

Democratic inclusiveness, climate policy outputs, and climate policy outcomes

In an ideal inclusive political system, all citizens are equally able to influence and challenge policies. We focus on how inclusiveness affects climate policies and outcomes. We argue that more inclusive systems should produce more policies in response to environmental threats and should have better outcomes. We test these hypotheses using panel and cross-sectional data relating to climate policy outputs and outcomes. The results suggest that inclusiveness is positively associated with policy outputs, but probably not with lower emissions of greenhouse gases. This pattern may relate to a lack of deliberation in systems, which are relatively inclusive in the narrower sense of pluralist theory.

Keywords: climate policy; democracy; inclusiveness; environmental sustainability

Introduction

It is widely believed that the empowerment of environmentally concerned citizens is a necessary condition for achieving sustainability, and that further democratization is therefore a key to achieving better environmental policies and outcomes. Concern for democratic inclusiveness is built into important international statements on sustainability, such as Principle 10 of the 1992 Rio Declaration on Environment and Development, which states that environmental issues are “best handled with the participation of all concerned citizens, at the relevant level.”¹ Here, we focus on whether an *inclusive form of democracy*, in which all citizens can participate in environmental decision-making, is important for environmental sustainability.

Robert Dahl distinguished between two main dimensions of democracy – inclusiveness and contestation:² inclusiveness varies with “the proportion of the population entitled to participate on a more or less equal plane in controlling and contesting the conduct of the government;”³ contestation requires that citizens “have unimpaired opportunities (1) to formulate their preferences, (2) to signify their preferences to their fellow citizens and the government by individual and collective action, [and] (3) to have their preferences weighed equally in the conduct of the government.”⁴ Contestation and inclusiveness are positively correlated, but there is considerable variation on the inclusiveness dimension among countries with similar contestation scores.⁵ We test the proposition that higher levels of democratic inclusiveness are associated with greater environmental policy outputs and better performance as measured by environmental outcomes. We focus on climate change because of its significance as an issue in environmental politics.

In the academic literature, the belief that democracies have a better environmental performance than autocracies often rests on ideas about inclusiveness. Liberal democracies allow environmentally aware citizens to channel their demands more effectively than in non-democratic systems, because of higher levels of inclusiveness.⁶ Unlike autocrats who can

survive in power by paying off supporters from a relatively small “selectorate,” democratic leaders must be more inclusive in the provision of benefits, which results in supplying public goods that benefit the electoral majority.⁷ This argument should also apply to environmental public goods.⁸ Some scholars argue that environmental sustainability necessarily presupposes democracy, because it demands widespread societal debate and engagement.⁹ In building our theoretical argument about inclusiveness, we draw on the work of green democratic theorists who believe that new, deeper forms of democratic participation play a role in eliciting environmental awareness and, thus, increasing relevant policy output as well as improving environmental outcomes.¹⁰

Using a single-dimensional, aggregate measure of liberal democracy such as the polity2 scale,¹¹ there is an extensive statistical literature on whether democracies have better environmental performance, *ceteris paribus*, than autocracies.¹² Democracies seem to be willing to take on more international environmental commitments,¹³ but in relation to other aspects of performance, conclusions depend on the sample of countries, the time period examined, and the aspect of environmental performance considered.¹⁴ So far, this literature is largely silent on the question of what dimension or dimensions of democracy matter most. Some theorists have long advocated participatory, community-based alternatives to liberal democracy,¹⁵ and some empirical studies in the environmental literature focus on themes related to inclusiveness such as civil society or stakeholder participation.¹⁶ However, there is a need to look more broadly at inclusiveness as a wider societal phenomenon advocated by normative theories of democracy.

It is not our position that other aspects of democracy are irrelevant to sustainability. Rather, we focus on inclusiveness because a reasonable *prima-facie* case can be made for its importance, and because democratic theorists highlight it as a key aspect. However, we currently know little about its actual effects. First, we sketch the re-emergence of inclusiveness as a prominent theme in democratic theory. We establish the theoretical link

between inclusiveness and environmental outputs and outcomes. We then discuss aspects of inclusiveness, corresponding to inclusiveness in the pluralist sense that we think are significant and can be captured in a cross-national study. We find that inclusiveness in the pluralist sense leads to greater output of policy related to climate change, but this does not seem to translate into better policy outcomes at present.

In the conclusion, we suggest that one possible explanation of this is the failure to meet *deliberative* norms in systems that are inclusive in the narrower pluralist sense. We thus perceive this research as an important step forward in the research agenda on inclusiveness, deliberation, pluralism, and environmental policies and outcomes.

The re-emergence of inclusiveness

Post-World War II democratic theory emphasized Weber's and Schumpeter's elitist models of democracy, in which participation was – if anything – seen as heightening conflict, disruption, and fanaticism.¹⁷ However, more recent democratic theory has revived the norms of inclusiveness and participation as part of the study of democracy as a normative ideal of government oriented to the common good, where “the normative legitimacy of a democratic decision depends on the degree to which those affected by it have been included in the decision-making processes and have had the opportunity to influence the outcomes.”¹⁸ This concern for inclusiveness as part of the core of democracy is evident in the institutionally focused, empirically based theories of pluralism.¹⁹ It has also been a key tenet of the resurgence of normative theory through the emergence of participatory²⁰ and deliberative democratic theory.²¹

Dahl's pluralist theory of democracy²² emerged as a direct critique of the Schumpeterian²³ model of democracy as competent leadership. According to Dahl, it is only through the free competition of a diverse multitude of views and beliefs that a “democratic equilibrium” could arise and result in positive political outcomes for the society. For this, it is insufficient to have

the right leaders in place; instead, citizens and social groups must be able to exert a “relatively high degree of control over leaders.”²⁴ Rather than establishing sovereignty of a “majority,” democracy, for Dahl,²⁵ requires the existence of multiple “minorities” in the form of social groups. Thus, Dahl and other pluralists counteract earlier elitist theories of democracy with a deep concern for, and recognition of, social inclusiveness in and participatory influence on the political process.

Yet, more recent democratic theory has moved beyond these concerns, and Dahl himself was criticised for being elitist and neglecting earlier participatory and emancipatory ideals found in the more strongly normative strands of democratic theory.²⁶ While pluralist theories largely focus on interest groups as key actors, participatory theories emphasize the significance of participation, even by individuals, in the wider political process, highlighting inclusive participation as the core of the emancipatory momentum inherent in ideals of democracy.²⁷ For Pateman,²⁸ “participatory democracy is built round the central assertion that individuals and their institutions cannot be considered in isolation from each other. The existence of representative institutions at national level is not sufficient for democracy.” Similarly, deliberative democracy is first and foremost a normative theory of democratic legitimacy,²⁹ defining democratic legitimacy not by a specific set of representative institutions or electoral processes, but by all affected citizens’ “participation in authentic deliberation” about the political decisions they are subject to.³⁰ As such, it goes beyond the earlier participatory theories by not only stipulating participation as such, but a demanding normative ideal of *even deeper inclusiveness*.

As pointed out above, the literature already highlights a range of reasons to link inclusiveness with sustainability. However, on the basis of these developments in democratic theory, we offer some further considerations.

Democratic inclusiveness and environmental sustainability

Most green theorists reject the existing liberal democratic model for its close connection with capitalism, its short-term orientation, and its distance from community engagement. While democratic theory has recently produced some new, largely small-scale alternatives,³¹ we argue that a key variable to overcoming these limitations, and hence a key variable capturing the environmental significance of democratic participation, is inclusiveness. First, only on a larger scale will a sufficiently wide range of citizens, organizations, and institutions be encouraged to take a more pro-social, longer-term perspective through participation.³² Moreover, only in conceptions of broad, system-wide inclusiveness as opposed to singular participatory innovations is there room for a range of ways of giving voice, because of the diversity of institutions or institutions allowing protest and other antagonistic voices.³³ Thus, we argue, the widely theorized promise of democratic participation for sustainability is most likely to be realized when democratic engagement is inclusive in a system-wide sense – which could therefore plausibly be one of the core features at work in the link between democratization and environmental policy-making.

The strongest case for *excluding* some citizens from environmental decision-making might be that their perceived interests would lead them to wish to block necessary changes. Yet, if people are excluded from the political process, they are less likely to see it as legitimate and to accept its output or outcomes. What is more, social capital is known to be particularly important to solving environmental problems, because it encourages reciprocity and pro-social behaviour.³⁴ Citizens who are excluded may come to distrust those who make decisions; and exclusion also prevents network relations between all members of the community from being built. Thus, exclusion is liable to reduce the amount of social capital, as it isolates some citizens. This would make it harder to motivate community- or society-wide change.

Dealing with climate change in particular requires considerable changes in everyday behaviour that are hard for any state to monitor and to control (coercively) – if this should even be seen as desirable. Hence, the legitimacy that stems from inclusiveness is particularly important for dealing with this issue. Although less progress might be possible in the short term if an inclusive process brings in those opposed to change, in the long run, this seems necessary as processes regarded as illegitimate are likely only to bring about limited change.

For instance, while it is by no means the case that all sections of the business community oppose moderate forms of ecological modernisation,³⁵ some industries decisively oppose fundamental and necessary changes such as the rapid move to a low or no-carbon energy economy. This is true of some powerful oil, gas, and coal companies, for example. Wide participation counteracts the domination of powerful economic interests typical of liberal democracies by opening up room for a wider set of values and concerns, including other-regarding, generalizable interests and values to come to the fore.³⁶ Companies and sectors whose immediate interests lead them to wish to block change may be induced by concern for profitability to accept it if they see that most citizens are now persuaded, and participation might also induce changes in corporate norms and business ethics.

Similarly, some have made the case for environmental guardianship where citizens are excluded from key decisions made by scientific and technical elites who know what is best for the rest of society.³⁷ However, while scientific and technological expertise is important for dealing with environmental issues, they are far from being the only relevant forms of knowledge. Skills required to adapt everyday behaviour, to work together in local communities, to find ways of financing small investments, and to persuade others of the seriousness of the problem, are widely distributed in society. It is by no means the case that political or economic elites monopolize them. Citizen engagement and participation focus the political debate, bring together information, and provide opportunities for social learning, all of which can make environmental politics more effective and long-term in orientation.³⁸

Yet, what is often neglected is that only if these political processes are inclusive, so that citizens and stakeholders feel they can have a meaningful say, will it become worthwhile for them to develop relevant skills.³⁹ There is potential for a virtuous circle whereby inclusiveness generates better-quality debate while at the same time tying citizens together as members of a political community. This can be crucial in relation to typical problems of implementation between environmental policy outputs and outcomes. Policies may fail to have an impact because they are not implemented, perhaps because they were purely symbolic and meant to reassure the public.⁴⁰ If policy is arrived at after an inclusive debate that engages not only the wider public, but also organs of the state that have to develop detailed policies and to implement them, it is less likely that the state can just ignore what has gone on,⁴¹ because the debate will create a public attentive to implementation failure of an extent not reached at a smaller scale or less deep forms of engagement.

Thus, we argue that it is not just democratic politics as such, but democratic *inclusiveness* that is centrally important to sustainability. Inasmuch as successful sustainability politics demands, as we have highlighted, deep, proactive citizen debate that includes critical voices and fosters social learning, the relevant form of inclusiveness goes beyond the sheer numerical weight of participation. Whilst pluralism is far from being a homogenous view of politics,⁴² it tends to ignore the processes that lead citizens to hold the views they do, and to ask questions about how such processes should be seen from a normative perspective.⁴³ In this respect, we can contrast a “pluralist” focus on the numerical weight of participation with our idea that it is *deeper, system-wide inclusive debate* that holds the greatest promise for sustainability. We return to this point, in combination with deliberation, in the conclusion.

Comparing inclusiveness across countries

An important question about inclusiveness is who does and does not belong to the demos. Arguably, all competent adults affected by decisions should be included.⁴⁴ Beyond this,

however, our theory contributes the idea that a deep democratic form of inclusiveness is important. For the purpose of our study and in light of its role in recent democratic theory, we thus seek to capture the following aspects of inclusiveness. First, inclusiveness increases to the extent to which citizens have equal opportunity to express their views, if they so desire. Standard individual citizenship rights to freedom of speech, freedom of assembly, association, and protection of the person from undue use of state power must exist. Unless this is the case, individuals may be deterred from expressing their viewpoint. Hence, we should consider *cross-nationally comparable measures of political freedoms*.

Second, our understanding of expression of viewpoint goes beyond the mere uttering of opinions. This may be possible, yet the views expressed may get no entry into processes where decisions are made, because such views are excluded in some way. If effective expression of views is to be possible, the political system must be open and competitive, not monopolized. A system is monopolized to the extent that certain individuals, groups or parties are able to exclude viewpoints from forums in which they are involved. For example, such exclusion could occur because some group, in combination with state agencies and politicians, excludes viewpoints, as highlighted in the literatures on agency capture.⁴⁵ We see competition as necessary for inclusiveness and, hence, we should consider *cross-nationally comparable competition measures*.

Third, individuals may be deterred from expressing opinions, because the probability that they will make a difference is rather small and there are costs for doing so.⁴⁶ If citizens do not express views because in effect they see this is pointless, we argue that they are excluded. Ideally, a flourishing civil society includes mechanisms that make individual expression seem meaningful, as well as providing selective incentives to participate that offset costs.⁴⁷ Hence, we should capture how the *strength of civil society varies cross-nationally*.

We expect these three aspects of inclusiveness we have highlighted to be positively associated with policy outputs and with improved environmental outcomes.

Research design

Climate policy output – Dataset and variables

It may take a considerable time for policy outputs to translate into changes in outcomes, so we focus on both aspects. *Climate policy output* is a cross-sectional measure comparing 149 countries' average values over 1990-2010. It is an additive index capturing ratification behaviour (whether and how fast countries have committed to the UNFCCC and the Kyoto Protocol), financial contributions (how often has a state made its financial contributions to the UNFCCC secretariat between 1995 and 2010), and reporting behaviour (whether a state submitted national climate reports to the UNFCCC and whether it has done so on time).⁴⁸ We recoded this variable to range from 0 to 1, with higher values standing for more cooperative climate policy outputs. Ignoring temporal variance is justified, because *climate policy output* is constructed so as to capture international commitment over the life of the climate change regime.

Our first measure relating to inclusiveness is PARCOMP, which captures on a five-point scale “the degree to which political participation is free from government control.”⁴⁹ In countries obtaining the highest score of 5, “[t]here are relatively stable and enduring, secular political groups which regularly compete for political influence at the national level; ruling groups and coalitions regularly, voluntarily transfer central power to competing groups. Competition among groups seldom involves coercion or disruption.”⁵⁰ This measure, which we term *inclusiveness—P*, captures the importance of a competitive political process to inclusiveness.

Our second measure pertaining to inclusiveness comes from Coppedge et al.⁵¹ who start with more than a dozen indicators of democracy and, in total, up to 19 sub-dimensions of democracy, and then carry out a principal components analysis. The first component relates to inclusiveness because it captures political freedoms, the sub-dimensions of democracy that load most heavily on it being adult suffrage, the size of the “selectorate” that is important to

maintaining regime stability,⁵² elections, legislative and executive selection, women's political rights, Vanhanen's index of participation, and openness of executive recruitment.⁵³

We term this variable *inclusiveness—C*. It correlates highly and positively with *inclusiveness—P* (Pearson's $r=0.626$; $p<0.01$).

We use the average number of established ENGOs with an organizational structure registered in a country with the International Union for Conservation of Nature (IUCN) between 1990 and 2006 to capture a flourishing civil society. The data for this variable, *ENGO leverage*, are taken from Bernauer et al.⁵⁴ We expect the direct effect of this variable to be positive, as environmentally concerned citizens are more likely to participate.⁵⁵ We also expect a positive, synergistic interaction between *ENGO leverage* and either of the two inclusiveness variables as higher scores on these should allow organised environmental groups to express themselves in debate.⁵⁶ We capture this using multiplicative interaction terms.

We additionally consider variables that have been identified by the previous literature as crucial determinants of environmental outputs.⁵⁷ We control for the number of intergovernmental organizations (IGOs) a state is a member of,⁵⁸ because states more strongly involved in the IGO network are also more likely to cooperate on issues such as climate change.⁵⁹ Data are not available for years after 2005, so we use the average annual count between 1990 and 2005. Second, we control for *trade openness (ln)* – the logged ratio of the sum of exports and imports to GDP,⁶⁰ and foreign direct investment (*FDI*) net inflows as a percentage of GDP. These could relate to pressure for environmental de-regulation, but might also capture openness to cleaner technology; so correlations with the dependent variables could run in either direction.⁶¹ Environmental degradation may be the result of high rates *GDP growth*.⁶² Moreover, higher *population density* may cause stress.⁶³ The literature frequently argues that the environment is a relatively low priority for states in the early stages of development, but it becomes a higher priority with further development;⁶⁴ hence, we

include the logged GDP per capita (*GDP per capita (ln)*) and its square term (square of *GDP per capita (ln)*) measured in constant 2005 US Dollars. Countries that are large producers of fossil fuels might be less likely to pursue policies, which improve climate policy outputs, as mitigation costs are higher;⁶⁵ so we control for a country's *oil, gas, and coal production* per capita. Finally, we employ the climate change index (*CCI*) as a measure of climate change risk exposure.⁶⁶

Climate policy outcome – Dataset and variables

Our outcome measure is CO₂ emission levels in metric tons per capita (log-transformed). The data for this variable vary over time and, thus, we use a time-series cross-sectional dataset. After taking into account missing values of the explanatory variables, the panel data comprise 201 countries over the time period 1974 to 2000.⁶⁷ Given the longitudinal nature of these data, we include a temporally lagged dependent variable that captures a country's CO₂ emission level in the previous year, country fixed effects, and year fixed effects. The lagged dependent variable captures general time dependencies, while year fixed effects control for common temporal shocks. Finally, country fixed effects control for idiosyncratic path dependencies and other forms of cross-sectional heterogeneity.

The controls we include are annual observations of the same ones we include in models of climate output, but we exclude the *CCI* and *oil, gas, and coal production* as these are time-invariant and, hence, incompatible with country fixed effects. We lag all controls by one year to address endogeneity concerns.

Results

Table 1 summarizes our empirical results for climate policy output based on OLS regression. We report four models. The first model considers *inclusiveness—P*, *ENGO leverage*, and the control variables. Model 2 is similar to the first one, but we replace *inclusiveness—P* by

inclusiveness—C. Model 3 and Model 4 are similar to Models 1 and 2, respectively, with the addition of the multiplicative term between the ENGO item and the inclusiveness measure. The table’s entries are non-standardized coefficients and we present robust standard errors in parentheses.

Table 1

In Models 1-4, the coefficients on either *inclusiveness—P* or *inclusiveness—C* (respectively) are statistically significant at least at the 5 percent level with positive coefficients, so we find support for our theoretical argument that inclusiveness increases policy output.⁶⁸ In Model 1 a one-unit increase of *inclusiveness—P* is associated with a 0.039-point increase in *climate policy output*, while in Model 2 a 0.047 increase is associated with a one-unit increase of *inclusiveness—C*. Given that *climate policy output* ranges between 0 and 1, the impact of either inclusiveness variable is very substantial.⁶⁹

Figure 1

In Models 1 and 2 the assumption is that the effect of *ENGO-leverage* is not conditioned by inclusiveness. Here we see no significant effect from *ENGO-leverage* on policy output. In Models 3-4, where we assume an interactive effect, we find that the interaction terms are significant at the 10 percent level, but we note that their coefficients are negative; so inclusiveness actually *decreases* the impact of *ENGO-leverage* on output. The multiplicative specification is easier to appreciate in the graphical form depicted in Figure 1, showing how the coefficient of *ENGO leverage* changes with the relevant inclusiveness variable. According to Model 3 and the top left-hand panel of Figure 1, the significant and positive impact of *ENGO leverage* on *environmental output* declines as *inclusiveness—P* increases, becoming

insignificant if *inclusiveness—P* is greater than about 3.5. The same qualitative pattern emerges in relation to *inclusiveness—C* in Model 4, as seen in the top right-hand panel of Figure 1. These results suggest that civil-society organization increases policy output unless inclusiveness is relatively high; but they are inconsistent with the idea of *positive* synergy with the inclusiveness.

Table 2

Table 2 presents our results for the climate policy outcome measure, *CO₂ emissions per capita (ln)*, specifications being similar to those in Table 1. First, neither inclusiveness measure is significant in Models 5-8 and, hence, inclusiveness is unlikely to affect climate policy outcomes.⁷⁰ In Models 5 and 6 the assumption is that the impact of *ENGO-leverage* is not conditioned by inclusiveness. Here *ENGO-leverage* has a negative and significant impact on *CO₂ emissions per capita (ln)*. A one-unit increase (i.e., one additional ENGO) is associated with 0.1 percent reduction in *CO₂ emissions per capita*. In Models 7 and 8 we assume, in contrast, that there is an interactive effect. The bottom panels in Figure 1, refereeing to Model 7 and 8 respectively, suggest that the negative impact of *ENGO-leverage* may only be significant for moderate to high levels of inclusiveness.

While none of the controls in Table 1 reaches conventional levels of statistical significance; most of them do so in Table 2. For instance, we find a (largely) significant U-shaped relationship between *GDP per capita (ln)* and *CO₂ emissions per capita (ln)*: after a turning point has been reached, countries emit less carbon as they become richer, other things equal. Membership of more IGOs is significantly associated with lower CO₂ emissions per capita. Substantively, a one-unit increase (i.e., one additional IGO membership) is associated with 0.2 percent reduction in *CO₂ emissions per capita*. Another strong predictor of the climate policy outcome measure is *GDP growth*. For example, a one-unit increase of this

variable in Model 5 leads to an increase of $\exp(0.001)=1.001$, i.e., a 0.1 percent increase in *CO₂ emissions per capita*. Consistently, larger values of trade intensity or openness are associated with higher levels of carbon emissions. The results for *GDP growth* and *trade openness (ln)* are robust across model specifications, and they are also in line with our expectations, as economic growth and a higher engagement in the global trade market are usually thought of as being associated with worse environmental outcomes.

Our statistical models address associations between variables, not causation. Moreover, the models in Table 1 rely on purely cross-section data, which does not allow for exploiting temporal variance. Nevertheless, we can reach some summary conclusions. It appears that inclusiveness, as measured by our indicators of liberal freedoms and a competitive political process, is associated with increased policy outputs, but does not significantly improve outcome performance. It could be argued that between the broad international commitments that enter our measure of policy output and reduced emissions of greenhouse gasses must come detailed legislation at the domestic level, for instance to encourage change in patterns of energy demand and supply. Initial exploration suggests that inclusiveness may positively influence domestic policy output, too. In the online appendix, we show that the output of renewable energy policy at this level is positively correlated with *ENGO leverage* and, in this case, there is a synergistic interaction between *ENGO leverage* and inclusiveness. As discussed above, our indicators capture systemic inclusiveness only from a pluralist perspective. We return to this point in the conclusion, as it may help explain why we get different results for output and outcomes.

ENGO leverage appears to increase policy output unless inclusiveness is high. In this case rather than a positive synergy between civil-society organization and our measures of inclusiveness, we actually observe a negative interaction, however. This apparently paradoxical patterns confirm what has been termed the *democracy-civil society paradox*:⁷¹ the marginal impact of an organized environmental movement decreases with higher levels of

democracy (in our case inclusiveness) as, for one thing, democratic systems tend to pursue better environmental policies anyway. We also find that ENGO-leverage may decrease emissions, but only at moderate to high levels of inclusiveness. Thus, the evidence for the impact of this aspect of inclusiveness is quite limited.

Conclusion

Our purpose in this paper has been two-fold. First, we developed the argument that inclusiveness plays a key role in the widely theorized importance of democracy for environmental sustainability. We contended that new forms of participatory democracy are indeed promising for better environmental policy, but that it is important that these processes are inclusive in a broader sense, so that citizens feel they can have their critical views taken into account when climate change policy is made, and are driven to adopt more pro-social outlooks. Second, we tested whether inclusiveness impacts on climate change policy outputs and outcomes. Understood in a pluralist sense, inclusiveness is associated with more policy output, but it does not necessarily appear to be associated with lower emissions.

One explanation of our findings is that the impact of inclusiveness of policy output has not yet had time to show up in reductions in emissions. Although we cannot ignore this possibility, we do not find it fully convincing. It certainly takes time to implement policies, but there was considerable domestic action to initiate policies in some developed democracies even before the Kyoto Protocol was signed in 1997, going back to policy debates in the late 1980s and the signing of the Framework Convention on Climate Change in 1992.⁷²

Recall, however, that our inclusiveness measures are based on, and in the more limited sense associated with, pluralist theory. Currently, it is not possible in a cross-national comparative study to capture whether an inclusive system also has processes that respect key features of *deliberation*, as conceived in normative theory. We recognize that this is a limitation of our study, but there are still good reasons to assess the impact of inclusiveness:

as we saw, several arguments in the literature link it to sustainability; and if it is also true that the promise of deliberation is limited without inclusiveness, inclusiveness stands as a key focus.

Still, it follows that we simply could not capture *deliberative* inclusiveness at this point. Deliberation is a particularly demanding process of public reasoning, in which the fair and equal setting induces citizens to look beyond their immediate self-interest to justify their preferences in terms that all can in principle accept. While self-interest may enjoin citizens to free-ride on the environmental commons,⁷³ after deliberation, they should be more orientated towards the public good of sustainability. Recent developments within democratic theory have motivated a large body of literature on the role played specifically by deliberative engagement in environmental governance,⁷⁴ and empirical studies of innovations such as deliberative polls and citizens' juries have provided some evidence for a positive effect of deliberation on environmentally relevant attitudes.⁷⁵ While much of this literature has focused on experimentation with small-scale artificial events known as "mini-publics,"⁷⁶ more recently, the focus in the theory has shifted towards the concept of "deliberative systems,"⁷⁷ stressing larger-scale interactions between multiple deliberative as well as non-deliberative social actors, sites, and processes. Systemic deliberation can be thought of as dynamic sets of interacting processes, institutions, actors, and venues at various scales that may not be fully deliberative in themselves, but nonetheless contribute to inclusive deliberative engagement at the level of the society as a whole.⁷⁸ For instance, a deliberative system might include meso-level deliberative forums linking organised groups and the state,⁷⁹ but it could also incorporate oppositional movements and forums. Thus, the recent shift in interest towards systemic deliberation is in line with the centrality of inclusiveness, of a type going beyond mere formal pluralism, that we have stressed in this paper. That being said, given its abstract normative nature, its full demandingness cannot at this point be captured in a quantitative empirical study.

And yet, it is instructive to keep this normative-theoretical context in mind, as the degree of “deliberativeness” of a society’s democratic inclusiveness could play a part in explaining the discrepancy between policy outputs and outcomes we have observed through our analysis. If inclusiveness is high in the pluralist sense, but there is little critical, attitude-changing deliberation among citizens, it is possible that climate change policy output will not translate into a significant reduction of emissions. It is deliberative engagement in particular that should create a public attentive to, and critical of, policies that are largely of symbolic significance, having little or no impact – even if implemented. Many developed countries were able to meet their commitments under the Kyoto Protocol as a result of de-industrialization and changes in the fuel mix brought about purely because of market forces, rather than climate change policy leading to changed social practices. In any case, the direct impact of Kyoto on global average temperature is probably miniscule, although some see the agreement as opening up economic, technological, and political possibilities for more thoroughgoing action. It is quite unlikely that commitments entered into force under the Copenhagen Climate Accord of 2009 will prevent dangerous global average temperature increase.⁸⁰ Participation by ENGOs in negotiating the Kyoto Protocol had some influence on process and framing, but little influence on outcomes.⁸¹ It hardly met deliberative norms,⁸² and was hardly accompanied by a ferment of deliberation at domestic level. If, so far, there is a considerable element of political symbolism rather than substance in policy outputs on climate change, it may be because inclusiveness on its own is insufficient, whether at the international or domestic level, without deliberation. Until cross-nationally comparable measures of the degree to which politics is deliberative as well as inclusive are developed, it is not possible to tell whether this explanation is supported by evidence. However, by developing the theory of inclusiveness to include deliberation, we have opened up a potential explanation, which we feel is well-worth pursuing in future research.

We conclude by stressing our contribution to the discourse on environmental policies and inclusiveness. We hope that this research constitutes a first step towards a research agenda on inclusiveness, deliberation, pluralism, and environmental policies and outcomes.

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1. UNEP, Rio Declaration.
 2. Dahl, *Polyarchy; Dahl, Democracy and its Critics*.
 3. (1971, p. 4
 4. Dahl, *Polyarchy*, 2.
 5. Coppedge et al., "Two Persistent Dimensions of Democracy," 639.
 6. Ward, "Liberal democracy and sustainability," 387; Kneuer, "Who is greener?," 867.
 7. Bueno de Mesquita et al., *The logic of political survival*.
 8. Bernauer et al., "Sources of global governance dynamics;" Cao and Ward, "Environmental public goods provision."
 9. Barry, *Rethinking green politics*, 215; Arias-Maldonado, "The democratisation of sustainability."
 10. Dobson, "Democratising green theory;" Dryzek, *Deliberative democracy and beyond*; Eckersley, "Deliberative democracy, ecological representation, and risk;" Smith, "Taking deliberation seriously;" Dryzek and Stevenson, "Global democracy and earth system governance."
 11. Marshall et al., *Polity IV project*.
 12. Congleton, "Pollution control;" Midlarsky, "Democracy and the environment;" Neumayer, "Democratic environmental commitment;" Fredriksson et al. "Environmentalism, democracy, and pollution control;" Li and Reuveny, "Democracy and environmental degradation;" Ward, "Liberal democracy and sustainability;" Lachapelle and Paterson, "Drivers of national climate policy."
 13. Neumayer, "Democratic environmental commitment;" Gates et al., *Environmental commitment, democracy, and inequality*; Roberts et al., "Who ratifies environmental treaties;" Bernauer et al., "Sources of global governance dynamics."
 14. Ward, "Liberal democracy and sustainability;" Fiorino, "National environmental performance," 388 Cao and Ward, "Environmental public goods provision."
 15. Mathews, "Community and the ecological self;" Achterberg, "Sustainability, community, and democracy;" Coenen et al., *Participation and environmental decision-making*.
 16. Betsill, "International environmental politics;" Betsill and Corell, *NGO diplomacy*; Bernauer et al., "Democracy-civil society paradox;" Böhmelt, "Civil society lobbying;" Böhmelt and Betzold, "ENGOs environmental commitments;" Fredriksson and Gaston, "climate change convention;" Fredriksson et al., "Kyoto protocol cooperation;" Roberts et al., "Who ratifies environmental treaties;" Rootes, "Mobilising for the environment."
 17. Held, *Models of Democracy*, 204.
 18. Young, *Inclusion and democracy*, 5-6.
 19. Dahl, *Democracy and its Critics*.
 20. Pateman, *Participation and Democratic Theory*; Barber, *Strong Democracy*.
 21. Habermas, *Between facts and norms*; Cohen, "Deliberation and democratic legitimacy."
 22. Dahl, *A Preface to Democratic Theory*; Dahl, *Who Governs?*; Dahl, *Polyarchy*.
 23. Schumpeter, *Capitalism, Socialism and Democracy*.
 24. Dahl, *A Preface to Democratic Theory*, 3.
 25. Dahl, *A Preface to Democratic Theory*; Dahl, *Who Governs?*; Dahl, *Polyarchy*.
 26. Blokland, *Pluralism, Democracy and Political Knowledge*, 199.
 27. Pateman, *Participation and Democratic Theory*; Young, *Inclusion and democracy*.
 28. Pateman, *Participation and Democratic Theory*, 42.
 29. Parkinson, *Deliberating in the real world*, 4.
 30. Dryzek, *Deliberative governance*, 23.
 31. E.g. Zwart, "A greener alternative?," 25; Lövbrand and Khan, "The deliberative turn in green political theory."

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32. Hendriks, "Integrated deliberation;" Parkinson, *Deliberating in the real world*.
 33. Mansbridge et al., "Deliberative systems," 17-19.
 34. Dietz et al., "The Struggle to Govern the Commons;" Pretty and Ward, "Social Capital and the Environment."
 35. Huber, "Ecological modernisation theory."
 36. Dryzek, *Deliberative democracy and beyond*; Smith, *Deliberative democracy and the environment*.
 37. Ophuls, *Ecology and the Politics of Scarcity*; Shearman and Smith, *Climate Change Challenge*.
 38. Ward et al., "Politics of sustainability;" Niemeyer, "Deliberation in the wilderness."
 39. See Dahl, *A Preface to Democratic Theory*; Dahl, *Who Governs?*; Dahl, *Polyarchy*.
 40. Edelman, *The Symbolic Uses of Politics*.
 41. Meadowcroft, "Deliberative democracy."
 42. Dryzek and Dunleavy, *Theories of the Democratic State*, 35-57.
 43. Dahl (*Polyarchy*, 2), for one, was a pluralist who was well aware of the importance to democracy of citizens being able to formulate (and reformulate) preferences under fair conditions.
 44. Dahl, *Democracy and its Critics*, 119-135. Because climate change and other significant environmental problems are global, capturing whether this is the case for them is particularly challenging.
 45. Ayres and Braithwaite, *Responsive Regulation*.
 46. Olson, *Logic of Collective Action*.
 47. Jordan and Maloney, "Public Interest Participation."
 48. Bernauer and Böhmelt, "Climate change cooperation index;" also Bättig et al., "Measuring countries' cooperation," 478; Bättig et al., "A climate change index;" Bättig and Bernauer, "Institutions and public goods," 294.
 49. Marshall et al., *Polity IV project*, 67.
 50. *Ibid.*, 27.
 51. Coppedge et al., "Two Persistent Dimensions of Democracy."
 52. Bueno de Mesquita et al., *The logic of political survival*.
 53. Coppedge et al., "Two Persistent Dimensions of Democracy," 637-638.
 54. Bernauer et al., "Democracy-civil society paradox."
 55. Fredriksson and Ujhelyi "Political Institutions" suggest that in some cases fewer groups might mean that the environmental lobby is better organized and, hence, better able to exert political pressure. However, we find that the "main effect" of our ENGO variable on environmental outputs is positive (see also Bernauer et al., "Democracy-civil society paradox").
 56. Bernauer et al., "Democracy-civil society paradox."
 57. Data are taken from the World Bank Development Indicators unless a source is mentioned in the text.
 58. Pevehouse et al., "International organizations dataset."
 59. Ward, "Regime network;" Bernauer et al., "Sources of global governance dynamics."
 60. Gleditsch, "Expanded trade and GDP data."
 61. Spilker, "Helpful organizations," 357f; Frankel and Rose, "Trade and Environment."
 62. Seledin and Song, "Environmental quality and development;" Grossman and Krueger, "Economic growth and the environment."
 63. Spilker, "Helpful organizations."
 64. Seledin and Song, "Environmental quality and development;" Grossman and Krueger, "Economic growth and the environment."
 65. Bättig and Bernauer, "Institutions and public goods," 296.

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66. Bättig et al., “A climate change index.” Descriptive statistics for the cross-sectional and panel samples are given in Tables A1 and A2 in the online appendix. We also replaced our variable for mitigation costs by a simpler indicator – the level of CO2 emissions per capita in 1990 (Bättig and Bernauer, “Institutions and public goods,” 296).
 67. Availability of inclusiveness-C limits reported results to the period up to 2000. In the online appendix Table A3 reports results to 2005, based on inclusiveness-P.
 68. In models 3 and 4 these coefficients refer to the impact of inclusiveness when *ENGO-leverage* is (hypothetically) zero.
 69. We also considered Henisz’s (“Institutional environment for infrastructure investment”) measure of veto players and the presence of green parties in a country’s government as controls. Neither variable substantively affects our results when it is included.
 70. In Models 7 and 8 these coefficients refer to the impact of inclusiveness when *ENGO-leverage* is (hypothetically) zero.
 71. Bernauer et al., “Democracy-civil society paradox.”
 72. The compliance literature (see Downs and Jones, “Reputation, compliance, and international law;” Chayes and Chayes, “On compliance”) suggest that while some states are willing to act, they lack the ability. Proxying state-capacity using GDP per capita (Hendrix, “Measuring state capacity”) we found no evidence for an interaction with policy output in a model for CO2 emissions per capita.
 73. Hardin, “Tragedy of the Commons;” Olson, *Logic of Collective Action*.
 74. Dobson, “Democratising green theory;” Torgerson, *The promise of green politics*; Dryzek, *Deliberative democracy and beyond*; Eckersley, “Deliberative democracy, ecological representation, and risk;” Arias-Maldonado, “The democratisation of sustainability;” Smith, “Taking deliberation seriously;” Smith, *Deliberative democracy and the environment*; Ward et al., “Politics of sustainability;” Meadowcroft, “Deliberative democracy;” Baber and Bartlett, *Deliberative environmental politics*; Humphrey, *Ecological politics and democratic theory*; Dryzek and Stevenson, “Global democracy;” Stevenson and Dryzek, “democratisation of global climate governance;” Stevenson and Dryzek, *Democratizing global climate governance*.
 75. Niemeyer, “The emancipatory effect of deliberation;” Dryzek et al., “Promethean Elites Encounter Precautionary Publics;” Grönlund et al., “Deliberation and civic virtue;” Sanders, “The effects of deliberative polling in an EU-wide experiment;” Aasen and Vatn, “Deliberation on GMOs.”
 76. Goodin and Dryzek, “Deliberative impacts;” Fung, “Recipes for public spheres;” Fung and Wright, “Deepening Democracy.”
 77. Parkinson and Mansbridge, *Deliberative systems*.
 78. Mansbridge et al., “Deliberative democracy.”
 79. Meadowcroft, “Deliberative democracy.”
 80. Many scientists are pessimistic about whether Copenhagen amounts to the cuts required cuts to prevent the 2° Celsius limit being broken (Rogelj et al., “Copenhagen Accord pledges are paltry”).
 81. Betsill, “Environmental NGOs.”
 82. Stevenson and Dryzek, *Democratizing global climate governance*.