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Can Non-State Actors Help to Overcome Barriers to State Cooperation? The Case of Global Climate Governance

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Abstract

While nation-states remain primary protagonists in global governance processes, it is increasingly recognized that non-state actors (NSAs) are key players in areas ranging from human rights and civil conflict to infectious disease and nuclear non-proliferation. The area of climate change is an illustrative example. NSAs have been active participants in the margins of the Conference of Parties (COP), the annual meeting of Parties to the UN Framework Convention on Climate Change (UNFCCC), since its inception in 1995 by holding side-events and protests, raising awareness, lobbying, etc. NSAs have also contributed to the development of a “regime complex” in climate governance at the same time. Yet, the determinants and effects of that participation are not well understood. The COP offers a unique opportunity to examine one piece of this puzzle; namely, the factors that enable and motivate NSAs to participate in the design and implementation of international agreements. We use an original dataset of NSA participants at the COP from 1995 to 2016, to examine whether NSAs are well positioned to help states overcome key barriers to cooperation. As NSAs ramp up their participation in climate governance and elsewhere, this study offers insight into their motivations and potential impact on governance outcomes.

Introduction

Non-state actors (NSAs) are key players in global governance. In areas ranging from human rights and civil conflict to infectious disease and nuclear non-proliferation, NSAs wield power and are transforming governance processes and outcomes. The area of climate change is an illustrative example. NSAs have been active participants in the margins of the Conference of Parties (COP), the annual meeting of parties to the UN Framework Convention on Climate Change (UNFCCC), since its inception in 1995 by holding side-events, engaging in protests, lobbying states, participating in dialogue, and more. The participation of NSAs at COP has been deepening and diversifying over time (Cabr  2011; Hanegraaff 2015). Further, there is evidence that NSA participation influences state commitments to address climate change (Nasiritousi, Hjerpe, and Linn r 2016). Across a multitude of global governance arenas, NSAs participate in negotiating international agreements either formally or informally, shape domestic perceptions of the costs and benefits of these agreements and regimes, and often, are the ultimate target of global governance arrangements (Chayes and Chayes 1998; Slaughter 2004; Bodansky 2010). Yet, the factors that shape NSA participation in various aspects of global governance and the effects of that participation are not well understood. The COP offers a unique opportunity to examine one piece of this puzzle; namely, the factors that enable and motivate NSAs to participate in the design and implementation of international agreements.

The 2015 Paris Agreement codified a role for NSAs in reaching the global goal of limiting temperature rise to less than two degrees Celsius. As such, while not formal signatories to the agreement, NSA compliance with the agreement is essential for states to follow through with their commitments. This has prompted significant interest at the UN and among states in enhancing NSA participation in climate governance writ large. The UN and states may have their own reasons to encourage NSA participation; and, NSA participation may be generally increasing over time. But, what motivates NSAs themselves to expend time and financial resources to participate in the COP? Under what conditions are NSAs more or less likely to participate? Why are some NSAs more likely than others to engage? And, what can these patterns tell us about the potential for NSAs to affect outcomes in climate governance and in other issue areas, especially in terms of influencing state commitments and behavior?

Existing scholarship on international organization and cooperation tends to see the increasing participation of NSAs in global governance in one of two ways: some argue that NSAs (non-governmental organizations [NGOs] in particular) have the potential to help overcome barriers to cooperation by pressuring states to find common ground through international agreements or by helping them to solve weak capacity issues. Alternatively, a more standard realist view might acknowledge that NSA participation is increasing in certain issue areas, but their potential to independently affect outcomes is limited, especially when it comes to influencing state behavior. Few large-n studies explicitly examine these alternatives.

This paper explores the role of NSAs in global governance using previously unexamined data coding all NSA participants at the COP from 1995 to 2016. Patterns of NSA participation across countries and over time suggest that NSAs may not be well positioned to help overcome state commitment or capacity issues and encourage cooperation at the negotiation stage. Indeed, we find that the extent of NSA participation at the COP is greater from countries that are already 1) committed to climate change mitigation, and 2) have high capacity.

The study has implications for both scholarship and policy. In terms of scholarship, this paper adds to growing body of work on NSAs in global governance. Most international relations scholarship on international cooperation still focuses on state behavior (Simmons 2010; the one recent exception is Jensen and Malesky 2018). Recent work documents and explains increasing NSA access to international organizations (Ruhlman 2014; Tallberg et al. 2014). Yet, we know comparatively little about when and why NSAs actually participate, and whether and how they influence outcomes, particularly when it comes to overcoming barriers to cooperation among states. At the same time, though research on climate governance has examined the role of NSAs, this research tends to focus on specific groups of actors, each of which may have different motivations (Thew 2018; Hadden 2015; Nasiritousi, Hjerpe, and Linnér 2016). A few studies consider the range of NSAs and look at trends in NSA participation over time, but do not examine variation in NSA participation across countries (Uhre 2013; Hanegraaff 2015). Furthermore, most analyses of NSA participation at the COP suffer from a methodological weakness—much of this work relies on data of NSAs *admitted* to attend the COP and assumes that it is a good approximation of actual *participation* at the conferences. A comparison of these numbers calls this assumption into question. The few scholars who have used actual NSA participation data only have year coverage until 2011 and so miss out on several years of data in the lead up to the Paris Agreement in 2015. Our study examines variation in actual participation at the COP across the universe of types of NSAs using the most up-to-date data and offers compelling evidence that NSAs may not be helping the states where they are based (and over which they arguably have the largest potential influence) to overcome key barriers to cooperation in this area.

From a policy perspective, as NSAs ramp up their participation in climate governance and elsewhere—and states and international organizations encourage that increased role—we need to know more about conditions under which NSAs are likely to participate and the possible impacts on governance outcomes. The finding that the extent of NSA participation tends to reflect the home country’s prior commitment to climate change mitigation and underlying state capacity might temper (or at least add nuance to) the most optimistic expectations that NSAs can encourage states hesitant or unable to cooperate in this area to change their position. Of course, these findings do not mean that NSAs have no role in global governance. Once a country is already committed to climate change mitigation and has relatively high capacity, creating an opportunity structure that favors NSA participation from that country, NSAs might influence state behavior down the line. For example, NSAs might be able to exert some pressure on their governments to prevent renegeing on commitments later. Or, NSAs might exert influence over states other than their home country. Future research will examine this question.

Importantly, though the study speaks most directly to the role of NSAs in climate governance, this is but one example of a more general phenomenon and scholars could adopt a similar research strategy to shed light on NSA behavior in a range of global governance areas that are also seeing an increase in NSA involvement.

The article proceeds as follows. The next section provides background on the UNFCCC and the changing role of NSAs over time. The third section draws on existing literature to lay out the key barriers to international cooperation between states and how NSAs might help to overcome these barriers. This section also develops a set of hypotheses for testing. Next, we review the data and

present results. The final section concludes by discussing the implications for scholarship and policy as well as next steps for this project.

Non-State Actors and the Framework Convention on Climate Change

The UNFCCC was established in 1992 at the Rio Conference, with the overarching aim of *“stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”* (UNFCCC 1). The engagement of NSAs is essential to achieving this aim, since it requires primary, secondary and tertiary sectors of national and sub-national economies across the world to shift away from producing GHGs (UNEP 2015). As an intergovernmental agreement, however, the Parties to the Convention consist of states (and the European Union), which alone have the right to engage in negotiations, make decisions, and adopt further agreement and protocols in support of the convention.

The lack of official representation at the UNFCCC and the central importance of NSAs to the climate equation have combined to contribute to two important modes of NSA participation in global climate governance. First, while not official Parties to the Convention, NSAs have nevertheless been informally engaged in the intergovernmental negotiations at the UNFCCC and even before its establishment, in significant ways. Indeed, NGO representatives were permitted to participate in the negotiations of the Intergovernmental Negotiating Committee of the UN General Assembly, which birthed the UNFCCC. By providing technical expertise, sharing information among negotiators and through direct advocacy and lobbying, as many as 77 NSAs wielded considerable influence on the negotiations for the UNFCCC (Mintzer and Leonard 1994). Such engagement by NSAs has continued to this day, in the annual conferences of the UNFCCC known as the COPs.

The UNFCCC Secretariat, in keeping with Agenda 21, recognizes nine categories – or ‘constituencies’ - of NSA as observer participants to the annual COP¹. NGOs may apply to be admitted to Observer status, with decisions made by Parties at each COP to admit new NGOs. Since private companies cannot directly obtain Observer status, obtaining accreditation through business NGOs that have been admitted as Observers is a common route to gaining access to the COP. This is also true for many NGOs or other NSAs that have not been admitted to observer status.

Second, with limited access to, and frustrated by the lack of progress in the official process, NSAs have increasingly begun engaging in governance processes outside the UNFCCC, resulting in a ‘regime complex’ for climate governance since the early 2000s (Keohane and Victor 2010). During this time, coalitions of NSAs and a few leaders among states began to make commitments and take action themselves, outside the formal process (Hsu et al. 2015). The

¹ These include Business and Industry NGOs (BINGOs), Environmental NGOs (ENGOS), Indigenous Peoples Organizations (IPOs), Trade Union NGOs (TUNGOS), Research and Independent NGOs (RINGOs), Local Government and Municipal Associations (LGMA), Women and Gender Organizations (WGOs), Youth NGOs (YOUNGOS), and Farmers.

use of 'clubs' such as the Group of Twenty or the Major Economies Forum became the stop-gap measure to circumvent the lack of progress in the UNFCCC and advance some concrete action. As a macro phenomenon, such activity has been described as transnational climate governance (Andonova, Betsill, and Bulkeley 2009). The failure of the Parties to reach agreement in Copenhagen on a concrete, legally binding agreement in 2009 is seen as an inflexion point in this regard (Busby and Hadden, n.d.). The number of coalitions and actors engaging in this regime complex has grown rapidly in the 2009-2015 period, with the phenomenon earning labels such as “Cambrian explosion” (Abbott 2012) or a “groundswell” (Hale 2016) of climate action.

In turn, Parties have taken note of this development outside the formal sphere, and recognized its value to the implementation of the Convention. During 2014-2015, the governments of Peru and France (as presidents of their respective COPs) and the offices of the UN secretary-general and the UNFCCC secretariat partnered on the so-called Lima-Paris Action Agenda, whose sole focus was to foster greater such transnational climate action (Widerberg 2017). The establishment of the NAZCA portal by the UNFCCC secretariat provided the first central repository of such action worldwide. This work was brought into the COPs as a central feature in 2014 and 2015, to demonstrate the scale of such action already happening and its potential for advancing the UNFCCC goals. Parties reached consensus on the importance of these processes and in decisions accompanying the Paris Agreement of 2015, Parties institutionalized an annual high-level meeting on NSA climate action to be held during the COP. As well, Parties have appointed two global champions on a two-year rotating basis to foster greater such action in the real economy. This fusion of the informal and formal governance arenas has led scholars to define the post-Paris climate governance paradigm as one of “hybrid multilateralism” (Kuyper, Linnér, and Schroeder 2018).

The participation of NSAs at these high-level annual meetings is facilitated through the same accreditation process described above. It is expected, therefore, that participation of NSAs at the COP is set to increase significantly in the coming years. What influence, though, are NSAs positioned to have on governance outcomes in this area?

Non-State Actors and International Cooperation

NSAs have many potential avenues of influence in global governance (Keck and Sikkink 1999; Slaughter 2004; Avant, Finnemore, and Sell 2010). Our focus here is one such avenue: the potential for NSAs to help their home states overcome two key barriers to cooperation: lack of commitment and lack of capacity. On the one hand, states may resist making international agreements, especially those requiring deep concessions, because they are not interested in cooperating in a given issue area. On the other hand, states may want to find common ground and even make significant concessions, but resist doing so either because they lack the capacity to fully engage in international negotiations, or they anticipate lacking the capacity to follow through with commitments later.

NSAs have the potential to help fill both gaps in commitment and gaps in capacity. In terms of commitment, NSAs could influence country positions through two central pathways: 1) exerting political pressure and 2) marshalling rhetoric based on specialized knowledge, expertise, or moral claims. In terms of capacity, NSAs can 1) provide relevant expertise to help governments

actually engage in the negotiations and 2) fill capacity gaps down the line to help governments follow through with their commitments (for examples see Mamudu and Glantz 2009; Oppermann and Röttsches 2010).

Case studies on NSA engagement at the climate COPs reveal these pathways at work. Businesses and industry groups, for example, have effectively advocated for and influenced states to adopt specific mechanisms under the Kyoto Protocol (Vormedal 2008). Environmental NGOs have been highly effective in marshalling rhetoric and expertise to shape the narrative and agenda. For example, the language of ‘climate justice’ was imported into statements made by states and the media as a result of committed advocacy by groups such as the Climate Justice Network at the UNFCCC (Hadden 2015). On capacity, the use of side events by NSAs to inform negotiators and build awareness has been well documented (Hjerpe and Linnér 2010; Schroeder and Lovell 2012) Summing up the various activities of NSAs at the UNFCCC, Nasiritousi et al (2016) develop a classification of nine governance profiles, many of which reflect the desires to exert influence over state positions and raise capacity. These include: raise awareness; represent public opinion; represent marginalized voices; influence agenda; influence policymakers; take mitigation action; take adaptation action; propose solutions; provide expertise; and evaluate consequences. On the whole these governance activities or profiles may be aggregated as (1) influence and action, (2) ideas and expertise, (3) representation and awareness-raising. Notably, specific types of NSAs appear to have comparative advantages vis-à-vis these profiles. For instance, businesses are particularly associated with influence and action, while indigenous peoples’ and women’s organizations are more associated with representation and awareness raising, and research organizations are found to engage in ideas and expertise.

While case studies on NSA engagement at COP provide compelling evidence of NSA influence over states, it remains to be seen if they are generalizable. Furthermore, the question of which states are influenced by which NSAs remains to be answered. This prompts us to ask: are NSAs positioned to help their home states cooperate at the COP?

If NSAs are well positioned to fill these gaps in their home state commitment and capacity through participation at the COP, then we would expect to find support for the following hypotheses:

H1. The extent of NSA engagement at the COP should be greater from states that are less committed to climate change mitigation.

H2. The extent of NSA engagement at the COP should be greater from states that have less capacity.

H3. Among states that are high capacity, the extent of NSA engagement at the COP should be greater from states that are less committed to climate change mitigation.

H4. Among states that are committed to climate change mitigation, the extent of NSA engagement at the COP should be greater from states that are low capacity.

Finding support for these hypotheses would provide evidence that NSAs are positioned to fill capacity and commitment gaps of their home countries. Not finding support for these hypotheses might accord with a realist perspective that international agreements are epiphenomal and simply

reflect the balance of power between states. In other words, even if NSAs attend the UNFCCC, they may have little independent effect on state positions or on the operation of the convention/climate agreements. However, not finding support for the above hypotheses does not necessarily mean that NSAs have no independent role. Even if the participation of NSAs from a given country reflects the prior commitment and capacity of that state, once the door is open and NSAs start attending the COP, they may influence state behavior and outcomes down the line. For example, they may help countries to follow through with their commitments later. Furthermore, we focus here on the potential influence of NSAs on the country where they are based. Another avenue for NSA influence may be on other countries. This may especially be the case if NSAs from better resourced countries attend the COP and then help to compensate for capacity issues in lower resource countries that are nonetheless committed to climate change mitigation. We do not explore this avenue here, but it is a fruitful one for future research.

Empirical Investigation

We were interested in the participation data at each COP, including (a) whether the participant is a government official or a non-state actor, (b) whether they are an official country delegate or observer, (c) for non-state actors, the organization and constituency to which they belong, and (d) the home country of each participant (i.e. the country being represented if the participant is a Party delegate, or the country in which the organization conducts its work if the participant is a non-state actor).

While there is a ‘Green Zone’ at each COP which is open to the public and consists of exhibitions and unofficial side events, for the scope of this study we restrict our attention to participation in the ‘Blue Zone’, where the intergovernmental negotiations take place as well as the majority of the informal hallway discussions among negotiators and observers, media engagements, bilateral meetings, workshops as well as all official side-events. Participation in the Blue Zone at the COP is enabled only through badges that are issued by the UNFCCC Secretariat.

Participation data in the Blue Zone for each COP is available on the UNFCCC website, in the form of PDF files that indicate the name, registration type (e.g. Party delegate, media, observer), title, organization, country, and constituency (if applicable). Gathering this information in a format that enables manipulation presents a significant challenge of scraping data and recoding. Instead, we approached the registration team of the UNFCCC Secretariat, and obtained access to the back-end spreadsheet that contains the registration data for participation at the COP from 1995 to 2016.

This dataset contains 267,794 observations of string data, with each observation corresponding to one participant at a given COP. We recoded the dataset to simplify the categories of the type of organization the participant belonged to as well as the type of badge they held. We used the official lists of Admitted NGOs available on the UNFCCC website to code for the home country for each admitted NGO, and then used an iterative process of keyword searches in the names of the organizations and manual searches of organization websites to assign countries to non-admitted NSAs, and where applicable, to assign constituencies, for each observation. Approximately 4,000 observations remain unassigned as yet and have been excluded from the

analysis presented in this paper for now, pending manual assignment. Finally, we transformed these variables into count variables of number of each type of badge (Party delegate, admitted NGO, media and UN/IGO), number of each type of organization (government, non-state actor, media and UN/IGO), and the number of each constituency of NSA, to yield a panel dataset of participation from 194 countries over 22 years.

The dependent variable for the four hypotheses - the extent of NSA engagement at the COP - can be considered along several dimensions. We consider three dimensions in this paper: the *density* (i.e. the numbers of NSAs engaged), the *diversity* (i.e. a measure of the spread of the different constituencies of NSAs engaged), and the *centrality* (i.e. the degree to which NSAs are involved in the negotiations themselves, as opposed to supporting activities). For each of these dimensions, we consider both, the number of individuals and the number of organizations.

For the density of NSA engagement, we count the number of total NSA participation by organization and individuals, per country per year. To measure the diversity of engagement, we follow Hanegraaff (2015) in using the Herfindahl Index, commonly used to measure the degree of competition among firms in an industry. Calculated as the sum of squares of the ratio of numbers of NSA to the total (organization or individual) for each type of NSA, low diversity is indicated by Herfindahl index value approaching 10,000 while high diversity is indicated by the Herfindahl index value approaching 0. Finally, to measure the centrality of NSA engagement, we also count the number of NSAs that are officially part of the Party delegation (per country per year). The rationale for this is as follows: if an NSA holds a Party delegate badge, they have access to the negotiations and from the perspective of all other Parties and the UNFCCC secretariat, are representatives of their government in the negotiations. While the policies of national governments on allowing specific NSAs to speak in the negotiations no doubt vary, we use this binary measure as indicative of NSAs being admitted to the inner core of a country's engagement in the UNFCCC.

For the independent variable of state capacity, we use the natural log of the GDP of the country for a given year. There are undoubtedly other ways to measure capacity that are more relevant to climate negotiations than GDP alone, and we plan to incorporate additional measures in future iterations of the paper. For the second key independent variable – the degree of state commitment to timely climate change mitigation – we use the percentage of renewable energy in the total energy consumption per country per year as our measure. We also considered using scores for domestic renewable energy policy landscape (such as those published by IRENA), or country commitments such as intended nationally determined contributions under the Paris Agreement, but none of these available metrics were available for the breadth of countries and span of time under consideration. However, we do plan to augment the analysis in this paper with these data sources in the future. For hypotheses 3 and 4, we add an interaction term between the renewable energy consumption ration and the natural log of the GDP as an independent variable, to isolate the marginal effects of high commitment given high capacity of a state on the level of NSA engagement, and vice versa.

We control for country-level factors including democracy, trade levels, vulnerability to climate change, population and whether the COP was held in-country. We also add a time trend. At the multilateral level, we control for the size of the country's official delegation to the COP, whether the COP was held in the same geographic region as the country, and membership of the country

in key UNFCCC negotiating groups that are known to hold strong stances that affect global commitment to timely climate mitigation action (all independent variables are lagged by one year). While negotiating groups hold nuanced positions on a range of issues such as ambition, climate finance, common but differentiated responsibilities, and loss and damage, some negotiating groups are associated with particularly strong and consistent positions on commitment. For example, Small Island Developing States (SIDS) have advocated successfully for the target of 1.5 degrees Celsius in the Paris Agreement through the Alliance of Small Island States (AOSIS) (Ourbak and Magnan 2018). Similarly, the European Union (EU) has a track record of leading developed countries to higher ambition commitments (Tornay 2015). On the other hand, members of the Organization of Petroleum Exporting Countries (OPEC) have traditionally demurred on pushing for higher ambition (Dessai 2004). It is interesting, then, to see whether membership in any of the negotiating groups has an independent impact on the engagement of NSAs in any of the three dimensions that we examine.²

We use a set of OLS regressions to examine variation in the diversity of NSA participation across countries and over time and a set of Negative Binomial models to examine variation in the count variables indicating density and centrality of NSA participation. All models cluster standard errors by country and results are robust to including random effects.

Results

Tables 1 and 2 present results examining variation in the three dimensions of the extent of NSA participation. In Table 1, Models 1 and 2 look at the diversity of participation (for NSA individuals and organizations), Models 3 and 4 look at the density of participation (for NSA individuals and organizations), and Models 5 and 6 look at the centrality of participation (for NSA individuals and organizations). Table 2 looks at the same set of dependent variables, but includes an interaction between renewable energy consumption (commitment) and GDP (capacity). Our results are surprising. Table 1 shows that a state's prior level of commitment and capacity are positively associated with NSA participation from that state across all three dimensions. Table 2 shows that there is a conditional relationship between commitment and capacity, and NSA participation. Among countries that are committed to climate change mitigation, NSA participation is greater from those with high capacity. And, among countries that are high capacity, NSA participation is greater from those that are committed. These findings are contrary to the hypotheses presented above.

The effect of interaction terms, especially in nonlinear models, is not easy to interpret directly from regression results. As such, Figure 1 displays some of the key results graphically. Figure 1 compares the number of NSAs participating from: 1) states with low and high GDP, 2) states hosting the COP in a given year to those not hosting, and 3) states with low and high renewable energy consumption. To compare each group of states, the figure presents the simulated first differences: each point in the figure represents how many more NSAs are likely to attend the COP from a state with a high level on each variable than from a state with a low level on each

² Data sources and summary statistics for all variables included in the analysis are presented in supplementary material, available upon request.

variable. In the case of GDP and renewable energy consumption, “low” and “high” refer to the first and third quartiles, in the case of COP host, low and high is 0 and 1.⁸

Figure 1 shows that transitioning from low to high renewable energy consumption is associated with about 1 (1.07) additional NSA attending the COP from that state. To get a sense of the substantive significance, this increase is comparable to being the host of the COP, which should be expected to reduce financial barriers to NSA attendance. Being a host country is also associated with about 1 (.96) additional NSA attending compared to not being a host. And, a state with high GDP is likely to have about 3 (3.19) additional NSAs attend compared to a state with low GDP. This relationship is similar to the increase in NSA participation for a democracy compared to a non-democracy (not included in the figure). Being a democracy (a score of 6 on the Polity scale), is also associated with about 3 (2.69) additional NSAs attending compared to being a non-democracy (a score of -6 on the Polity scale). These findings show that even accounting for other likely predictors of NSA participation, NSAs are more likely to participate when their home country is already committed to climate change mitigation and has high capacity. A similar relationship holds for the diversity and centrality of NSA participation.

Turning to the conditional relationship between a country’s level of commitment and capacity, Figure 2 presents the first differences in the simulated number of NSA individuals attending moving from a state with low to high GDP as renewable energy consumption increases. The figure shows that the association between GDP and the number of NSA individuals participating increases at higher levels of renewable energy consumption. For example, for a state that falls in the first quartile of percentage of renewable energy consumption (about 5.6%), high GDP is associated with 3.8 additional individuals attending. But, for a state in the third quartile of percentage of renewable energy consumption (about 56%), GDP is associated with 6.3 additional individuals attending. For comparison, being a democracy is associated with 1.9 additional individuals attending compared to a non-democracy. These findings suggest that among highly committed states, NSAs are actually more likely to attend from high capacity states. The flip side is also true. Except for the highest capacity states, as capacity increases in the form of GDP, the association between renewable energy consumption and NSA participation also increases. Similar relationships hold for the diversity and centrality of NSA participation.

Finally, we also consider the membership of negotiating groups as a potential measure of commitment, and note several trends. Membership in OPEC is consistently associated with lower density and centrality of NSA engagement, while membership in SIDS and EU is associated with higher centrality of NSA engagement and membership in ALBA is associated with lower centrality. This is consistent with the results described above, in which NSA engagement is positively associated with prior levels of state commitment (the case of ALBA is interesting since the group takes a strong anti-capitalist ideological stance while being committed to climate

Figure 1

The simulated marginal effect of GDP, the COP being held in country, and % RE consumption on the number of NSA organizations attending from each country

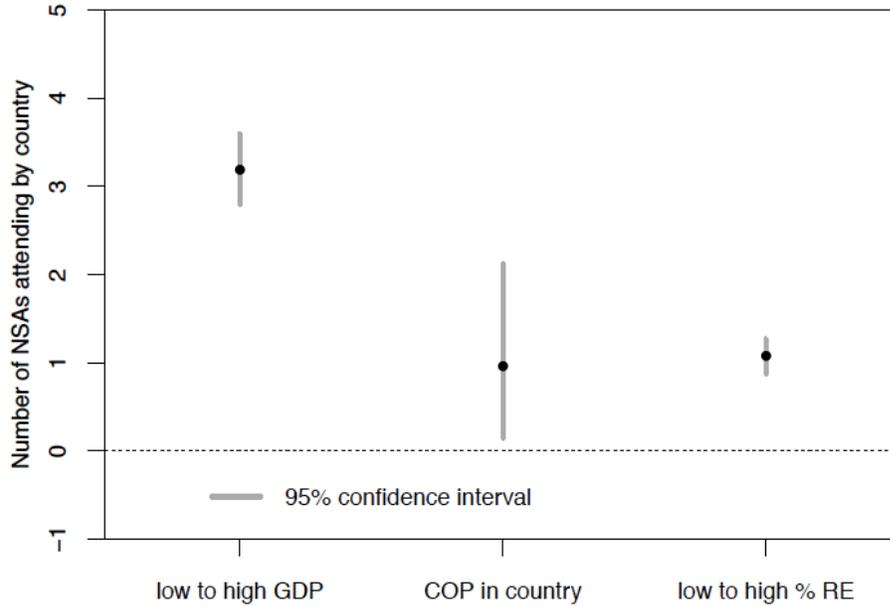
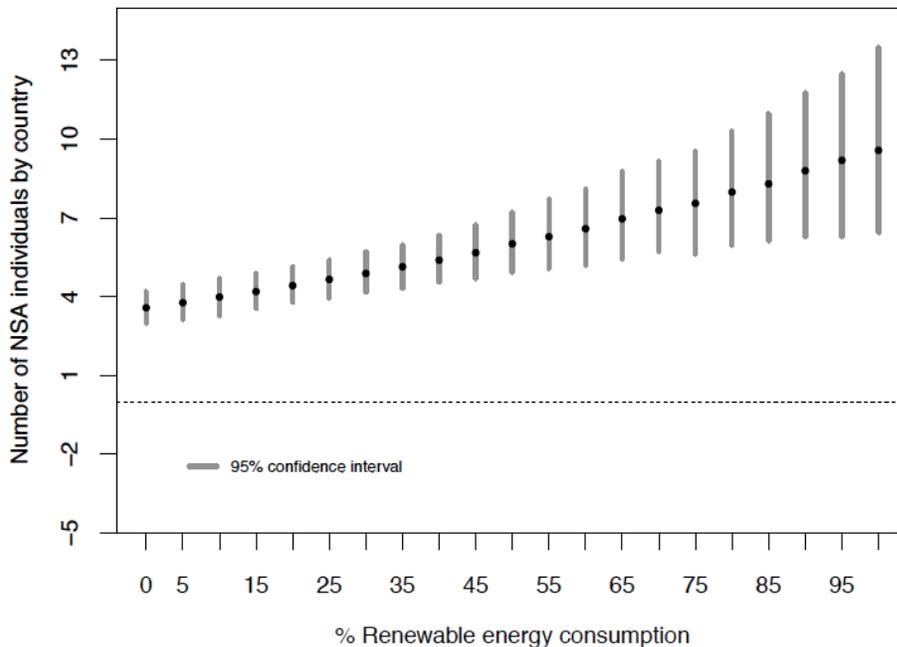


Figure 2

The simulated marginal effect of GDP on the number of NSA individuals attending from each country as renewable energy consumption increases



mitigation. The reluctance of ALBA governments to include NSAs in their delegations may be a reflection of their need to maintain their radical negotiating position in this regard). Membership in the African Group is associated with lower diversity of NSA engagement, and we do not see significant negative relationships between NSA engagement and membership of typically high capacity groups such as the EU, which is also weakly consistent with our previous results of a positive relationship between NSA engagement and state capacity.

All of these results are robust to including random effects, as well as to using an alternative measure of state commitment – the percentage of electricity from renewable sources. Taken together, these findings suggest that NSAs might not be particularly well-positioned to help their home countries overcome deficits in capacity and commitment.

What explains the unexpected results across our hypotheses? Several alternative pathways could be at work. In countries that have low capacity, NSAs themselves face capacity constraints to participate in COPs, and a desire to overcome the commitment gap may be overshadowed by the inability to overcome the capacity gap. As well, given existing networks of NSAs already engaged at COP, barriers to entry may prevent new and additional NSAs from entering the fray. Analysis of NSA networks and participation in side events may shed light on these possible mechanisms. Alternatively, NSAs may be prioritizing domestic engagement in those countries where and depending on greater influence from their international networks of NSAs at the COP to bridge the commitment and capacity gaps of their home states.

At the same time, as several scholars have noted, NSAs are not a homogenous group. The different constituencies of NSAs such as businesses and environmental NGOs have varied motivations between them and even within them. Therefore, these results can be further interrogated by examining the impact of state commitment and capacity on each of the individual constituencies of NSAs. Initial exploration of models using NSA constituencies as basis of the dependent variables rather than aggregate NSA numbers indicates that this is a promising avenue for exploration. Marked differences are seen in the effects of state capacity and commitment on businesses vs. environmental NGOs, and on trade unions vs. indigenous peoples' organizations. We plan to further investigate these nuances.

Table 1. Models explaining NSA participation at COPs 1995-2016

	NSA diversity (ind)	NSA diversity (org)	NSA count (ind)	NSA count (org)	NSAs in PD (ind)	NSAs in PD (org)
	(1)	(2)	(3)	(4)	(5)	(6)
RE Consumption	-16.152** (7.600)	-15.522** (7.510)	0.015** (0.006)	0.013*** (0.004)	0.014** (0.006)	0.010*** (0.003)
Log(GDP)	-425.958** (186.555)	-374.653** (183.958)	0.618*** (0.112)	0.588*** (0.085)	0.447*** (0.104)	0.317*** (0.083)
Merch Trade	-1.798 (3.393)	-1.656 (3.372)	0.001 (0.003)	-0.00003 (0.002)	-0.002 (0.002)	-0.002 (0.002)
COP in country	977.823** (452.959)	1,040.039** (461.185)	1.061*** (0.330)	0.418 (0.281)	0.442 (0.302)	-0.463* (0.261)
COP in region	-156.620 (183.440)	-238.769 (187.657)	0.384*** (0.121)	0.309*** (0.089)	-0.171 (0.108)	-0.098 (0.091)
Democracy	30.907 (45.166)	0.510 (45.063)	0.107** (0.053)	0.090*** (0.029)	-0.013 (0.051)	0.046 (0.042)
Log(population)	41.359 (192.056)	-15.714 (189.700)	-0.064 (0.103)	-0.051 (0.080)	-0.092 (0.123)	-0.066 (0.095)
Vulnerability	832.372 (3,276.350)	1,256.289 (3,236.005)	0.601 (1.916)	0.437 (1.560)	-1.127 (1.675)	-0.559 (1.386)
SIDS	196.059 (643.671)	185.783 (636.786)	-0.120 (0.389)	-0.016 (0.357)	1.274** (0.480)	0.758* (0.401)
OPEC	457.655 (519.207)	349.978 (507.384)	-1.343*** (0.384)	-1.142*** (0.234)	-0.673** (0.298)	-0.420 (0.244)
African Group	635.733 (403.782)	625.024 (399.286)	-0.028 (0.330)	0.179 (0.225)	-0.050 (0.341)	0.060 (0.192)
Arab States	1,286.269** (564.765)	1,085.551* (557.657)	0.632 (0.762)	0.094 (0.346)	0.089 (0.360)	0.168 (0.297)
EIG	-291.260 (740.764)	-367.192 (735.669)	0.936 (0.536)	0.534 (0.367)	0.588 (0.353)	0.350 (0.219)
EU	437.597 (344.554)	407.636 (343.968)	-0.039 (0.274)	0.035 (0.221)	0.092 (0.247)	0.259 (0.161)
ALBA	2,852.982*** (934.284)	2,780.999*** (924.254)	-0.196 (0.618)	0.183 (0.688)	-3.117 (0.957)	-2.702* (0.759)
CfRN	-101.687 (232.783)	-215.831 (231.506)	0.224 (0.225)	0.171 (0.155)	0.060 (0.201)	0.222 (0.156)
log(Size of Party Delegation)	-509.106*** (64.837)	-592.268*** (66.023)	0.728*** (0.092)	0.598*** (0.044)	0.811*** (0.062)	0.690*** (0.046)
Year	-7.664 (14.239)	-4.360 (14.362)	0.026* (0.014)	0.007 (0.007)	-0.003 (0.011)	-0.045*** (0.009)
Intercept	32,254.380 (28,674.380)	25,391.090 (28,940.630)	-67.631** (28.579)	-29.478** (13.831)	-5.016 (20.984)	80.330*** (17.894)
Observations	1,817	1,817	3,164	3,164	3,164	3,164

Note: *p<0.1; **p<0.05; ***p<0.01. Standard errors clustered by country.

Table 2. The conditional relationship between commitment and capacity

	NSA count (ind)	NSA count (org)	NSAs in PD (ind)	NSAs in PD (org)
	(1)	(2)	(3)	(4)
RE Consumption	0.080* (0.046)	0.068* (0.034)	0.088 (0.062)	-0.005 (0.035)
Log(GDP)	0.681*** (0.112)	0.637*** (0.084)	0.511*** (0.112)	0.308*** (0.085)
Merch Trade	0.001 (0.003)	0.0004 (0.002)	-0.001 (0.002)	-0.002 (0.002)
COP in country	1.080*** (0.325)	0.442 (0.282)	0.408 (0.306)	-0.460* (0.261)
COP in region	0.386*** (0.119)	0.311*** (0.087)	-0.155 (0.107)	-0.101 (0.090)
Democracy	0.119** (0.052)	0.099*** (0.029)	-0.00001 (0.051)	0.044 (0.042)
Log(population)	-0.036 (0.103)	-0.032 (0.082)	-0.057 (0.121)	-0.074 (0.090)
Vulnerability	0.033 (2.059)	-0.127 (1.677)	-1.945 (1.919)	-0.340 (1.449)
SIDS	-0.070 (0.382)	0.011 (0.350)	1.324*** (0.455)	0.756* (0.403)
OPEC	-1.232*** (0.387)	-1.040*** (0.245)	-0.578* (0.299)	-0.450 (0.259)
African Group	-0.051 (0.335)	0.121 (0.225)	-0.112 (0.352)	0.085 (0.210)
Arab States	0.714 (0.773)	0.177 (0.351)	0.224 (0.380)	0.135 (0.307)
EIG	0.889 (0.555)	0.495 (0.377)	0.525 (0.358)	0.361 (0.216)
EU	-0.138 (0.248)	-0.026 (0.197)	0.038 (0.252)	0.272* (0.159)
ALBA	-0.260 (0.590)	0.123 (0.660)	-3.071 (0.897)	-2.704* (0.775)
CfRN	0.288 (0.213)	0.216 (0.152)	0.120 (0.188)	0.213 (0.162)
log(Size of Party Delegation)	0.707*** (0.089)	0.584*** (0.042)	0.798*** (0.062)	0.690*** (0.045)
Year	0.027* (0.014)	0.009 (0.007)	-0.001 (0.011)	-0.045*** (0.009)
RE Consumption * Log(GDP)	-0.003 (0.002)	-0.002 (0.001)	-0.003 (0.002)	0.001 (0.001)
Intercept	-72.233** (29.081)	-34.486** (14.033)	-12.328 (22.078)	81.876*** (17.907)
Observations	3,164	3,164	3,164	3,164

Note: *p<0.1; **p<0.05; ***p<0.01. Standard errors clustered by country.

Conclusion and Next Steps

For the participation of NSAs at COP from 1995 to 2016, we hypothesized that there would be a *negative* relationship between the extent of NSA engagement and the NSA home state's commitment and capacity. We also hypothesized that there exists a *negative* relationship between NSA engagement and state commitment and capacity at high levels of capacity and commitment respectively. Our results are surprising across the board. We find consistently positive relationships between NSA engagement and the home state's capacity and commitment; and positive relationships between state capacity and NSA engagement as commitment increases, and vice versa.

This was the first step in a multi-step investigation to systematically interrogate the record of NSA participation at the COP vis-à-vis home country capacity and commitment. As an immediate next step, we will disaggregate the types of NSAs to discern whether this relationship holds for each type of NSA. Given the importance of the differences in motivations and capacities of NSA groups, this may be a fruitful avenue for exploration. In addition, we will explore the relationship between NSAs and states that are not their home states to capture more fully the dynamics of engagement at COP.

About the authors

Poorti Sapatnekar is a PhD Candidate at the University of Maryland School of Public Policy. Her research focuses on the role of international organisations in global governance. Using climate governance as a case study, Poorti explores the notion of “orchestration” and how international organisations have wielded power over non-state actors and states to effect particular outcomes in the climate regime during the past twenty years. Before embarking on her PhD studies, Poorti was a Political Affairs Officer in the office of the UN Secretary-General. Previously, she worked on post-crisis recovery with various NGOs and the UN in Rwanda, Sri Lanka and Indonesia. Poorti holds an MSc in Development Studies from the School of Oriental and African Studies, University of London; and a BA in Natural Sciences from Cambridge University.

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Current projects examine international cooperation during global health emergencies and state compliance with WHO's International Health Regulations. Work on these topics has been published or is forthcoming in *The Review of International Organizations*, *Global Health Governance*, and *International Studies Perspectives*. Other ongoing projects address international cooperation in the areas of climate change, human trafficking and building domestic outbreak response capacity. Dr. Worsnop holds a PhD in Politics from Brandeis University (2016) and a BA in Government from Colby College (2008). Before joining UMD, she was an Assistant Professor in the Health Sciences Department at Worcester State University. Previously, she

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References

Abbott, Kenneth. 2012. "The Transnational Regime Complex for Climate Change." *Environment and Planning C: Government and Policy* 30: 571–90.

Andonova, Liliana B., Michele M. Betsill, and Harriet Bulkeley. 2009. "Transnational Climate Governance." *Global Environmental Politics* 9 (2): 52–73.

Avant, Deborah, Martha Finnemore, and Susan Sell. 2010. *Who Governs the Globe?* Cambridge.

Bodansky, Daniel. 2011 *The Art and Craft of International Environmental Law* Harvard University Press.

Busby, Josh, and Jennifer Hadden. n.d. "Nonstate Actors in the Climate Arena."

Cabré, Miquel Muñoz. 2011. "Issue-Linkages to Climate Change Measured through NGO Participation in the UNFCCC." *Global Environmental Politics* 11 (3): 10–22.

Chayes, Abram, and Antonia Handler Chayes. 1998. *The New Sovereignty: Compliance with International Regulatory Agreements*. Cambridge, MA: Harvard University Press.

Dessai, Suraje. 2004. "An Analysis of the Role of OPEC as a G77 Member at the UNFCCC | WWF." 2004. <http://wwf.panda.org/?17192/An-Analysis-of-the-Role-of-OPEC-as-a-G77-Member-at-the-UNFCCC>.

Hadden, Jennifer. 2015. *Networks in Contention: The Divisive Politics of Climate Change*. New York, NY: Cambridge University Press.

Hale, Thomas. 2016. "'All Hands on Deck': The Paris Agreement and Non-State Climate Action." *Global Environmental Politics* 16 (3).

Hanegraaff, Marcel. 2015. "Transnational Advocacy over Time: Business and NGO Mobilization at UN Climate Summits." *Global Environmental Politics* 15 (1): 83–104..

HJERPE, MATTIAS, and BJÖRN-OLA LINNÉR. 2010. "Functions of COP Side-Events in Climate-Change Governance." *Climate Policy* 10 (2): 167–80.

Hsu, Angel, Andrew S. Moffat, Amy J. Weinfurter, and Jason D. Schwartz. 2015. "Towards a New Climate Diplomacy." *Comments and Opinion. Nature Climate Change*. May 21, 2015.

Keck, Margaret E., and Kathryn Sikkink. 1999. "Transnational Advocacy Networks in International and Regional Politics." *International Social Science Journal* 51 (159): 89–101.

Keohane, Robert, and David Victor. 2010. "The Regime Complex for Climate Change." *The Harvard Project for International Climate Agreements*.

Kuyper, Jonathan W., Björn-Ola Linnér, and Heike Schroeder. 2018. "Non-State Actors in

Hybrid Global Climate Governance: Justice, Legitimacy, and Effectiveness in a Post-Paris Era.” *Wiley Interdisciplinary Reviews: Climate Change* 9 (1): e497.

Mamudu, Hadii M., and Stanton A. Glantz. 2009. “Civil Society and the Negotiation of the Framework Convention on Tobacco Control.” *Global Public Health* 4 (2): 150–168.

Nasiritousi, Naghmeh, Mattias Hjerpe, and Björn-Ola Linnér. 2016. “The Roles of Non-State Actors in Climate Change Governance: Understanding Agency through Governance Profiles.” *International Environmental Agreements: Politics, Law and Economics* 16 (1): 109–26.

Oppermann, Kai, and Dagmar Röttches. 2010. “NGOs as Catalysts for International Arms Control? The Ratification of the Chemical Weapons Convention and the Comprehensive Test Ban Treaty in the United States.” *Journal of International Relations and Development* 13 (3): 239–267.

Ourbak, Timothée, and Alexandre K. Magan. 2018. “The Paris Agreement and Climate Change Negotiations: Small Islands, Big Players.” *Regional Environmental Change* 18 (8): 2201–7.

Ruhlman, Molly. 2014. *Who Participates in Global Governance? : States, Bureaucracies, and NGOs in the United Nations*. Routledge.

Schroeder, Heike, and Heather Lovell. 2012. “The Role of Non-Nation-State Actors and Side Events in the International Climate Negotiations.” *Climate Policy; London* 12 (1): 23–37.

Slaughter, Anne-Marie. 2004. *A New World Order*. Princeton and Oxford: Princeton University Press. <https://press.princeton.edu/titles/7712.html>.

Tallberg, Jonas, Thomas Sommerer, Theresa Squatrito, and Christer Jönsson. 2013. *The Opening Up of International Organizations: Transnational Access in Global Governance*. Cambridge University Press.

Tornay, Diarmuid. 2015. “European Climate Leadership in Question.” The MIT Press. 2015. <https://mitpress.mit.edu/books/european-climate-leadership-question>.

UNEP. 2013. “The Emissions Gap Report 2013: A UNEP Synthesis Report.” Nairobi: United Nations Environment Programme (UNEP).

Vormedal, Irja. 2008. “The Influence of Business and Industry NGOs in the Negotiation of the Kyoto Mechanisms: The Case of Carbon Capture and Storage in the CDM.” *Global Environmental Politics* 8 (4): 36–65.

Widerberg, Oscar. 2017. “The ‘Black Box’ Problem of Orchestration: How to Evaluate the Performance of the Lima-Paris Action Agenda.” *Environmental Politics* 26 (4): 715–37.