Strauss, 1967; Tracy, 2010).

Thematic content analysis based on grounded theory provided the initial data and information about the negotiation phase, created clubs and coalitions, produced signed bilateral and multilateral agreements, and developed policy instruments at the national and subnational levels between the US and EU member states. The collected information was the foundation for in-depth interviews regarding bilateral international, transnational, and national cooperation under the UNFCCC, the Kyoto Protocol, and the Paris Agreement.

The analytical framework for bilateral cooperation is presented in Figure 3.1. For the sake of this study, non-state actors include only subnational public actors (individual states, provinces, and cities) in the transnational context.

Figure 3.1

Analytical Framework for Bilateral Cooperation between EU and US Actors



Bilateral cooperation through climate policy coordination occurs between EU and US national and subnational actors in horizontal, vertical, and diagonal dimensions of interactions. The horizontal dimension (black and green lines) covers bilateral cooperation between two national actors (states) and two transnational subnational actors (individual states, provinces, and cities). The vertical dimension (blue line) covers bilateral cooperation and policy coordination between national and subnational levels in one state. The diagonal dimension (orange line) covers cooperation between two actors, a supranational/national actor in one state and a subnational actor in another state. Bilateral cooperation could be shaped by negotiations and events that occurred in the international arena, and vice versa.

This research considers EU–US bilateral cooperation to occur at three stages: (a) negotiation, (b) signed agreements, and (c) implementation.

Bilateral cooperation is the dependent variable in this study. The independent variables are agenda setting, goal formulation, designing actions, policy choices, and implementation.

The levels of analysis take place at the international (the EU and the US), national and subnational (US states and EU member states), and local (EU and US cities) levels.

The units of analysis are government officials and bilateral and multilateral agreements.

3.2 Thematic Content Analysis Method

Thematic content analysis was used to answer the second research question regarding bilateral informal agreements, providing the necessary information about EU and US actors and their climate policies so that in-depth interviews could be conducted to answer the other two questions.

For this research, California was chosen as the US subnational actor, which has established the Intergovernmental Climate Action Team (ICAT) for cooperative initiatives with foreign countries. Participating agencies in the ICAT include the Governor's Office, the Governor's Office of Planning and Research, the California Environmental Protection Agency, the California Air Resources Board, the California Energy Commission, the California Natural Resources Agency, the Governor's Office of Economic Development, and others. Thus, websites of these government agencies were sources of information about California climate policy and its bilateral partnerships with European countries.

For this study, three US cities and two EU cities have been chosen for a city-to-city pairing initiative under the International Urban Cooperation Program. Grey papers (technical reports, policy documents, and programs), articles, blogs on social media pages (Twitter and Facebook), and events related to the participation of these selected cities were analysed through the websites of transnational partnerships, such as the Global Covenant of Mayors for Climate and Energy, and the International Urban Cooperation Program. This approach provided the necessary information about climate policy collaboration among municipalities and other stakeholders, which gave a foundation for the in-depth interviews with the representatives of city councils.

The bilateral informal agreements between California and European countries on the environment, climate change, and energy were analysed in January–March 2020 during my visiting research fellowship at the Europa-Kolleg Hamburg-Institute for European Integration at the University of Hamburg (Germany). California currently has 15 bilateral agreements with Denmark, France, Germany, the Netherlands, Norway, Scotland, Spain, and Sweden.

An inductive approach to organizing the raw data through a process of open coding (parent and child codes) were used for data analysis. Parent codes were applied to

the following categories: agenda setting, goal formulation, designing actions, policy choices, and implementation. Child codes were created for the following categories: (a) sector-related or area of cooperation (energy, transportation, water, air quality, sustainability, science and research, urban infrastructure, etc.), (b) forms of cooperation, and (c) provisions and elements in agreements (parties, duration of cooperation, financial arrangements and obligations, and modification procedure).

The thematic content analysis gave me an understanding of types of bilateral informal agreements the actors prefer, their designs and structures, as well as the interconnections and relevance to the provisions of the Paris Agreement.

3.3 Interview Method

The results of the thematic content analysis were a foundation for in-depth interviews with EU and US government officials. Data gathered about the structures and content of bilateral agreements helped in preparation for detailed interview questions. These interview questions were designed to answer my first and third research questions regarding motives, preferences, and conditions for bilateral cooperation in multilateral settings in the transnational context.

Instrumentation/Data Collection

Sixteen semi-structured qualitative interviews were conducted with EU and US government officials by phone or Skype at the supranational (European Commission), national (EU countries), and subnational (California, US and EU cities) levels. The list of stakeholders for these interviews is provided in Appendix 2. The EU and US government officials were interviewed in February–August 2020. Each interview lasted 30–45 minutes and was structured with five to eight open-ended questions that allowed me to gather data about the broadest possible range of issues associated with the phenomenon of this research.

The local (municipal) level of bilateral cooperation was covered by interviews with city council government officials in the following EU and US cities: Varna (Bulgaria), Barcelona (Spain), San Diego and Santa Monica (California), and Birmingham (Alabama).

EU and US cities were chosen for the interview process from the International Urban Cooperation (IUC) city-to-city pairings program between the EU and the US. The IUC Program collaborates closely with the Global Covenant of Mayors for Climate and Energy Initiative. The IUC includes cooperation between EU and US cities on sustainable development and climate change for 18 months. Therefore, this is a unique opportunity to conduct interviews with the representatives of city councils to learn their bilateral cooperative experience.

The participants for the interviews were selected by using “snowballing” criteria, whereby one contact helps to recruit another contact, which in turn can put the

researcher in touch with someone else. The interviews were recorded and stored in an electronic medium. An informed consent form was provided to the participants before the interview started. Explanation was given about the current research. The participants were informed about the interview's recording, and they were allowed to ask any questions before the interview process began.

As a researcher, I participated in the interview as a facilitator through interaction and conversation with the participants. I identified myself as a white woman researcher who is enrolled in a PhD program and who has previous experience as a government official in the negotiation process on climate change. Because of sharing a professional identity and environment, it was easy to understand the participants. Any biases that might shape the analysis (e.g., emotional reactions and judgments) were decreased by recording the interviews and listening to them calmly and rationally after a post-interview gap of several days. Also, the interviews were structured with clear questions according to the interview guide.

All interviews were audio-recorded and transcribed using Olympus Sonority and Express Scribe software. Numerical codes were applied to each participant (ranging from 1 to 16).

The transcribed interviews were stored in an electronic format on a computer and an external drive to ensure the security of the data. All files are password protected.

Data Analysis

The qualitative interviews were analysed through a discourse analysis methodology. Discourse analysis studies the spoken and written text through conversations, debates, and discussions, where images of the mind are reproduced and transformed (Burman & Parker, 1993). Hardy et al. (2004) noted that "While it shares a concern with the meaningfulness of social life, discourse analysis provides a more profound interrogation of the precarious status of meaning. Where other qualitative methodologies work to understand or interpret social reality as it exists, discourse analysis tries to uncover the way that reality is produced" (p.19).

Compared to a content analysis of the real text of bilateral agreements, a discourse analysis pays attention to the language of participants and their interpretation of the events. This analysis is suitable to understand motives and conditions for bilateral cooperation and answer the first and third research questions. The limitation of this analytic method is subjectivity and relying on the government officials' personal views regarding bilateral cooperation on climate change. But, a combination of thematic content analysis (hard text evaluation of the agreements) with discourse analysis appears to be a "win-win" situation to answer the research questions under this study.

4 Results and Discussion

4.1 Europe–California Bilateral Agreements

During the 2015–2019 period, California signed 15 bilateral informal agreements on climate change with eight European countries[21]: Denmark, France, Germany, the Netherlands, Norway, Scotland, Spain, and Sweden (Figure 4.1). From this time period, one can see that a bilateral trend of transatlantic cooperation in the diagonal dimension started arising in the post-Kyoto period (2013–2020) when construction or reconstruction of the international climate regime occurred.

Denmark, the Netherlands, and Scotland have more bilateral agreements signed with California than do other European countries (Figure 4.2). This could be explained by geographical location and a joint interest in sharing knowledge, technologies, and experience in the energy sector, particularly offshore wind energy production.

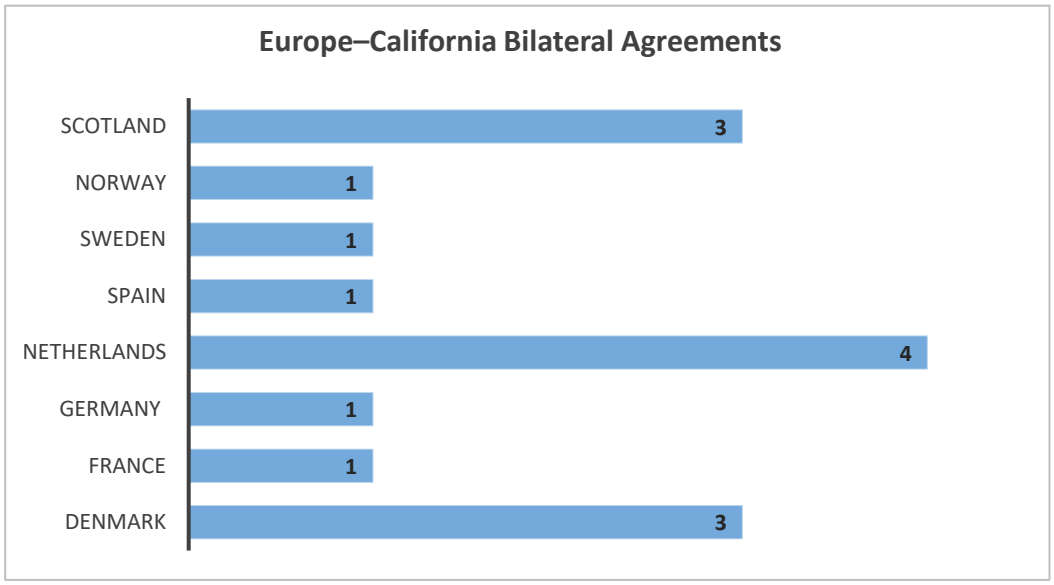
Figure 4.1

Geographical Representation of Bilateral Cooperation and Agreements Signed between California and European Countries, 2015–2019

[21] The Intergovernmental Climate Action Team (ICAT), https://www.energy.ca.gov/about/campaigns/international-cooperation/climate-change-partnerships (accessed on August 12, 2020).

Figure 4.2

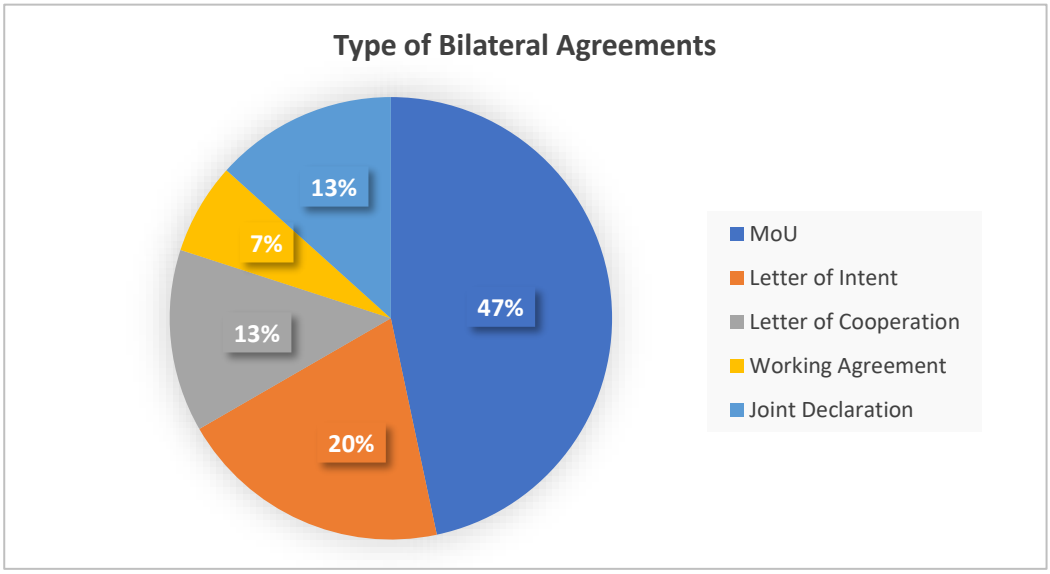
Number of Bilateral Informal Agreements Signed between California and European Countries, 2015–2019



Interestingly, there are five types of bilateral informal agreements that partners prefer: (a) 47% of signed agreements are associated with a memorandum of understanding (MoU); (b) a letter of intent covers 20% of signed agreements, followed by a (c) letter of cooperation (13%), (d) joint declaration (13%), and working agreement (7%) (Figure 4.3).

Figure 4.3

Type of Bilateral Informal Agreements Signed between California and European Countries, 2015–2019

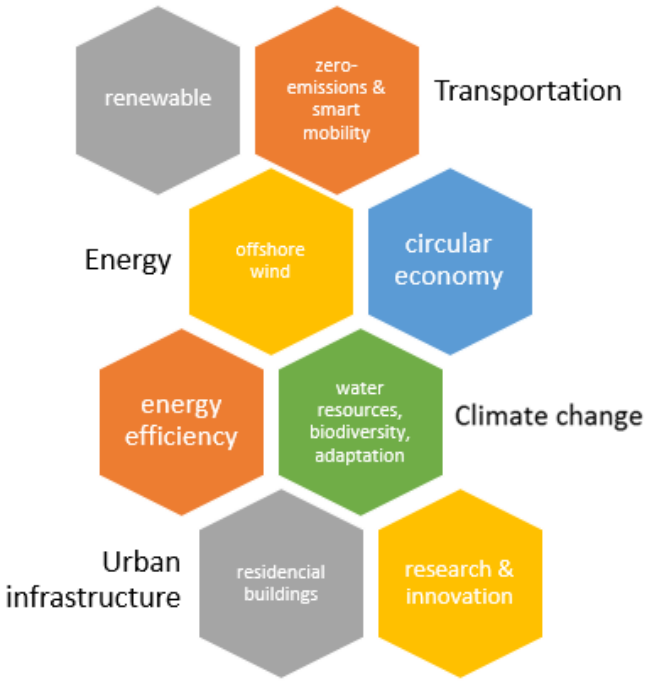


The content analysis of California–Europe bilateral agreements showed that transatlantic partners mostly cooperate in the areas of energy (solar energy, offshore wind, and energy efficiency), transportation (mobility and zero-emission vehicles), and urban infrastructure (Figure 4.4). In their bilateral agreements, partners clearly state a vulnerability to climate change and a connection of climate mitigation and adaptation actions at the subnational level with a goal of the Paris Agreement and SDGs. Partners also recognize the importance of subnational leadership and cooperation for GHG emissions reduction. Furthermore, transatlantic friends are convinced that climate actions have significant economic and scientific benefits in terms of jobs creation, investments, growth and trade, and research and innovation.

California–European actors prefer to cooperate in the form of sharing knowledge, experience, and best practices as well as conducting policy and research initiatives, visits, workshops, pilot and flagship projects, public–private partnerships, and innovation hubs. The list of California–Europe bilateral agreements is presented in Appendix 1.

Figure 4.4

Areas of Cooperation Covered by Bilateral Informal Agreements between California and European Countries, 2015–2019



With respect to the second research question, it was found that national and subnational transatlantic actors prefer to cooperate through five types of bilateral informal agreements: MoU, letter of intent, letter of cooperation, joint declaration,

and working agreement. This finding is consistent with that of Slaughter (2004), who noted that the MoU is the most common bilateral agreement for cooperation. However, political and academic worlds cannot ignore other types of bilateral informal agreements that actors prefer to sign, covering 53% of California–European bilateral agreements.

The choice of the MoU as a means of cooperation could be explained by two reasons. First, the MoU is a historic and diplomatic tradition at the state level of cooperation when two or more unitary actors prefer to agree on non-legally binding rules and commitments to avoid any disputes in the international courts. Thus, subnational stakeholders follow this tradition because the MoU is the most common soft-law instrument in international law. Second, the MoU is very similar to the structure of international legally binding treaties (agreements, pacts, protocols, etc.) that have a preamble; sections devoted to objectives, priorities and mechanisms of cooperation, financial obligations, liability, dispute resolution, and modification procedure; and final provisions. Thus, if for some reason there is no federal or national support for implementing climate actions at the highest level, subnational actors can enter into informal cooperation by signing a similar agreement internationally. Simultaneously, a non-binding agreement allows subnational actors to protect themselves from legal disputes under national law and regulations. So, subnational actors try to find a way to cooperate more effectively at the different levels of governance if they do not have support for their actions from the federal or national level.

Besides the MoU, other California–European bilateral agreements have a mixed structure. However, content analysis of these agreements clearly demonstrates a different level of cooperation and the partnership's readiness. An agreement in the form of a letter of cooperation has more general unstructured provisions, short length (1–2 pages), and broader cooperation areas. With this type of agreement, it is therefore likely that transatlantic partners have only begun their cooperation. They are at the stage of getting to know each other and learning each other's policies and behaviours before entering another stage of relationship with specific areas of cooperation.

A letter of intent and a joint declaration (in some cases a declaration of intent) take the main structural elements and provisions from the MoU, but they do not include a statement regarding dispute resolution, modification procedure, and in some cases financial obligations. It is therefore likely that transatlantic partners using these agreements are in the middle stage of their cooperative relationship. Finally, the working agreement has very specific and narrow areas of cooperation that are based on past joint activities under the letter of cooperation and MoU. For instance, this is the case for the working agreement between the California Energy Commission and the Province of Noord-Holland. This type of bilateral agreement refers to cooperation on specific pilot projects or public–private partnerships (e.g., SolaRoad, Coast e-mobility program) that require further monitoring, evaluation, and reporting.

One can explain the growing number of bilateral agreements between California and European countries by the announcement of President Trump in 2017 to withdraw from the Paris Agreement and his administration's inaction on climate change at the international and national levels. Although this announcement did accelerate intensive partnerships between subnational actors, there are also other reasons for bilateral cooperation at the subnational level. The first reason is changing norms and rules during a period of reconstruction/construction of a new climate regime (2013–2020). The bottom-up approach highlighted in the Paris Agreement gives a "green light" to subnational non-state actors to develop and implement cooperative climate initiatives across borders.

The second reason is joint leadership between two transatlantic partners—the state of California and Germany. The content analysis of California–European bilateral agreements showed a reference to the Under2 MoU (currently Under2 Coalition)[22]. The Under2 Coalition is an initiative of subnational governments to reduce GHG emissions by 80–95% below the 1990 level by 2050 to limit global warming to less than 2°C by the end of the century. This initiative started from a partnership between the state of California (US) and the state of Baden-Württemberg (Germany) in 2015. Both transatlantic partners signed the Global Climate Leadership Memorandum of Understanding. Today, the coalition's members include more than 220 subnational governments (states, provinces, regions, and cities) across 37 countries and five continents. Together, it represents more than 1.3 billion people and 43% of the global economy. The Global Climate Leadership MoU is available in 11 languages that allow any international subnational actor to read and understand a vision, goal, and commitments under the coalition and join it by signing this agreement. Furthermore, the Under2 Coalition platform was developed in coordination with the UNFCCC Partnerships for the NAZCA. This coordination provides an opportunity for data exchange and monitoring.

One of the more significant findings to emerge from this research is the discovery of an interesting phenomenon that I call the "bi-soft effect" in international relations. "Bi" means bilateral cooperation at any level of governance, which may include state and non-state actors. "Soft" implies the mode of this cooperation based on the soft-law (non-legally binding) instrument, which is a bilateral informal agreement. "Effect" means the reciprocal impact of bilateral cooperation on the multilateral setting, and vice versa. In other words, bilateral informal cooperation is a match that sparks a multilateral fire. In its turn, this multilateral fire provides light for multiple bilateral cooperation. The Under2 Coalition initiative clearly demonstrates the phenomenon of the "bi-soft effect". One can see that the bilateral informal partnership between California and Baden-Württemberg led to signing the MoU and establishing the Under2 Coalition multilateral platform. In its turn, this multilateral setting provided an opportunity for multiple bilateral cooperation through various

[22] Under2 Coalition, https://www.theclimategroup.org/under2-coalition (accessed on November 20, 2020).

types of informal agreements (MoU, letter of intent, letter of cooperation, joint declaration, and working agreement).

Therefore, considering the challenges and opportunities in global climate governance mentioned at the beginning of this paper, traditional international relations theory and international law theory must be revised to take into account the "bi-soft effect". Traditional international relations theory should apply a concept of bilateral relations not only to sovereign states but also to transnational non-state actors. International law theory should pay attention to the informal bilateral agreements signed between transnational actors.

4.2 EU–US Cooperation: Challenges and Opportunities

By aligning positions in the bilateral and presenting them into the multilateral format, we basically increase our firepower and our convincing power. (Dagmara Koska, Counselor on Climate and Energy, Washington DC)

The quote above, from an interview with Dagmara Koska, Counselor on Climate and Energy at the Delegation of the EU to the United States, provides an answer to my first research question: Why do national and subnational public actors in global climate governance cooperate bilaterally even if they know multilateral cooperation already exists?

The interview participants represented 25% of government officials at the supranational level (European Commission), 25% of officials at the national level (European countries), and 50% of government officials at the subnational level (states and cities). The interview results clearly showed that all decision makers are convinced about the essential role of bilateral informal cooperation in multilateral settings. Further, European and US actors stated that bilateral transatlantic cooperation should be a necessary part of international, national, and subnational strategies. Cooperating bilaterally at all levels of climate governance provides an opportunity to understand preferences, motives, and policies of transatlantic partners and meet challenges together, as well as to find solutions and strengthen power, position, and voice during multilateral negotiations.

Interview questions were designed around four main topics. First, it was necessary to understand what cooperation means for transatlantic partners at different levels of governance (their definition of cooperation). Second, I was curious to know how the participants view the role, advantages, and disadvantages of bilateral and multilateral cooperation in the transatlantic context. Third, it was crucial to understand from public actors about the necessity of aligning bilateral cooperation with the Paris Agreement. Finally, it was essential to see how European and US actors look at challenges and view bilateral cooperation opportunities. The detailed results of interviews at the supranational, national, and subnational levels are presented in Table 4.1. However, a general trend is noticeable: all transatlantic actors are looking in the same direction.

European and US public officials define cooperation as an opportunity to share values, knowledge, and best practices and a chance to help each other succeed. Interestingly, transatlantic partners are convinced that successful cooperation can be achieved if both sides have similar goals, common interests, equal rights, and responsibilities. Both sides are open to sharing challenges and solutions, and they are committed to implementing specific policies and creating reciprocal relations. This is the only way to build trust in bilateral cooperation and establish an equal partnership.

The advantages of bilateral informal interactions are obvious at all levels of cooperation (supranational, national, subnational). First, bilateral cooperation is much easier to handle because there are only two partners in the game who have a high interest in making progress in a specific policy area. Second, bilateral cooperation allows the parties to generate outcomes and reach established goals much quicker than multilateral cooperation, when several partners are involved. Third, bilateral cooperation is deeper and more technical, and it focuses on specific topics (e.g., offshore wind energy, green infrastructure, net-zero emissions vehicles). Finally, bilateral cooperation is an essential tool to increase global climate ambitions and strengthen the implementation of the Paris Agreement. The participants did not express any disadvantages of bilateral cooperation.

Moreover, a common view amongst interviewees was that bilateral informal cooperation is a way to follow up with a multilateral platform, and it is an approach to complement multilateral negotiations. The evidence for this statement is the example of establishing the Under2 Coalition that started from bilateral cooperation between the state of California and the state of Baden-Württemberg in 2015 and later grew to the multilateral platform. Another example is the creation of the US Climate Alliance in 2017 in response to President Trump's decision to withdraw from the Paris Agreement. Today, this alliance unites 25 governors committed to reducing GHG emissions to support the US NDC to the Paris Agreement. The alliance represents 55% of the US population and its $11.7 trillion economy[23]. It is more likely that the Under2 Coalition and the US Climate Alliance will proliferate under the newly elected Biden administration.

Compared with bilateral cooperation, in the participants' view, multilateral cooperation has both advantages and disadvantages. In terms of advantages, the multilateral setting and cooperation provide an opportunity to look broadly at global challenges and solutions, and find matching topics and partners for bilateral cooperation. In this case, subnational actors feel themselves a part of global solutions through their regional and local contributions. Multilateral cooperation also helps to create a network and makes the voice heard in the international arena. In terms of disadvantages, according to respondents' view, the multilateral setting and cooperation take longer to generate results and agree on something because of

[23] US Climate Alliance, http://www.usclimatealliance.org (accessed on November 19, 2020).

actors' diverse interests and views. A multilateral setting also does not focus on a specific topic or project because it covers broad areas and high-level talks. Nevertheless, there was complete agreement among all participants that multilateral and bilateral cooperation complement each other.

Table 4.1

Results of the Interviews on Bilateral and Multilateral Cooperation

Level	Cooperation	Bilateral Cooperation	Multilateral Cooperation
Supra-national	- sharing values, knowledge, and best practices - mutual interest - achievement of objectives and targets - responsibility, trust, and openness	- generating outcomes much quicker - can provide examples for other parties - good for a specific area where both partners have strengths to share - soft law - complements multilateral cooperation	- global scope but takes longer to generate results - complements bilateral cooperation
National	- knowledge sharing - helping each other to succeed - similar challenges - common interests - trust - varies depending on partners' interests - capacity building	- useful to foster dialogue on specific topics - helpful before multilateral negotiations to understand partners' priorities - a tool to increase global ambitions and strengthen implementation of a multilateral agreement - way to follow up on a multilateral platform - complements multilateral cooperation	- more broad - supports bilateral cooperation

State	- learning from each other - sharing experience and best practice - equal partnership - same rights -responsibility - can be different depending on partners and interests	- advantage of having only one partner - high level of interest from both sides - easy to handle in terms of interactions - more focus on specific topics	- opportunity to find matching topics - more broad topics - making the voice heard - helping to find a partner for bilateral cooperation, and vice versa - more diverse - creates a network - needs more governance and needs to be formalized
City	- learning from each other - same goals - sharing challenges and solutions - reciprocal relations - sparking new ideas	- more detail and deep cooperation - more technical - clear goals - making more progress	- hard to cooperate because of multiple actors - more obstacles - high level and more talking - building network - stronger voice

Not challenges but also opportunities, to look at every bilateral cooperation in view of accomplishment of objectives of the Paris Agreement. (Artur Runge-Metzger, Director of DG Climate Action, Brussels)

This quote from an interview with Artur Runge-Metzger, Director of DG Climate Action at the European Commission, answered my third research question: What challenges do European and US actors meet in building a cooperative partnership, and what opportunities do they discover through their bilateral informal cooperation?

All public officials look at California–European bilateral cooperation as an opportunity to learn from each other; share values, knowledge, and best practices; and contribute to the achievement of the Paris Agreement's goal and the SDGs.

The participants mentioned the following challenges with EU–US bilateral cooperation: the difference in time zone, communication problems in terms of language (not everyone can speak fluently in English at the technical level of

cooperation), and COVID-19. Surprisingly, subnational actors do not consider the absence of federal support under the Trump administration as a challenge. This challenge is more relevant for supranational and national levels. Subnational actors expressed that federal support would help them to align policies inside the country. However, in the case of an absence of such support, they will nevertheless continue informal transatlantic cooperation at their levels, having their own climate policies in place as well as joint leadership and goals at the state and city levels to achieve emissions reduction targets. The COVID-19 challenge did interrupt many activities and plans. But even so, the participants found opportunities in this challenge: cancelled flights in themselves reduced GHG emissions; participants found a way to be more innovative in terms of remote and online communications, and the remote meetings saved time that would have been spent on participants' travel.

Additionally, cities look at bilateral cooperation as an opportunity to create a model for other cities in the area of energy efficiency, renewable energy, sustainable transport, resilience to climate change, sustainable use of land and nature-based solutions, urban innovation, the circular economy, affordable housing, and community engagement. Thus, I would like to conclude this section with a quote from an interview with one of the city representatives: "We are a small city, we are not going to change the world, but we can create a model for other cities to follow."

5 Conclusion

The complex and cross-cutting nature of the climate change problem, together with fragmentation, lack of coordination, and escalation of non-state actors in a state-centric system, pose significant challenges to successful global climate governance. However, these challenges give each country and the global community opportunities to revise the current global system and adjust their policy options in finding solutions suitable for all parties.

Notably, a fragmentation challenge provides an opportunity for multiple bilateral cooperation between state and transnational non-state actors, especially in the period of transformation from the Kyoto regime to Paris. A lack of coordination during the Kyoto regime provided an opportunity for intensive cooperation through bilateral informal agreements in the post-Kyoto period. A top-down approach is one of the reasons for the escalation of non-state actors in a state-centric system, which started forming their own coalitions, clubs, and networks across borders. Indeed, this challenge has created an opportunity for the vital role playing of subnational actors. States are no longer the only actors in global climate governance, and subnational stakeholders have begun to occupy the international arena of climate negotiations and collaborating across borders.

Cooperation on climate change between the EU and the US deserves special attention from the perspectives of international relations theory, international law,

and transnational governance theory. Historically, EU–US relations have been subject to turbulence in different areas of cooperation in the global governance system. These nations had a long-standing transatlantic partnership since 1953 in building democracy and security and facing global challenges. Climate change and energy cooperation are among the challenges in a strategic EU–US partnership, particularly under the Trump presidency. However, this challenge provides an opportunity to revise the New Transatlantic Agenda and build a fruitful bilateral partnership and policy coordination in the area of climate change and energy.

The EU accepted wisely the decision of President Trump to withdraw from the Paris Agreement. Thinking strategically for a long-term period, the EU took a time of "frozen federal relations" to update its climate and energy policy and develop new solutions and strategies. Today, the EU has a package on the table of transatlantic negotiations in terms of the European Green Deal and the new EU–US Agenda for Global Change. From the EU perspective, both nations can sit together around the table and discuss a shared commitment to a net-zero emissions pathway by 2050, the upcoming WTO-compatible EU Carbon Border Adjustment Mechanism, the design of a regulatory framework for sustainable finance, and goals for biodiversity protection.

Paradoxically, the US federal government's historic inaction created a legal space that allowed many US states and cities to adopt climate laws and policies that support the Paris Agreement's goal and emissions reduction targets even without federal engagement. California is one of the examples of state leadership in developing and implementing climate regulations. Today, this state has 63 informal bilateral agreements with other countries on climate and energy cooperation, 15 of which are with Europe. Therefore, considering the appearance of new actors in the international arena, the US federal government has only one path ahead—getting back to the climate game under the leadership of newly elected US President Joe Biden. Informed by the lessons learned from US individual states and supported by state leaders, the federal government can develop a powerful climate policy package and demonstrate joint leadership with the EU in achieving the Paris Agreement's goal.

The analysis of bilateral informal cooperation between California and European countries under this study showed that national and subnational transatlantic actors prefer to cooperate through five types of bilateral informal agreements: memorandums of understanding, letters of intent, letters of cooperation, joint declarations, and working agreements. The non-binding nature of these agreements allows subnational actors to protect themselves from legal disputes under national law and regulations. Simultaneously, subnational actors try to find a way to cooperate more effectively at the different levels of governance if they do not have support for their actions from the federal or national level.

The interview results clearly showed that US and European public actors at the national and subnational (state and city) levels are convinced about the essential role of bilateral informal cooperation in multilateral settings. Cooperating bilaterally

at all levels of climate governance provides an opportunity to understand preferences, motives, and policies of transatlantic partners; meet challenges together; find solutions; and strengthen power, position, and voice during multilateral climate negotiations. Moreover, bilateral informal cooperation is a way to follow up with a multilateral platform, and this approach complements multilateral negotiations.

Public officials at the national and subnational levels look at US–European bilateral cooperation as an opportunity to learn from each other; share values, knowledge, and best practices; and contribute to the Paris Agreement's goal and the SDGs. Also, US and European cities look at bilateral cooperation as an opportunity to create a model for other cities.

One of the more significant findings to emerge from this research is discovering the interesting phenomenon of a "bi-soft effect" in international relations. Bilateral informal cooperation, using the power of soft-law instruments, makes a significant impact on establishing a multilateral setting that, in its turn, gives birth to multiple bilateral cooperation. The Under2 Coalition initiative clearly demonstrates this bi-soft effect.

Therefore, the role of subnational actors and their bilateral informal cooperation in the transatlantic context are underestimated in the academic and political world. Considering the challenges and opportunities in global climate governance, a newly adopted bottom-up approach to the Paris Agreement, and current EU–US relations under the presidencies of Joe Biden and Ursula von der Leyen, traditional international relations theory and international law theory must be revised, taking into account the bi-soft effect. Traditional international relations theory should apply a concept of bilateral relations not only to sovereign states but also to transnational non-state actors. International law theory should concentrate its attention not only on the analysis of international legally-binding agreements between states; it should also pay attention to informal bilateral agreements between state and transnational actors. Transnational governance theory should not ignore bilateral cooperation between state and transnational actors in the diagonal dimension of interaction (a state and a transnational subnational public actor).

To address global environmental problems, states, transnational subnational actors, and cities must be interrelated subjects of international relations, international law, and transnational governance theories. Understanding the motivations and conditions of bilateral cooperation among these actors across borders will help to understand a changing pattern in multilateral negotiations. It will also complement and strengthen multilateral negotiations and cooperation under the Paris Agreement. Furthermore, it will help unravel the contribution of bi-multilateral initiatives collectively and guide decision makers to operate effectively in a global polycentric system.

6 Bibliography

Abbott, K. (2012). The transnational regime complex for climate change. Environment and Planning C: Government and Policy, 30(4), 571–590.

Aldy, J., & Stavins, R. (2009). Post-Kyoto international climate policy: Summary for policymakers. Cambridge University Press.

Almer, C., & Winkler, R. (2017). Analyzing the effectiveness of international environmental policies: The case of the Kyoto Protocol. Journal of Environmental Economics & Management, 82C, 125–151.

Andonova, L., Betsill, M., & Bulkeley, H. (2009). Transnational climate governance. Global Environmental Politics, 9(2), 52–73.

Bailes, A. J. K. (2004). EU and US strategic concepts: A mirror for partnership and difference?

The International Spectator, 39(1), 19-33.

Bailey, C. J. (2015). US climate change policy. Ashgate Publishing.

Bakker, C., & Francioni, F. (2014). The EU, the US and global climate governance. Ashgate.

Belis, D., Schunz, S., Wang, T., & Jayaram, D. (2018). Climate diplomacy and the rise of 'Multiple Bilateralism' between China, India & the EU. Carbon & Climate Law Review, 12(2), 85–97.

Blum G. (2008). Bilateralism, multilateralism, and the architecture of international law. Harvard International Law Journal, 49(2), 324–379.

Bodansky, D. (2016). The Paris Climate Change Agreement: A new hope? American Journal of International Law, 110(2), 288–319.

Bodansky, D., Brunnée, J., & Rajamani, L. (2017). International climate change law (First edition.). Oxford University Press.

Broto, C.V., & Bulkeley, H. (2013). A survey of urban climate change experiments in 100 cities. Global Environmental Change, 23(1), 92–102.

Buchholz, W., Peters, W., & Ufert, A. (2018). International environmental agreements on climate protection: A binary choice model with heterogeneous agents. Journal of Economic Behavior and Organization, 154, 191–205.

Bulkeley, H. (2010). Cities and the Governing of Climate Change. Annual Review of Environment and Resources, 35(1), 229–253.

Bulkeley, H., Andonova, L., Bäckstrand, K., Betsill, M., Compagnon, D., Duffy, R., Kolk, A., Hoffmann, M., Levy, D., Newell, P., Milledge, T., Paterson, M., Pattberg, P., & VanDeveer, S. (2012). Governing Climate Change Transnationally: Assessing the Evidence from a Database of Sixty Initiatives. Environment and Planning. C, Government & Policy, 30(4), 591–612.

Burman, E., & Parker, Ian. (1993). Discourse analytic research: Repertoires and readings of texts in action. Routledge.

Carlarne, C. (2010). Climate change law and policy: EU and US approaches. Oxford University Press.

Cuciurianu, M. L. (2014). The US-EU relation. Competition or cooperation. SEA: Practical Application of Science, 5, 275–280.

de Botselier, B. (2018). US climate politics in the Trump era: Options for EU engagement. College of European Policy Brief # 1.18, January 2018.

Denzin, N., & Lincoln, Y. (2011). Introduction: The discipline and practice of qualitative research. In The SAGE Handbook of Qualitative Research (pp. 1–20).

Falkner, R. (2016). The Paris Agreement and the new logic of International climate politics. International Affairs, 92(5): 1107–1125.

Farber, D. (2011). Legal guidelines for cooperation between the EU and American state governments. In D. Vogel & J. Swinnen, Transatlantic regulatory cooperation: The shifting roles of the EU, the US and California (pp. 3–19). Edward Elgar.

Fullerton, D., & Wolfram, C. (Eds.). (2012). The design and implementation of US climate policy. University of Chicago Press.

Glaser, B., & Strauss, A. (1967). The discovery of grounded theory: Strategies for qualitative research. Aldine.

Grunewald, N., & Martinez-Zarzoso, I. (2016). Did the Kyoto Protocol fail? An evaluation of the effect of the Kyoto Protocol on CO 2 emissions. Environment and Development Economics, 21(1), 1–22.

Gupta, J. (2014). The history of global climate governance. Cambridge University Press.

Guzman, A. (2005). The design of international agreements. European Journal of International Law, 16(4), 579–612.

Hamilton, D. (2010). Shoulder to shoulder: Forging a strategic U.S.-EU partnership. Center for Transatlantic Relations, The Paul H. Nitze School of Advanced International Studies, The Johns Hopkins University.

Hamilton, D., & Volker, K. D. (2011). Transatlantic 2020: A tale of four futures. Center for Transatlantic Relations, Paul H. Nitze School of Advanced International Studies, Johns Hopkins University.

Hardy, C., Harley, B., & Phillips, N. (2004). Discourse analysis and content analysis: Two solitudes? Harvard University Symposium: Discourse and Content Analysis.

Hayes, J., & Knox-Hayes, J. (2014). Security in climate change discourse: Analyzing the divergence between US and EU approaches to policy. Global Environmental Politics, 14(2): 82–101.

Hoffman, A. (2015). How culture shapes the climate change debate. Stanford University Press.

Jessop, B. (2011). Metagovernance. In M. Bevir The SAGE handbook of governance (pp. 106-123). SAGE Publications Ltd.

Kahler, M. (1992). Multilateralism with small and large numbers. International Organization, 46(3), 681–708.

Keohane, R. (1990). Multilateralism: An agenda for research. International Journal, 45(4), 731–764.

Keohane, R. O., & Nye, Joseph S. (2001). Power and interdependence (3d ed.). Longman.

Keohane, R., & Victor, D. (2011). The regime complex for climate change. Perspectives on Politics, 9(1), 7–23.

Keohane, R., & Victor, D. (2016). Cooperation and discord in global climate policy. Nature Climate Change, 6(6), 570–575.

Koranyi, D. (2011). Transatlantic energy futures: Strategic perspectives on energy security, climate change, and new technologies in Europe and the United States. Center for Transatlantic Relations, Paul H. Nitze School of Advanced International Studies, Johns Hopkins University.

Lundestad, G. (2008). Just another major crisis?: The United States and Europe since 2000. Oxford University Press.

Ma, Z. (2012). The effectiveness of Kyoto Protocol and the legal institution for international technology transfer. The Journal of Technology Transfer, 37(1), 75–97.

Milner, H. (1992). International theories of cooperation among nations: Strengths and weaknesses (book review). World Politics, 44(3), 466–496.

Mitchell, R. B. (2003). International environmental agreements: A survey of their features, formation, and effects. Annual Review of Environment and Resources, 28(1), 429–461.

Mitchell, R. B. (2006). Problem structure, institutional design, and the relative effectiveness of international environmental agreements. Global Environmental Politics, 6(3), 72–89.

Oberthür, S., & Groen, L. (2018): Explaining goal achievement in international negotiations: The EU & the Paris Agreement on climate change. Journal of European Public Policy, 25(5), 708–727.

Ostrom, E. (2009). A polycentric approach for coping with climate change. Policy Research Working Paper No. WPS 5095. World Bank.

Parker, C. F., Karlsson, C., & Hjerpe, M. (2015). Climate change leaders and followers: Leadership recognition and selection in the UNFCCC negotiations. International Relations, 29(4), 434–454.

Pataki, G., Vilsack, T., Levi, M., & Victor, D. (2008). Confronting climate change: A strategy for U.S. foreign policy: Report of an independent task force. Council on Foreign Relations.

Peel, J., Godden, L., & Keenan, R. J. (2012). Climate change law in an era of multi-level governance. Transnational Environmental Law, 1(2), 245–280.

Rao, P. K. (2012). Multilateral environmental agreements and trade policies. In P. K. Rao (Ed.), International trade policies and climate change governance (pp. 35–44). Springer Berlin Heidelberg.

Ruggie, J. G. (1992). Multilateralism: the anatomy of an institution. International Organization, 46(3), 561–598.

Schunz, S. (2016). The prospects for transatlantic leadership in an evolving multipolar world. European Foreign Affairs Review, 21(3), 431.

Slaughter, A. (2004). A new world order. Princeton University Press.

Smith, M. (2005). The European Union and the United States of America: The politics of 'bi-multilateral' negotiations. In O. Elgström & C. Jönsson (Eds.), European Union negotiations: Processes, networks and institutions (pp. 164–182. Routledge).

Sorensen, E., & Torfing, J. (2009). Making governance networks effective and democratic through metagovernance. Public Administration, 87(2): 234-258.

Sussman, G. & Daynes, W. (2013). US politics and climate change: Science confronts policy. Lynne Rienner.

Sweet, W. (2016). Climate diplomacy from Rio to Paris: The effort to contain global warming. Yale University Press.

Tago, A. (2017). Multilateralism, bilateralism, and unilateralism in foreign policy. Oxford Research Encyclopedia of Politics. http://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-449

Tracy, S. (2010). Qualitative quality: Eight 'big-tent' criteria for excellent qualitative research. Qualitative Inquiry, 16(10), 837–851.

Underdal, A. (2017). Climate change and international relations (after Kyoto). Annual Review of Political Science, 20(1), 169–188.

United Nations., United Nations., & Canada. (1992). United Nations Framework Convention on Climate Change. New York: United Nations, General Assembly.

van Asselt, H. (2014). The fragmentation of global climate governance: Consequences and management of regime interactions. Edward Elgar.

van der Gaast, W. (2017). International climate negotiation factors: Design, process, tactics. Springer.

von Bassewitz, N. (2013). 2 International Climate Change Policy: Where do we Stand? In Climate Change: International Law and Global Governance (1st ed., pp. 101–170). Nomos Verlagsgesellschaft mbH & Co. KG.

Weiss, T. G. (2009). What happened to the idea of world government? International Studies Quarterly, 53(2): 253-271.

Appendix 1: California-Europe Bilateral Agreements

Country	Type of Agreement	Date of Signature	Areas of Cooperation	Forms of Cooperation
Denmark	Memorandum of Understanding	October 2, 2019	• energy efficiency in industrial sector and residential buildings	• sharing knowledge, experience, & best practices • research initiatives • visits, seminars, workshops • pilot & flagship projects
	Memorandum of Understanding	April 30, 2018	• offshore wind energy • impact on fishing industry • regulatory approaches • scientific models	• sharing knowledge, information, & best practices • research initiatives • visits, seminars, workshops, meetings
	Memorandum of Understanding	September 19, 2017	• water data collection & management • wastewater & water technologies • regulations	• sharing knowledge, information, & best practices • governance models & research • visits, seminars, workshops, meetings
France	Joint Declaration	December 7, 2015	• climate change mitigation • carbon pricing • adaptation & resiliency • water management • biodiversity • transportation • clean energy • sustainable buildings & cities • applied science	• working groups within the Under2 Coalition • sharing information & policy initiatives • capacity building & technical support • cooperative research • business-to-business networking • innovation hubs

				• training, seminars, workshops, exhibitions
Germany (Baden Württem-berg)	Memorandum of Understanding	September 15, 2018	• climate, energy, & environmental policy • traffic transformation • urban infrastructure • information technology	• working groups within the Under2 Coalition • sharing knowledge, information, & best practices • exchange of experts • innovative research partnerships • networking
Nether-lands	Letter of Intent (governor level)	November 13, 2019	• sustainable mobility • circular economy • climate change & resilience	• information exchange • design & policy consultations • joint university projects • sharing of innovative technologies
	Letter of Intent (agency level)	May 24, 2017	• sustainable mobility & zero-emission vehicles • climate change policy	• working groups within the Under2 Coalition • sharing information and best practices • public-private partnership • conferences, events
	Letter of Intent (agency level)	January 9, 2017	• smart & e-mobility • climate change • energy innovation	• information exchange • infrastructure and Economic Development Bank program • venture capital program
	Working Agreement (state and province level)	March 11, 2015	• solar energy • zero emission transportation	• sharing information and best practices

			• smart mobility & infrastructure • policy development	• public-private partnership • exchange meetings, workshops • joint research
Norway*	Declaration of Intent	August 2, 2017	• SDG 13 "Climate Action" • climate policy & carbon pricing • deforestation • zero-emission transportation • renewable energy • energy efficiency	• working groups within the Under2 Coalition • information exchange • sharing experience and best practices • partnerships between state and non-state actors • technical, scientific, and policy capacity building
Spain (Catalo-nia)	Memorandum of Understanding	April 6, 2015	• sustainable mobility • water resources management • environmental protection • bio-tech & life sciences • advanced agriculture & food technologies • GHG emissions reduction	• sharing information and best practices (regulations, policies) • joint trade promotion activities • business missions • science & technology exchange programs
Sweden	Letter of Cooperation	April 19, 2017	• clean/renewable energy • climate actions • transportation • research & innovation	• working groups within the Under2 Coalition • sharing information and best practices • conferences and summits
Scotland*	Letter of Cooperation	April 3, 2017	• clean/renewable energy • low-carbon economy	• working groups within the Under2 Coalition • sharing information and best practices

	Memorandum of Understanding	January 15, 2018	• offshore wind energy • biodiversity	• working groups within the Under2 Coalition • sharing information and best practices • visits, seminars, workshops, meetings
	Memorandum of Understanding	October 24, 2019	• cultural heritage • climate vulnerability assessment • GHG emissions reduction	• working groups within the Under2 Coalition • sharing information, experience, and best practices • visits, seminars, workshops, meetings • education

* Norway and Scotland are not members of the European Union

Appendix 2: List of Stakeholders for the Interviews

Code	Stakeholders	Level	Number of Interviewees
001	European Commission, European External Action Service, Brussels	Supranational	1
002	Delegation of the EU to the United States, Washington, DC	Supranational	1
003-004	European Commission, DG Climate Action, Brussels	Supranational	2
005-006	Danish Energy Agency, Ministry of Climate, Energy, and Utilities, Copenhagen, Denmark	National	2
007	Ministry of Environment and Food, Copenhagen, Denmark	National	1
008	Ministry of Climate and Environment, Oslo, Norway	National	1
009	Ministry of Environment, Climate Protection, and the Energy Sector, Baden-Württemberg, Germany	Subnational (State)	1
010	California Environmental Protection Agency, Sacramento, CA, US	Subnational (State)	1
011	International Urban Cooperation Secretariat, New York, US	Subnational (City)	1
012	City of Barcelona, Spain	Subnational (City)	1
013	City of Varna, Bulgaria	Subnational (City)	1
014	City of Santa-Monica, California, US	Subnational (City)	1
015	City of San Diego, California, US	Subnational (City)	1
016	City of Birmingham, Alabama, US	Subnational (City)	1
Total			16

About the Author

Nataliya Stranadko was a visiting fellow at the Europa-Kolleg Hamburg within the "Europe and Beyond" Fellowship Program, which is part of the cooperation between Europa-Kolleg Hamburg and Bundeskanzler-Helmut-Schmidt Foundation and financed through funding by the Free and Hanseatic City of Hamburg. Nataliya Stranadko is a doctoral candidate in Public Affairs and Policy at the Mark O. Hatfield School of Government, Portland State University (Oregon, USA).

Prior to her doctoral research, she earned the Master of Science in Global Environmental Change from the University of Leicester (Leicester, United Kingdom). She also completed a Master of Science in Ecology and Environmental Protection at Sumy State University, and postgraduate study in climatology and meteorology at Ukrainian Hydrometeorological Institute (Kyiv, Ukraine).

Contact: natalia.stranadko@gmail.com

Europa-Kolleg Hamburg
Institute for European Integration

The Europa-Kolleg Hamburg is a private law foundation. The foundation has the objective of furthering research and academic teachings in the area of European integration and international cooperation.

The Institute for European Integration, an academic institution at the University of Hamburg, constitutes the organisational framework for the academic activities of the Europa-Kolleg.

The Discussion Papers are designed to make results of research activities pursued at the Institute for European Integration accessible for the public. The views expressed in these papers are those of the authors only and do not necessarily reflect positions shared by the Institute for European Integration. Please address any comments that you may want to make directly to the author.

Editors
Europa-Kolleg Hamburg
Institute for European Integration
Prof. Dr. Jörg Philipp Terhechte, Managing Director
Dr. Andreas Grimmel, Research Director
Windmühlenweg 27
22607 Hamburg, Germany
http://www.europa-kolleg-hamburg.de

Please quote as follows
Europa-Kolleg Hamburg, Institute for European Integration,
No.02/2021, http://www.europa-kolleg-hamburg.de

Europa Kolleg Hamburg
Institute for European Integration

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG