Global climate governance: rising trend of translateral cooperation

Nataliya Stranadko

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Abstract
The transformation from the Kyoto Protocol to the Paris Agreement has been analyzed 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 part of the construction or reconstruction of the international regime. Why do national and subnational public actors in global climate governance cooperate bilaterally when multilateral cooperation already exists? What type of bilateral cooperative agreements do these actors prefer, and why? Using qualitative methods, combining content analysis subsequent interviews, this research empirically demonstrates the role and importance of bilateral transatlantic cooperation and informal agreements between national and subnational actors in global climate governance. Using the EU-US case study, this research identifies a diagonal dimension of interaction between states and transnational actors. It introduces and defines the terms “translateral cooperation” and “translateral agreements” in the new climate regime.

Keywords Bilateral cooperation · Climate change · Environmental treaties · Global governance · Soft law · Subnational actors

1 Introduction
Climate change is a global environmental problem 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; van Asselt, 2014). The theory of global governance is based on the concept of multilateralism in which a number of sovereign states are involved in cooperation on a particular worldwide problem.
(Keohane, 1990). But what role does bilateral cooperation play in a multilateral world between national and subnational actors? Does such cooperation matter?

For the sake of this study, the term *bilateral cooperation* refers both to cooperation between states as unitary actors but also to cooperation between states and subnational actors.

Efforts to address climate change problem and to build effective global climate governance began in 1992 when countries adopted the United Nations Framework Convention on Climate Change (UNFCCC) as a key multilateral agreement. Looking for a practical mechanism for implementation of that agreement, states negotiated the Kyoto Protocol as a further set of norms, rules, and principles.

However, the Kyoto Protocol’s implementation has encountered several obstacles that bring into question the effectiveness of multilateral climate agreement and global climate governance in general. Among these drawbacks are: segregation of states into small negotiating groups, top-down approaches, isolation of non-state actors from decision-making, lack of coordination and cooperation, and lack of linkage to sustainable development (Gupta, 2014). After Kyoto, it was obvious that multiple states could not achieve emissions reduction targets because climate actions are rooted in domestic politics that involve subnational actors, which form their own coalitions, clubs, and networks (Bulkeley et al., 2012). Even more important, national and subnational actors began to negotiate and cooperate bilaterally. Learning from the Kyoto regime, in 2015, the states adopted the Paris Agreement as a new international treaty that began implementation in 2021.

The regime’s transformation from the Kyoto Protocol to the Paris Agreement has been analyzed by scholars of international relations, international law, and transnational governance. The international relations literature looks at the climate regime from a perspective of power distribution, state interests, institutions, and multilateral negotiations (Kahler, 1992). International law theory focuses on legal analysis and the design of international climate agreements (Bodansky et al., 2017). The transnational governance literature examines the participation and involvement of transnational non-state actors at different levels of governance (Broto & Bulkeley, 2013). However, each of these theories overlooks *a bilateral trend of cooperation in a multilateral setting that arises as part of the construction or reconstruction of the international regime.*

This paper expands these theories by demonstrating empirically, in a multilateral world, the important role of bilateral cooperation among national, subnational, and municipal actors in the transnational context of global climate governance.

To provide greater insight into bilateral cooperation in a multilateral setting, this research focuses on climate change cooperation among national and subnational actors during the 2008–2021 period between the US and foreign nations, particularly the European Union.

This paper is organized as follows: first, I present theoretical and analytical frameworks that outline the current knowledge, gaps, challenges, and opportunities in the area of global climate governance as well as providing conceptualization for introducing a new term *translateral cooperation:* then I describe my research design and methods, and I conclude by providing discussion and results regarding transatlantic climate cooperation.
2 Theoretical and analytical frameworks

In global climate governance, the UNFCCC, the Kyoto Protocol, and the Paris Agreement are key fora for multilateral cooperation on climate change. The regime’s development from Kyoto to Paris together with new features of the Paris Agreement gave rise to a bilateral trend of cooperation between state and subnational actors that deserves explanation.

2.1 Global climate governance: challenges and opportunities

To address the climate change problem, the Kyoto Protocol obligated 37 industrialized countries and the European community to reduce GHG emissions by 5.2% over the 2008–2012 period compared with 1990.

However, the first two years of Kyoto Protocol implementation faced several 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).

2.1.1 Challenge 1: fragmentation

Fragmentation refers to the process of breaking the established international institutions into separate parts, crafted in response to three forces: the different interests of relevant states, uncertainty about the implementation of commitments, and the struggle to find productive linkages (Keohane & Victor, 2011, p. 8). In global climate governance, “fragmentation” (van Asselt, 2014) has been referred to as “disaggregated world order” (Slaughter, 2004), “polycentric approach” (Ostrom, 2009), “multi-level governance” (Peel et al., 2012), and “regime complex” (Keohane & Victor, 2011, 2016). Regardless of the terminology, fragmentation creates a set of clubs and regional groups based on common interests and commitments. In the Kyoto case, the following groups were formed: 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. Such an unusual phenomenon should be explained by international relations theory, which traditionally applies a concept of bilateral relations only to sovereign states and not to transnational actors.

Recently, the EU, US, and China signed bilateral agreements on climate change and clean energy cooperation at the national level. In addition, many countries announced their policies and targets for achieving climate neutrality by 2050 under the Paris Agreement. Indeed, negotiations and cooperation among 200 nations would be challenging under the Paris Agreement. Most serious international efforts are more likely to result from bilateral cooperation between major global players such as the EU, US, and China (Andresen et al., 2021; Victor, 2016). Furthermore, subnational public actors are increasingly important occupants of the international arena (Keohane & Oppenheimer, 2016). Thus, international relations theory would benefit from investigating the trend of rising bilateral cooperation.
between state and non-state actors as a part of the construction or reconstruction of the international regime.

2.1.2 Challenge 2: a lack of cooperation and coordination between actors

A lack of cooperation and coordination appeared as fragmented groups of states (the “horizontal” dimension) due to disagreement and conflicts of interest among developed and developing countries.

Looking at the Kyoto regime using Milner’s definition of cooperation (1992), members of each fragmented group have pursued their rational interests based on the importance they gave to two divergent goals: mitigation and adaptation. Developed countries that ratified the Kyoto Protocol focused on mitigation measures by looking at opportunities for various projects in developing nations that had the technical capacity to help fulfill developed countries’ mandatory emissions reduction targets. On the other hand, some developed nations, like the US, did not want to adjust their climate policy on GHG emissions reduction through legally binding targets. In response, developing countries blamed developed states for inaction, and they required more financial resources for adaptation while also refusing to adopt their own mitigation policy.

In addition to a lack of cooperation in the horizontal dimension, a cooperation deficit was also observed in the vertical dimension of interaction between actors (between supranational government officials and national counterparts) (Slaughter, 2004).

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 primary mode of cooperation. However, international law theory mainly concentrates its attention on the analysis of multilateral agreements, and in some cases, bilateral, formal, legally binding agreements between states. It pays far less attention to informal bilateral agreements between states and transnational actors. The literature pays less attention to bilateral cooperation and soft law instruments, to the design of bilateral agreements, and to their effect on multilateral treaties (Guzman, 2005; Lawrence & Wong, 2017; Mitchell et al., 2020). Therefore, international law theory would benefit by investigating the existence of any bilateral cooperation and informal agreements between national and subnational actors in the transatlantic context.

2.1.3 Challenge 3: escalation of non-state actors in a state-centric system

The lack of cooperation in the horizontal and vertical dimensions led to the isolation of non-state actors from the national decision-making process, and lack of access to the information submitted by national governments to the UNFCCC Secretariat. This creates a top-down approach that prompts non-state actors to develop new strategies, including forming their own coalitions, clubs, and networks across borders (e.g., the NDC Partnership, America’s Pledge Initiative, the US Climate Coalition, and the Global Covenant of Mayors for Climate and Energy). Most of these clubs/coalitions were created in the post-Kyoto period, as negotiations on the new international climate agreement started gaining momentum.

Opportunity 3: the rising importance of subnational actors

The third challenge creates an opportunity for subnational actors to play a more important role. States are no longer the only actors in global climate governance, and subnational
stakeholders become more involved in climate negotiations and collaborations across borders.

The involvement of subnational actors in international relations and foreign policy is not a new phenomenon. Indeed, international relations scholars dedicated enormous efforts to studying a concept of paradiplomacy (subnational or parallel to federal government diplomacy), which originated from international activities of states (California in the USA), provinces (Quebec in Canada), lands (Baden-Württemberg in Germany), and regions (Scotland and Catalonia). For instance, Duchacek (1984), Soldatos (1990), Kuznetsov (2014), and Lequesne and Paquin (2017) explain reasons for these international activities and highlight the national government’s fears regarding the involvement of subnational actors in international relations. Recent studies analyze paradiplomacy in selected countries and emphasize gaps in policies and resources at the subnational level (Liu & Song, 2020; Nganje, 2016; Schiavon, 2018; Tavares, 2016).

Despite the rich literature, paradiplomacy scholars look at subnational actors primarily through the lens of international relations theory, missing its connectivity with international law and transgovernmental theory.

De facto, the increasing involvement of non-state actors in international issues has given birth to transnational climate governance theory (Andonova et al., 2009), as part of global climate governance (Slaughter, 2004). However, it has also raised theoretical and practical questions about the mode of cooperation and type of cooperative agreements between these actors.

In the real world, the importance of subnational non-state actors was recognized in 2014, when the UNFCCC Secretariat launched a global climate action portal called Partnerships for the Non-State Actor Zone for Climate Action (NAZCA). Subsequently, academic scholars began to discuss the role of subnational actors in achieving the nationally determined contributions (NDCs) under the Paris Agreement (Hsu et al., 2020; Murthy, 2019).

Each type of non-state stakeholder involved in NAZCA deserves separate scientific attention. My research focuses only on subnational public actors (individual states, provinces, and cities) in the transnational context. In other words, this paper employs Slaughter’s (2004) concept about government officials performing both a domestic and an international role at national, subnational, and local levels.

### 2.2 Why does EU–US cooperation need particular attention?

China (23.9%), the USA (11.8%), India (6.8%), and the EU (6.8%) are the largest emitters of GHG emissions (Climatewatch, 2021), which together constitute almost 50% of global emissions. Therefore, serious international efforts on climate change are more likely to come from bilateral cooperation between these nations (Andresen et al., 2021; Victor, 2016). Among these emitters, the EU has demonstrated enormous leadership in climate change negotiations and climate actions over recent decades. “Frozen federal relations” within the US under the Trump administration, new European Commission elections, and the challenge of COVID-19 became catalysts for the EU climate and energy policy.

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1 For the current climate actions and the involved stakeholders, see the NAZCA portal at [https://climateaction.unfccc.int](https://climateaction.unfccc.int) (accessed on July 2, 2021).
The EU announced the vision to become the first world climate-neutral continent by 2050 and transform its economy toward net-zero GHG emissions. Following the EU, China, the USA, and India pledged to achieve climate neutrality by the middle of the century. Since 2015, the EU has initiated and signed bilateral agreements on climate change and energy cooperation with the US, China, and India. Furthermore, subnational actors in these states intensified their bilateral informal cooperation. For instance, despite China’s top-down central government approach, Liu and Lo (2020) suggest that China follow climate bilateralism and transnationalism. Meanwhile, US Senator Chris Murphy (Democrat) and US Senator David Perdue (Republican) introduced a Bill on Establishing the Office of Subnational Diplomacy within the US Department of State (Murphy, 2020).

Each case of bilateral climate cooperation between these countries deserves separate research attention. The Harvard Project on Climate Agreements at the Harvard Kennedy School and the Center of Public Diplomacy at the University of Southern California began intensive research into US cooperation with China and India on climate change and the role of subnational actors. Considering the share of global emissions between these states, such studies are indeed essential. However, the EU-US bilateral cooperation research also deserves attention because it demonstrates an interesting phenomenon and types of cooperation between national and subnational actors that may constitute a new theoretical and practical concept in the climate regime and could be replicable to other countries.

Thus, the EU–US case study was chosen for the following reasons:

- The announcement of President Trump in 2017 to withdraw from the Paris Agreement, and the inaction of his administration on climate change at the international and national levels, raised questions about international relations theory regarding the role of states as unitary actors in international negotiations.
- Under President Biden, climate change and energy cooperation are the key pillars in the new EU–US Agenda for Global Change.
- The European Green Deal and the EU Carbon Border Adjustment Mechanism would impact and change socioeconomic and environmental relations with the US subnational actors to achieve climate neutrality.
- In the absence of US federal support for international climate actions under the Trump administration, the EU–US case study demonstrates the rising trend in bilateral cooperation in the diagonal dimension of interactions—between state actors (EU member states) and transnational subnational actors (individual US states and cities).
- California climate leadership and policy experience also represent a subnational cooperative model that other US states may follow.

All the above create a unique set of circumstances in the post-Kyoto period—a period of construction of a new climate regime—that provides a foundation for the expansion of international relations theory, international law, and transnational governance theory, in terms of translateral cooperation as a new dimension in global climate governance.

2.3 Conceptualization of translateral cooperation

Traditional international relations theory, international law, and transnational governance theory apply bilateral relations only to sovereign states but not transnational non-state actors. These theories assume that bilateral cooperation in a multilateral setting occurs only in horizontal and vertical dimensions of global governance by signing
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bilateral legally binding agreements. Even extensive studies on paradiplomacy primarily focus on cooperation in these two dimensions. *This paper argues that a period of transformation from Kyoto to Paris gave birth to intensive informal cooperation between state and non-state actors in a diagonal dimension.* I present this new cooperative concept in global climate governance is presented in Fig. 1. For the sake of this study, non-state actors include only subnational public actors (individual states, provinces, and cities) in the transnational context.

Caption: Bilateral cooperation occurs between EU and US national and subnational actors in horizontal, vertical, and diagonal dimensions of interactions. The horizontal dimension covers bilateral cooperation between two national actors (states) and two transnational subnational actors (individual states, provinces, and cities). The vertical dimension covers bilateral cooperation and policy coordination between national and subnational levels in one state. The diagonal dimension covers cooperation between two actors, a supranational/national actor in one state and a subnational actor in another state. In addition, bilateral cooperation could be shaped by negotiations and events that occur in the international arena.

During most of my interviews, I used the term *bilateral cooperation* because policymakers at national and subnational levels apply this term to cooperation between any two actors. However, bilateral, translational, multilateral, and transnational municipal cooperation covers different types and levels of actors’ interactions and benefit from clear definitions from theoretical and legal perspectives.

Thus, the questions arise: Why do state and non-state subnational actors decide to cooperate bilaterally? What type of agreements do these actors prefer if they choose to cooperate?

Bilateral cooperation in the diagonal dimension has not received much previous attention in international relations theory, international law, and transnational governance theory. Also, the term *bilateral cooperation* has typically been used exclusively
for cooperation between states. Thus, I introduce the term *translateral cooperation* to refer to this “diagonal” dimension of actors’ interactions. I define *translateral cooperation* as:

A process of policy dialogue, knowledge sharing, and transnational coordination of goals, actions, challenges, and solutions between a national actor in one state and a subnational actor in another state. Translateral cooperation uses soft law instruments to achieve specific outcomes that foster bilateral and multilateral negotiations between states to address the particular worldwide problem. Translateral agreement is a mode of translateral cooperation.

This research considers EU–US translateral cooperation (*dependent variable*) to occur at three stages: (a) negotiation, (b) signed agreements, and (c) implementation. The interview guide is built on these stages. 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.

### 2.4 Scientific and policy importance

This research is important for scholarship and international climate policy because it raises the visibility and understanding of the role of translateral cooperation in global climate governance.

In the scholarly domain, it can contribute to international relations theory by identifying the reasons for the growth in bilateral cooperation in the diagonal dimension during the international climate regime’s reconstruction. Furthermore, it can contribute to international law and transnational governance theories by offering a typology of translateral agreements that would be an essential part of the soft law mechanisms and practical legal steps during the Paris Agreement implementation. Finally, it can provide empirical evidence of cooperation between national and subnational actors, which is crucial for recognizing subnational actors as interrelated subjects of international relations, international law, and transnational governance theories.

In the policy domain, it can unravel the importance of translateral cooperation in achieving the nationally determined contributions (NDCs) agreed under the Paris Agreement, particularly Article 6, and strengthen coordination between actors in vertical and horizontal dimensions of interaction. Moreover, identifying motivations and conditions of translateral cooperation between national and subnational actors across borders can improve our understanding of changing patterns in multilateral negotiations. Thus, improving our conceptual understanding of the growth in bilateral informal cooperation can help solve the practical problem in achieving NDCs.

### 3 Research questions and methods

I address three research questions:

1. Why do national and subnational public actors in global climate governance cooperate bilaterally in a setting in which multilateral cooperation already exists?
2. What type of 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 questions, I adopt a qualitative methods approach involving both content analysis of primary documents and interviews (Online Resource 1).

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 policies so that in-depth interviews could be conducted to answer the other two questions.

Sixteen semi-structured qualitative interviews were conducted with EU and US government officials recommended by international climate experts (Online Resource 3). I selected interviewees who were knowledgeable, experienced, and respected in their organizations and international arena to ensure the evidence collected was credible and reliable. I focused on translateral cooperation involving California, as it was the US subnational actor who demonstrated the strongest climate change leadership, negotiating many agreements over time with foreign countries. However, data about existing bilateral informal agreements were also collected from other US states to see if California serve as a model for them to follow.

4 Results and discussion

4.1 Rising trend of bilateral cooperation between the US and Foreign countries

As shown in Fig. 2, during the 2008–2021 period, US states signed 96 bilateral informal (translateral) agreements on climate change with foreign countries. California signed 84
agreements (87.5%), while other US states signed 12 (12.5%). Interestingly, Fig. 2 shows that a bilateral trend of cooperation in the diagonal dimension started arising significantly in the post-Kyoto period when reconstruction of the international climate regime occurred. The number of agreements peaked in 2014–2015 when the Paris Agreement was adopted, and in 2017 when President Trump announced a withdrawal from the Paris Agreement. The graph shows a decline since 2019, attributed to COVID-19-related travel restrictions and border closures. Despite this, the US states signed 16 agreements between 2019 and 2021.

I sent requests to identify bilateral informal agreements to 50 US states in May–July 2021. By July 15, 2021 with the response rate of 32%, a total of twelve agreements were reported. Given this response rate, it is likely that other US states have signed more agreements that are not identified here.

Figure 3 compares the number of agreements signed by US states with different countries. China and the EU are the main bilateral partners for the US states. However, this figure also reveals several additional facts. First, the US signed 31 translateral agreements with China between 2008 and 2021. Almost half of these agreements became inactive during this period. Also, China prefers only one type of informal agreement: Memoranda of Understanding (MoUs). These aspects make US–China climate cooperation an interesting case study for further research and require investigating why China so strongly prefers MoUs over alternative types of translateral cooperation and why do so many of these agreements become so quickly inactive.

Second, the US signed 30 translateral agreements with the EU between 2008 and 2021. In contrast to China, all these agreements are still active, and interviewees identified several additional agreements currently under negotiation. EU-US translateral agreements also exhibit far more variation in the types of agreements signed with subnational actors compared to China’s focus on MoUs.
4.2 EU–US translateral agreements

As shown in Fig. 4, between 2008 and 2021, nine US states (California, Kentucky, Maine, Michigan, Minnesota, New Jersey, New York, Virginia, and Washington) signed 30 translateral agreements on climate change with twelve European countries: Austria, Denmark, Finland, France, Iceland, Germany, the Netherlands, Norway, Scotland, Spain, Sweden, and the UK (Online Resource 2). California has the largest number of agreements from the US side, and Germany has the largest number of agreements from the EU side. On the other hand, Denmark, the Netherlands, and Scotland have more translateral agreements signed with California than other European countries. 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 5 shows that other US states have used California’s experience as a model for translateral cooperation, signing eight translateral agreements between 2018 and 2020. During that period, California actively participated in the international climate
negotiations, and announced strong commitments to the Paris Agreement in the absence of federal support. California, with other states, also established the US Climate Alliance and, for the first time in history, hosted the Global Climate Action Summit in 2018.

Interestingly, there are seven types of translateral agreements that partners prefer (Fig. 6):

1. MoUs (54%)
2. Joint declarations (20%)
3. Letters of intent (10%)
4. Letters of cooperation (7%)
5. Collaboration agreements (3%)
6. Cooperation agreements (3%)
7. Working agreements (3%)

This finding is consistent with Slaughter (2004), who noted that the MoUs are the most common form of bilateral cooperation agreement. However, it is notable that MoUs are only half of all bilateral informal agreements, with other forms, covering 46% of US–European translateral agreements.

Content analysis of translateral agreements shows that transatlantic partners cooperate primarily in the areas of energy (solar energy, offshore wind, and energy efficiency), transportation (mobility and zero-emission vehicles), and urban infrastructure (Fig. 7). In their agreements, partners clearly identify a vulnerability to climate change, and the connection of climate mitigation and adaptation actions at the subnational level with the goals of the Paris Agreement and SDGs. Partners also recognize the importance of subnational leadership and cooperation to achieve GHG emissions reduction. Furthermore, transatlantic agreements demonstrate that the actors involved are convinced that climate actions have significant economic and scientific benefits in terms of jobs creation, investments, growth and trade, and research and innovation.

US–European actors prefer to cooperate by sharing knowledge, experience, and best practices, and by conducting policy and research initiatives, visits, workshops, pilot and flagship projects, public–private partnerships, and innovation hubs.
Two factors appear to explain the choice of MoUs as the most common form of translateral cooperation. First, MoUs dominate 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 adopt MoUs because they are international law’s most common, and commonly recognized, soft law instrument. Second, MoUs are similar in structure to 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 an agreement that has international parallels. Simultaneously, a non-binding agreement allows subnational actors to protect themselves from legal disputes under national law and regulations. So, MoUs provide subnational actors with a way to cooperate effectively at different levels of governance if they lack support for their actions at federal or national levels.

Besides MoUs, other US–European agreements have a mixed structure. Content analysis of these agreements 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, is shorter in length (1–2 pages), and tends to identify broader areas for cooperation. These types of agreements appear to be preferred when transatlantic partners are beginning cooperation, learning each other’s preferences, policies, and behaviors before entering secondary stages involving more specific areas of cooperation.

A joint declaration, a letter of intent, collaboration, and cooperation agreements follow the main structural elements and provisions from MoUs. Still, they rarely include clauses addressing dispute resolution, modification procedure, or financial obligations. Therefore, it is likely that transatlantic partners using these agreements are in a middle stage of their cooperative relationship. Finally, working agreements have very specific and narrow areas
of cooperation that reflect past joint activities under letters of cooperation and MoUs. For instance, this is the case for the working agreement between the California Energy Commission and Noord-Holland Province. This type of bilateral agreement involves cooperation on specific pilot projects or public–private partnerships (e.g., SolaRoad, Coast e-mobility program) that require further monitoring, evaluation, and reporting.

4.3 EU–US Cooperation: implementation, challenges, and opportunities

“Our 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).

This quote, from an interview with Dagmara Koska, Counselor on Climate and Energy at the Delegation of the EU to the United States, answers my first research question regarding reasons for cooperation between national and subnational public actors.

The interview results clearly show that participants are consistently 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 transatlantic partners’ preferences, motives, and policies, to meet challenges together, as well as to find solutions and to 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 (i.e., how they define cooperation). Second, I inquired into the participants views on the role, advantages, and disadvantages of bilateral and multilateral cooperation in the transatlantic context (Online Resource 4). Third, I sought to understand the necessity of aligning bilateral cooperation with the Paris Agreement. Finally, I sought to identify how European and US actors implement their agreements, look at challenges, and view cooperation opportunities. The detailed results of interviews at the supranational, national, and subnational levels show that transatlantic actors generally perceive these issues similarly.

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, and subnational). First, bilateral cooperation is much easier to handle because only two partners in the game 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 involving several partners. Third, bilateral cooperation is deeper and more technical, and focuses on specific topics (e.g., offshore wind energy, green infrastructure, net-zero emissions vehicles). Finally, bilateral cooperation is seen as helping increase global climate ambitions, strengthen the implementation of the Paris Agreement, and achieve climate neutrality. The participants did not express any disadvantages of bilateral cooperation.
Moreover, a common view among interviewees was that bilateral informal cooperation serve as a follow-on that can complement multilateral agreements. This approach also complements multilateral negotiations. The evidence for this statement is the example of establishing the Under2 Coalition that started from bilateral cooperation between 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.

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 to find matching topics and partners for bilateral cooperation. In this case, subnational actors feel themselves to be a part of global solutions through their regional and local contributions. Multilateral cooperation also helps to create a network and fosters voices heard in the international arena. Regarding disadvantages, according to respondents’ view, the multilateral setting and cooperation take longer to reach agreement and generate results because actors have diverse interests and beliefs. A multilateral setting also does not focus on a specific topic or project, instead covering broad areas and high-level talks. Nevertheless, all interviewees agreed that multilateral and bilateral cooperation complement each other.

In terms of implementation of agreements, there is a positive trend to move forward as evidenced by the organization of several successful events, although the COVID-19 led some to be postponed. For instance, Denmark signed a MoU on offshore wind with California in 2018. Both sides have visited each other’s facilities, exchanged knowledge and information, and they are in the process of preparing a regulatory policy framework for combining solar and offshore wind energy production in California.

The Transatlantic Climate Bridge MoU signed between Germany and some US states has established a working group on subnational engagement and expanded efforts to implement long-term low-carbon strategies. An online forum was organized in March 2021 to discuss further perspectives and alliances and to prepare for COP 26 in Glasgow.

Most EU-US cities under the International Urban Cooperation (IUC) conducted their learning exchange and technical visits, participated in several conferences, and prepared the City Integrated Local Action Plans with thematic areas of cooperation, planned activities, and achievements. In addition, the IUC program demonstrated good feedback from transatlantic cities in terms of learning and policy development. Thus, the IUC Secretariat decided to expand this program to regional cooperation, including Latin America and the Caribbean.

“This 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, answers my third research question regarding challenges and opportunities.

The participants look at California–European bilateral cooperation as an opportunity to learn from each other; share values, knowledge, and best practices; and contribute to achieving the goals of the Paris Agreement and the SDGs.

The participants mentioned the following challenges with EU–US bilateral cooperation: differences in time zones, communication problems in terms of language (not everyone can speak English fluently), and COVID-19. Surprisingly, subnational actors do not consider
the absence of federal support under the Trump administration to be 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 absence of such support, they plan to nevertheless continue informal transatlantic cooperation at their levels, having their climate policies in place and joint leadership and goals at the state and city levels to achieve emissions reduction targets. The COVID-19 challenge interrupted many activities and plans. 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.

5 Conclusions

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 influence the current international system and adjust their policy options to identify innovative 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 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. Moreover, the escalation of non-state actors in a state-centric system 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 collaborate 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. This article shows that 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, but also on informal bilateral agreements between state and transnational actors. Finally, transnational governance theory should not ignore bilateral cooperation between state and transnational actors in the diagonal dimension of interaction, one of the more significant findings to emerge from my research. The term bilateral cooperation is historically reserved for cooperation between states as unitary actors. Thus, this paper has introduced and defined a new term for the diagonal dimension of interactions called translateral cooperation.

The analysis of translateral cooperation between US states and European countries shows that national and subnational actors cooperate through seven types of 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 find a way to cooperate more effectively at different levels of governance if they do not have support for their actions at the federal or national level.

The interview results clearly show that US and European public actors at the national and subnational levels are convinced that bilateral informal cooperation in multilateral
settings is essential. Cooperating bilaterally at all levels of climate governance provides
an opportunity to understand transatlantic partners’ preferences, motives, and policies,
to meet challenges together, to find solutions, and to strengthen power, position, and
voice during multilateral climate negotiations. Moreover, bilateral informal cooperation
is a way to follow up on issues raised on a multilateral platform, thereby complementing
multilateral negotiations.

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 sup-
port the Paris Agreement’s goals 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 64 active informal bilateral
agreements with other countries on climate and energy cooperation, 18 of which are
with Europe. Following the California model, eight other US states signed twelve agree-
ments with European countries.

In summary, the results of my research provide important insights into understanding
key reasons for the growth of translateral cooperation. First, ending the Kyoto regime with
legally binding obligations provided a space for national and subnational actors to explore
various forms of informal cooperation giving uncertainty about reaching a new multilateral
treaty. Second, lessons learned from the Kyoto Protocol showed that a top-down approach
with legally binding targets for states did not work effectively, and that subnational actors
could play an essential role in achieving emissions reduction targets through their inform-
al non-legally binding cooperation and participation in the international climate nego-
tiations. Third, the adoption of the Paris Agreement in 2015 with its bottom-up approach,
new norms, and rules gave a green light for the involvement of subnational actors in inter-
national climate activities based on the soft law instruments. Finally, scientific evidence
on climate change and the announcement by President Trump to withdraw from the Paris
Agreement in 2017 allowed subnational actors to bring their voices to the international
negotiations and accelerate transatlantic climate actions under the California leadership.

It is likely that the EU and China will remain key partners for the US in translateral
cooperation in coming years. Furthermore, it seems likely that translateral agreements will
continue to increase for the foreseeable future. There are several reasons for this. First,
newly elected President Biden supports climate and energy cooperation at the national
level by returning the US to the Paris Agreement. Second, adopting the Paris Rulebook on
Article 6 at COP 26 will provide an opening for international, regional, and national car-
bon markets and linking the emission trading schemes (ETS) among different stakeholders.
Thus, ETSs could become a new area of translateral cooperation between the US (e.g.,
California) and European countries, which have already established cap-and-trade systems,
and China, which plans to activate its ETS in 2021. Finally, the European Green Deal,
carbon border adjustment mechanism, establishment of an office of subnational diplo-
macy within the US Department of State, and announcements by several nations to achieve
climate neutrality will change the rules of the game for international activities and will
open up yet more possibilities for translateral cooperation among national and subnational
actors.

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Availability of data and materials  In this study, the author analyzed bilateral informal agreements on climate change between California and eight European countries: Denmark, France, Germany, the Netherlands, Norway, Scotland, Spain, and Sweden. Bilateral agreements are available at the website of the California Intergovernmental Climate Action Team (ICAT) by the following link: https://www.energy.ca.gov/about/campaigns/international-cooperation/climate-change-partnerships

Code availability  Numerical codes were applied to each interviewee ranging from 1 to 16.

Declarations

Conflict of interest  The author has no relevant financial or non-financial interests to disclose.

Ethics approval  This research was approved by the PSU Human Research Protection Program (HRPP) on December 5, 2019. Research Integrity determined this study qualifies as exempt and is satisfied the provisions for protecting the rights and welfare of all subjects participating in research are adequate.

Consent to participate  The PSU HRPP approved the consent form to participate in research on December 5, 2019. Consent Statement included: “I have had the opportunity to read and consider the information in this consent form. I have asked any questions necessary to make a decision about my participation. I understand that I can ask additional questions throughout my participation. I understand that I am volunteering to participate in this research. I understand that I am not waiving any legal rights. I understand that if my ability to consent for myself changes, either I or my legal representative may be asked to provide consent prior to me continuing in the study. I consent to participate in this study.”

Consent for publication  To use quotes from the interviews, participants were asked by email permission to publish them.

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