

ARTICLE

Public Support for Pro-environment and Environment-Critical Movements

Dirck De Kleer¹ , Catherine E. De Vries¹  and Simon van Teutem²

¹Department of Social and Political Sciences, Bocconi University, Milan, Italy and ²Nuffield College, University of Oxford, Oxford, UK

Corresponding author: Catherine E. De Vries; Email: catherine.devries@unibocconi.it

(Received 23 November 2024; revised 2 October 2025; accepted 6 October 2025)

Abstract

With environmental protests on the rise, we ask: how do they affect support for pro-environment and environment-critical movements? We answer this question using evidence from two studies—a survey experiment and media content analysis—conducted in the Netherlands, a leading country in the green transition. Our experimental findings reveal an asymmetric bias in public support for protests. For the same protest action, public support is higher for environment-critical movements compared to pro-environment ones. This bias is most pronounced among right-leaning individuals with low education and low trust in science and politics. Our content analysis traces the bias back to newspaper reporting. While attention to protest groups is balanced across tabloid and broadsheet newspapers, tabloid reporting is more negative about pro-environment movements. These results highlight an important aspect of the backlash against environmental policies: a bias against pro-environment movements within parts of the public and media.

Keywords: Protests; public opinion; environmental politics; media bias; protest movements

Introduction

During the last decade, governments around the globe have committed to policy initiatives to protect the environment and combat climate change, but garnering public support for these policies has been far from straightforward (Bechtel and Scheve 2013; Gaikwad et al. 2022; Voeten 2024; Bosetti et al. 2025). In democracies, public policy requires broad-based support among the public and an electoral backing for parties and candidates that support ambitious action. Understanding the politics of environmental protection is thus crucial for ensuring a successful green transition that is politically sustainable in the long term in combating environmental degradation, biodiversity loss, and climate change. The green transition may generate winners and losers, not only in the labor market (Vona et al. 2018, 2019; Cavallotti et al. 2025) but also by imposing unevenly distributed costs on citizens (Colantone et al. 2024; Voeten 2024; Bosetti et al. 2025). As a result, environmental policies may trigger a backlash that rewards environment-critical parties and candidates, which in turn leads to the election of policy makers who are less sensitive to environmental challenges.

Numerous studies document that public support for environmental protection declines with costs (Bechtel and Scheve 2013; Bernauer and Gampfer 2015; Egan and Mullin 2017; Stokes and Warsaw 2017; Rhodes et al. 2017; Bergquist et al. 2020), and that individuals or groups adversely

affected by green policies support populist parties critical of the environment (Colantone *et al.* 2024; Voeten 2024; Bosetti *et al.* 2025). A shift away from parties backing pro-environmental policies may also be the result of a broader process of growing skepticism in society towards political and scientific elites (Rhodes *et al.* 2017; Kitt *et al.* 2021; Huber *et al.* 2022; Krange *et al.* 2021; Meijers *et al.* 2023; Dickson and Hobolt 2025).

Notwithstanding the importance of these insights, political science literature to date has had far less to say about the role of protest events in garnering support for (or opposition to) pro-environment policy (for recent exceptions see Le Corre Juratic *et al.* 2025; Valentim 2023; Zeitzoff and Gold 2024; Brehm and Gruhl 2024; Ostarek *et al.* 2024). This is unfortunate given that we have witnessed a steady rise in outer-parliamentary political activity concerning the environment in recent years (Carnegie Endowment for International Peace 2024). Indeed, in many advanced industrial democracies, movements have taken to the streets to voice their discontent with environmental policy. These protests pitted two specific groups against each other: pro-environment protesters that seek to intensify political efforts to protect the environment and combat climate change, and environment-critical protest movements that aim to abate these efforts. Pro-environment protest movements, such as Extinction Rebellion, have aimed to raise public awareness about nature preservation and climate change with the aim of compelling governments to do more to avoid tipping points in the climate system, biodiversity loss, and ecological collapse (Kountouris and Williams 2023). Environment-critical protest groups, such as farmer groups, have expressed their discontent about a raft of policy measures aimed at protecting the environment and achieving climate neutrality, which they feel have gone too far and have paid too little attention to the distributive consequences of these policies, especially for the agricultural sector (Otjes and Krouwel 2022).

The literature to date has focused on the role of pro-environment protests, but what is the role of environment-critical protest movements in shaping public opinion? This study aims to provide an answer to this question by presenting evidence from the Netherlands and examining public support for pro-environment protests and environment-critical protest activity. While European countries have been at the forefront of environmental protection globally, the Netherlands is one of Europe's leaders in the green transition (Fritz *et al.* 2024). The Dutch public also consistently ranks high in support for environmental policies, not least due to the country's vulnerability to climate change (Inglehart 1995; Poushter *et al.* 2022). At the same time, however, the Netherlands is one of the biggest exporters of agricultural produce in the world after countries like the United States and Brazil (Baazil 2022). Environmental action to preserve nature and combat biodiversity loss involves important trade-offs, especially when it comes to the interests of the agricultural sector. This became clear in the Netherlands in 2019 when large-scale protests by both farmer and environmental groups erupted across the country. These developments translated themselves into increasing political polarization over the environment (Haan and Vermeer 2023). This backdrop makes the Netherlands an apposite case to study public support for pro-environment and environment-critical protests, not least because it adds a high degree of realism to our survey experiment.

Our empirical evidence stems from two studies. Study 1 presents results from a pre-registered experiment conducted in June 2023. In the experiment, respondents were shown two protest scenarios. These resembled the actual protests in the Netherlands, which have occurred since 2019. In the scenarios, we randomized protest groups ('protesting climate activists' as pro-environment, and 'protesting farmers' as environment-critical groups), protest actions (disruptive, non-disruptive), and the use of violence (violent, non-violent) across respondents ($n = 2,528$). The results show that, while disruptions and violence generally decreased support for protest movements, farmer protests garnered more support than climate protesters when engaging in the same repertoire of protest actions. We coin this finding an *asymmetric bias in environmental*

protest support, and show that it is more pronounced among right-leaning, less-educated respondents with lower trust in science and politics.

In study 2, we trace back this asymmetric bias to media coverage of protest groups. By means of quantitative and qualitative content analyses of two popular Dutch newspapers—the tabloid newspaper *De Telegraaf*, with a more right-leaning audience, and the broadsheet newspaper *NRC*, with a more centrist, left-leaning audience (Bakker and Scholten 2019; Leruth et al. 2017)—we examine (i) the volume of newspaper coverage of protests and (ii) the sentiment of the coverage. Our evidence suggests that both the tabloid and broadsheet newspapers reported more about environment-critical protests staged by farmers than about the pro-environment protests of climate activists. That said, the tabloid newspaper reporting was much more negative about climate protesters compared to farmers. This asymmetric bias in coverage mirrors the levels of protest support we documented for different subgroups in the Dutch population. While the readership of the tabloid *De Telegraaf* encompasses a broad demographic profile of the Dutch population that is on average more right-leaning and less educated, the broadsheet *NRC* is read by more centrist or left-leaning individuals with higher levels of income and education (Bakker and Scholten 2019; Leruth et al. 2017).

While we are not able to disentangle the causal direction between media reporting and public opinion, our evidence does suggest that the differences in newspaper coverage of protesting farmers and climate activists, both in terms of volume and sentiment, precedes our survey fieldwork. The combined evidence from both studies reveals an important aspect of a backlash against environmental policy that has received scant attention in the literature thus far: a bias against pro-environment protesters among important parts of the public and newspaper media.

This study makes three important contributions to the existing literature. First, it adds to a growing body of work documenting a public backlash against green policies (Colantone et al. 2024; Gaikwad et al. 2022; Voeten 2024). We highlight another important source of backlash that does not necessarily stem from direct exposure to the policy consequences of environmental policies, but rather is the result of a bias against climate activists among a considerable part of the public and leading newspapers. Second, our results contribute to the growing literature about public support for protests and how different protest features affect this support. Recent studies document that the nature and size of protests matter (see, for example, Enos et al. 2019; Muñoz and Anduiza 2019; Wang and Piazza 2016; Wouters 2013, 2019; Feinberg et al. 2020). We build on this work to suggest that the interaction between the type of protest group (farmer or climate protesters) and action repertoire (disruptive, non-disruptive, violent, non-violent) may matter for public support. Finally, our results speak to the growing literature on democratic backsliding that suggests that certain parts of the population might be willing to condone the illiberal or anti-democratic rhetoric or behavior of political elites (Graham and Svobik 2020; Claassen 2020a,b; Frederiksen 2022). While our findings suggest that, on average, disruptive and violent protests find little support among the Dutch public, certain citizens, specifically those who are right-leaning, with low education, and low trust in science and politics, are more willing to condone violent protests by environment-critical movements. This could point towards possible effects of conflict over the green transition on a much more general process of democratic backsliding.

Theory and Expectations

Responding to environmental degradation and climate change requires enacting key policies that have broad public support and the electoral backing of parties and candidates. Understanding the politics of environmental policy is therefore crucial to ensuring that successful environmental action is politically sustainable in the long term. The literature suggests that political support for environmental policies may be undermined by a host of reasons, such as the costs and distributional consequences that they entail (see, for example, Bechtel and Scheve 2013; Bergquist

et al. 2020; Bernauer and Gampfer 2015; Egan and Mullin 2017; Stokes and Warshaw 2017; Colantone *et al.* 2024; Voeten 2024), the mobilization of political parties that are skeptical of the green transition (Spoon *et al.* 2014; Dickson and Hobolt 2025), or societal skepticism towards political and scientific elites (Rhodes *et al.* 2017; Kitt *et al.* 2021; Huber *et al.* 2022; Krange *et al.* 2021; Meijers *et al.* 2023).

The existing literature has comparatively paid less attention to the role of protest events and outparliamentary political activity when it comes to the environment. While only a small subset of the population is involved in environmental protests, their consequences are much more widespread (see, for example, Valentim 2023; Brehm and Gruhl 2024). So, the question becomes: how do these protest activities affect support for pro-environment and environment-critical movements in the wider population? A vast literature on protest activity has shown that protests have important consequences. They affect public opinion, the position-taking of political elites, and the agenda-setting of the media (Madestam *et al.* 2013; Wasow 2020; Gause 2022a, b), and these effects can be persistent (Mazumder 2018), especially if exposure is local and repeated (Tertychnaya and Lankina 2020; Valentim 2023).

What is more, this literature suggests that the protest repertoire used—how violent, peaceful, or disruptive protests are—crucially affects public opinion (Wang and Piazza 2016; Enos *et al.* 2019; Feinberg *et al.* 2020), legislators' beliefs (Wouters and Walgrave 2017), and media reporting (Myers and Caniglia 2004; Wouters 2013). Using evidence from 23,000 protest events in the United States between 1960 and 1995, Wang and Piazza (2016) show that protesters face a trade-off between raising awareness by engaging in more disruptive protest activities but losing public support as a result of this disruption (see also Simpson *et al.* 2018; Shuman *et al.* 2021, 2022). In the European context, a study by Muñoz and Anduiza (2019) exploits an unexpected riot event by an anti-austerity movement that broke out during a large-scale protest in Spain while a survey was in the field to show that street violence episodes reduced support for anti-austerity movements (see, for example, Hager *et al.* 2022). Other studies demonstrate that protest size, disruptive protest action, and symbolic protest action are important drivers of media coverage of protests (see, for example, Smith *et al.* 2001; Amenta and Alan Elliott 2017; Hsiao and Radnitz 2021; Wouters 2013) and public support (Feinberg *et al.* 2020; Wouters 2019) for protests in the United States and Europe. Building on these important findings, this study contributes to our understanding of how the degree of disruption and violence affects support for protest activities concerning the environment among the wider public, and how the kind of group that stages the protest matters.

Environmental protest events have been on the rise in recent years (Carnegie Endowment for International Peace 2024). Pro-environment movements have staged protests to raise public awareness about the environment, biodiversity loss, and climate change to compel government action to avoid tipping points in the climate system and ecological collapse. The most famous example of a pro-environment movement is Extinction Rebellion (XR).¹ Opposition to environmental policies and their redistributive effects also gave rise to environment-critical movements. Examples of such movements have, for example, been farmer groups.² Across

¹XR was founded in the United Kingdom in 2018 and quickly turned into a global environmental movement. Its first major action was to occupy the London Greenpeace offices on 17 October 2018, which was followed by the public launch at the 'Declaration of Rebellion' on 31 October 2018 outside the British Parliament. Since then, XR has staged blockades of roads and bridges and other disruptive tactics, while other pro-environment movements, such as Just Stop Oil, have engaged in activities that were deemed as illegal, such as vandalizing artworks. Due to their disruptive or even illegal protest activities, pro-environment movements have been criticized for alienating potential supporters of climate policies. Polling suggests that in 2019 a majority of British respondents (54 per cent) opposed XR's protest activities (YouGov 2019).

²In 2019, environment-critical protests by organizations representing farmers broke out in the Netherlands, for example (Centraal Bureau voor de Statistiek (CBS) 2020). In order to protect the country's environment and biodiversity, the government aimed to reduce nitrogen. By far the largest share of nitrogen deposited on Dutch land comes from agriculture, so measures like the buying out of farmers and shutting down livestock farms were discussed. While it was far from clear if these plans would be enacted, protests erupted across the country by the environment-critical movement, mostly consisting of

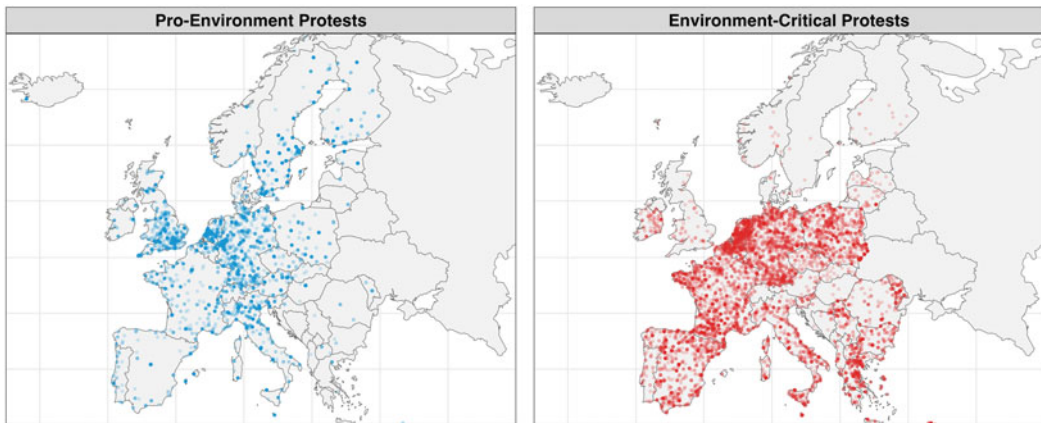


Figure 1. Pro-environment (XR, Just Stop Oil, FF) and environment-critical (farmers) protests between 2019 and 2024.

Europe, both pro-environment and environment-critical movements have resorted to disruptive actions to showcase their grievances as they have obstructed traffic on highways, vandalized private or public property, and, in some cases, resorted to the use of violent tactics. These protests have been widespread. Figure 1 shows protest events by pro-environment groups (XR, Just Stop Oil, and Fridays for Future combined) and farmers that have been critical of environmental policies in European countries from October 2019 to November 2024. To count these events, we rely on data from ACLED (Armed Conflict Location & Event Data), a non-profit organization that collects worldwide conflict and protest data. More information about the data collection and descriptive statistics can be found in Appendix section A.

Figure 1 gives us a general sense of the spread of pro-environment and environment-critical protests across Europe by homing in on protests by climate activists and farmers' protests respectively. This is not to say that all these protests are the same. Pro-environment groups like Extinction Rebellion, Just Stop Oil, and Fridays for Future differ in their rhetoric, protest actions, and goals. Nonetheless, they are united in raising public awareness about environmental protection, biodiversity, and climate change more broadly. Likewise, while environment-critical farmer protests have different triggers across countries, they have mostly been fueled by concerns and resentment over perceived adverse effects on the economy and industry due to tighter environmental regulation (Finger et al. 2024).

Larger questions about how to get environmental policy and the green transition right, and how to align them with equitable distributional outcomes, loom behind these disruptive protests (Iskander and Lowe 2020; Valentim 2023). These protests are also an important warning sign to political elites: when governments get environmental policy wrong, or fail to do it fairly, they not only risk further environmental degradation and biodiversity loss, but also that political behavior in their countries might move in a more extreme direction. To understand the possible societal ramifications of pro-environment and environment-critical protests and the long-term support for environmental policy, it is important to study how pro-environment *and* environment-critical protests shape support among the wider public.

Important studies have explored the effects of environmental protests on public opinion. Valentim (2023), for example, examined how pro-climate protests by the Fridays for Future movement in Germany affected voting for the Green Party using a difference-in-differences design. His findings show that repeated exposure to environmental protests increases the vote

farmer groups like the Farmers Defence Force. Since then, the Dutch government has stalled its plans to combat nitrogen, in part because of a snap election in the fall of 2023 after a government collapse.

share of the Greens, but not other environmentally friendly behaviors (see also Brehm and Gruhl 2024). Based on survey experimental evidence from the United States, Bugden (2020) finds that peaceful pro-climate protests increase support for pro-environment movements among Democratic and independent-leaning voters, but not among Republicans. Kountouris and Williams (2023) investigate Extinction Rebellion protests that happened during the fieldwork period of survey in the United Kingdom to examine how these protest events affect pro-climate attitudes and support for pro-environmental policy and behavior. The findings suggest that while exposure to protest increases support for pro-environmental behavior and policy, it lowers people's willingness to pay more for environmentally friendly consumption (see also Ostarek *et al.* 2024). Finally, Zeitzoff and Gold (2024) examine public attitudes towards various environmental protest tactics, with a particular focus on cyber-based actions employed by the radical environmental movement in the United States. The results suggest that American respondents are more supportive of cyber tactics compared to strategies involving property damage or sabotage, and support is positively associated with heightened concern about climate change.

These findings are instructive but they only focus on the effects of pro-environment protests. We build on this work to consider how *different kinds* of protest activities (varying based on their legality, level of disruption, and use of violence) of *different types* of groups (pro-environment protest movements *v.* environment-critical protest movements) matter. In keeping with the general protest literature discussed above, we expect that within democracies, when it comes to environmental protests, citizens show little support for violent and disruptive protests compared to legal and non-violent alternatives, regardless of the protest movement that stages them (Hypothesis 1).

Based on the work on rural resentment and the urban–rural divide in politics (see, for example, Berenguer *et al.* 2005; Cramer 2016; Tosun *et al.* 2024; De Lange *et al.* 2023), we expect that rural residents will show higher support for farmer-led protests than those of climate activists, compared to urban residents (Hypothesis 2). Rural resentment reflects long-term discontent among people residing in rural communities about the extent to which the central government favors urban areas at the expense of rural areas. Recent research suggests that rural residents often share perceptions of being victims of ‘distributive injustices’ by those in power (Ziblatt *et al.* 2024, 4). Rural communities are usually less connected to national decision-making centers and often feel that their communities have been left behind by the state, and that they do not receive their fair share of public services (Ziblatt *et al.* 2024; Cramer 2016; Cremaschi *et al.* 2025; Patana 2020). As a result, rural residents may show higher support for political parties and social groups that stress rural belonging and associated inequalities, and promise to restore the status of neglected places (Cramer 2016; Elgenius and Rydgren 2017; Cremaschi *et al.* 2025; Hochschild 2018).

Yet, feeling closer to social groups and their grievances might not only originate from the urban–rural divide, but also from shared concerns about how environmental policy adversely affects lower educated and economically vulnerable people in society (Otjes and Krouwel 2022; Voeten 2024), or feelings that the green transition is being ‘imposed’ by societal elites, most notably scientists and politicians (Schwörer and Fernández-García 2023). What is more, these types of grievances are increasingly mobilized by populist radical right parties (Küppers 2022; Oswald *et al.* 2021; Vihma *et al.* 2021). As a result, we expect supporters of populist radical right parties, who generally have less trust in science and politics, to be more supportive of farmer-led protests compared to the same type of protest activities staged by climate activists (Hypothesis 3).

The Dutch Case

Before we present the findings from our two empirical studies, we first provide some background on the Dutch case. The Netherlands is one of the leaders in the green transition in Europe (Fritz *et al.* 2024). It is also a member state of the European Union, which has formulated a set of green

policies, known as the Green Deal, to become the 'world's first climate-neutral continent' by 2050 (Commission 2024). The dedication to climate and environmental action is in part a result of the fact that large parts of the Netherlands are below sea level, and therefore especially vulnerable to climate change and its consequences, such as rising sea levels. Both historically and more recently, the country has witnessed several flooding disasters with dire consequences for affected citizens. For these reasons, the Dutch public consistently ranks high in support for policies combating climate change and protecting the environment (Inglehart 1995; Poushter et al. 2022). A recent Eurobarometer report shows that 72 per cent of the Dutch population agrees that environmental issues have a direct effect on their daily life and health, and 83 per cent agrees that EU environmental legislation is necessary to protect the environment in the Netherlands (European Commission 2024).³ That said, the Netherlands is one of the biggest exporters of agricultural goods worldwide (Baazil 2022). Protecting nature and the environment more generally might involve trade-offs. Environmental protection might especially require changes in the agriculture sector and thus have considerable consequences, especially for those employed in or reliant on the agricultural sector. This tension between the need to protect the environment and the interests of the agricultural sector to resist adjustments came to a boiling point in October 2019, with large-scale protests erupting across the country.

The origins of these protests can be traced back to the summer of 2019, when the Dutch Council of State, the highest administrative court in the Netherlands, released a report stating that 'drastic measures' were needed for the country to meet its nature preservation goals and reduce nitrogen emissions. It ruled that the Netherlands' nitrogen permits system was failing to prevent nitrogen emissions from harming protected nature reserves and biodiversity in general. Nitrogen emissions mainly consist of ammonia. By far, the most ammonia is released into the air through agriculture. In the Netherlands, approximately 91 per cent of total ammonia emissions stems from farming, especially dairy farming (Centraal Bureau voor de Statistiek (CBS) 2020). Although it was far from clear how this recommendation would be implemented by the government, farmer protests erupted in October 2019 against the more general environmental policy goals of the Dutch government to protect biodiversity and nature in the country.

While the farming sector is relatively small in the Netherlands (51,000 farms, not only including livestock farms, but also horticultural companies), and dairy farming accounts for just 1 per cent of Dutch gross domestic product (Schouten 2023), large-scale protests by Dutch farmers erupted on 1 October 2019. On that day, 2,000 tractors blocked major highways in the Netherlands. This was in part a reaction to one of the government parties (Democraten66, D66) proposing a reduction of Dutch cattle by 50 per cent in order to meet the nature preservation goals entailed in European regulation transposed by Dutch parliament in national regulation. Subsequent waves of protests intensified when the Minister of Agriculture, Nature and Food Quality set a maximum for the protein content in concentrates for dairy cattle in 2020, and later on between 2021 and 2023, when the government presented new reports on how to cut back nitrogen emissions. The main mobilizing group was the Farmers Defence Force, which mobilized farmers, mostly online, to vandalize public property, block highways, and visit government ministers at their private homes. Recently, the Dutch government has stalled its plans to combat the nitrogen crisis, in part because of a snap election in the fall of 2023 after a government collapse due to the issue of migration and refugee settlement.

The farmer protests that began in October 2019 were very quickly followed by pro-environment protests. The Dutch branch of Extinction Rebellion, a pro-environment group founded in the United Kingdom in December 2018, started staging protest actions around the Netherlands in the Spring of 2019. This group, but also other environmental groups like Greenpeace, staged protests to raise awareness about the environment, climate change, biodiversity loss, and governments' ongoing subsidies for fossil fuels. Similar to protesting

³Also in our survey, a large majority of Dutch respondents, 76 per cent, report being quite concerned about climate change.

farmers, their repertoire of protest actions also includes blocking roads and highways and vandalizing public or private property. Most notably, since the summer of 2022, XR has organized regular protests on the A12 highway, an important and busy highway in The Hague. In 2022, XR and Greenpeace activists also stormed an area holding private jets at Schiphol International Airport, where they cycled around and chained themselves to private jets (Moloney 2022). These protests lasted for years and became known as the *nitrogen crisis*. The environment question deeply polarized Dutch society: not only did environmental stances come to define voters' left-right placements (Otjes and Krouwel 2022), and a new farmers' party secured an electoral breakthrough (Otjes and Krouwel 2022), but also the Dutch Commissioner for Climate in the European Commission returned to Dutch politics to lead an electoral coalition between two left parties to advocate more pro-environment stances (Tullis 2023). For a timeline of the pro-environment and environment-critical protests in the Netherlands, please see Appendix section B.

Empirical Approach

To better understand how disruptive, or even violent, protest features by pro-environment and environment-critical groups affect public support for protests, we present evidence from two empirical studies. Study 1 reports evidence from a pre-registered vignette experiment embedded in a representative survey of the Dutch population. Study 2 documents findings from a quantitative and qualitative content analysis of media reporting of the most popular tabloid and broadsheet newspapers in the Netherlands.

Study 1: The Survey Experiment

Our survey was administered by IPSOS. We used a quota sampling strategy to obtain a sample of Dutch citizens representative on age, gender, and education ($n = 2,528$). We used an oversampling strategy to increase the proportion of respondents from outside the three largest cities (Amsterdam, Rotterdam, The Hague) to adequately test hypothesis 2 concerning the urban-rural divide. We report sample statistics in Appendix section F.⁴ Respondents first answered demographic questions, including questions about their age, education, and gender. Next, we asked respondents about their attitudes towards different social groups, including farmers and climate activists, and more general political attitudes. In a next section, we asked respondents about their perceptions of local public goods and services. This included questions about perceptions of the quality of public service provision and whether there has been a decline in public service provision in their region or not. Thereafter, we asked more specific questions about politics. Here, we asked respondents about their vote choice during previous and upcoming elections and their feelings towards several Dutch political parties. Then we presented respondents with the vignette experiment (discussed in the next subsection) and asked them a series of outcome questions about their opinions on the protest scenarios. After the vignette experiment, we presented respondents with additional questions about environmental policy and climate change, their general feelings about democracy, and their attitudes towards the European Union.

Experimental Design

We showed respondents two fictional protest scenarios. These vignettes resemble real protests that have occurred in the Netherlands between 2019 and 2023. We debriefed respondents about the experiment and randomization of the vignettes at the end of our survey. In the two vignettes, we randomized the levels of three protest features: the 'protest movement', the 'protest actions', and

⁴Although not a quota, we also show that our sample is rather representative based on vote choice. This approximation can also be found in Appendix section F.

Table 1. Protest features and levels

Feature	Level	Text
Movement	Pro-environment	Climate activists
Movement	Environment-critical	Farmers
Action	Legal	Protested at the Malieveld
Action	Civil disobedience	Obstructed traffic on a highway
Action	Sabotage	Vandalized state property
Violence	Non-violent	Communication with the police went smoothly
Violence	Violent	A number of protesters assaulted police officers
Violence	Violent and arrested	A number of protesters were arrested for assaulting police officers

Note: The first column displays protest features, the second column shows levels of these protest features, and the third column shows how levels are operationalized as text in the vignettes.

whether 'violence was used or not'. These protest features are shown in Table 1. More details about the rationale behind the vignette design can be found in Appendix section C.

Protest movement

We first randomize the protest movement. We contrast a pro-environment movement against an environment-critical movement. For the pro-environment group we use the generic term 'climate activists' (Dutch: 'Klimaatactivisten') in our protest scenarios. We chose the term 'climate activists' over specific group names, such as 'Extinction Rebellion', to account for the multiplicity of pro-environment groups (for example Greenpeace, Just Stop Oil), and because the use of the term 'climate activists' is more recognizable than alternative wordings such as 'environmental activists'. For the environment-critical group we choose 'farmers'. We focus on farmers because they have been the most visible environment-critical protest movement in the Netherlands (Schelfaut 2019). Dutch farmer protests were covered worldwide in international media and acknowledged as a leading example of green backlash movements (Tullis 2023).

Protest actions

We then randomize protest actions. We loosely modeled these actions after the pyramid of environmental tactics (Bugden 2020; Brown 2021). The pyramid conceptually describes escalatory steps in the repertoire of environmental protest tactics. At the bottom of the pyramid sits legal protest, followed by civil disobedience, sabotage, and, eventually, violence (Brown 2021). In our vignette, we operationalized legal protest as having 'protested at the Malieveld'. The Malieveld is a big open field close to the central station in The Hague allocated for legal protests by the public authorities. We operationalized civil obedience as having 'obstructed traffic on a highway'. Lastly, we operationalized sabotage as having 'vandalized state property'.⁵

Use of violence

Finally, we randomize whether violence, at the top of the environmental protest tactics pyramid, was used or not. We operationalized violence in the vignettes as 'a number of demonstrators assaulted police officers'. We also include a slightly modified level of violence: 'a number of demonstrators were arrested for assaulting police officers'. We add this second attribute level to our attribute randomization to see if the cue about protesters being arrested changes perceptions about the acceptability of violence. The final level is non-violence, which we operationalized as 'communication with the police went smoothly'.

⁵We acknowledge that respondents could interpret this last protest feature in different ways. We discuss this issue further in Appendix section C.

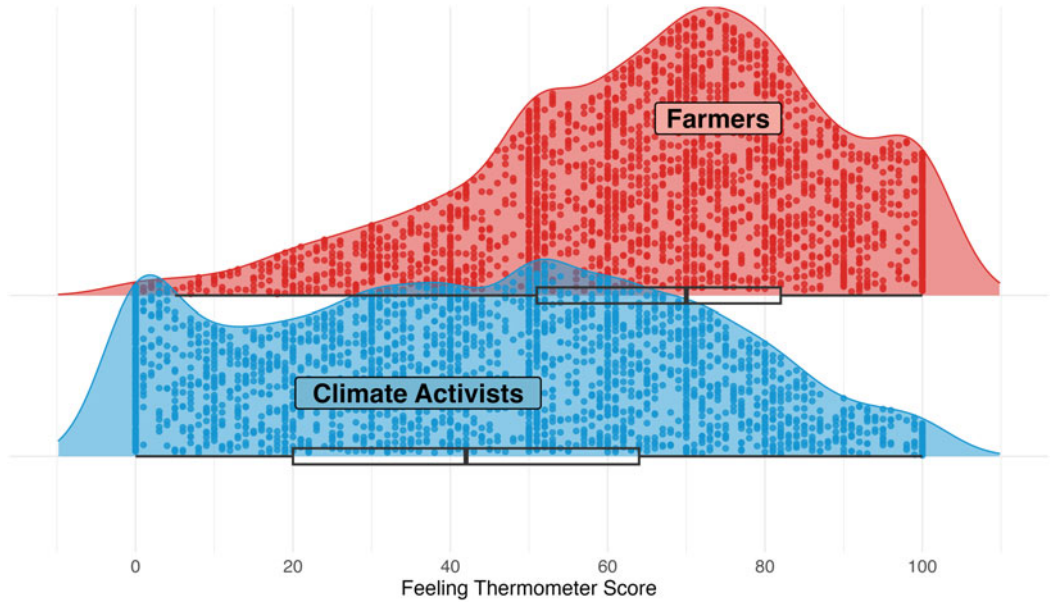


Figure 2. Thermometer scores for protest movements. Scores run from 0 (extreme dislike) to 50 (neutral) and 100 (extreme like).

Treatment scenarios and outcomes

The protest features are randomized within and across two vignettes. We first show respondents the following introductory text:

The Netherlands has experienced several protests. We are interested in your opinion on two protests. You will now see the description of the first protest. Read the description carefully.

After this, respondents see the first protest scenario followed by some outcome questions and then proceed to the second protest vignette. In the second vignette, we adjust the feature order to account for a possible ordering effect. The protest vignettes take on the following form:

Protest 1: In this protest, **farmers [climate activists] protested at the Malieveld [vandalized state property/obstructed traffic on a highway]** to express their dissatisfaction with the current Cabinet’s climate plans. During the protest, **a number of protesters assaulted police officers [a number of protesters were arrested for assaulting police officers/communication with the police went smoothly].**

Protest 2: In this protest, **there was a demonstration at the Malieveld [state property was vandalized/traffic was obstructed on a highway]** by **farmers [climate activists]** to express their dissatisfaction with the current Cabinet’s environmental plans. During the protest, **a number of protesters assaulted police officers [a number of protesters were arrested for assaulting police officers/communication with the police went smoothly].**

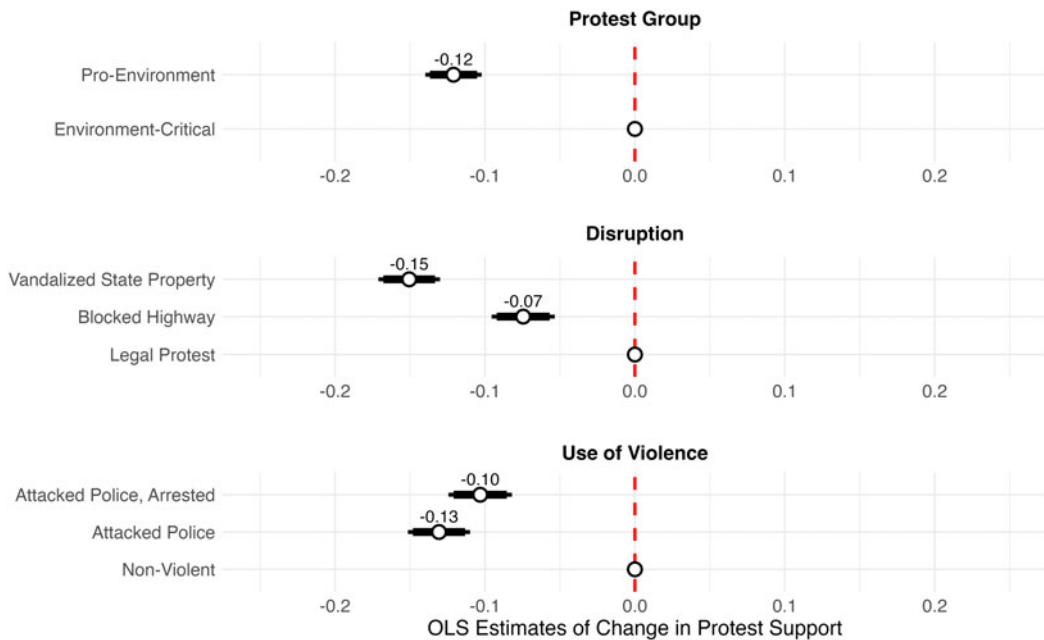


Figure 3. The effect of protest features on public support for protest movements. Thin bars are 95 per cent CIs and thick bars are 90 per cent CIs. Reference levels set to 0.

After each protest vignette, we ask respondents to what extent they support or oppose the protesters' actions. We use a five-point Likert scale with a neutral midpoint that ranges from 'strongly oppose' (= 0) to 'strongly support' (= 1).⁶

Results From the Survey Experiment

We first present descriptive statistics for several variables of interest. We then discuss our experimental results, and finally, we explore heterogeneity in our results.⁷

First, we report sample-wide feelings towards farmers (environment-critical) and climate activists (pro-environment). In one of our pre-treatment questions, we used feeling thermometers to ask respondents how much they like or dislike different social groups and political actors. Figure 2 shows the sample-wide distribution of feelings towards farmers and climate activists. The distributions, as well as the median values in the box plots, reveal that Dutch citizens like farmers more than they do climate activists.⁸

Next, we turn to the main results from our vignette experiment.⁹ For several protest features, Figure 3 shows ordinary least squares estimates of changes in public support for climate protests. Because we showed two vignettes per respondent, we clustered standard errors at the respondent level. We scaled our outcome variable 'To what extent do you support the protester's actions?' to range from 0 (fully oppose) to 1 (fully support).

⁶In other words, our outcome variable uses a normalized scale. We also asked respondents if they think the protesters should be prosecuted or not, using a [yes/no] format. We included these model estimates in Appendix section H.

⁷As specified in our pre-analysis plan, we omit survey speeders from our analyses of experimental results. This is the case if respondents finished the survey in < 1/3 of median response time.

⁸We also test how feelings towards climate activists and farmers relate to levels of support across protest features. These marginal means are uploaded in Appendix section I.

⁹The main results are unweighted. For weighted estimates, we refer to Appendix section H.

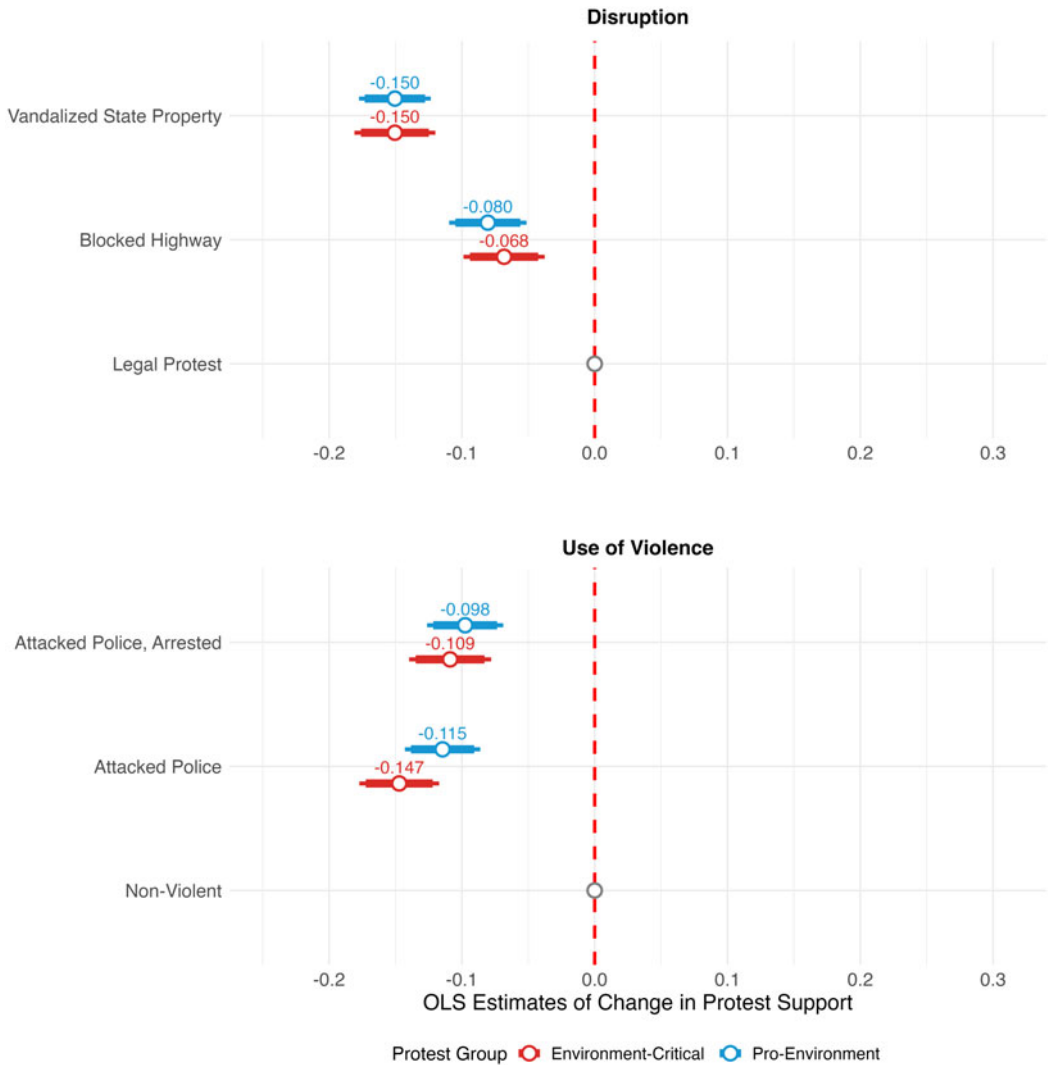


Figure 4. Average component interaction effects. Thin bars are 95 per cent CIs and thick bars are 90 per cent CIs. Reference levels set to 0.

First, protest actions staged by farmers receive more public support than those by climate activists (0.12 points on the 0–1 scale). This seems in line with our descriptive expectations from Figure 2. Second, disruptive actions and violence decrease public support for protests. This provides initial support for our first pre-registered hypothesis: Dutch citizens do not condone undemocratic behaviors. On a 0 to 1 scale, blocking a highway (civil disobedience) and vandalizing state property (sabotage) lead to a 0.07 point and 0.15 point decrease in support compared to the reference category (legal protest). Similarly, attacking police officers or attacking police officers and being arrested lead to 0.13 point and 0.10 point decreases in support respectively, compared to the non-violent reference category.

We finally examine the interactions between protest groups and protest actions. This allows us to fully test our first hypothesis to see if similar disruptive actions by different protest groups lead to different increases or decreases in support. These protest feature interactions are shown in Figure 4.

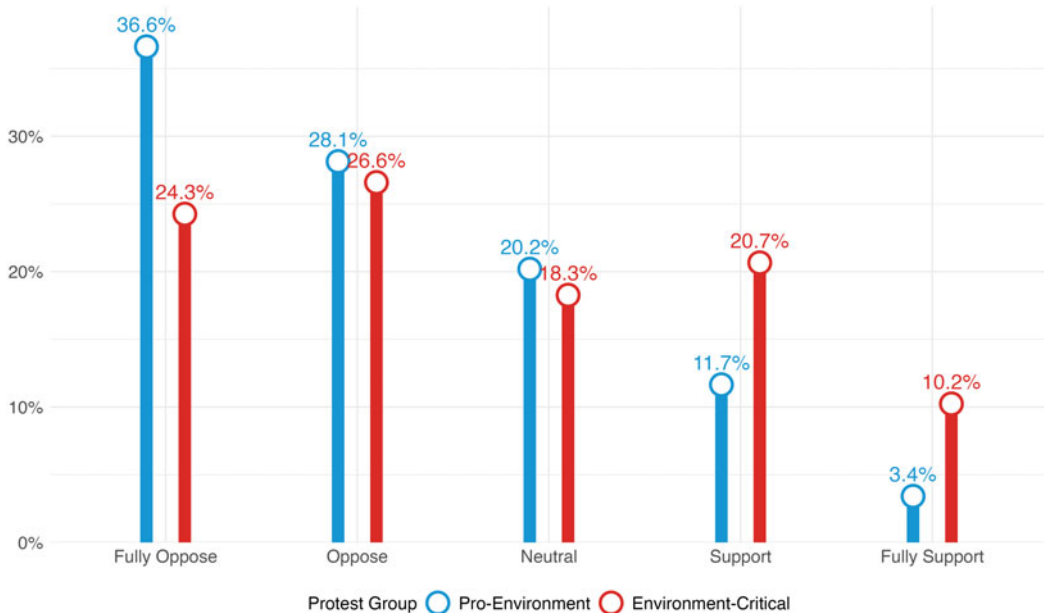


Figure 5. Bar plot of support for disruptive protests. Percentages apply to the subset of respondents who have been shown a disruptive attribute level in the experiment (for example ‘blocked highway’, ‘vandalized state property’).

Consistent with our first pre-registered hypothesis, Dutch citizens do not condone undemocratic behaviors *regardless* of the protest group. For both climate activists and farmers, the use of disruption and violence leads to decreases in support of the protests. The differences *between* protest groups, for similar protest actions, are not statistically significant (see also Appendix section H for the interaction coefficients).

Heterogeneity Analysis

Percentage of support for protest scenarios

Figures 3 and 4 show how protest features lead to changes in protest support compared to legal and non-violent protest scenarios as a reference category. We are also interested in how *levels* of support differ across protest features. We first explore this in Figure 5, where we plot the distribution of responses to our dependent variable among the subsample of respondents who saw disruptive protest scenarios.¹⁰ We show the distribution for both the pro-environment group and the environment-critical group. Figure 5 suggests that disruptive protests by the pro-environment group are far more often opposed than those by the environment-critical group. Disruptive protests by the pro-environment group are supported in about 15 per cent of scenarios, while this is more than double for the environment-critical group (in 31 per cent of scenarios).¹¹

Marginal means

We use marginal means to further examine how *levels* of support differ across our protest features (Leeper et al. 2020). Figure 6 shows the marginal means for interactions between protest groups

¹⁰These are the scenarios in which either the ‘vandalized state property’ or ‘blocked highway’ level is shown in the vignette.

¹¹‘Supported’ here means that respondents either answered ‘support’ or ‘fully support’.

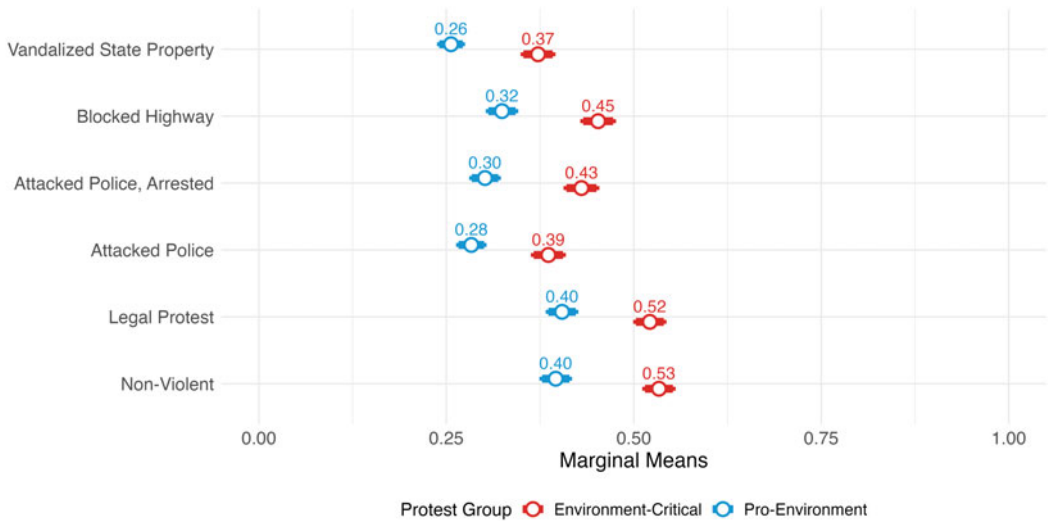


Figure 6. Marginal means of protest features. 0.5 implies a neutral stance. The ‘marginal mean differences’ are estimates of the differences between subgroup levels.

and protest actions. The marginal means corroborate the descriptive statistics from Figure 5: while disruptive protests are mostly opposed, the pro-environment protest group is punished more than the environment-critical protest group for the same actions.¹²

In addition to heterogeneity across our protest features, we also examine heterogeneity across respondents by examining how marginal means vary across different subgroups.¹³ We pre-registered a second hypothesis stating that for the same repertoire of protest actions, we expect rural residents to more strongly oppose the pro-environment group (climate activists) than the environment-critical group (farmers) and vice versa for urban residents. Our hypothesis finds only partial support. In fact, Figure 7 suggests an *asymmetric* bias in public opinion: levels of support for protest actions by the environment-critical protest group (farmers) do not differ significantly between urban and rural residents. Yet, rural residents are significantly more negative about the pro-environment protest group (climate activists) than urban residents are. We observe a similar asymmetry when we use other measures that tap into urban–rural differences. These marginal means plots can be found in Appendix section I.¹⁴ One of the reasons for finding only partial support for our second hypothesis is that our expectation was based on the notion that rural respondents would identify more strongly with farmers, while urban respondents would identify more strongly with climate activists. Yet, the feeling thermometer scores in Appendix section J show that a majority of Dutch respondents, including urban residents, identify more strongly with farmers compared to climate protesters before even having been exposed to our experimental vignettes.

When we explore other pre-registered covariates, such as ideology and political trust, the asymmetric bias persists, and the gap between subgroups of respondents widens even more in most cases. Figure 8 shows the marginal means for respondents who identify on the left, center, or right of the political spectrum. The marginal mean differences between ideological groups are all

¹²The marginal means shown in the main text are without region weights. We also ran marginal means with region weights, but the estimates remain virtually the same. We therefore did not include the weighted marginal means in the appendix, but these estimates are available upon request.

¹³For an overview of our construction of variables, see Appendix section D.

¹⁴As alternative urban–rural measures, we also explored marginal mean differences between citizens living in and outside of the ‘Randstad’ conurbation, and we constructed a ‘regional resentment’ variable that we modeled after the one presented in De Lange *et al.* (2023).

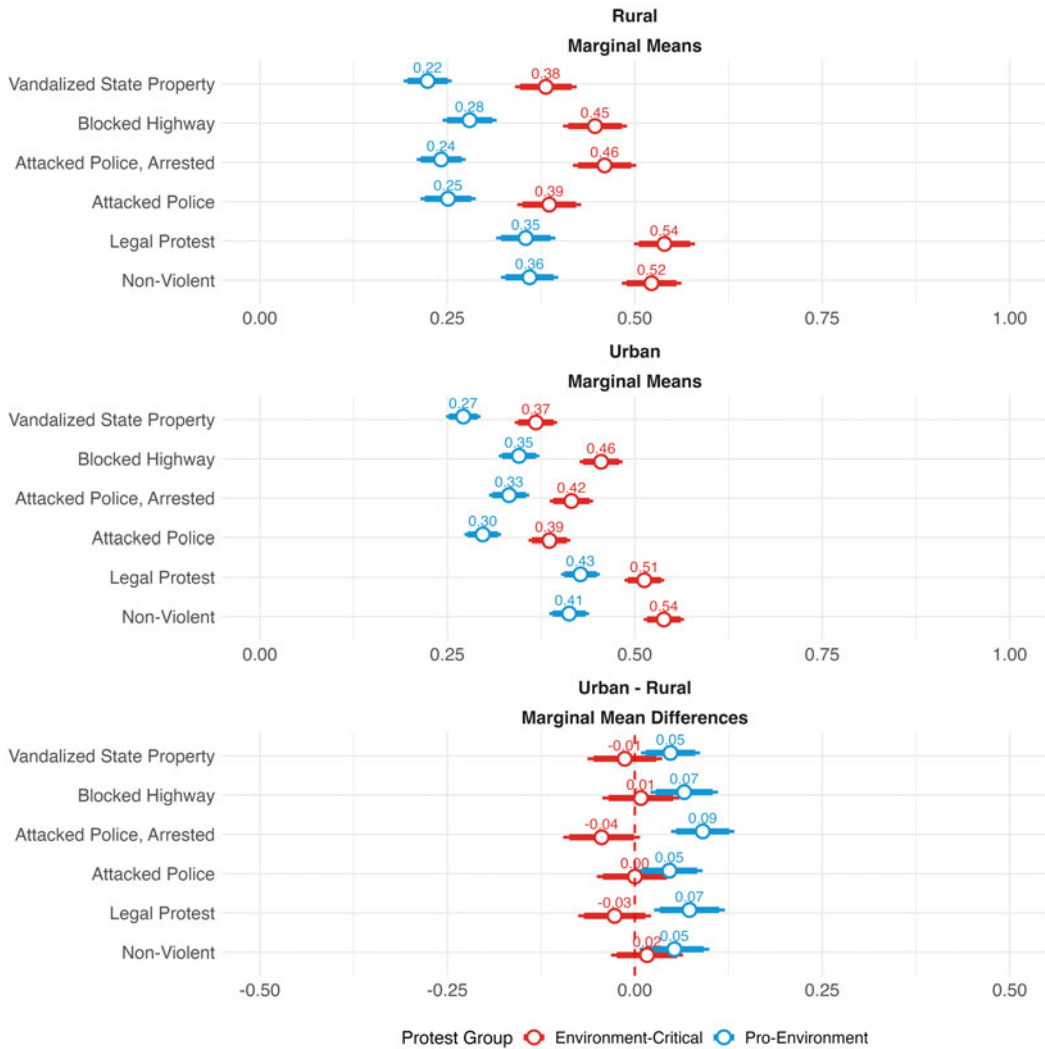


Figure 7. Marginal means of protest features - urban-rural. 0.5 implies a neutral stance.

statistically significant. Those on the left show small biases between protest groups for the same actions, although protest actions by the pro-environment group are seen as more favorable. By contrast, those on the right are much more negative about pro-environment than environment-critical protesters across the same protest features. What is more, those on the right are, on average, not opposed to farmers blocking highways (MM = 0.56), attacking police officers (MM = 0.50), and attacking police officers and being arrested (MM = 0.51).

The same picture recurs in Figure 9, where we facet marginal means showing respondents with below and above median levels of political trust. The former opposes the pro-environment group more strongly than the environment-critical group for the same actions, while those higher in political trust have small between-group biases. Similarly to those on the ideological right, those low in political trust are, on average, not opposed to farmers blocking highways (MM = 0.52) and farmer protesters attacking police officers and being arrested (MM = 0.53).

The asymmetric bias strongly persists when we examine differences between respondents with and without a university education, and respondents with below or above median levels of trust in scientists. We report these plots in Appendix section I.

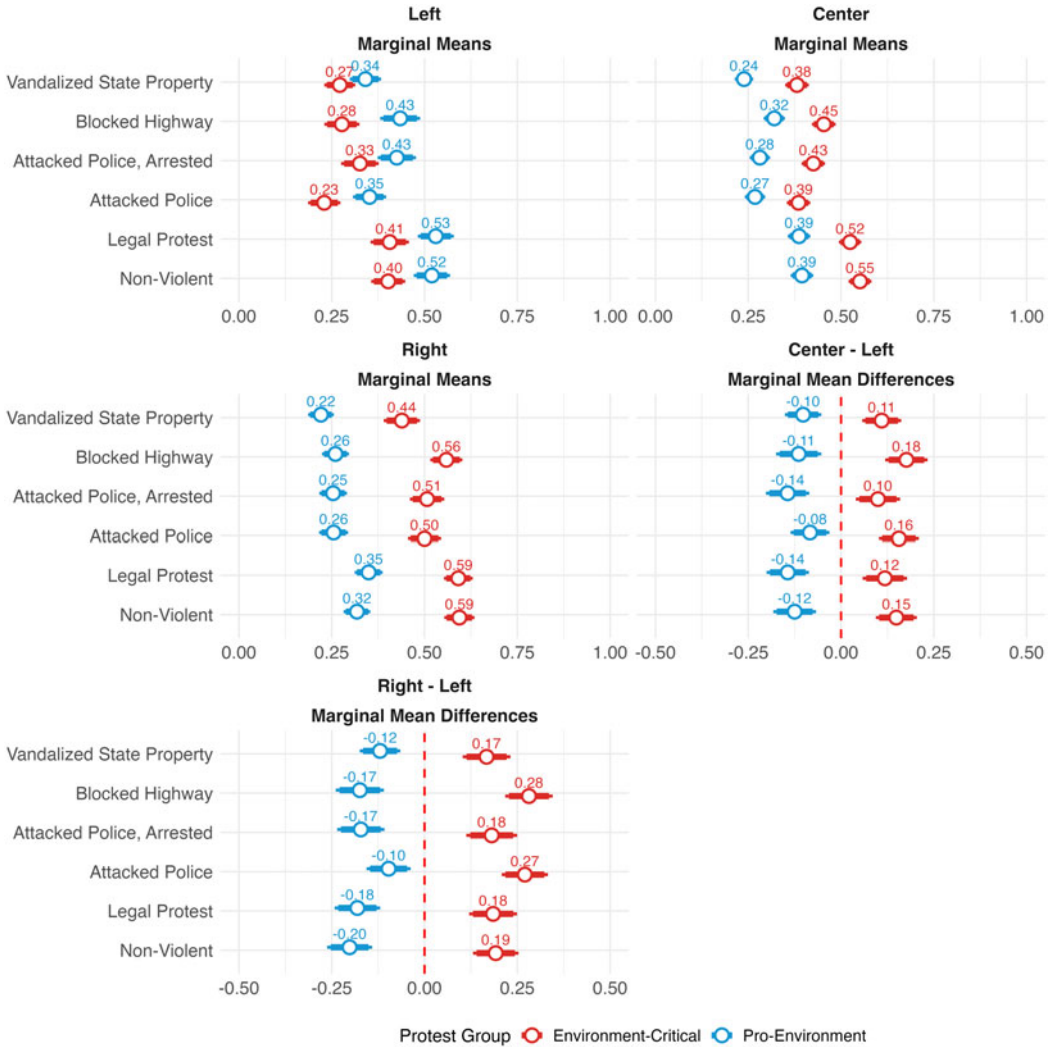


Figure 8. Marginal means of protest features – split by left-right. 0.5 implies a neutral stance. The ‘marginal mean differences’ are estimates of the differences between subgroup levels.

Study 2: Content Analysis of Newspaper Reporting

We turn to media coverage of environmental protests to better understand the asymmetric bias in support for environmental protest groups. Previous work suggests that media coverage and framing of protest events can affect public support for protest movements (McLeod and Detenber 1999; Shultziner and Stukalin 2021) and that different protest features, including protest tactics, protest size, and the protest group, can all have an influence on how these protests are portrayed in news coverage (Wasow 2020; Wouters 2013; Boyle et al. 2012). We analyze how the pro-environment (climate activists) and environment-critical (farmers) protest groups were featured in two national-level newspapers in the Netherlands: broadsheet newspaper the *NRC* and tabloid newspaper *De Telegraaf*. Both newspapers are the most-read newspapers in their genre—broadsheet v. tabloid. We chose these newspapers because of the different demographics of their readership. On average, *NRC*’s readers are highly educated, high earners, and ideologically center-to left-leaning. On the other hand, *De Telegraaf* readers are, on average, more right-leaning, less

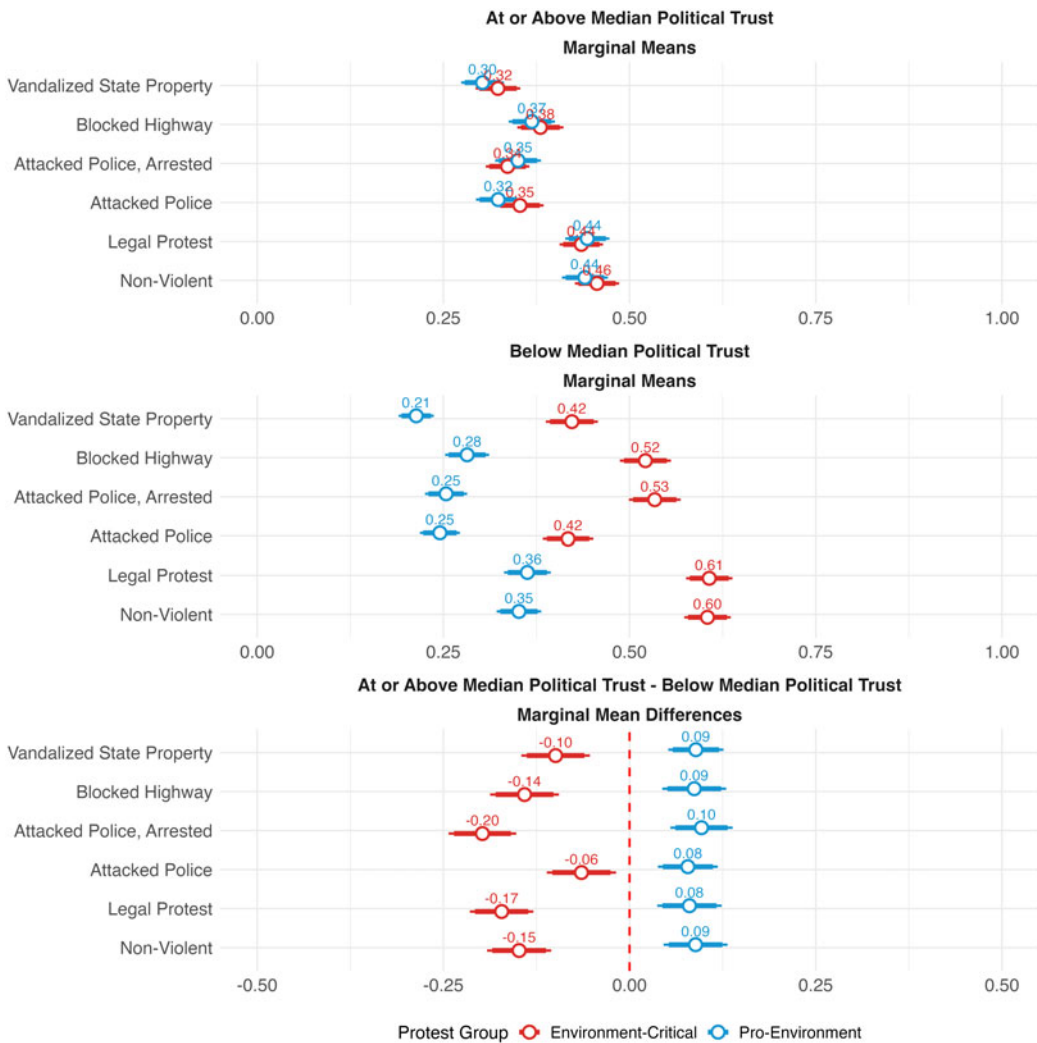


Figure 9. Marginal means of protest features – split by political trust. 0.5 implies a neutral stance. The ‘marginal mean differences’ are estimates of the differences between subgroup levels.

educated, and represent a larger cross-section of the Dutch population (Bakker and Scholten 2019; Leruth et al. 2017).

We collected newspaper articles through the Nexis Uni database. We selected articles from 1 October 2019, when the first big farmer protest started in the Netherlands, until 20 June 2023, the end of our survey data collection. To find relevant articles, we used a separate search string for each protest group. These can be found in Appendix section K. Our query yielded 3,459 articles: 1,203 articles for our protesting climate activists query and 2,256 articles for our protesting farmers query. We excluded articles that were not about the Netherlands ($n = 778$), articles that did not mention the respective protest groups or only mentioned them in passing ($n = 1,667$), and articles that, while referring to the respective protest groups, did not mention any protests ($n = 127$). This leaves us with a final sample of 880 news articles to analyze.¹⁵

¹⁵During the exclusion stage, we also excluded seven articles that were otherwise irrelevant. For example: because they were crossword puzzles.

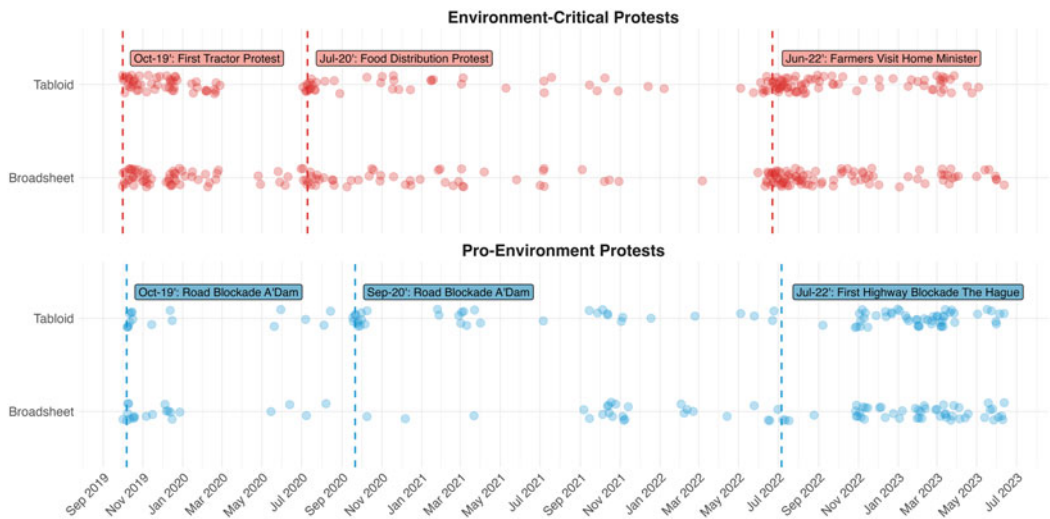


Figure 10. Over-time count of articles about protest groups across newspapers.

In addition to news articles, we include columns, op-ed pieces, and letters to the editor in our analysis. Mass media provide a platform where protesters, targets, and third parties can interact (Koopmans and Olzak 2004). Columns, op-ed pieces, and letters to the editor are therefore important 'target' and 'third-party' responses (Wouters 2016) that are crucial to our analysis. While these pieces might not necessarily represent the views of editors, they have an important agenda-setting function (Sommer and Maycroft 2008) and strong persuasive effects on the general public (Coppock *et al.* 2018). We therefore believe it is crucial to include them in our overall assessment of the newspapers' coverage of protests.

Results From the Content Analysis

Figure 10 shows the count of articles per newspaper and protest group over time. In terms of overall reporting on environmental protests, the broadsheet newspaper *NRC* and tabloid newspaper *Telegraaf* show very similar over-time patterns, closely mirroring the ebb and flow of protest events. But in terms of volume, there is much more coverage of protesting farmers than of protesting climate activists in both the main tabloid and broadsheet newspapers. This mirrors the asymmetric bias we find in our heterogeneity analyses: farmers' protests receive far more coverage than climate protests.

Next, we conduct a sentiment analysis of newspaper articles to examine if there are differences in coverage of protesting climate activists and protesting farmers. We code sentiment at the article level. We manually coded whether references to protesting climate activists or protesting farmers are predominantly negative (−1), predominantly positive (1), or neutral/balanced (0). More details about our exclusion and coding strategy can be found in Appendix section K.

We measured the reliability of the manual codings by conducting an interrater reliability test. We used Cohen's *K* as a test statistic (two coders), and report a Cohen's *K* of 0.65 (81.1 per cent agreement). This value reflects substantial agreement between two coders (Landis and Koch 1977) and is in line with what we would expect based on other studies that examine sentiment in media content (Dunaway and Lawrence 2015; Boukes *et al.* 2020).

Figure 11 shows the mean values of sentiment scores for protesting climate activists and protesting farmers in the main tabloid and broadsheet newspapers in the Netherlands. Both the within-newspaper difference in mean scores and the between-newspaper differences in mean

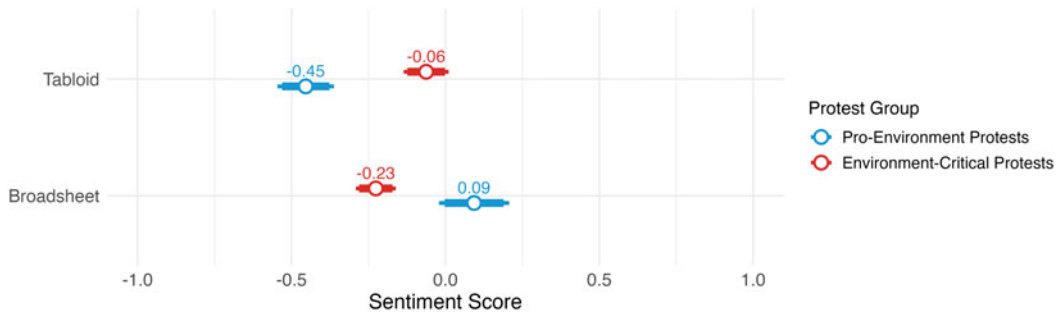


Figure 11. Sentiment scores for newspaper articles about protest groups. Sentiment scores range from -1 (fully negative) to 1 (fully positive). 0 represents a neutral/balanced mid-point. Thin bars are 95 per cent CIs, thick bars are 90 per cent CIs.

scores are statistically significant.¹⁶ Overall, the sentiment scores mirror the levels of protest support across subgroups of Dutch society. In the broadsheet newspaper, with a more center-left leaning readership, references to climate activists are balanced ($\mu = 0.09$) while references to protesting farmers are somewhat negative ($\mu = -0.23$). In the tabloid newspaper, with a more right-leaning readership, references to protesting climate activists are on average quite negative ($\mu = -0.45$) while references to protesting farmers ($\mu = -0.06$) are mostly balanced. A key takeaway from Figure 11 is also that the differences in sentiment scores between the pro-environment (climate activists) and environment-critical (farmers) protest groups are small in the Dutch main broadsheet newspaper, but markedly different in the coverage of the main tabloid. Coverage of pro-environment protesters is considerably more negative in *De Telegraaf*. The media analysis thus shows that both the volume (more articles about environment-critical protests in both newspapers) and sentiment (the biggest tabloid newspaper being mostly negative about the pro-environment group) may contribute to the asymmetric bias in public support for environmental protests.

In addition to our quantitative sentiment estimates, we also provide a more qualitative account of *how* protest groups are covered in Dutch newspapers. In the broadsheet newspaper, some op-ed pieces emphasize the similarity between farmer-led and climate activists' protest actions. For example, in one article, an interviewee points out that 'the climate and farmers' protests have major similarities. Both are well-organized and disrupt public order. An important difference is that climate activists protest nonviolently, while farmers not always do' (*NRC*, 2 February 2023). Criticism of farmer protests in the *NRC* homes in on this: farmers seem to use more extreme actions than their pro-environment counterparts. In November 2019, a well-known *NRC* columnist, Tom-Jan Meeus, writes that 'protests are sometimes accompanied by hardening and radicalization, and ominous signs of this are now being seen among farmers'. Meeus is worried that 'high expectations have been raised, but it has long been clear that they cannot be met. And we know the price of excessive optimism: despair and extremism' (*NRC*, 7 November 2019).

In *De Telegraaf*, articles are mostly critical of climate activists. While displaying more understanding of farmers' concerns, they are not outright positive. Criticism of climate activists in some articles is often directed towards the perceived 'globalist identity and lifestyle' of protesters. For example, after an XR protest at Eindhoven Airport, a reader suggests that a 'fitting punishment' would be to ban these protesters from ever flying again: 'only then will they contribute to the environment' (*De Telegraaf*, 28 March 2023). Another op-ed piece criticizes the 'predominantly white leaders of "Extinction Rebellion"' who 'grew up behind screens in peace and

¹⁶We conducted independent two-tailed *t*-tests to compare mean differences. *NRC* between groups: $t = 4.8042$, $df = 198.05$, $p\text{-value} = 3.062e - 06$, *Telegraaf* between groups: $t = -6.5568$, $df = 316.1$, $p\text{-value} = 2.24e - 10$. Activists between newspapers: $t = 7.3735$, $df = 235.74$, $p\text{-value} = 2.806e - 12$. Farmers between newspapers: $t = -3.2883$, $df = 604.62$, $p\text{-value} = 0.001066$.

prosperity. The world was their village, Globalism their new mother tongue and a weekend in New York the crowning glory of their adolescence' (*De Telegraaf*, 11 October 2019). The predicament of protesting farmers is sometimes also blamed on left-wing 'elites'. Discussing the proposed nitrogen emissions reduction, a reader argues that '[t]hese are all decisions of the left-wing environmental mafia, Amsterdam elites, who think that chocolate milk comes from a cow with brown spots' (*De Telegraaf*, 1 October 2019). Criticism of farmers, similar to *NRC*, often focuses on the extremity of farmers' actions, while also being somewhat understanding of their position. In a sent-in letter, a reader writes that she 'personally experienced the farmers' anger yesterday and the behavior of these frustrated farmers was very dangerous. Their protest actions were very understandable to me, but to endanger traffic in such a way was downright criminal' (*De Telegraaf*, 24 June 2022).

Additional Analyses

We further explore the negative bias towards pro-environment protesters in the tabloid newspaper *De Telegraaf* that we documented in the previous section. Our qualitative assessment suggested that both negative sentiment towards pro-environment protesters (climate activists) and more favorable attitudes towards environment-critical protesters (farmers) were often couched in anti-elite terms. This suggests that anti-establishment sentiment could be important for the asymmetric bias we have documented. Anti-elite rhetoric is a core rhetorical strategy of populist parties that pit the 'normal people' against vilified elites (De Vries and Hobolt 2020; Mudde 2004). Dutch right-wing populist parties, such as the Farmer-Citizen Movement (BoerBurgerBeweging, BBB) or the Freedom Party (Partij voor de Vrijheid, PVV), played a central role in public debate about environmental policy in recent years (Otjes and Krouwel 2022). In the run-up to the 2023 Dutch General Elections, they heavily politicized environment-critical stances and rallied behind the protesting farmers. We therefore hypothesize that supporters of right-wing populist parties will be more supportive of environment-critical protesters compared to the same type of protest activities staged by pro-environment protesters (Hypothesis 3).

To explore this link with right-wing populist parties, we run an additional model with marginal means where we split our sample based on whether respondents intended to vote for a right-wing populist party during the 2023 Dutch General Elections or not. These marginal means are shown in Figure 12.¹⁷

The marginal means in Figure 12 mirror the asymmetric bias we found for other subgroups (for example left-right, education, political trust, trust in science), but the magnitude is even larger. Among voters who did not vote for a right-wing populist party, mean levels of support across protest features show very small biases between protest groups. However, for respondents who intended to vote for a right-wing populist party during the 2023 General Elections, the biases between the pro-environment and environment-critical protesters are extremely stark. Overall, this group of voters opposes (< 0.5) all pro-environment protests, including legal protests, while showing support (> 0.5) for legal, disruptive, and even violent environment-critical protests. The marginal mean differences between subgroup levels are all statistically significant.

In a final step, we explore if we also find an asymmetric bias in respondents' own thoughts on pro-environment and environment-critical protests. In our survey, we asked participants if they wanted to share their opinions about the protest vignettes they saw with the Minister of the Interior using the prompt below.¹⁸

¹⁷We coded a right-wing populist vote based on popu-list.org, a peer-reviewed database of party classifications (Rooduijn *et al.* 2024). More information about this operationalization can be found in Appendix section D.

¹⁸As specified in our Pre-Analysis Plan, we anonymized and bundled the responses and sent them to the Ministry of the Interior on 17 June 2024. The spokesperson for the Minister of the Interior confirmed the receipt. More information about these procedures can be found in Appendix section E.



Figure 12. Marginal means of protest features – split by right-wing populist vote or not. 0.5 implies a neutral stance. The ‘marginal mean differences’ are estimates of the differences between subgroup levels.

As a Dutch person, you can take action by telling the Minister of the Interior what action should be taken against the protests you have read about. On the next page you have the opportunity to share your opinion on the subject completely anonymously. We process comments from you and others, anonymously, in a letter that we send to the Minister of the Interior. Your comments, if you choose to share them, will be completely anonymous. Would you like to share your opinion about the protests with the Minister of the Interior?

In total, 52.1 per cent of respondents (1,316) chose to share their comments. We filtered out empty comments and those with fewer than fifteen characters. We then conducted the same sentiment analysis that we did for the media data. To do this, we subsetted on comments that contained references to climate activists (for pro-environment sentiment scores), farmers (for environment-critical sentiment scores), or both ($n = 261$). For each answer, we then coded

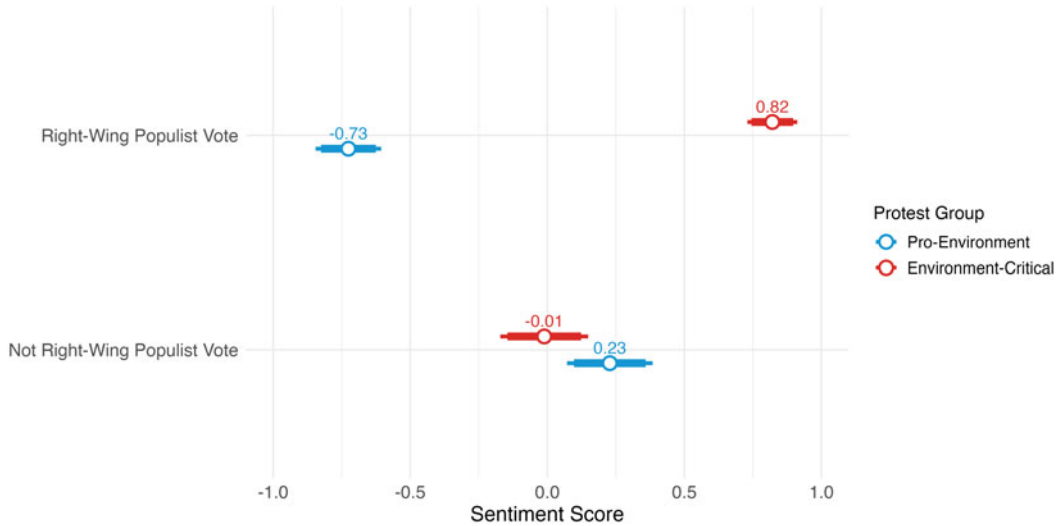


Figure 13. Sentiment scores open-ended comments about protest groups. Sentiment scores range from -1 (fully negative) to 1 (fully positive). 0 represents a neutral/balanced mid-point. Thin bars are 95 per cent CIs, thick bars are 90 per cent CIs.

whether references to these protest groups were predominantly positive (1), neutral (0), or predominantly negative (-1). We then grouped sentiment scores based on whether respondents intended to vote for a right-wing populist party or not (see footnote Figure 12). The sentiment scores are shown in Figure 13. These scores again mirror the strong asymmetric bias we find between populist voters and non-populist voters in Figure 12, and between tabloid and broadsheet newspapers in Figure 11: non-right-wing-populist voters' comments about farmers and climate activists are very similar in tone, while right-wing populist voters' comments have a strong negative bias towards climate activists, and even a strong positive bias towards farmers.¹⁹

These findings help place the pro-environment and environment-critical protests in the context of recent political developments in the Netherlands. These protests have deeply polarized Dutch society since 2019, and the asymmetric bias reported in public support for protest and in tabloid newspaper coverage might help to understand the electoral breakthrough of the right-wing populist party, BBB, amplifying skepticism towards pro-environmental policy and protests in the 2023 elections (Haan and Vermeer 2023).

Conclusion

While most studies to date highlight how different design features or adverse consequences of green policies may foster a backlash against particular efforts to deal with nature preservation, environmental degradation, and climate change, this study shifts our attention to environmental protests and how they are viewed within the wider public. As the effects of ecological decline and climate change have become more apparent, protests aimed at intensifying or abating environmental policy are on the rise (Gordon and Press 2023). While only a small subset of the population engages in protest activities, the consequences of increasing protests are likely more widespread. While protesters aim to raise public attention for their causes, these events can become counter-productive when protests are disruptive or even turn violent, fueling a backlash

¹⁹We also checked how much these mean values are driven by the inclusion of BBB in our measure of right-wing populist parties. Excluding BBB from the group of right-wing populist parties more or less yields the same mean values (-0.67 for pro-environment protesters, 0.78 for environment-critical protesters).

against the demands of protesters (see also Gunderson and Charles 2023). Given that protests have the potential to increase the political stakes of environmental policy, understanding how the wider public reacts to them is of crucial importance.

This study aims to understand when and why citizens support environmental protests aimed at intensifying or abating green policy. It does so by combining evidence from a novel survey fielded in the Netherlands, in which we embedded a pre-registered survey experiment, and the results of quantitative and qualitative content analyses of newspaper coverage of environmental protests. We report three main findings. First, our results suggest that, on average, the use of disruptive and violent tactics decreases support for both pro-environment and environment-critical protest movements. Second, we uncover an asymmetric bias: for the same protest actions, overall support levels in the population are higher for environment-critical protesters than for pro-environment protesters. This asymmetric bias is somewhat visible among those living in rural (versus urban) areas, but especially pronounced among right-leaning (versus left-leaning) individuals, those with low education (versus university-educated respondents), and those with low (versus high) political trust and trust in science. These groups are more willing to condone disruptions and violence by environment-critical movements, while penalizing pro-environment movements for the same actions. Third, we document that newspaper coverage of pro-environment and environment-critical protest movements differed markedly. While both the most popular Dutch tabloid and broadsheet newspaper dedicated more coverage to environment-critical protesters compared to pro-environment ones, the coverage in the tabloid newspaper was much more negative about pro-environment protesters (climate activists) than about environment-critical protesters (farmers). The reporting in the broadsheet newspaper, on the other hand, was much more balanced about both groups. We found the largest asymmetric bias for those respondents that fit the demographic profile of the readership of the tabloid newspaper and the least bias among those that fit the readership of the broadsheet newspaper. While we have no causal evidence on the direction of these effects, the trends in newspaper reporting clearly precede our survey. Overall, our evidence suggests the existence of a bias in favor of environment-critical protesters and against pro-environment protesters in the Netherlands. It is an interesting avenue for future research to explore this type of bias in other countries.

These findings have important implications. The most important one is perhaps that they suggest that protest movements should be cognizant of the trade-offs that their protest actions entail. Whereas disruptive protest actions may raise public attention for their causes, they might also trigger a backlash among the wider public. This is what Feinberg et al. (2020) call ‘the activist’s dilemma’. From the findings we reported here, this trade-off is especially apparent for pro-environment movements. When protests designed to create awareness for the detrimental effects of environmental degradation, biodiversity loss, and climate change in order to increase government action to avoid tipping points in the climate system are disruptive, or even turn violent, this is likely to have countervailing effects. Environment-critical movements that aim to protect the current status quo have more leeway in this respect compared to pro-environment movements. This also suggests that the political room to maneuver for policy makers to advance environmental policies might be even smaller than previously thought. As ecological decline and climate impacts worsen and green policies become more salient and divisive, protests will likely become even more numerous, and understanding their impact more important.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S0007123425101063>.

Data availability statement. Replication data for this article can be found in Harvard Dataverse at: <https://doi.org/10.7910/DVN/SLC5YO>.

Acknowledgments. The authors thank Michael Bechtel, Italo Colantone, Federica Genovese, Simone Cremaschi, Ruud Wouters, and participants of the ‘Europe Workshop’ at Princeton University, ‘Political Behavior WiP Workshop’ at the

London School of Economics, ‘Political Dynamics and Consequences of Climate Policy’ Workshop at Bocconi University, APSA 2024, and EPSA 2024 for their comments and suggestions. Feline van der Werf provided excellent research assistance.

Financial support. The research was funded by the European Research Council (Grant Agreement Nr. 864687).

Competing interests. None.

Ethics. Ethics approval was obtained from the Institutional Review Boards of Bocconi University (FA000585) and the University of Oxford (SSHDPIRC1A23008).

References

- Amenta E and Alan Elliott T** (2017) All the right movements? Mediation, rightist movements, and why US movements received extensive newspaper coverage. *Social Forces* **96**, 803–830.
- Baazil D** (2022) Dutch no longer want to be one of world’s top agro exporters. Available at <https://www.bloomberg.com/news/articles/2022-12-12/dutch-no-longer-want-to-be-one-of-world-s-top-agro-exporters> (accessed 2 October, 2025).
- Bakker P and Scholten O** (2019) *Communicatiekaart Van Nederland. Overzicht Van Media En Communicatie (10e druk)*. Amsterdam: Kluwer.
- Bechtel MM and Scheve KF** (2013) Mass support for global climate agreements depends on institutional design. *Proceedings of The National Academy of Sciences of The United States of America* **110**, 13763–13768.
- Berenguer J, Corraliza JA and Martin R** (2005) Rural–urban differences in environmental concern, attitudes, and actions. *European Journal of Psychological Qsessment* **21**, 128–138.
- Bergquist P, Mildener M and Stokes LC** (2020) Combining climate, economic, and social policy builds public support for climate action in the US. *Environmental Research Letters* **15**, 054019.
- Bernauer T and Gampfer R** (2015) How robust is public support for unilateral climate policy? *Environmental Science & Policy* **54**, 316–330.
- Bosetti V, Colantone I, De Vries CE and Musto G** (2025) Green backlash and right-wing populism. *Nature Climate Change* **15**, 822–828.
- Boukes M, Van de Velde B, Araujo T and Vliegenthart R** (2020) What’s the tone? Easy doesn’t do it: analyzing performance and agreement between off-the-shelf sentiment analysis tools. *Communication Methods and Measures* **14**, 83–104.
- Boyle MP, McLeod DM and Armstrong CL** (2012) Adherence to the protest paradigm: the influence of protest goals and tactics on news coverage in us and international newspapers. *The International Journal of Press/Politics* **17**, 127–144.
- Brehm J and Gruhl H** (2024) Increase in concerns about climate change following climate strikes and civil disobedience in Germany. *Nature Communications* **15**, 2916.
- Brown JM** (2021) Civil disobedience, sabotage, and violence in us environmental activism. In Sowers Jeannie, VanDeveer Stacy D and Weinthal Erika (eds.), *The Oxford Handbook Of Comparative Environmental Politics*. Oxford: Oxford University Press. <https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780197515037.001.0001/oxfordhb-9780197515037-e-34>.
- Bugden D** (2020) Does climate protest work? Partisanship, protest, and sentiment pools. *Socius* **6**, 2378023120925949.
- Carnegie Endowment for International Peace** (2024) Climate protest tracker. Available at <https://carnegieendowment.org/features/climate-protest-tracker?lang=en> (accessed 2 October, 2025).
- Cavallotti E, Colantone I, Stanig P and Vona F** (2025) Green collars at the voting booth: material interest and environmental voting. Working Paper 09.2025. Bocconi University. Available at <https://hdl.handle.net/10419/315132>.
- Centraal Bureau voor de Statistiek (CBS)** (2020) Feiten en cijfers over landbouw. Available at <https://www.cbs.nl/nl-nl/achtegrond/2020/19/feiten-en-cijfers-over-de-landbouw> (Accessed October 2 2025).
- Claassen C** (2020a) Does public support help democracy survive? *American Journal of Political Science* **64**, 118–134.
- Claassen C** (2020b) In the mood for democracy? Democratic support as thermostat opinion. *American Political Science Review* **114**, 36–53.
- Colantone I, Di Lonardo L, Margalit Y and Percoco M** (2024) The political consequences of green policies: evidence from Italy. *American Political Science Review* **118**, 108–126.
- European Commission** (2024) The European green deal. Available at https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en (Accessed October 2 2025).
- Coppock A, Ekins E, David Kirby** (2018) The long-lasting effects of newspaper op-eds on public opinion. *Quarterly Journal of Political Science* **13**, 59–87.
- Cramer KJ** (2016) *The Politics of Resentment: Rural Consciousness in Wisconsin and the Rise of Scott Walker*. University of Chicago Press.
- Cremaschi S, Bariletto N and De Vries CE** (2025) Without roots: the political consequences of collective economic shocks. *American Political Science Review*. 1–20.

- de Lange S, van der Brug W and Hartevelde E** (2023) Regional resentment in the Netherlands: a rural or peripheral phenomenon? *Regional Studies* 57, 403–415.
- De Kleer D, de Vries C and van Teutem S** (2025) Replication Data for Public Support for Pro-environment and Environment-Critical Movements. <https://doi.org/10.7910/DVN/SLC5YO>, Harvard Dataverse, V1.
- De Vries CE and Hobolt S** (2020) *Political Entrepreneurs: The Rise of Challenger Parties in Europe*. Princeton University Press.
- Dickson ZP and Hobolt SB** (2025) Going against the grain: climate change as a wedge issue for the radical right. *Comparative Political Studies* 58, 1733–1759.
- Dunaway J and Lawrence RG** (2015) What predicts the game frame? Media ownership, electoral context, and campaign news. *Political Communication* 32, 43–60.
- Egan PJ and Mullin M** (2017) Climate change: US public opinion. *Annual Review of Political Science* 20, 209–227.
- Eigenius G and Rydgren J** (2017) The Sweden Democrats and the ethno-nationalist rhetoric of decay and betrayal, *Sociologisk forskning*. pp. 353–358.
- Enos RD, Kaufman AR and Sands ML** (2019) Can violent protest change local policy support? Evidence from the aftermath of the 1992 Los Angeles riot. *American Political Science Review* 113, 1012–1028.
- European Commission** (2024) Attitudes of Europeans towards the environment. *Special Eurobarometer*. 550. Fieldwork, Publication: European Union. <https://europa.eu/eurobarometer/surveys/detail/3173>.
- Feinberg M, Willer R and Kovacheff C** (2020) The activist's dilemma: extreme protest actions reduce popular support for social movements. *Journal of Personality and Social Psychology* 119, 1086.
- Finger R, Fabry A, Kammer M, Candel J, Dalhaus T and Meemken EM** (2024) Farmer protests in Europe 2023–2024. *EuroChoices* 23, 59–63.
- Frederiksen KVS** (2022) Does competence make citizens tolerate undemocratic behavior? *American Political Science Review* 116, 1–7.
- Fritz T, Willendorf AM, Zangemeister L and Neuss K** (2024) The green transition index. <https://www.oliverwyman.com/our-expertise/insights/2022/jun/green-transition-index.html>. [Accessed on 22-11-2024].
- Gaikwad N, Genovesi F and Tingley D** (2022) Creating climate coalitions: mass preferences for compensating vulnerability in the world's two largest democracies. *American Political Science Review* 116, 1165–1183.
- Gause LG** (2022a) Revealing issue salience via costly protest: how legislative behavior following protest advantages low-resource groups. *British Journal of Political Science* 52, 259–279.
- Gause LG** (2022b) *The Advantage of Disadvantage: Costly Protest and Political Representation for Marginalized Groups*. Cambridge University Press.
- Gordon N and Benjamin P** (2023) Climate protests: tracking growing unrest, Carnegie Endowment for International Peace. <https://carnegieendowment.org/2023/01/12/climate-protests-tracking-growing-unrest-pub-88778> (Accessed October 2 2025).
- Graham MH and Svulik MW** (2020) Democracy in America? Partisanship, polarization, and the robustness of support for democracy in the United States. *American Political Science Review* 114, 392–409.
- Gunderson R and Charles W** (2023) A sociology of “climategate”: the appeal and counterproductivity of property destruction as a climate change strategy. *Environmental Sociology* 9, 398–408.
- Haan Md and Vermeer O** (2023) Ineens is onder kiezers ook het klimaat onderdeel van de tweestrijd rond migratie. Available at <https://www.nrc.nl/nieuws/2023/11/19/ineens-is-onder-kiezers-ook-het-klimaat-onderdeel-van-de-tweestrijd-rond-migratie-a4181371> (Accessed October 2 2025).
- Hager A, Hensel L, Hermle J and Roth C** (2022) Group size and protest mobilization across movements and countermovements. *American Political Science Review* 116, 1051–1066.
- Hochschild AR** (2018) *Strangers in Their Own Land: Anger and Mourning on the American Right*. The New Press.
- Hsiao Y and Radnitz S** (2021) Allies or agitators? How partisan identity shapes public opinion about violent or nonviolent protests. *Political Communication* 38, 479–497.
- Huber RA, Greussing E and Eberl JM** (2022) From populism to climate scepticism: the role of institutional trust and attitudes towards science. *Environmental Politics* 31, 1115–1138.
- Inglehart R** (1995) Public support for environmental protection: objective problems and subjective values in 43 societies. *PS: Political Science & Politics* 28, 57–72.
- Iskander NN and Lowe N** (2020) Climate change and work: politics and power. *Annual Review of Political Science* 23, 111–131.
- Kitt S, Axsen J, Long Z and Rhodes E** (2021) The role of trust in citizen acceptance of climate policy: comparing perceptions of government competence, integrity and value similarity. *Ecological Economics* 183, 106958.
- Koopmans R and Olzak S** (2004) Discursive opportunities and the evolution of right-wing violence in Germany. *American Journal of Sociology* 110, 19198–230.
- Kountouris Y and Williams E** (2023) Do protests influence environmental attitudes? Evidence from extinction rebellion. *Environmental Research Communications* 5, 011003.

- Krange O, Kaltenborn BP and Hultman M** (2021) “Don’t confuse me with facts”—how right wing populism affects trust in agencies advocating anthropogenic climate change as a reality. *Humanities and Social Sciences Communications* **8**, 255.
- Küppers A** (2022) Climate-Soviets, Alarmism, and Eco-Dictatorship: the framing of climate change scepticism by the populist radical right alternative for Germany. *German Politics* **33**, 1–21.
- Landis JR and Koch GG** (1977) The measurement of observer agreement for categorical data. *Biometrics* **33**, 159–174.
- Juratic LC, Morgan MW and Bischof D** (2025) Democratic hypocrisy: unequal tolerance for protest in Germany. https://osf.io/preprints/osf/3mfhc_v1. Preprint.
- Leeper TJ, Hobolt SB and Tilley J** (2020) Measuring subgroup preferences in conjoint experiments. *Political Analysis* **28**, 207–221.
- Leruth B, Kutiyski Y, Krouwel A and Startin NJ** (2017) Does the information source matter? Newspaper readership, political preferences and attitudes towards the EU in the UK, France and the Netherlands. In Caiani Manuela and Guerra Simona (eds.), *Euro-scepticism, Democracy and The Media: Communicating Europe, Contesting Europe*. London: Palgrave Macmillan, pp. 95–120. https://link.springer.com/chapter/10.1057/978-1-137-59643-7_5.
- Madestam A, Shoag D, Veuger S and Yanagizawa-Drott D** (2013) Do political protests matter? Evidence from the tea party movement. *The Quarterly Journal of Economics* **128**, 1633–1685.
- Mazumder S** (2018) The persistent effect of US civil rights protests on political attitudes. *American Journal of Political Science* **62**, 922–935.
- McLeod DM and Detenber BH** (1999) Framing effects of television news coverage of social protest. *Journal of Communication* **49**, 3–23.
- Meijers MJ, Van Drunen Y and Jacobs K** (2023) It’s a hoax! The mediating factors of populist climate policy opposition. *West European Politics* **46**, 1288–1311.
- Moloney C** (2022) Climate activists arrested after blocking private jets in amsterdam airport. *The Guardian*, <https://www.theguardian.com/world/2022/nov/05/climate-activists-storm-amsterdam-airport-and-block-private-jets> (accessed October 2 2025).
- Mudde C** (2004) The populist zeitgeist. *Government and opposition* **39**, 541–563.
- Muñoz J and Anduiza E** (2019) If a fight starts, watch the crowd: the effect of violence on popular support for social movements. *Journal of Peace Research* **56**, 485–498.
- Myers DJ and Caniglia BS** (2004) All the rioting that’s fit to print: selection effects in national newspaper coverage of civil disorders, 1968–1969. *American Sociological Review* **69**, 519–543.
- Ostarek M, Simpson B, Rogers C and Ozden J** (2024) Radical climate protests linked to increases in public support for moderate organizations. *Nature Sustainability* **7**, 1626–1632.
- Oswald MT, Fromm M and Broda E** (2021) Strategic clustering in right-wing-populism? Green policies in Germany and France. *Zeitschrift für Vergleichende Politikwissenschaft* **15**, 185–205.
- Otjes S and Krouwel A** (2022) Environmental policy preferences and economic interests in the nature/agriculture and climate/energy dimension in the Netherlands. *Rural Sociology* **87**, 901–935.
- Patana P** (2020) Changes in local context and electoral support for the populist radical right: evidence from Finland. *Party Politics* **26**, 718–729.
- Poushter J, Fagan M and Gubbala S** (2022) Climate change remains top global threat across 19-country survey. *Pew Research Center*. Technical report. <https://www.pewresearch.org/global/2022/08/31/climate-change-remains-top-global-threat-across-19-country-survey/>.
- Rhodes E, Axsen J and Jaccard M** (2017) Exploring citizen support for different types of climate policy. *Ecological Economics* **137**, 56–69.
- Rooduijn M, Pirro ALP, Halikiopoulou D, Froio C, Van Kessel S, De Lange SL, Mudde C and Taggart P** (2024) The populist: a database of populist, far-left, and far-right parties using expert-informed qualitative comparative classification (eiqcc). *British Journal of Political Science* **54**, 969–978.
- Schelfaut S** (2019) Stikstofplan ingetrokken na felle acties van boeren. Available at <https://www.ad.nl/binnenland/stikstofplan-ingetrokken-na-felle-acties-van-boerena0815b9d/>.
- Schouten E** (2023) Aantal boerenbedrijven in ons land halveert elke 25 jaar. NU.nl. <https://www.nu.nl/economie/6255124/aantal-boerenbedrijven-in-ons-land-halveert-elke-25-jaar.html> (Accessed October 2 2025).
- Schwörer J and Fernández-García B** (2023) Climate sceptics or climate nationalists? Understanding and explaining populist radical right parties’ positions towards climate change (1990–2022). *Political Studies* **72**, 1178–1202.
- Shultziner D and Stukalin Y** (2021) Distorting the news? The mechanisms of partisan media bias and its effects on news production. *Political Behavior* **43**, 20201–222.
- Shuman E, Hasan-Aslih S, Van Zomeren M, Saguy T and Halperin E** (2022) Protest movements involving limited violence can sometimes be effective: evidence from the 2020 blacklivesmatter protests. *Proceedings of The National Academy of Sciences of The United States of America* **119**. <https://doi.org/10.1073/pnas.2118990119>.
- Shuman E, Saguy T, van Zomeren M and Halperin E** (2021) Disrupting the system constructively: testing the effectiveness of nonnormative nonviolent collective action. *Journal of Personality and Social Psychology* **121**, 819.

- Simpson B, Willer R and Feinberg M** (2018) Does violent protest backfire? Testing a theory of public reactions to activist violence. *Socius* 4. <https://doi.org/10.1177/2378023118803189>.
- Smith J, McCarthy JD, McPhail C and Augustyn B** (2001) From protest to agenda building: description bias in media coverage of protest events in Washington, DC. *Social Forces* 79, 1397–1423.
- Sommer B and Maycroft JR** (2008) Influencing public policy: an analysis of published op-eds by academics. *Politics & Policy* 36, 586–613.
- Spoon JJ, Hobolt SB and De Vries CE** (2014) Going green: explaining issue competition on the environment. *European Journal of Political Research* 53, 363–380.
- Stokes LC and Warshaw C** (2017) Renewable energy policy design and framing influence public support in the United States. *Nature Energy* 2, 1–6.
- Tertytchnaya K and Lankina T** (2020) Electoral protests and political attitudes under electoral authoritarianism. *The Journal of Politics* 82, 285–299.
- Tosun J, Schaub S and Marek C** (2024) Europeans' attitudes toward the goals of agricultural policy: a case of rural–urban divide? *Political Studies Review* 22, 174–192.
- Tullis P** (2023) Nitrogen wars: the Dutch farmers' revolt that turned a nation upside-down. *The Guardian*. <https://www.theguardian.com/environment/2023/nov/16/nitrogen-wars-the-dutch-farmers-revolt-that-turned-a-nation-upside-down> (Accessed October 2 2025).
- Valentim A** (2023) Repeated exposure and protest outcomes: how Fridays for future protests influenced voters. https://osf.io/preprints/socarxiv/m6dpg_v2. Preprint.
- Vihma A, Reischl G and Nonbo Andersen A** (2021) A climate backlash: comparing populist parties' climate policies in Denmark, Finland, and Sweden. *The Journal of Environment & Development* 30, 219–239.
- Voeten E** (2024) The energy transition and support for the radical right: evidence from the Netherlands. *Comparative Political Studies* 0. 00104140241237468.
- Vona F, Marin G and Consoli D** (2019) Measures, drivers and effects of green employment: evidence from US local labor markets 2006–2014. *Journal of Economic Geography* 19, 1021–1048.
- Vona F, Marin G, Consoli D and Popp D** (2018) Environmental regulation and green skills: an empirical exploration. *Journal of the Association of Environmental and Resource Economists* 5, 713–753.
- Wang DJ and Piazza A** (2016) The use of disruptive tactics in protest as a trade-off: the role of social movement claims. *Social forces* 94, 1675–1710.
- Wasow O** (2020) Agenda seeding: how 1960s, black protests moved elites, public opinion and voting. *American Political Science Review* 114, 638–659.
- Wouters R** (2013) From the street to the screen: characteristics of protest events as determinants of television news coverage. *Mobilization: An International Quarterly* 18, 83–105.
- Wouters R** (2016) Do targets react and third parties comment? Responsiveness and scope expansion in television news items of protest. *Social Movement Studies* 15, 577–592.
- Wouters R** (2019) The persuasive power of protest. How protest wins public support. *Social Forces* 98, 403–426.
- Wouters R and Walgrave S** (2017) Demonstrating power: how protest persuades political representatives. *American Sociological Review* 82, 361–383.
- YouGov** (2019) Daily question: 15 october 2019. Survey result. <https://yougov.co.uk/topics/science/survey-results/daily/2019/10/15/470b6/1> (Accessed October 2 2025).
- Zeitsoff T and Gold G** (2024) Cyber and contentious politics: evidence from the US radical environmental movement. *Journal of Peace Research* 61, 134–149.
- Ziblatt D, Hilbig H and Bischof D** (2024) Wealth of tongues: why peripheral regions vote for the radical right in Germany. *American Political Science Review* 118, 1480–1496.