

## Disapproval of Climate Policy Dismantlement: A Comparative Analysis of International Public Opinion on Donald Trump's Withdrawal from the Paris Climate Change Regime

John Kenny

**To cite this article:** John Kenny (08 Nov 2023): Disapproval of Climate Policy Dismantlement: A Comparative Analysis of International Public Opinion on Donald Trump's Withdrawal from the Paris Climate Change Regime, *Journal of Comparative Policy Analysis: Research and Practice*, DOI: [10.1080/13876988.2023.2262431](https://doi.org/10.1080/13876988.2023.2262431)

**To link to this article:** <https://doi.org/10.1080/13876988.2023.2262431>



© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



[View supplementary material](#)



Published online: 08 Nov 2023.



[Submit your article to this journal](#)



Article views: 158



[View related articles](#)



[View Crossmark data](#)



# Disapproval of Climate Policy Dismantlement: A Comparative Analysis of International Public Opinion on Donald Trump's Withdrawal from the Paris Climate Change Regime

JOHN KENNY 

Tyndall Centre for Climate Change Research, School of Environmental Sciences, Norwich Research Park, University of East Anglia, Norwich, UK

*(Received 25 February 2023; accepted 19 September 2023)*

**ABSTRACT** *When Trump was elected as US President and given the opportunity to implement his campaign promise of withdrawing the country from international climate change agreements, it sparked fears of a knock-on effect of non-commitment from other states that could result in the Paris Agreement's dismantlement. This article examines public opinion – which often influences governments' policy decisions – collected in early 2017 in 38 countries on his proposed withdrawal from international climate change agreements. On top of important individual-level predictors, disapproval of his proposal was higher in liberal democracies and countries that depend less on fossil fuels for electricity.*

**Keywords:** climate change; climate policy; comparative surveys; Donald Trump; Paris Agreement; policy dismantlement; public opinion

## Introduction

To mitigate against the dangers associated with increased global surface temperatures, governments need to undertake rapid and sustained policy action (Jordan et al. 2022). This entails not only implementing ambitious new policies, but also ensuring that existing instruments and political infrastructure are not weakened. Despite this, climate policy retrenchment or even complete dismantlement has already occurred (Jordan and Moore 2020, p. 5; Schaub et al. 2022, pp. S14–S24), such as the repeal of carbon pricing

---

**John Kenny** is Senior Research Associate on the DeepDCarb project at the University of East Anglia. His research focuses on public opinion and on environmental politics.

*Correspondence Address:* John Kenny, Tyndall Centre for Climate Change Research, School of Environmental Sciences, Norwich Research Park, University of East Anglia, NR4 7TJ, UK. Email: [john.kenny@uea.ac.uk](mailto:john.kenny@uea.ac.uk)

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

in Australia (Crowley 2017) and reducing the capacity of key institutions to effectively mitigate climate change in Brazil (Hochstetler 2021).

A particularly high-profile rollback that threatened to undermine global mitigation efforts occurred in the aftermath of Donald Trump's election as US President in 2016 given his campaign promises to withdraw the country from the landmark Paris Agreement (De Pryck and Gemenne 2017). While far from perfect, the agreement was important for breaking the political impasse since the disappointing 2009 Copenhagen summit and provided a new framework for international cooperation (Bodansky 2016; Falkner 2016).

When Trump duly followed through by announcing the planned exit in a speech on 1 June 2017 in which he emphasised that he was "elected to represent the citizens of Pittsburgh, not Paris" (Trump 2017), this endangered the agreement. One early assessment went so far as noting that the country's non-participation could "lethally wound" the agreement for reasons of both effectiveness and legitimacy (Kemp 2017, p. 98). Given the US's status as the second largest producer of greenhouse gases, it was imperative that it undertook mitigation actions. Were it to neglect its responsibilities following its withdrawal, the extent of emissions cuts required by other countries would be so drastic and likely to have such a severe impact on national economies (Dai et al. 2017) as to be politically infeasible. Moreover, the US was due to be the largest financial contributor to the Green Climate Fund that would assist developing countries reach key mitigation and adaptation targets as per commitments in Article 9 of the Paris Agreement. The withdrawal left a \$2 billion deficit in the fund's budget, posing major challenges to delivering its goals (Bowman and Minas 2018). Indeed, Urpelainen and Van de Graaf (2018) argued that the US's non-participation in climate financing was a more serious threat to global climate cooperation than the risk of it missing its emission reduction targets.

At the time of the announced withdrawal, there were moreover worries of a domino effect. It was feared that other countries would follow by also withdrawing (Harvey 2016) or remain but be far less ambitious in their emission reduction efforts (Diringer 2017; Pickering et al. 2017). Either scenario would substantially reduce the world's chances of effectively mitigating climate change. One model suggested that were US mitigation efforts delayed by eight years – the length of two presidential terms – and the rest of the world followed its example, the probability of staying below 2°C would drop from about two-thirds to 10 per cent (Sanderson and Knutti 2016).

This moment was thus a critical juncture for the climate policy decisions of governments. Yet policymaking is not solely a top-down process; publics do influence elite decisions (Dietz 2020). Governing requires politicians to be responsive to their populations, whether due to normative ideals and/or election incentives inherent within democracies (Froio et al. 2017; Schaffer et al. 2022) or to identify sources of dissatisfaction that could threaten regime survival in non-democratic systems (Prakash and Bernauer 2020). When countries are ratifying international climate treaties, some minimum degree of public support is required (Bernauer and Gampfer 2015, p. 317). Thus arises the question: when governments were faced with deciding how to react to Trump's withdrawal from the Paris Agreement, what were the views of their publics on US (non-) participation? Furthermore, did such views vary according to individual or contextual characteristics?

These are the research questions of this paper, which I examine using surveys fielded across 38 countries worldwide from the first half of 2017 on disapproval of Trump leaving international climate change agreements. It is important to be clear on what this focus can and cannot tell us. One cannot infer whether respondents think their own government's (continued) involvement in international climate treaties or support for emission reduction measures should depend on the behaviour of the US or indeed other countries (on these questions, see Tingley and Tomz 2014; Beiser-McGrath and Bernauer 2019; Coleman et al. 2023). This paper also cannot ascertain the reasons why respondents disapprove of the US leaving the agreement. It may be that respondents attribute the US causal responsibility for its past emissions in creating the problem and so consider that it should be part of the solution or that – given its resources – free riding would put an unfair burden on other less well-off states (Shue 1999). They may also think the Paris goals are unlikely to succeed without the US. Yet – whatever the rationale – those who disapprove can be expected to consider climate action worthwhile and the framework of international treaties to be an appropriate forum through which to organise action, thus sending an important signal to governments on public preferences. Hence, the remit of this paper in outlining the level of cross-country differences and the factors associated with such disapproval.

## **Literature**

Public support is an important factor not only for the expansion and success of climate policies, but also for acting against dismantlement (Drews and van den Bergh 2016; Prakash and Bernauer 2020; Drews 2021; Fairbrother 2022). The implementation of climate policies is particularly responsive to situations where publics favour such policies and climate change is salient (Schaffer et al. 2022). Cognisant of this, governments and interest groups wishing to roll back climate policies have made concerted efforts in certain countries to misinform publics or keep them uninformed as precursors to weakening or dismantling climate policies (Young and Coutinho 2013; Rajão et al. 2022). Given the limited literature focusing specifically on public opinion on climate policy dismantlement, in this section I outline what we broadly know about the types of people who support climate policies and situate the contribution of this paper.

There are many individual-level factors for why publics support policies to tackle climate change. US research shows that those with a university education are more likely to favour climate policies, while the roles of gender, age and income are more mixed (McCright et al. 2016; Drews 2021, p. 238). People are more likely to support climate policies the more they believe climate change is real, is caused by humans and has negative consequences (Steg 2023, p. 394). Individuals may be influenced by the expressed positions of political leaders that they (do not) support (Kousser and Tranter 2018), being more supportive of policies originating from politicians that they feel positive towards. Those who place themselves on the left rather than the right tend to be more supportive, though this may not be a direct effect of political orientation and instead may be driven by values (Drews and van den Bergh 2016, p. 857). Authoritarian value orientations – that is, a “preference to submit to authority, to conform to traditional norms, and to punish those who deviate from these norms” (Stanley and Wilson 2019,

p. 46) – may be strongly related to lower pro-climate change and environmental attitudes (Stanley and Wilson 2019).

Despite its importance, a recent review concludes that the literature on understanding publics' support for climate policies is “surprisingly small”, focusing instead more on climate beliefs and concerns (Fairbrother 2022, p. 9) which do not necessarily translate to policy support. That which exists is primarily focused on support for carbon taxes with little research on other policies (Fairbrother 2022). This is problematic, as supporting/opposing one climate policy does not mean that one will support/oppose another. Various policy features – including design and perceived costs/benefits – may affect public support (Drews 2021). For instance, take the gilets jaunes protesters whose actions were influential in dismantling France's carbon tax policy. Many were not against climate policy per se, and felt aggrieved at being depicted as such, but did view the proposal as unfair due to the perception it would widen social inequalities (Driscoll 2023). Moreover, research focuses on support for policies in the US and to a lesser extent in other high-income democracies, but there is little research covering low-income and/or non-Western countries (Drews and van den Bergh 2016; Fairbrother 2022). Thus, the extent of our knowledge is geographically skewed. One key study, *The People's Climate Vote*, sought to address this by surveying climate policy opinion across 50 diverse countries (Flynn et al. 2021). It found both the types and amounts of policies that publics supported varied in different world regions. In general, high-income countries and small-island developing states displayed greater support than middle-income or least-developed countries. Moreover, across all countries, certain policies saw greater support among males and others among females, indicating that the *type* of climate policy affects who supports it.

This paper contributes to the literature as follows. Firstly, it moves beyond the predominant focus on climate policy support in developed democracies. Secondly, this brings the advantage of greater variation in contextual conditions to better ascertain their associations with public opinion on the climate policy of interest. Thirdly, the design enables the analysis of the interacting role of both individual- and contextual-level factors concurrently, picking up on a recent research recommendation (Drews 2021, p. 245). Fourthly, it sheds light on public opinion internationally towards one of the most high-profile policy cases of attempted climate policy dismantlement. Its prominence means it had high recognition globally that enabled respondents in various countries to have an opinion, which may not be the case with other climate policy decisions made by national leaders. It was, moreover, specific, tangible and imminent, with serious implications.

## Data

I use data from a Pew Research Center Global Attitudes survey (Pew Research Center 2017) fielded between 16 February and 8 May 2017. The dataset has several advantages. Firstly, it features a broad range of 38 countries (see Figure 1) – including many understudied cases – that have desirable variance in geographic region, level of democracy/autocracy and mitigation efforts. Secondly, the data is of high quality, having been collected using multi-stage probability sampling to achieve nationally representative samples through a combination of telephone and face-to-face interviews. Thirdly, it contains a question specifically on Trump withdrawing from international climate

agreements when his ability to withdraw was clear but before he officially announced the introduction of the policy, as well as many useful explanatory variables. For all analysis, combined probability and post-stratification weights are used, and an additional weight is added so that every country has the same number of respondents.<sup>1</sup>

### *Dependent Variable*

This question asks: “As I read some proposed policies of President Donald Trump, please tell me if you approve or disapprove of each one: Withdraw U.S. support for international climate change agreements.” Individuals could respond “approve”, “disapprove”, “don’t know” or refuse to answer. While not naming the Paris Agreement explicitly, this was the international climate agreement under imminent threat of US withdrawal and so respondents could be expected to answer with this in mind.

### *Independent Variables*

I include the demographics of gender, age, university education and having low, medium or high household income<sup>2</sup> as variables that have been examined in the existing climate policy support literature (Drews 2021). While findings have been mixed, the overall expectation is that disapproval will be higher among females, younger individuals, those with a university education and those with higher incomes. Furthermore, I add whether they are an internet user. Having equitable access to information is vital and yet unequal access to and use of the internet is a barrier to this in both developing and developed countries (Tayo et al. 2016; Lopez-Sintas et al. 2020). As the internet can increase individuals’ capacity to receive and use knowledge to make more informed decisions (Guerriero 2015) – and previous analysis finds internet usage is positively associated with individuals being simultaneously aware of climate change while attributing it to human activity (Levi 2021) – I hypothesise that internet use is associated with greater disapproval.

I then include attitudinal variables. Firstly, do respondents think that climate change is a threat to their own country? If individuals do not believe this, they may not be as worried about the challenges posed by the US withdrawing from international agreements and so one would expect their disapproval to be lower. Secondly, to examine whether responses are mainly explained by views on the proposer, a question is used asking about confidence in Trump to do the right thing regarding world affairs, with greater confidence hypothesised as being associated with lower disapproval.

To capture authoritarian values – hypothesised to be associated with lower disapproval – responses to whether respondents think “having people of many different backgrounds, such as different ethnic groups, religions and races, makes our country a better place to live or a worse place to live” are added. Furthermore, on authoritarian leadership, a question is added on whether “A system in which a strong leader can make decisions without interference from parliament or the courts” would be a good thing for the respondent’s country. Finally, a question is included on whether it is sometimes acceptable for news organisations to favour one political party over others. Given that individuals are better informed when consuming unbiased media outlets (Wolton 2019)

and press freedom can increase public awareness of climate change (Povitkina 2018), it is expected that those considering biased news to be acceptable are less disapproving. Respondents' left–right self-placement is not included, with the variable not available for many countries.

Five contextual-level country variables are added that were all measured for 2016. A country's carbon emissions may correlate with public opinion, with some evidence that higher per capita emissions are (weakly) associated with higher climate concern (Pohjolainen et al. 2021, p. 5). Furthermore, disapproval may be greater in countries that have already made strides in reducing emissions. I therefore include national-level per capita carbon emissions, as well as change in these since 2000 (Ritchie et al. 2020). Moreover, climate policy density (the number of implemented policies) may be a good measure of climate policy ambition (Schaub et al. 2022). To test whether countries with greater climate policy density have greater disapproval, I add a measurement from the *Climate Change Laws of the World* database (Grantham Research Institute on Climate Change and Environment and Sabin Center for Climate Law Change 2022), which has a particularly comprehensive record of national-level climate legislation (Schaub et al. 2022).

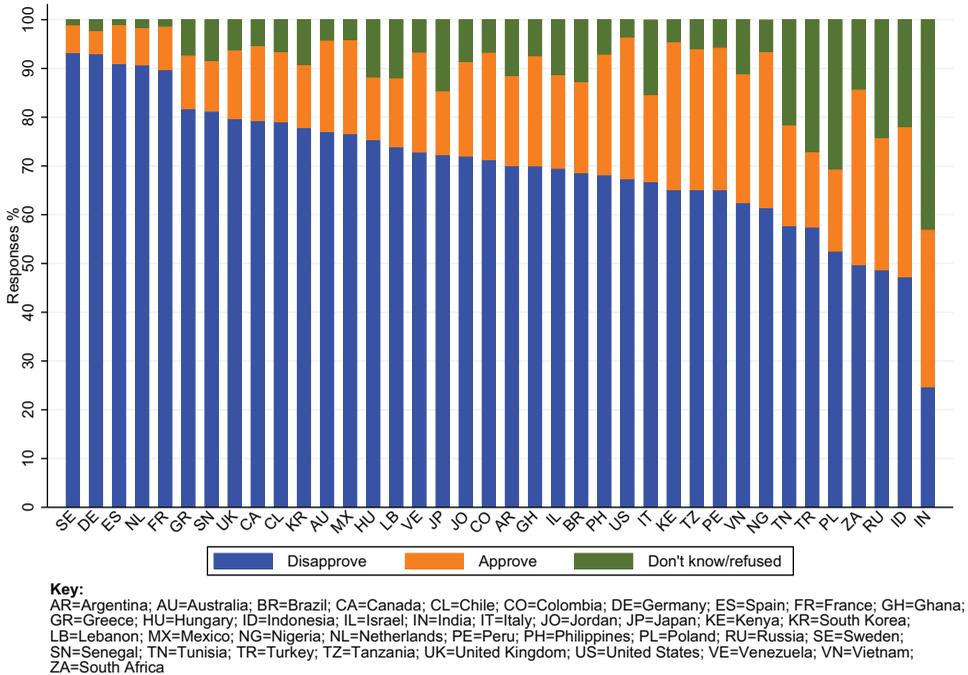
Another important factor is fossil fuel dependence, as higher dependence could be associated with a lower willingness to alter the status quo. Research in Canada, for instance, demonstrates that individuals who have confidence that fossil fuel industries will remain an important economic driver are less likely to support climate policies (Schimpf et al. 2022). Thus, data on the percentage share of electricity produced from fossil fuels in each country is added (Ritchie et al. 2022).

Lastly, work in Europe points to the value of examining the role of how democratic a country is for climate attitudes (Pohjolainen et al. 2021). Though finding no direct relationship between this factor and support for two different climate policies, the authors do find that the positive association between climate concern and support for each policy is amplified in countries with a higher quality of democracy. Another globally focused study relatedly finds a greater increase in the perceived threat of climate change between 2007–2010 and 2019 in countries where civil liberties increased (Levi and Goldberg 2022). I utilise an index capturing to what degree the ideal of liberal democracy is achieved in each country, ranging from low (0) to high (1) (Coppedge et al. 2022)<sup>3</sup> to test not only for a direct association, but whether climate threat perceptions have a greater association with disapproval in more democratic countries when drawing upon a global sample with wide variation in democratic quality.

## Results

Firstly, Figure 1 presents a breakdown of the dependent variables' distributions.<sup>4</sup> There is large variation. Majorities in all but three countries – Russia, Indonesia and India – disapproved of the policy.<sup>5</sup> The only countries to have disapproval rates at 90 per cent or higher are all non-anglophone countries in Western Europe – Sweden, Germany, Spain, Netherlands and France. The Western anglophone countries of the UK, Canada and Australia, which have a notable presence of elite and public polarisation on climate change (Tranter 2013; Smith and Mayer 2019; Kenny 2022), are somewhat less

**Figure 1.** Disapproval of the US leaving international climate change agreements by country

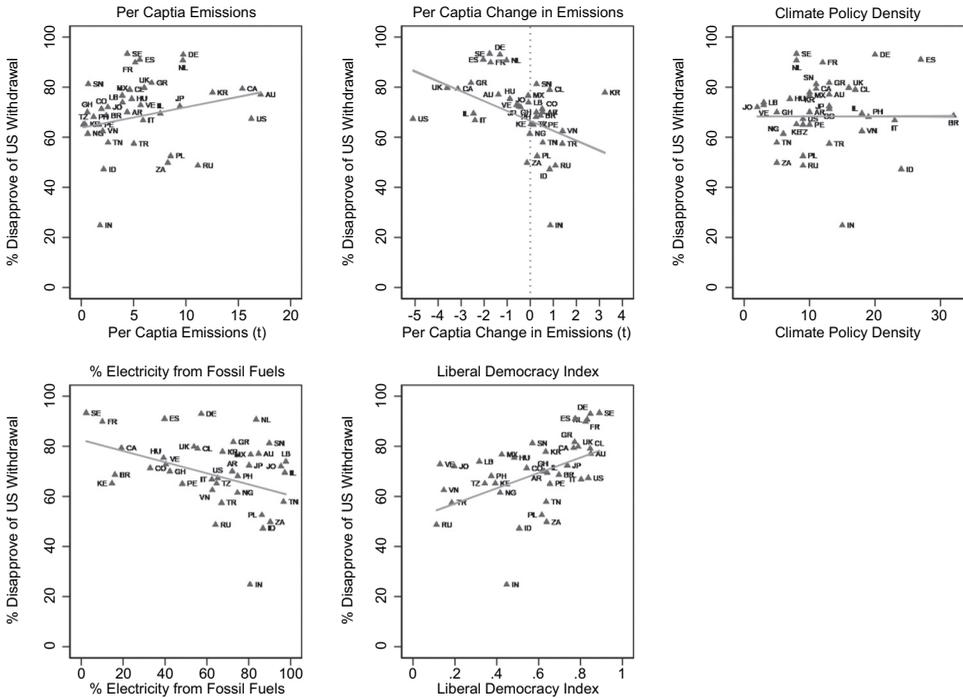


disapproving, but still substantially so with around four in every five respondents against the change. Senegal stands out as the only African country with over 80 per cent disapproval.

Below the median country value, there is a higher proportion of countries with less robust democratic systems. Some have relatively higher proportions of individuals approving of Trump leaving international climate agreements; in others, many individuals do not give a view either way. For instance, Kenya, Tanzania and Peru all record approximately 30 per cent approval and have just 5 per cent responding “don’t know”, whereas in both Turkey and Poland around 15 per cent approve but almost double that did not say one way or another. India is notable as – while the only country where more individuals would approve than disapprove – the plurality response is “don’t know”.

From here on, I analyse the differences between those who disapproved “1” and those who did not “0” (combining “approval” and “don’t know/refusals”). In this way, the analysis speaks to the characteristics of individuals who favour progressing with international coordination, compared to those who are outright opposed or are not able/willing to make a judgement. Widespread ambivalence is itself a barrier to effective climate policy expansion given that – unless there is widespread and intense public concern – representatives may be unwilling to undertake the political risks associated with substantial societal change (Nisbet 2011). Thus, on this matter of whether a leader of an influential state with a substantial carbon footprint should withdraw from

**Figure 2.** Scatterplots of the association between disapproval of US withdrawal from international climate change agreements and contextual variables



international agreements, the consequences of not opposing such climate obstructionism lends credence to the utility of this binary categorisation.<sup>6</sup>

Next, I present scatterplots of the relationship with this binary variable and the five country-level characteristics (see Figure 2). While disapproval seems somewhat higher in countries with higher per capita emissions, this is heavily affected by the outlier India and flattens notably when that country is removed. However, there is a stronger association with per capita emission reductions since 2000, whereby disapproval is higher in countries that have most reduced their emissions. Similarly, in countries with higher shares of electricity from fossil fuels, respondents are less likely to disapprove. The line is flat for the relationship with climate policy density. The final panel demonstrates that disapproval is higher in more democratic countries.

Next, I carry out mixed-effect multinomial logit models with random intercepts whereby individuals (level 1) are nested within countries (level 2) (see Table 1). Given the null association already established for climate density, this variable is omitted in these models.

Initially, in model 1 disapproval is regressed solely on individual-level variables. There is no difference between male and female respondents, and only the over-65s are less likely to disapprove. Having a university education is associated with increased disapproval, as is being in the top income bracket and being an internet user.

**Table 1.** Multilevel regression models predicting disapproval of US withdrawal from international climate change agreements

VARIABLES	Individual		Contextual		All	
<b>Individual variables</b>						
Female	0.05	(0.03)	...	...	0.05	(0.03)
Age (18–29)						
30–49	0.01	(0.05)	...	...	0.00	(0.05)
50–64	–0.07	(0.06)	...	...	–0.07	(0.07)
65+	–0.15*	(0.06)	...	...	–0.16*	(0.06)
Don’t know/refused	–0.60*	(0.26)	...	...	–0.61*	(0.26)
University	0.32***	(0.06)	...	...	0.32***	(0.06)
Income bracket (lower)						
Medium	0.09	(0.06)	...	...	0.09	(0.06)
High	0.31***	(0.06)	...	...	0.31***	(0.06)
Don’t know	–0.15*	(0.07)	...	...	–0.15*	(0.07)
Refused	0.03	(0.08)	...	...	0.03	(0.08)
Internet user	0.19***	(0.05)	...	...	0.19***	(0.05)
Climate change major threat	0.53***	(0.07)	...	...	0.53***	(0.07)
Trump confidence (a lot)						
Some	0.42***	(0.11)	...	...	0.42***	(0.11)
Not too much	0.75***	(0.15)	...	...	0.75***	(0.15)
None	0.90***	(0.16)	...	...	0.90***	(0.16)
Don’t know/refused	0.07	(0.13)	...	...	0.07	(0.13)
Diversity (positive)						
Negative	–0.11	(0.06)	...	...	–0.11	(0.06)
No difference	–0.01	(0.06)	...	...	–0.01	(0.06)
Don’t know/refused	–0.41***	(0.08)	...	...	–0.41***	(0.08)
Media party bias (acceptable)						
Unacceptable	0.39***	(0.05)	...	...	0.39***	(0.04)
Don’t know/refused	–0.46***	(0.07)	...	...	–0.46***	(0.07)
Autocracy (very bad)						
Very good	–0.57***	(0.08)	...	...	–0.56***	(0.08)
Somewhat good	–0.48***	(0.06)	...	...	–0.48***	(0.06)
Somewhat bad	–0.19**	(0.05)	...	...	–0.19**	(0.05)
Don’t know/refused	–1.12***	(0.11)	...	...	–1.12***	(0.11)
<b>Contextual variables</b>						
Emissions	...	...	0.00	(0.02)	–0.01	(0.01)
Emissions change	...	...	–0.07	(0.07)	–0.07	(0.05)
%Electricity from fossil fuels	...	...	–0.01*	(0.00)	–0.01*	(0.00)
Liberal Democracy Index	...	...	1.27**	(0.44)	0.90**	(0.33)
Intercept	–0.15	(0.16)	0.69*	(0.31)	–0.25	(0.29)
Random intercept: country	0.31***	(0.08)	0.35**	(0.08)	0.20***	(0.04)
Observations	41,953		41,953		41,953	
Number of groups	38		38		38	
Log likelihood (null)	–21,466		–21,466		–21,466	
Log likelihood	–19,655		–21,457		–19,647	

Note: Robust standard errors in parentheses.

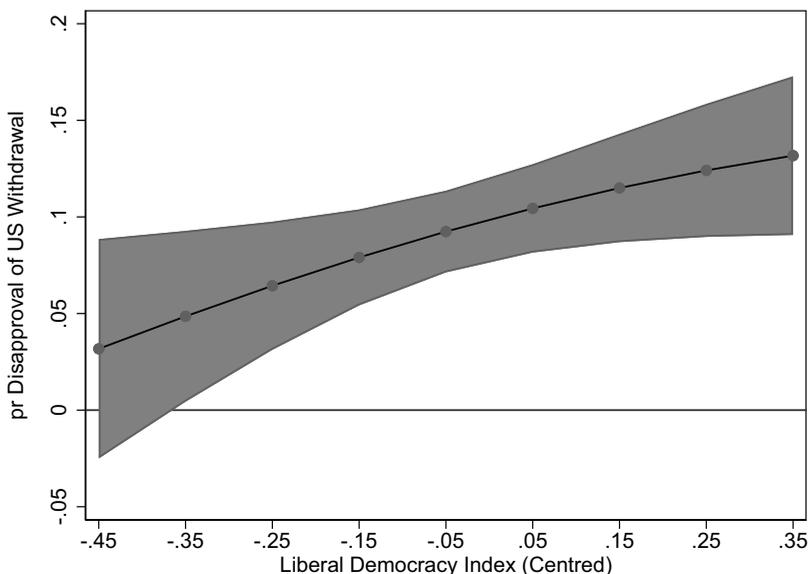
\*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ .

Perceiving climate change as a threat to one's country is statistically significant. Confidence in Trump is also expectedly related, with disapproval increasing according to lower confidence. Finding media bias acceptable and thinking that having a strong leader who can make decisions without interference from other branches of government is a good thing are both associated with lower disapproval. Having a negative view of diversity is not, however, statistically significant.

In the second column, I include solely the contextual variables. Two are statistically significant: the higher the level of democracy, the higher the likelihood of disapproval, while higher percentages of electricity from fossil fuels is associated with lower disapproval. Neither per capita emissions nor their change since 2000 are significant. When both the individual and contextual variables are included concurrently, the country-level variance is far lower compared to the models that contain them separately, pointing to the importance of accounting for both. At the contextual level, the inclusion of the individual-level factors reduces the magnitude of the log-odds coefficient for the liberal democracy index by 25 per cent. Calculating predicted probabilities based on this model, keeping the rest of the variables at their recorded values, in countries that receive almost none of their electricity from fossil fuels the probability of disapproval is close to 76 per cent while this drops by over 10 percentage points for those that receive almost all their electricity from fossil fuels. And moving from 0.9 (high liberal democracy) to 0.1 (low liberal democracy), the probability of disapproval drops by 13 percentage points.

I finally test for a cross-level interaction between a country's level of democracy and the perceived threat of climate change. A random slope for climate change threat is added and the continuous variables in the model are mean-centred as best practice advises (Heisig and Schaeffer 2019; Geese 2023). The findings show that such an interaction is statistically significant and positive (see appendix for table). Figure 3 displays the marginal effects. It

**Figure 3.** Marginal effect of disapproval of the US leaving international climate change agreements based on a country's level of democracy and perceiving climate change as a major threat to one's country



highlights that going from the least to the most democratic countries, the magnitude of the association between perceiving climate change to be a major threat and disapproval increases.

## **Conclusion**

This article examined the individual- and contextual-level factors associated with public opinion on President Trump's intention to withdraw from international climate agreements using nationally representative data from 38 countries. Given the US's political and economic power as well the necessity for it to cut its emissions, there were serious concerns regarding the impact such a withdrawal could have on the viability of the Paris Agreement and the willingness of other countries to commit to it. This study provides the opportunity to shed light on the international public mood on the issue at a crucial juncture and is particularly valuable as it includes understudied countries from outside of advanced industrial democracies that are key stakeholders but are often neglected in public opinion research on climate change.

Majorities disapproved of Trump's policy in all but three of the countries examined, yet there was large variance, ranging from Western European countries, where approval was rare, to others that were more divided. At the individual level, disapproval was greater amongst those with a university education, those under 65, individuals living in higher-income households and those with internet access. Perceiving climate change to be a major threat to one's country, having little confidence in Trump, finding media bias unacceptable and not supporting autocratic leadership styles were likewise predictors. Though these are as expected from existing literature on support for new policies to address climate change, it is important to show empirically that such factors are also associated with not wanting existing commitments reversed. At the contextual level, neither carbon emission levels per capita, nor the change in such emissions since 2000, nor climate policy density explains variation in public views. While it had been hypothesised that disapproval may be greater in countries that had already made strides in reducing emissions, the results do not suggest public backlash or reward on this issue from such national achievements. Disapproval was lower in countries whose electricity has a higher composition of fossil fuels and it was higher in more democratic countries.

It is worth emphasising that this analysis is correlational, and causality cannot be established from examining a single timepoint. However, given the literature detailing the extent to which fossil fuel industries lobby against climate policies and make concerted efforts to move public opinion in line with a slower transition than the scientific evidence finds is required (Dunlap and McCright 2012; Mildenerger 2020; Supran and Oreskes 2021; Carroll et al. 2022), the results underline the challenges in bringing climate policy support in these countries to the same level as countries where it already exists. On the association with democracy, we know that freedom of expression and access to information is restricted in less democratic countries (Povitkina 2018), that autocracies more frequently utilise misinformation for shaping public opinion (Boese et al. 2022), and that consuming climate change misinformation is associated with a lower willingness to undertake climate action (Van Der Linden 2015). While such an explanation fits with the communication of climate change in Russia (Tynkkynen and Tynkkynen 2018), it would be valuable for more research in less democratic countries to unpack the mechanism behind this relationship and what the driving explanations are. And as this paper demonstrates that perceiving climate

change as a major threat to one's country is a stronger correlate of disapproval in more democratic countries, this also raises further questions as to whether potential future increases of perceived climate risks in less democratic countries will translate to greater support for the international climate change regime.

It is finally worthwhile reflecting on the changing political conditions since Trump's announced withdrawal. The US returned to the agreement upon President Biden's inauguration in January 2021 and during the Trump Presidency the commitment of US states, cities and companies representing 50 per cent of the economy to take actions consummate with the Paris Agreement somewhat replaced federal-level action (Diaz-Rainey et al. 2021). For various reasons, we did not witness the mass withdrawal of other countries that many had feared. That the balance of public opinion was largely against Trump's decision suggests a supportive political environment for national leaders to proceed with their involvement.

However, we cannot rely on this continuing. On more difficult policy decisions that involve implementing the necessary emissions cuts – with existing emission reductions pledges being overwhelmingly insufficient (United Nations Environment Programme 2022) – one could expect divisions to be greater than those recorded here. This is especially so with the evidence of increased public polarisation on climate change at recent international summits (Falkenberg et al. 2022). As Andresen et al. (2021, p. 6) remark, the domestic implementation of policy mixes needs to result in positive policy feedback if climate policies are to result in Paris commitments being met. If this does not emerge or is overwhelmed by negative feedback, the challenge increases further. Thus, it is important to monitor global public views on existing and future climate change policies going forward and specific measures to fulfil them so as to comprehend the opportunities for and barriers to achieving effective emissions cuts that can enjoy public favour.

## Notes

1. While most countries have 1,000 individuals, some have fewer (e.g. 852 in Greece) and some more (most notably 2,464 in India), hence why this weight is required.
2. In each country, respondents were presented with various income brackets and asked which bracket their household income fell into. Removing “don't know” and “refuse” answers, within each country I classified those who fell approximately in the lowest tertile as “lower”, the middle tertile as “medium” and the upper tertile as “higher” as far as possible. Don't know/refuse answers were then added back into this variable to keep these respondents in the sample.
3. Another variable of interest is Gross Domestic Product (GDP). However, this is too highly correlated with the other variables to be able to include it concurrently.
4. See the appendix for this information in table format.
5. These three countries correspond with those listed in *The People's Climate Vote* as having the lowest support – among a subset of countries with particularly high greenhouse gas emissions from electricity and heating – for increased renewable energy (Flynn et al. 2021, p. 37).
6. See appendix for models where the “don't know/refusals” are instead treated as missing, as well as multinomial logit models where the “don't know/refusals” are included in the analysis as a separate category.

## Acknowledgements

I would like to thank Lucas Geese, the editorial team and the anonymous reviewers for their constructive comments on previous drafts that greatly improved the paper.

## Disclosure Statement

No potential conflict of interest was reported by the author.

## Supplemental data

Supplementary data for this article can be accessed at <https://doi.org/10.1080/13876988.2023.2262431>

## Funding

This work was supported by funding provided by the ERC [via the DeepDCarb Advanced Grant No. 882601].

## ORCID

John Kenny  <http://orcid.org/0000-0001-9401-3555>

## References

- Andresen, S., Bang, G., Skjærseth, J. B., and Underdal, A., 2021, Achieving the ambitious targets of the Paris Agreement: The role of key actors. *International Environmental Agreements: Politics, Law and Economics*, **21**(1), pp. 1–7. doi:10.1007/s10784-021-09527-6.
- Beiser-McGrath, L. F. and Bernauer, T., 2019, Commitment failures are unlikely to undermine public support for the Paris agreement. *Nature Climate Change*, **9**(3), pp. 248–252. doi:10.1038/s41558-019-0414-z.
- Bernauer, T. and Gampfer, R., 2015, How robust is public support for unilateral climate policy? *Environmental Science & Policy*, **54**, pp. 316–330. doi:10.1016/j.envsci.2015.07.010.
- Bodansky, D., 2016, The Paris climate change agreement: A new hope? *American Journal of International Law*, **110**(2), pp. 288–319. doi:10.5305/amerjintlaw.110.2.0288.
- Boese, V. A., Lundstedt, M., Morrison, K., Sato, Y., and Lindberg, S. I., 2022, State of the world 2021: Autocratization changing its nature? *Democratization*, **29**(6), pp. 983–1013. doi:10.1080/13510347.2022.2069751.
- Bowman, M. and Minas, S., 2018, Resilience through interlinkage: The green climate fund and climate finance governance. *Climate Policy*, **19**(3), pp. 342–353. doi:10.1080/14693062.2018.1513358.
- Carroll, W. K., Daub, S., and Gunster, S., 2022, Regime of obstruction: Fossil capitalism and the many facets of climate denial in Canada, in: D. Tindall, M. C. J. Stoddart, and R. E. Dunlap (Eds) *Handbook of Anti-Environmentalism* (Cheltenham: Edward Elgar Publishing), pp. 216–233.
- Coleman, E. A., Harring, N., and Jagers, S. C., 2023, Policy attributes shape climate policy support. *Policy Studies Journal*, **51**(2), pp. 419–437. doi:10.1111/psj.12493.
- Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Teorell, J., Altman, A., Bernhard, M., Cornell, A., Fish, M. S., Gastaldi, L. and Gjerløw, H., 2022, V-Dem [Country–Year/Country–Date] Dataset v12. *Varieties of Democracy (V-Dem) Project*. doi:10.23696/VDEMDS22.
- Crowley, K., 2017, Up and down with climate politics 2013–2016: The repeal of carbon pricing in Australia. *Wiley Interdisciplinary Reviews: Climate Change*, **8**(3), pp. 1–13. doi:10.1002/wcc.458.
- Dai, H.-C., Zhang, H.-B., and Wang, W.-T., 2017, The impacts of U.S. withdrawal from the Paris Agreement on the carbon emission space and mitigation cost of China, EU, and Japan under the constraints of the global carbon emission space. *Advances in Climate Change Research*, **8**(4), pp. 226–234. doi:10.1016/j.accre.2017.09.003.
- De Pryck, K. and Gemenne, F., 2017, The Denier-in-Chief: Climate change, science and the election of Donald J. Trump. *Law and Critique*, **28**(2), pp. 119–126. doi:10.1007/s10978-017-9207-6.
- Diaz-Rainey, I., Gehricke, S. A., Roberts, H., and Zhang, R., 2021, Trump vs. Paris: The impact of climate policy on U.S. listed oil and gas firm returns and volatility. *International Review of Financial Analysis*, **76** (101746). doi:10.1016/j.irfa.2021.101746.
- Dietz, T., 2020, Political events and public views on climate change. *Climatic Change*, **161**(1), pp. 1–8. doi:10.1007/s10584-020-02791-6.

- Diringer, E., 2017, Let Trump claim a better deal on climate. *Nature*, **546**(7658), pp. 329–329. doi:10.1038/546329a.
- Drews, S., 2021, Public support for climate policy, in: A. Franzen and S. Mader (Eds) *Research Handbook on Environmental Sociology* (Cheltenham: Edward Elgar Publishing), pp. 237–249.
- Drews, S. and van den Bergh, J. C. J. M., 2016, What explains public support for climate policies? A review of empirical and experimental studies. *Climate Policy*, **16**(7), pp. 855–876. doi:10.1080/14693062.2015.1058240.
- Driscoll, D., 2023, Populism and carbon tax justice: The yellow vest movement in France. *Social Problems*, **70**(1), pp. 143–163.
- Dunlap, R. E. and McCright, A. M., 2012, Organized climate change Denial, in: J. S. Dryzek, R. B. Norgaard, and D. Schlosberg (Eds) *The Oxford Handbook of Climate Change and Society* (Oxford: Oxford University Press), pp. 144–160.
- Fairbrother, M., 2022, Public opinion about climate policies: A review and call for more studies of what people want. *PLoS Climate*, **1**(5), pp. 1–14. doi:10.1371/journal.pclm.0000030.
- Falkenberg, M., Galeazzi, A., Torricelli, M., Di Marco, N., Larosa, F., Sas, M., Mekacher, A., Pearce, W., Zollo, F., Quattrociochi, W. and Baronchelli, A., 2022, Growing polarization around climate change on social media. *Nature Climate Change*, **12**(12), pp. 1114–1121. doi:10.1038/s41558-022-01527-x.
- Falkner, R., 2016, The Paris Agreement and the new logic of international climate politics. *International Affairs*, **92**(5), pp. 1107–1125. doi:10.1111/1468-2346.12708.
- Flynn, C., Yamasumi, E., Fisher, S. D., Snow, D., Grant, Z., Kirby, M., Browning, P., Rommerskirchen, M., and Russell, I., 2021, The people’s climate vote. *United Nations*. Available at <https://www.undp.org/publications/peoples-climate-vote> (accessed 27 January 2021).
- Froio, C., Bevan, S., and Jennings, W., 2017, Party mandates and the politics of attention: Party platforms, public priorities and the policy agenda in Britain. *Party Politics*, **23**(6), pp. 692–703. doi:10.1177/1354068815625228.
- Geese, L., 2023, Does descriptive representation narrow the Immigrant Gap in Turnout? A comparative study across 11 Western European democracies. *Political Studies*, **71**(4), pp. 1277–1297. doi:10.1177/00323217211067129/.
- Grantham Research Institute on Climate Change and Environment and Sabin Center for Climate Law Change, 2022, Climate change laws of the world database. Available at [climate-laws.org](http://climate-laws.org) (accessed 4 April 2022).
- Guerriero, M., 2015, The impact of internet connectivity on economic development in Sub-Saharan Africa. *Economic and Private Sector Professional Evidence and Applied Knowledge Services*. Available at <https://assets.publishing.service.gov.uk/media/57a0899b40f0b652dd0002f4/The-impact-of-internet-connectivity-on-economic-development-in-Sub-Saharan-Africa.pdf> (accessed 28 January 2023).
- Harvey, C., 2016, The US isn’t the only big country at risk of backsliding on climate change. *Washington Post*, 29 December.
- Heisig, J. P. and Schaeffer, M., 2019, Why you should always include a random slope for the lower-level variable involved in a cross-level interaction. *European Sociological Review*, **35**(2), pp. 258–279. doi:10.1093/esr/jcy053.
- Hochstetler, K., 2021, Climate institutions in Brazil: Three decades of building and dismantling climate capacity. *Environmental Politics*, **30**(sup1), pp. 49–70. doi:10.1080/09644016.2021.1957614.
- Jordan, A., Lorenzoni, I., Tosun, J., i Saus, J. E., Geese, L., Kenny, J., Saad, E. L., Moore, B. and Schaub, S. G., 2022, The political challenges of deep decarbonisation: Towards an integrated agenda for research and practice. *Climate Action*, **1**(1), pp. 1–12. doi:10.1007/s44168-022-00004-7.
- Jordan, A. and Moore, B., 2020, *Durable by Design? Policy Feedback in a Changing Climate* (Cambridge: Cambridge University Press).
- Kemp, L., 2017, US-proofing the Paris Climate Agreement. *Climate Policy*, **17**(1), pp. 86–101. doi:10.1080/14693062.2016.1176007.
- Kenny, J., 2022, The role of political attention in moderating the association between political identities and anthropogenic climate change belief in Britain. *Political Studies*, **70**(1), pp. 3–25. doi:10.1177/0032321720928261.
- Kousser, T. and Tranter, B., 2018, The influence of political leaders on climate change attitudes. *Global Environmental Change*, **50**, pp. 100–109. doi:10.1016/j.gloenvcha.2018.03.005.
- Levi, S., 2021, Country-level conditions like prosperity, democracy, and regulatory culture predict individual climate change belief. *Communications Earth & Environment*, **2**(1), pp. 1–10. doi:10.1038/s43247-021-00118-6.

- Levi, S. and Goldberg, M. H., 2022, Democracy and public opinion formation: How illiberal regimes suppress climate change concern (version 0.4). *Working paper*. doi:10.31235/OSF.IO/6VK9D.
- Lopez-Sintas, J., Lamberti, G., and Sukphan, J., 2020, The social structuring of the digital gap in a developing country. The impact of computer and internet access opportunities on internet use in Thailand. *Technology in Society*, **63**(101433). doi:10.1016/j.techsoc.2020.101433.
- McCright, A. M., Marquart-Pyatt, S. T., Shwom, R. L., Brechin, S. R., and Allen, S., 2016, Ideology, capitalism, and climate: Explaining public views about climate change in the United States. *Energy Research & Social Science*, **21**, pp. 180–189. doi:10.1016/j.erss.2016.08.003.
- Mildenberger, M., 2020, *Carbon Captured: How Business and Labor Control Climate Policies* (Cambridge, Massachusetts: MIT Press).
- Nisbet, M. C., 2011, Public opinion and participation, in: D. Schlosberg, J. Dryzek, and R. B. Norgaard (Eds) *The Oxford Handbook of Climate Change and Society* (Oxford: Oxford University Press), pp. 355–368.
- Pew Research Center, 2017, Pew research center: Spring 2017 global attitudes survey. *Roper Center for Public Opinion Research*. doi:10.25940/ROPER-31116604.
- Pickering, J., McGee, J. S., Stephens, T., and Karlsson-Vinkhuyzen, S. I., 2017, The impact of the US retreat from the Paris Agreement: Kyoto revisited? *Climate Policy*, **18**(7), pp. 818–827. doi:10.1080/14693062.2017.1412934.
- Pohjolainen, P., Kukkonen, I., Jokinen, P., Poortinga, W., Adedayo Ogunbode, C., Böhm, G., Fisher, S., and Umit, R., 2021, The role of national affluence, carbon emissions, and democracy in Europeans' climate perceptions. *Innovation: The European Journal of Social Science Research*. Routledge. doi:10.1080/13511610.2021.1909465.
- Povitkina, M., 2018, The limits of democracy in tackling climate change. *Environmental Politics*, **27**(3), pp. 411–432. doi:10.1080/09644016.2018.1444723.
- Prakash, A. and Bernauer, T., 2020, Survey research in environmental politics: Why it is important and what the challenges are. *Environmental Politics*, **29**(7), pp. 1127–1134. doi:10.1080/09644016.2020.1789337.
- Rajão, R., Nobre, A. D., Cunha, E. L., Duarte, T. R., Marcolino, C., Soares-Filho, B., Sparovek, G., Rodrigues, R. R., Valera, C., Bustamante, M. and Nobre, C., 2022, The risk of fake controversies for Brazilian environmental policies. *Biological Conservation*, **266**(109447). doi:10.1016/j.biocon.2021.109447.
- Ritchie, H., Roser, M., and Rosado, P., 2020, *CO<sub>2</sub> and Greenhouse Gas Emissions*, OurWorldInData.org. Available at <https://ourworldindata.org/co2-and-greenhouse-gas-emissions> (accessed 14 March 2022).
- Ritchie, H., Roser, M., and Rosado, P., 2022, *Energy*, OurWorldInData.orgData. Available at <https://ourworldindata.org/energy> (accessed 14 March 2022).
- Sanderson, B. M. and Knutti, R., 2016, Delays in US mitigation could rule out Paris targets. *Nature Climate Change*, **7**(2), pp. 92–94. doi:10.1038/nclimate3193.
- Schaffer, L. M., Oehl, B., and Bernauer, T., 2022, Are policymakers responsive to public demand in climate politics? *Journal of Public Policy*, **42**(1), pp. 136–142. doi:10.1017/S0143814X21000088.
- Schaub, S., Tosun, J., Jordan, A., and Enguer, J., 2022, Climate policy ambition: Exploring a policy density perspective. *Politics and Governance*, **10**(3), pp. 226–238. doi:10.17645/pag.v10i3.5347.
- Schimpf, C., DeCillia, B., Sleptcov, N., Thomas, M., and Thorlakson, L., 2022, If it ain't broke, don't fix it: How the public's economic confidence in the fossil fuel industry reduces support for a clean energy transition. *Environmental Politics*, **31**(6), pp. 1081–1101. doi:10.1080/09644016.2021.1978199.
- Shue, H., 1999, Global environment and international inequality. *International Affairs (Royal Institute of International Affairs 1944-)*, **75**(3), pp. 534–545.
- Smith, E. K. and Mayer, A., 2019, Anomalous anglophones? Contours of free market ideology, political polarization, and climate change attitudes in English-speaking countries, Western European and post-Communist states. *Climatic Change*, **152**(1), pp. 17–34. doi:10.1007/s10584-018-2332-x.
- Stanley, S. K. and Wilson, M. S., 2019, Meta-analysing the association between social dominance orientation, authoritarianism, and attitudes on the environment and climate change. *Journal of Environmental Psychology*, **61**, pp. 46–56. doi:10.1016/j.jenvp.2018.12.002.
- Steg, L. 2023. Psychology of climate change. *Annual Review of Psychology*, **74**(1), pp. 391–421. doi:10.1146/annurev-psych-032720-042905.
- Supran, G. and Oreskes, N., 2021, Rhetoric and frame analysis of ExxonMobil's climate change communications. *One Earth*, **4**(5), pp. 696–719. doi:10.1016/j.oneear.2021.04.014.
- Tayo, O., Thompson, R., and Thompson, E., 2016, Impact of the digital divide on computer use and internet access on the poor in Nigeria. *Journal of Education and Learning*, **5**(1), pp. 1–6. doi:10.5539/jel.v5n1p1.

- Tingley, D. and Tomz, M., 2014, Conditional cooperation and climate change. *Comparative Political Studies*, **47**(3), pp. 344–368. doi:10.1177/0010414013509571.
- Tranter, B., 2013, The great divide: Political candidate and voter polarisation over global warming in Australia. *Australian Journal of Politics and History*, **59**(3), pp. 397–413. doi:10.1111/ajph.12023.
- Trump, D. J., 2017, *Statement by President Trump on the Paris Climate Accord*, *White House Archives*. Available at <https://trumpwhitehouse.archives.gov/briefings-statements/statement-president-trump-paris-climate-accord/> (accessed 13 February 2023).
- Tynkkynen, V. P. and Tynkkynen, N., 2018, Climate Denial revisited: (Re)contextualising Russian public discourse on climate change during Putin 2.0. *Europe-Asia Studies*, **70**(7), pp. 1103–1120. doi:10.1080/09668136.2018.1472218.
- United Nations Environment Programme, 2022, *The Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies*, Nairobi.
- Urpelainen, J. and Van de Graaf, T., 2018, United States non-cooperation and the Paris agreement. *Climate Policy*, **18**(7), pp. 839–851. doi:10.1080/14693062.2017.1406843.
- Van Der Linden, S., 2015, The conspiracy-effect: Exposure to conspiracy theories (about global warming) decreases pro-social behaviour and science acceptance. *Personality and Individual Differences*, **87**, pp. 171–173. doi:10.1016/j.paid.2015.07.045.
- Wolton, S., 2019, Are biased media bad for democracy? *American Journal of Political Science*, **63**(3), pp. 548–562. doi:10.1111/ajps.12424.
- Young, N. and Coutinho, A., 2013, Government, anti-reflexivity, and the construction of public ignorance about climate change: Australia and Canada compared. *Global Environmental Politics*, **13**(2), pp. 89–108. doi:10.1162/GLEP\_a\_00168.