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Brokering Climate Action: The UNFCCC Secretariat between Parties and Non-Party Stakeholders

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Abstract

Our article aims to better understand the role of the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) in the increasingly complex global climate governance structure. We employ an innovative approach to addressing this issue by systematically examining the climate secretariat's relations with the main groups of actors involved in this policy domain, in particular with non-party actors. In a first step, we use social network analysis (SNA) to examine the secretariat's relations with non-party and state stakeholders and to identify its position in the UNFCCC policy network. An understanding of where the climate secretariat stands in the global climate governance network and which actors it interacts with most allows us to draw preliminary conclusions about the ways in which it connects with other stakeholders in order to influence global climate policy outputs. In a second step, we conduct 33 semi-structured interviews to corroborate the results of the SNA. Our findings lend support to the argument that the climate secretariat may gradually be moving from a rather neutral and instrumental stance to playing a proactive and influential role in international climate governance. It aims to increase its political influence by establishing strategic links to actors other than the formal negotiation parties.

Keywords: United Nations Framework Convention on Climate Change (UNFCCC); non-party and party stakeholders; climate secretariat; multi-stakeholder negotiations.

Introduction

Today's global climate governance system is characterized by institutional complexity, bottom-up and top-down elements and a multiplicity of actors and levels. It is a structure which allows for interest-driven and voluntary actions within and outside of the formal auspices of the United Nations Framework Convention on Climate Change (UNFCCC) (Falkner 2016; Fuhr and Hickmann 2016; Jänicke 2017; Jänicke and Quitzow 2017; Saerbeck et. al 2017; Widerberg and Pattberg 2016). In other words, a "mosaic of stakeholders, including governments, civil society, science, business, and public non-party stakeholders" (Pattberg and Stripple 2008, p. 368) have taken ownership of the implementation of "a universal, ambitious climate agreement that is differentiated, fair, lasting, dynamic, balanced, legally-binding" (ENB 2015 (12) 653, p. 1) in an attempt to stay below 2°C.

In this article, we explore the role of the UNFCCC secretariat within this unique global governance structure. One of the climate secretariat's duties is to promote and coordinate the so-called Nationally Determined Contributions (NDCs), domestic mitigation measures pursued by the parties (Art. 4 Paragraph 2, 12 Paris Agreement), via the continuous exchange of information. Based on the notion that the climate secretariat "strives to keep all stakeholders informed on the negotiating process […] through a variety of communication products" (UNFCCC 2019), whilst also facilitating the NDCs, we argue that the climate secretariat makes use of the multi-actor and multilevel structure of the global climate regime to gauge national positions and mobilize climate action by non-party stakeholders in order to achieve the goal of the Convention. This helps the member states reach compromises by extending the policy debate to different actors inside and outside of government who would otherwise probably not connect.

The literature on international bureaucracies and treaty secretariats has mostly examined the important and influential roles secretariats can and do play in international negotiations (see, for example, Bauer et al. 2012; Bauer and Ege 2016, 2017; Busch 2009; Jinnah 2014; Johnson 2013). We still lack knowledge about the role and position of secretariats in their respective networks and how they interact with and likely even influence different kinds of stakeholders. Moreover, the literature on the global climate governance regime has focused mainly on the interaction between negotiation parties and non-party actors. An important strand of this literature has studied the authority of non-party stakeholders and their influence on decision-makers and negotiation outcomes (Böhmelt 2013; Böhmelt and Betzold 2013; Lund 2013; Moussu 2015; Rietig 2014; Nasiritousi et al. 2014, 2016; Nasiritousi and Linnér 2016; Schroeder and Lovell 2012; Tallberg et al. 2013). Despite shedding light on the important role of international treaty conventions, such as the UNFCCC, and the activities of non-party stakeholders that might contribute to societal transformation in global climate governance, these studies have neglected the link between convention secretariats and party and non-party stakeholders.

The climate secretariat needs to master the unique architecture of multilevel global climate governance despite its narrow formal mandate that emphasizes its logistical and informational role while explicitly exempting it from taking on a more active part in multilateral negotiations (Hickmann et al. 2019; Jörgens et al. 2016; Kolleck et al. 2017b). Consequently, when communicating and cooperating with different kinds of stakeholders in order to guarantee the successful realization of the measures agreed upon in the Paris Agreement, the secretariat always strives to act in a balanced and impartial way (Well et al. forthcoming). By scrutinizing the position of the climate secretariat within the UNFCCC regime and how it engages with negotiation parties and non-party stakeholders, this paper seeks to contribute to the literature on secretarial interaction patterns as a first step towards a better understanding of the role played by the climate secretariat in the global climate governance regime.

We apply a mixed methods design to gain deeper insight into the ways in which the climate secretariat engages with others. In a first step, we employ tools of social network analysis (SNA) to study how the climate secretariat interacts and cooperates with the entire range of actors operating in the climate policy realm. Based on an original dataset derived from a large-n survey among organizations in the field of global climate governance, our SNA maps net-

works of policy specific communication and cooperation among diverse actor groups and assesses the position that administrative organizations occupy within these networks. The choice of this first approach is based on the fact that existing studies usually focus on just one actor type, which only allows them to draw limited conclusions about the relationships between various actor types within the same negotiations (notable exceptions include Böhmelt and Betzold 2013; Lund 2013). In a second step, we conduct document analysis and 33 structured interviews with party and non-party stakeholders as well as with members of the climate secretariat between 2015 and 2018 – during and between the Conferences of the Parties (COP) 21 to 23 – to narrow down our assumption and answer our research question. Interviewees were asked about the nature of the relationship and extent of interaction. The combination of a survey based SNA with interviews and document analysis enables us to reconstruct the policy specific information flows and identify the actors who hold positions that allow them to connect different groups of actors.

The paper is structured as follows. We first discuss the changing perception of the role of IPAs in international treaty negotiations in general and then formulate our hypothesis. Taking into account the unique characteristics of the global climate governance structure, we then describe the interaction between the three types of actors – the climate secretariat, negotiation parties and non-party stakeholders. The analysis of our findings allows us, inter alia, to test our assumptions and discuss our findings on the ways in which the climate secretariat interacts with other stakeholders.

The Changing Conceptualization of International Treaty Secretariats

International treaty secretariats are established by states as formal bodies to provide the parties to an intergovernmental convention with a common knowledge base irrespective of national capacities (Depledge 2005). They shall support governments and non-party stakeholders in subsequent rounds of issue specific negotiations within multilateral treaty regimes through the provision of technical, legal, and procedural expertise – as well as normative and diplomatic knowledge (Bauer 2006; Jörgens et al. 2016; Kolleck et al. 2017a). Scholars in the field of International Relations and IPA have long treated international organizations (IOs) and their bureaucracies as instruments of nation states rather than actors in their own right (Ness and Brechin 1988). Consequently, until recently, research on IOs has been primarily concerned with exploring whether IPAs represent a challenge to state power and the political control of bureaucracies.

More recently, this focus has shifted to an empirical examination of the degree to which international secretariats, and IPAs more generally, exert autonomous influence on politics and policies. The expectation that IPAs may constitute partially autonomous and potentially influential actors of global governance is based on a series of assumptions. First, IPAs are often perceived as the institutional memory of their respective policy regime (Bauer 2006), that is, to have superior "informal knowledge about the history and evolution of institutional processes" (Jinnah 2010, p. 62). Moreover, they are said to often have an informational advantage on technical and legal issues over their political masters (Barnett and Finnemore 2004; Derlien et al. 2011). IPAs are no longer understood as just epiphenomena of national governments, but rather regarded as either self-interested actors using information asymmetries to their advantage vis-à-vis their

principals, namely the nation states, or as agents of the global common good, whose actions go at least partially beyond national interests. Against this backdrop, scholars have studied the agency and influential role of IPAs in multilateral negotiations by inquiring whether, how and to which degree they exert influence on international policymaking (see, for example, Bauer et al. 2012; Bauer and Ege 2017; Busch 2009; Jinnah 2014).

Secretariats of multilateral environmental conventions may try to mobilize support to advance their own proposals and to build momentum for agreement (Abbott and Snidal 2010; Jörgens et al. 2016; Kolleck et al. 2017b). For example, some IPAs, e.g. the desertification and the biodiversity secretariat, have framed discourses and problem perceptions in line with their governance preferences – despite narrow and issue specific mandates, close supervision by their principals and relatively limited scientific and administrative capacities (see, for example, Bauer 2006; Conliffe 2011; Depledge 2007; Jinnah 2011; Jörgens et al. 2016; Kolleck et al. 2017a; Siebenhüner 2009). They have raised their convention's profile, set items on the agenda, introduced amendments to draft proposals, and promoted the institutionalization of their conventions (Bauer 2009; Michaelowa and Michaelowa 2017; Pallavi 2011). Moreover, many of the initiatives and compromises proposed by the chairs or presidencies of multilateral frameworks are traceable back to the secretariat (Depledge 2005).

Eckhard and Ege (2016, p. 961) conclude that IPAs act as "autonomous actors with some degree of influence on global public policy". Today, it is not only the state signatories of a convention who contribute to processes of multilateral decision-making.[1] Rather, administrative and political actors interact horizontally, vertically and diagonally with one another, leading to blurred lines and competencies between national and supranational, as well as direct and indirect administrative activities. In this regard, Kingsbury et al. (2005) argue that "much of global governance can be understood and analyzed as administrative action: rule making, administrative adjudication between competing interests, and other forms of regulatory and administrative decisions and management" (Kingsbury et al., p. 5). A global administrative space is said to evolve (Wessel and Wouters 2007: 281) in which states are no longer the single determinant, but rather one of many. Wessel and Wouters (2007) therefore call "for the recognition of a global administrative space in which international and transnational administrative bodies interact in complex ways" (Wessel and Wouters 2008, p. 281).

The Climate Secretariat as Knowledge Broker?

Building on studies that take the behavior of international bureaucracies – rather than state delegation – as a starting point, this paper assumes that not all bureaucratic behavior in global politics is state defined and that international secretariats can play a constitutive role in shaping party and non-party stakeholder preferences. Moreover, we believe that the climate secretariat's potential for influence relates to the global climate governance structure and its transnational networking and mobilization capacities.

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[1] In this regard, a representative of a think tank quoted by Reschke (2016) refers to Ostrom and Ostrom's (1965) notion of polycentricity, which emphasizes the multifaceted nature of human-ecosystem interaction. Namely, it explains the variety of relationships between governmental units, public agencies, and private businesses coexisting and functioning in a public economy that can be coordinated through patterns of inter-organizational arrangements.

As stated in the introduction, the global climate governance regime is characterized by a multi-sectoral and a multi-actor network structure. It is a system in which skilled action can enable actors such as international secretariats to mobilize support for their policy preferences (Jänicke 2015; Ostrom 2010). They do so by interacting with party and non-party stakeholders at different levels of government. Jinnah (2014), for example, shows that treaty secretariats position themselves at the center of transnational communication flows that surround official multilateral negotiations to provide policy relevant information to negotiators from the outside. Abbott and colleagues (Abbott et al. 2015; Abbott and Snidal 2010) further conceive of IOs and their secretariats as "orchestrators" who follow a complementary strategy of "reaching out to private actors and institutions, collaborating with them, and supporting and shaping their activities" in order to achieve their regulatory goals and purposes (Abbott and Snidal 2010, p. 315). Finally, Carpenter (2001), in his study on the autonomy and influence of regulatory agencies in the United States, points out that administrative agencies may try to influence public policy-making by publicly promoting their preferred policy options in issue specific discourses outside the political system.

Against this backdrop, several authors conceptualize secretariats as knowledge or policy brokers (see Bauer and Weinlich 2011; Biermann and Siebenhüner 2009; Eckhard and Ege 2016; Jinnah 2014; Jörgens et al. 2016; Kolleck et al. 2017a). Understood by Sabatier and Jenkins-Smith as actors who mediate and seek compromise between competing advocacy coalitions, actors possessing a brokerage position "bring parties together" and create an "enabling environment" (Lepoutre et al. 2007, p. 10) among actors who lack "access to or trust in one another" (Marsden 1982, p. 202). They can potentially negotiate the stream of information and "bring together ideas that emerge within the network" (Kolleck 2014, p. 55), to "facilitate exchange, identifying potential options for multi-actor agreement, and helping to craft patterns of communication as well as multilevel and multi-actor governance arrangements" (Bressers and O'Toole 2005, p. 141). The concept of knowledge brokerage hence emphasizes that information dissemination plays a key role in exerting influence in political processes.

Since Max Weber, studies in the field of public administration have found that bureaucracies derive authority from their superior expertise (see, for example, Barnett and Finnemore 2004; Derlien and Böhme 2011). Giving meaning to information, bureaucracies are able to shape social reality, prompt action, and exert cognitive influence. International public administrations in general and convention secretariats in particular are no exceptions to this (Bauer and Weinlich 2011; Jinnah 2010). Scholars of international bureaucracies have shown that international treaty secretariats can be powerful actors that wield (independent) influence in global policy-making. For example, Barnett and Finnemore (2004) explain with reference to Weber that bureaucratic power includes control over information (meaning bureaucrats have information that others do not have), but also the ability to transform information into knowledge, that is, to structure perceptions. International bureaucracies exert influence, inter alia, through the use of their central position in actor networks, their privileged access to information, their professional authority, and technical expertise (Bauer and Ege 2016; Jörgens et al. 2016; Kolleck et al. 2017b; Widerberg and van Laerhoven 2014, Jinnah 2014).

We assume the climate secretariat makes use of the unique multi-actor and multilevel structure of global climate governance, thereby expanding its original spectrum of activity. It can do so by connecting with a variety of stakeholders operating at different levels and linking otherwise disconnected pools of ideas, acting as an intermediary in the UNFCCC regime. To confirm this expectation, we would have to observe a number of features of a policy broker in the climate secretariat. In particular, we would have to demonstrate that it engages in activities that are typical of knowledge (or policy) brokers, such as gathering, synthesizing, processing, and disseminating policy relevant information to a wide range of different stakeholders in an attempt to alter knowledge and belief systems (Jinnah 2014). In addition, we would have to show that it occupies a central position within the international climate policy network, enabling it to influence the flow and content of policy relevant knowledge and information. In the next section, we will study the role of the secretariat by analyzing its interactions with state and non-party actors. Using SNA, we will first identify the position of the secretariat within the UNFCCC stakeholder network and then examine its interactions with state and non-party actors in more detail.

Methodological approach and data sources

We conduct a systematic empirical analysis of the policy-related information and cooperation network that has emerged between negotiation parties, non-party stakeholders, and the climate secretariat to determine the climate secretariat's position within the network as well as the ways in which it interacts with different stakeholders operating at various levels of government.

Research on the interaction between international treaty secretariats and other – state and non-state – actors within the context of multilateral agreements has advanced considerably over the past years (see, for example, Bauer 2006, 2009; Busch 2009; Conliffe 2011; Depledge 2005, 2007; Jinnah 2011, 2014; Jörgens et al. 2016; Kolleck et al. 2017b; Siebenhüner 2009). A number of scholars studied why and under which conditions states and/or international organizations would be interested in information provided by non-party actors (Böhmelt 2013; Jinnah, 2014; Rietig 2014; Tallberg et al. 2013, 2015). Some scholars analyzed the links between different treaty secretariats, including the climate secretariat (Betsill et al. 2015), and the role that international secretariats play in the management of regime overlap (Jinnah 2010, 2011). However, although information provided by international treaty secretariats is believed to be valued by party and non-party stakeholders, the ways in which international treaty secretariats and the stakeholders of their conventions exchange issue specific and policy relevant information is still largely unknown, as is the position they hold within global policy domains such as the climate governance regime. Our paper addresses this research gap through an empirical analysis of how the climate secretariat attempts to influence the multilateral climate negotiations under the UNFCCC by means of engaging with other, notably non-party, actors.

We start by applying SNA measures to identify the position of the secretariat within the UNFCCC stakeholder network. SNA adds a relational component to the analysis of actors and their influence on policy outcomes. Instead of focusing only on actors (nodes) and their attributes, SNA shifts the focus towards the relations (ties) between actors and to the overall structure of policy networks. Applied to our case, SNA enables us to concentrate on the UNFCCC network

as a whole and the relationships that have emerged between different actors and actor groups within this network. Thus, we shift the unit of analysis from individual secretariats to the linkages or relations between a broad range of relevant actors, including, but not limited to the secretariat of interest.

Data was collected between September 2015 and March 2016, approaching a wide variety of state and non-state actors operating at different levels of the global environmental policy domain via a large-N survey of organizations in the field of global climate governance. Respondents were identified through lists of COP participants in previous years. Within every organization, we identified one person to answer our survey. We then asked this person to name their contacts concerning cooperation and information exchange. We then extended the number of respondents based on the snowball principle and data provided in open questions.

The survey was received by 2474 persons of which 769 answered at least partially, representing a 31 percent response rate. The survey contained two network questions. One asked "Which organizations did you cooperate closely with regarding topics discussed under the UNFCCC during the last 12 months?" and the other "Which organizations did you receive trustworthy information from during the last 12 months?". These two questions form the basis for our SNA and were combined into one undirected network consisting of 1021 nodes and 1834 ties UNFCCC stakeholders were asked, amongst other, to indicate the actor group they represent. They also answered questions concerning the type of information provided by the UNFCCC secretariat. This allows us to detect if the UNFCCC secretariat limits itself to providing procedural information or if it also offers, for example, information on policy options and the technical or scientific aspects of climate policies.[2]

In order to build a more detailed picture of the quality of interaction between the secretariat and UNFCCC stakeholders, we also conducted 33 interviews and substantiated interview responses through a document analysis. Interviews 1-7 were conducted with staff of the climate secretariat (e.g. staff concerned with communication and outreach, strategy, mitigation, data and analysis, finance, technology and capacity-building, legal affairs and administrative services such as the organization of side events), interviews 8-25 with party stakeholders (e.g. representatives of different public authorities and agencies at the local, regional, national level), and interviews 26-33 with non-party stakeholders (e.g. members of international organizations (IO), research organizations, non-governmental organizations (NGO) and business representatives).

Interviewees were queried, among other things, whether and if so with whom they mainly cooperate and exchange policy relevant information. Stakeholders of the UNFCCC were also asked to indicate the role and importance of the secretariat within the UNFCCC realm as well as the relationship they entertain with secretariat staff. Members of the climate secretariat, on the other hand, were requested to describe the ways they interact with UNFCCC stakeholders in order to provide issue specific information and eventually build trusting relationships. This allows us to better understand and retrace the methods employed by the climate secretariat to foster the facilitation of negotiations and the implementation of the Paris Agreement.

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[2] As research on the provision of information by the UNFCCC secretariat is still at the beginning, we included the category "other information" to gain additional information.

The Climate Secretariat within the UNFCCC Stakeholder Network

To study the secretariat's potential role within the climate regime, we first analyze its position in the UNFCCC stakeholder network. We apply two centrality measures to determine the secretariat's position: betweenness and eigenvector centrality. Betweenness centrality is often described as a measure to assess an actor's broker potential within a specific network. It is calculated by counting how often an actor lies on the shortest path between two other actors. Actors with high betweenness centrality scores are in a powerful position to control flows through the network, e.g. information flows. Moreover, their absence from the network has a strong potential to lead to disruption. The second measure, eigenvector centrality, accounts for the quality of an actor's connections. It measures how many ties an actor has to other actors, which in turn have many ties. In other words, it shows us how well an actor is connected to other well-connected actors. Table 1 ranks the 25 most central actors in the UNFCCC stakeholder network according to their betweenness and eigenvector centrality, respectively.

Table 1. Top 25 UNFCCC stakeholders with the highest centrality scores

| Betweenness centrality			Eigenvector centrality		
Organization	Type	Value	Organization	Type	Value
1. UNDP	IO	100525.884	UNDP	IO	1
2. UNEP	IO	90334.1668	UNEP	IO	0.92607348
3. GIZ	Government	61936.3445	GIZ	Government	0.79012691
4. UNFCCC	IO	50766.1967	UNFCCC	IO	0.70554767
5. CAN	NGO	40328.1431	WWF	NGO	0.53081342
6. UNFCCC Secretariat	IO	34137.6474	UNFCCC Secretariat	IO	0.51165778
7. WWF	NGO	31688.5403	WRI	Research	0.50014145
8. IPCC	IO	24353.1372	FAO	IO	0.48784391
9. FAO	IO	24193.5707	CAN	NGO	0.44324944
10. WRI	Research	23627.5991	IETA	NGO	0.41941308
11. UNESCO	IO	20746.042	IPCC	IO	0.41567093
12. BMUB	Government	19964.5282	Wuppertal Institute	Research	0.40953824
13. CGIAR	Research	19855.811	EU	IO	0.36134739
14. Climate Analytics	Research	17182.2932	BMUB	Government	0.35428374
15. Government of France, Ministry of Ecology, Energy, Sustainable Development and Spatial Planning France	Government	15872.9552	GHMC	Government	0.32707374
16. IETA	NGO	15630.3831	UBA	Government	0.32375486
17. CIFOR	Research	14583.1155	NAMA Facility	IO	0.30059063
18. EU Commission	IO	13708.5745	Government of Thailand, Ministry of Natural Resources and Environment	Government	0.30022025
19. HCENR	Government	13630.7554	BMLFUW	Government	0.29881895
20. EU	IO	13130.8729	SEMARNAT	Government	0.27709143
21. IEA	IO	12747.3383	IEA	IO	0.27156099
22. UIC	Business	12247.3376	GEF	IO	0.25561021
23. UBA	Government	11895.6864	OECD	IO	0.24350941
24. World Bank	IO	11494.9094	EU Commission	IO	0.24254535

25.	Wuppertal Institute	Research	11275.9957	IISD	NGO	0.24166453

The UNFCCC in general and the UNFCCC secretariat more specifically both occupy an extremely central position within the UNFCCC stakeholder network. For both centrality measures, the UNFCCC ranks fourth and the UNFCCC secretariat sixth (see table 1). These findings show that the climate secretariat is well-embedded within the UNFCCC stakeholder network. As mentioned above, a high betweenness centrality score indicates that the secretariat has the potential to act as a broker within the increasingly complex UNFCCC regime. This means it is a potentially powerful actor within the network and can disrupt the network easily by, for example, limiting information flows. Moreover, the eigenvector centrality score reveals that the climate secretariat is well-connected to other potentially influential actors and successfully engages with other multiplier stakeholders. Other actors with high scores for both measures are international organizations such as the United Nations Development Program (UNDP), the United Nations Environment Program (UNEP), globally-active NGOs such as the Climate Action Network (CAN) and the World Wildlife Fund (WWF), and governmental organizations like GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit).

As survey responses differentiated between UNFCCC and the climate secretariat, we treated the two as separate actors. Some respondents, however, might not have clearly distinguished between the UNFCCC as a treaty regime and the climate secretariat as an international bureaucracy. To account for the possibility that respondents who indicated the UNFCCC might actually have meant the secretariat, we merged the UNFCCC and the climate secretariat into one actor, recalculated its centrality measures, and adapted the egocentric network of the secretariat accordingly (see Appendix 1 and 2, respectively). In the adapted stakeholder network, the climate secretariat obtains the highest scores for both betweenness and eigenvector centrality. Nevertheless, to avoid the risk of over-interpreting our data, we base our analysis on a stakeholder network which considers the UNFCCC and the climate secretariat as separate actors.

In addition to examining the centrality scores of the UNFCCC secretariat, we are also interested in the secretariat's specific interactions with groups of UNFCCC stakeholders. Figure 1 shows the egocentric network of the UNFCCC secretariat which only includes those actors who responded that they cooperated or exchanged information with the secretariat (see Appendix 2 for an egocentric network of UNFCCC and the climate secretariat combined). We can see that party and non-party stakeholders are almost equally represented. The UNFCCC secretariat is an important partner for both groups of actors.

*Figure 1. The UNFCCC secretariat's egocentric network*
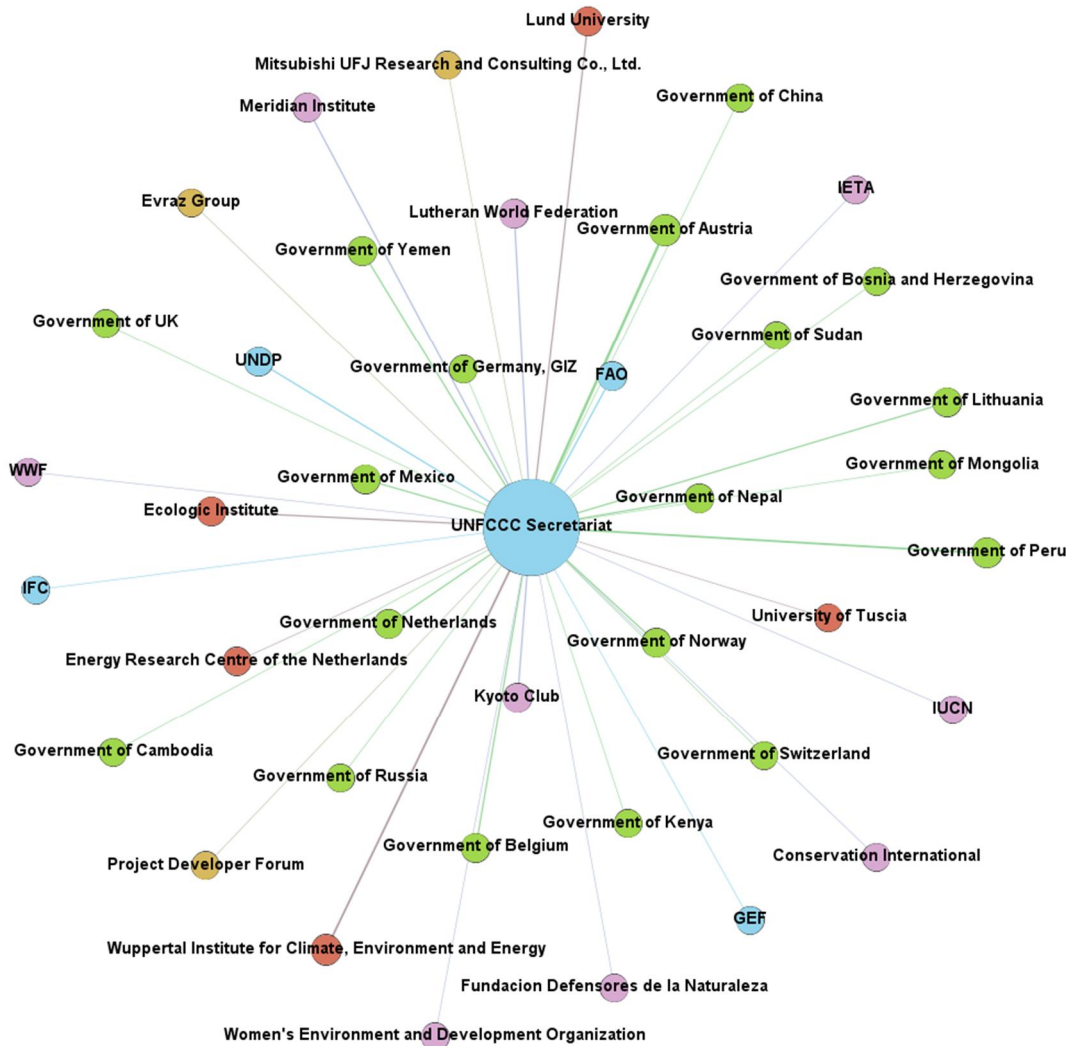
Note: The network was created with Gephi, using the Fruchterman-Reingold layout. The node color represents the actor type: international organizations = blue, government = green, research = red, NGOs = pink, business = orange.

Although the secretariat's position in the global climate governance network indicates a significant potential for influence, its actual influence depends crucially on the type of information that it passes on to other actors. Figure 2 shows that the secretariat primarily provides procedural information to surveyed governments, intergovernmental organizations and non-party stakeholders. However, the secretariat also shares information on policy options related to the climate negotiations. Among all actor types, policy relevant information was the second most common answer, ranging from 24 per cent for international organizations to almost 30 per cent for NGOs. Furthermore, a considerable share of research (20 per cent), government (16 per cent) and international organizations (13 per cent) reported to have received technical or scientific information from the secretariat. This indicates that the climate secretariat not only holds a central position within the UNFCCC regime, but that it also engages in the dissemination of policy relevant information to state and non-party stakeholders within the network. The fact

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that different groups of actors perceive the secretariat as a go-to organization for policy relevant information is an important precondition for it to exert influence on policy outcomes and an indicator of its potential as a global climate policy broker.

Figure 2: Types of information provided by the climate secretariat to different actor types
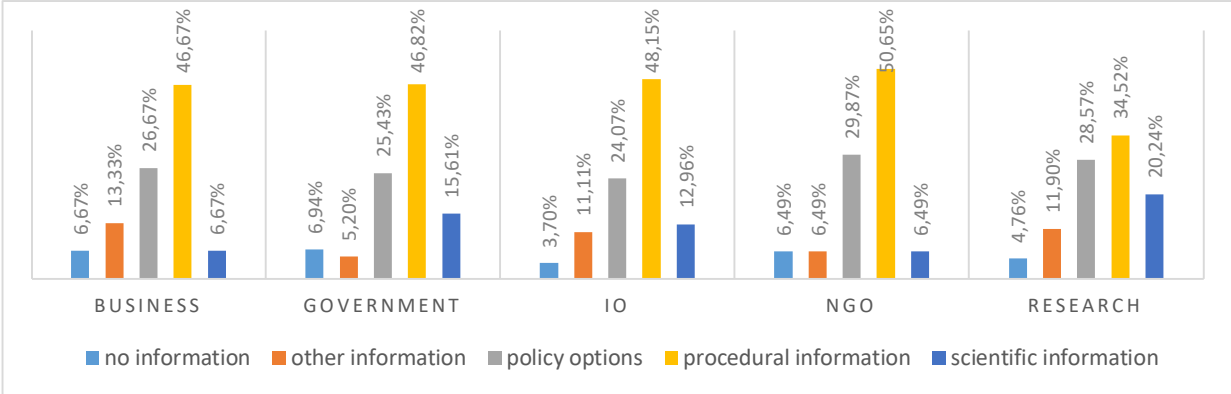
Summing up, the findings of our SNA indicate that the climate secretariat has significant potential to influence the UNFCCC regime. First, it is able to broker information of different kinds within the UNFCCC stakeholder network between party and non-party stakeholders, which may allow it to facilitate international climate negotiations. Second, it connects with other well-connected stakeholders, meaning that it provides information to actors who, in turn, provide information to many other actors. Third, the information it provides to other actors is not limited to procedural information, but also includes substantial information on policy options and the technical or scientific aspects of climate policies.

The Climate Secretariat's Interaction

By providing policy relevant information to both the negotiation parties and non-party stakeholders, the climate secretariat strengthens its link to the formal climate negotiations and, to a certain degree, confers institutional legitimacy to their problem definitions and policy proposals. The official mandate of the secretariat and the demands of parties do not seem to hinder it from maintaining close links to non-party stakeholders. Rather, our survey data and subsequent interviews suggest that it focuses more strongly on the needs of non-party stakeholders than its mandate stipulates and tries to build support among non-party stakeholders in the hope of putting pressure on parties and thereby advancing negotiations in the desired direction. The next sections present the results of our qualitative analysis and explores in more detail how the climate secretariat interacts with party and non-party stakeholders.

The Climate Secretariat and Non-Party Stakeholders

On closer analysis of the relationship between the climate secretariat and non-party stakeholders, we find that different kinds of interaction take place. As non-party stakeholders are generally less interested in information about the negotiating process itself and rather seek to understand the interaction between the parties and the underlying political questions (Interview 6), the secretariat tends to give information on the proceedings and obstacles to the negotiations as well as "the possibilities for a successful outcome" (Interview 6). Moreover, the secretariat

provides targeted information to non-party stakeholders so they may better understand "what climate change means on the ground in different areas" (Interview 6).

Understanding the different needs of stakeholders (Interview 6), the climate secretariat reaches out to non-party stakeholders to educate people about climate change by giving a "sense of positivity and optimism that it can be done and that we are not starting at ground zero" (Interview 5). For example, at COP 22, the address made by the Executive Secretary of the climate secretariat to the opening plenary highlighted the need to fully include non-party stakeholders, as "they are central to the global action agenda for transformative change" (TWN Marrakech Update 2016 No. 3, p. 1). Defined as "anybody who is not a governmental actor and wants to contribute to the process" (Interview 6) by a member of the secretariat, non-party stakeholder involvement is said to push for the greater good in international climate politics (Interview 1) and makes people aware of the direct consequences of climate change.

As changing the narrative on climate change is a costly endeavor, members of the secretariat team up with a variety of other actors (Interview 5) to underscore the multiple (economic) benefits resulting from acting. Members of the secretariat, for example, worked with software developers to program a climate game, promoted by "a couple of (…) celebrities" (Interview 5) to reach out to the public so they may in turn take action. Moreover, the climate secretariat "spent a lot of time forming partnerships with key stakeholders, like the former mayor of New York, Michael Bloomberg and celebrities who had climate interests such as Mark Ruffalo" (Interview 5). The Executive Secretary also talked to religious groups and their leaders, such as the Pope, as well as to research organizations and other entities, asking them to speak out on climate change. The climate secretariat connects with high-level stakeholders – so-called influencers in media and in research – to articulate the secretariat's message (Interview 5).

The climate secretariat also actively extends its network of focal points to, for example, youth organizations (Interview 4). It invites civil society to make requests for technical assistance "from any level, be it local government, NGOs, universities, the private sector or national ministries" (Interview 28). On the issue of women and gender for example, the secretariat facilitates implementation and capacity building via a network of approximately "260 organizations, private sector entities and other types of institutions around the world" (Interview 28), such as the GEF Gender Partnership, United Nations Environmental Program, the Women Delegates Fund and the Global Gender Climate Alliance (Interview 28). Other cooperation partners include the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the German Development Institute.

The climate secretariat also supports and encourages the engagement of non-party stakeholders operating at different levels beyond the UNFCCC regime. This happened, for example, in the context of identifying synergies between the Paris Agreement and the Sustainable Development Goals (SDG). When the President of the 71st session of the UN General Assembly called for a "focus on new strategic partnerships and mobilizing resources from public, private, blended and alternative sources" (ENB 2017 (32)29, p. 2), the UNFCCC Executive Secretary quickly "echoed the UN Secretary-General's vision for addressing challenges in an integrated manner" (ENB 2017 (32)27, p. 2). She stated that momentum is not only building among national gov-

ernments but also in the "unprecedented alliances" of companies, investors, cities, regions, institutions and individuals (ENB 2017 (32)27, p. 2, see also Interview 5). Additionally, at the UNFCCC Bonn sessions in May 2017, she said, "all sectors of society in all nations need to be on-board and fully involved to support governments as they take forward their climate action plans into the future" (UNFCCC 2017).

To sum up, members of the secretariat actively promote interaction with non-party stakeholders (Interview 2): "stakeholders are out in the real world. They've got boots on the ground, they are dealing with vulnerable communities, they are trying really hard to talk across ministries, across sectors" (Interview 1, also Interview 4). Members of the secretariat interact with non-party stakeholders while acting as mediators and facilitators on certain issues (Interviews 24, 26), or as the "hub of a network" (Interview 6), thereby pushing for cooperation via the extension of topics. As one member of the climate secretariat states: "my job (…) is to bring together stakeholders, like NGOs, science, different levels of decision-makers, experts of every potential kind, and involve them into discussion that the parties have" (Interview 1). Non-party stakeholders themselves greatly appreciate the efforts of the climate secretariat. At an exclusive meeting between non-party stakeholders and members of the climate secretariat at COP 23, many non-party stakeholders thanked the climate secretariat for all of its work and for giving them "the opportunity to be heard, not only in the corridors, but also in an open dialogue" (Interview 32).

The Climate Secretariat as Communication Hub between Party and Non-Party Stakeholders

The climate secretariat seems to be very aware of the importance of communication and staying within its mandate (Interviews 1, 6), as state delegates occasionally express their reservations about the climate secretariat taking an active role during COP negotiations. Whilst members of the secretariat might not openly voice their opinion in the negotiating space (Interview 1), providing non-sensitive information in a "strictly neutral" (Interview 6) fashion, party stakeholders confirm that the members of the climate secretariat's interaction with the parties goes beyond merely facilitating negotiations (Interview 7 and 19). Rather, it acts as a mediator – as communication hub – between parties (Interview 24) and non-party stakeholders.

Interaction between party and non-party stakeholders often takes place via participation in convention institutions like the Adaptation Committee and in other initiatives such as the Lima Paris Action Agenda and the Technical Expert Meetings (Interview 6). This kind of cooperation is particularly evident during COP sessions, in the form of jointly conducted side events organized by members of the climate secretariat.

Side events are held in parallel to negotiation sessions and provide an opportunity to discuss policy issues beyond the realm of the negotiation. They bridge the "interactions between the formal and informal spaces of climate governance" (Schroeder and Lovell 2012, p. 23) as states are formally required to collaborate with an observer organization in order to apply via the climate secretariat for a side event and/or an exhibit slot. At side events, all speakers have the opportunity to prominently present their views on a certain topic and to advocate for a preferred

policy option in tandem. While the formal view of the party hosting the side event does not necessarily need to converge with that of the non-party stakeholders, these events are often used to demonstrate a common stance on a specific issue.

Non-party stakeholders are very keen to register and participate as observers in UNFCCC negotiations and to organize side events in order to actively take part in the discussions (Interview 2) to ensure they get their "fingerprints on the process" (Interview 1). Party stakeholders, on the other hand, welcome the non-party stakeholders' participation in side events as they generate important stimuli (Interview 16) as well as legitimize their actions. Side events enable capacity building, the introduction of potential items for negotiation, networking across levels and policy areas and dissemination of information (Hjerpe and Linnér 2010, UNFCCC 2015, see also Interviews 17, 30). Side events can thus be understood as high quality conversations that are able to foster innovation, trust and awareness of the need for possible compromises (Hjerpe and Linnér 2010), all of which can positively affect both the negotiation of issues and the implementation of past decisions.

Conclusion

In this article, we aimed to better understand the role of the UNFCCC secretariat in the increasingly complex global climate governance structure. We developed an innovative methodological approach to addressing this issue and systematically examined the climate secretariat's relations with the main groups of actors involved in this policy domain, in particular with non-party actors. More specifically, we used SNA to examine the secretariat's relations with non-party and party stakeholders and to identify its position in the UNFCCC policy network. An understanding of where the climate secretariat stands in the global climate governance network and which actors it interacts with most allowed us to draw preliminary conclusions about the ways in which it connects with other stakeholders in order to influence global climate policy outputs. In addition, we extended our findings gathered with SNA by conducting 33 semi-structured interviews to corroborate the results of the SNA.

Our quantitative and qualitative analysis show that interaction between party and non-party stakeholders and the climate secretariat occurs in many ways. Hence, in this article we demonstrate that the climate secretariat not only provides expertise that allows party and non-party stakeholders to understand the complexity of the issue at hand, but also successfully connects with other well-connected stakeholders (e.g. influencers) to promote the implementation of the Paris Agreement and combat climate change outside of the UNFCCC regime. In doing so, it prioritizes its actions and (selectively) connects with a variety of stakeholders. We also conclude that the climate secretariat acts as an intermediary between party and non-party stakeholders. It deliberately extends issue specific policy debates beyond the inner circle of official negotiation parties (i.e. the national delegations) to build transnational support for the policy issues at stake, thereby raising pressure from both within and outside to continue and successfully conclude the negotiations. The climate secretariat shows key characteristics of a knowledge broker in that it deliberately engages in the gathering, synthesizing, processing, and disseminating policy relevant information to a wide range of different stakeholders in an attempt to alter knowledge and belief systems. In addition, the central position which it occupies

within the international climate policy network enables the secretariat to influence the flow and content of policy relevant knowledge and information among the actors in this network.

The results of our study lend support to the argument that the climate secretariat may gradually be moving from a rather neutral and instrumental stance to playing a proactive and influential role in international climate governance. It aims to increase its political influence by establishing strategic links to actors other than the formal negotiation parties, thereby exceeding its role as a mere provider of process-related information. Whilst its behavior is rooted in its formal mandate, we find that the climate secretariat is increasingly involved in the generation and diffusion of climate-related policy ideas and innovations. It coordinates and moderates the interaction with numerous stakeholders operating at various levels to foster cooperation and agreement. For example, the former Executive Secretary of the UNFCCC, Christiana Figueres, was publicly perceived as the driving force behind the UNFCCC COP 21 negotiations in conjunction with the French presidency. The laudation of the Ewald von Kleist Award which they received at the 2016 Munich Security Conference, states: "While many played a part in achieving agreement in Paris, it was our two award winners tonight who, primarily, made the Paris accord possible" (UNSG 2016).

Mastering the unique multi-level global climate governance architecture despite a narrow formal mandate that emphasizes its logistical role and explicitly exempts it from taking on a more active part in multilateral negotiations, it cooperates with different kinds of stakeholders in order to guarantee the successful realization of the measures agreed upon in the Paris Agreement. The climate secretariat makes a deliberate choice to use its limited resources for investing heavily into networking with different kinds of stakeholders. Being an intermediary between party and non-party stakeholders, our study lends support to the assumption that international treaty secretariats may be gradually moving from playing a rather neutral and instrumental role in international climate governance (Busch 2009) to being proactive and influential (see, for example, FCCC/SBI/2016/INF.13). While the UNFCCC explicitly stipulated that the secretariat should cooperate with different stakeholders operating at various levels in order to guarantee the implementation of the measures agreed upon, it might be precisely this secretariat task that blurs the borders between fulfilling its mandate and participating in shaping the political will.

Conflict of Interest
The authors declare no conflict of interest.

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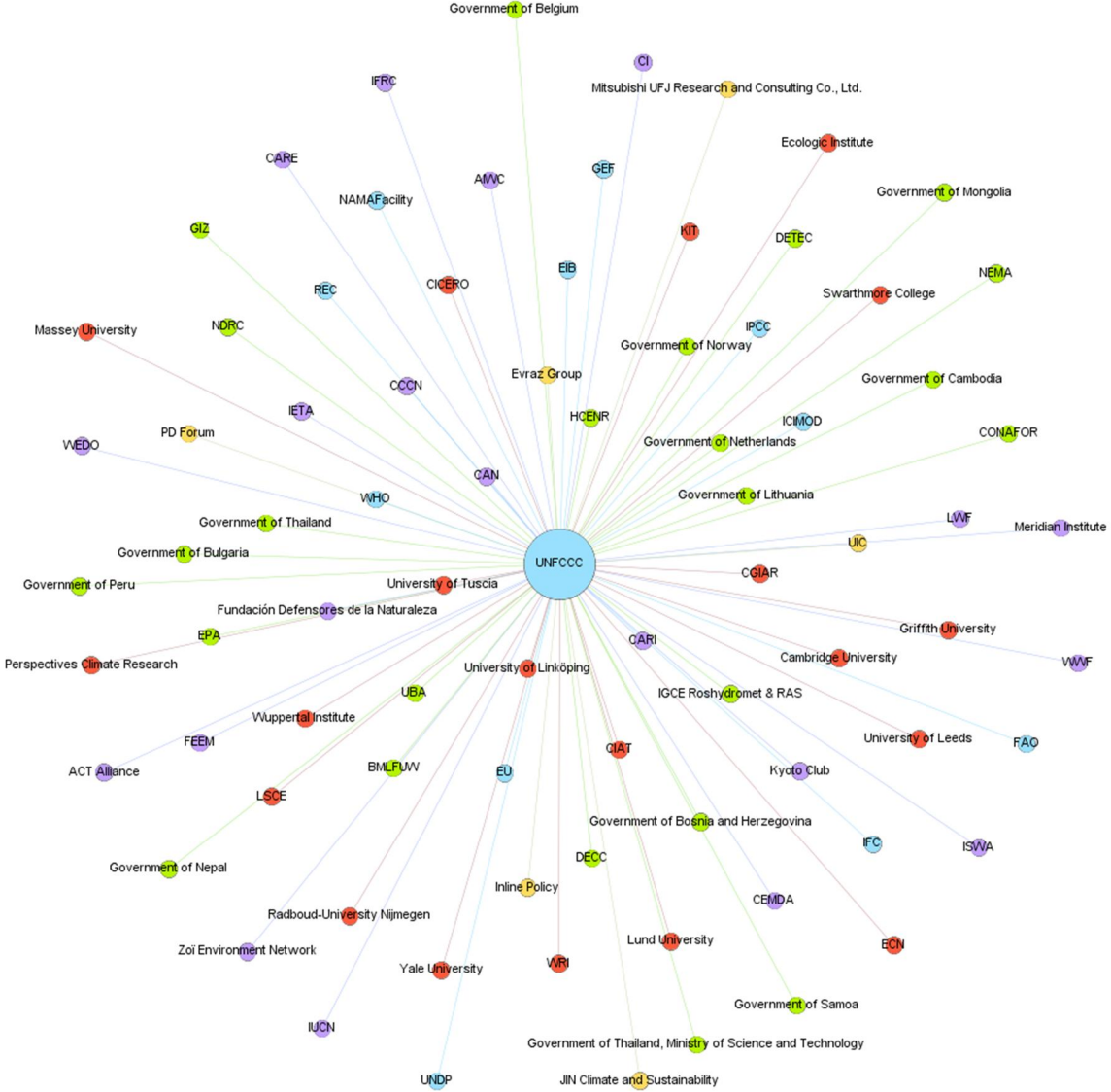
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Appendix
Appendix 1. Combined centrality measures for UNFCCC and the UNFCCC secretariat

Organization	Type	Betweenness	Organization	Type	Eigenvector
UNFCCC	IO	114280.9228	UNFCCC	IO	1
UNDP	IO	96920.87722	UNDP	IO	0.89706
UNEP	IO	81030.72126	UNEP	IO	0.774357
GIZ	Government	56728.47128	GIZ	Government	0.626994
CAN	NGO	38976.31843	WWF	NGO	0.492751
WWF	NGO	31406.38085	WRI	Research	0.450377
WRI	Research	22728.36283	FAO	IO	0.420964
IPCC	IO	22276.69836	CAN	NGO	0.415235
FAO	IO	21264.00434	IETA	NGO	0.345161
UNESCO	IO	20521.91507	EU	IO	0.338465
BMUB	Government	18915.05769	Wuppertal Institute	Research	0.337966
CGIAR	Research	18622.56905	IPCC	IO	0.328115
Climate Analytics	Research	17163.63868	BMUB	Government	0.305592
IETA	NGO	15006.35117	UBA	Government	0.299579
CIFOR	Research	14441.0737	NAMA Facility	IO	0.278098
HCENR	Government	14334.13179	Government of Thailand	Government	0.276907
EU Commission	IO	12649.13414	GHMC	Government	0.260101
UIC	Business	12577.98002	BMLFUW	Government	0.247875
Government of France	Government	12423.71885	IEA	IO	0.238758
EU	IO	12390.76894	Government of Norway	Government	0.222908
IEA	IO	11913.83151	EU Commission	IO	0.218413
UBA	Government	11603.87548	GEF	IO	0.211153
UCPH	Research	10900.6367	CONAFOR	Government	0.210917
Wuppertal Institute	Research	10403.28576	CARE	NGO	0.209178
World Bank	IO	10247.56396	ActionAid India	NGO	0.205306

Appendix 2. Egocentric network for UNFCCC and the UNFCCC secretariat combined

Note: The network was created with Gephi, using the Fruchterman-Reingold layout. The node color represents the actor type: international organizations = blue, government = green, research = red, NGOs = pink, business = orange.