

Appendix

Methodology

Weighted bootstrapped independent t-tests were conducted to determine the difference in means from before the protests to after the protests. All bootstraps used 10,000 samples. Aggregated metrics were created by taking the mean answer of several different questions, and answers are rounded to the nearest integer for use in visualisations. The full set of questions asked can be seen below under [Full Survey Questions](#).

Recruitment was completed via online methodology, inviting a nationally representative sample of approximately 2,000 UK adults based on age, gender, social grade, region, 2016 EU Ref and 2019 General Election votes. Weighting was applied to adjust the demographic distribution to a nationally representative sample based on the crossbreaks listed above.

Cronbach's alpha was used to check whether it made sense to average together the multiple items that were part of each variable. Each of the aggregated variables had a Cronbach's alpha above 0.7, which is acceptable. The alpha for each aggregated metric is reported below.

We aggregated variables that asked similar questions and had a Cronbach's alpha of above 0.7 - for instance, the aggregated metric that examines a respondent's 'concern about climate' change takes the average of the the respondent's view on two statements: 'climate change is one of the greatest threats to humanity' and 'I feel frightened at the prospect of climate change and the impact it might have' (Cronbach's Alpha = 0.886).

Willingness to take part in Climate Activism	0.866
Concern about Climate Change	0.886
Support for Just Stop Oil's Goals	0.902
Opposition to Just Stop Oil's Goals	0.776

Additional Results

Discontent with Government

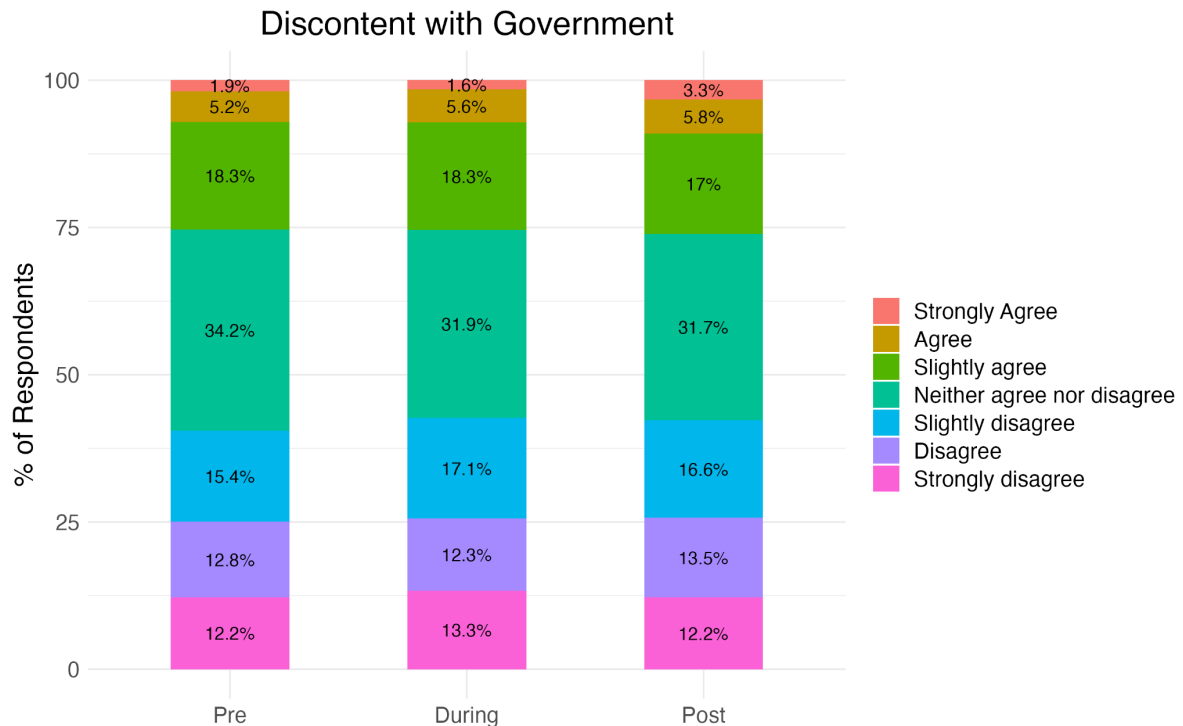
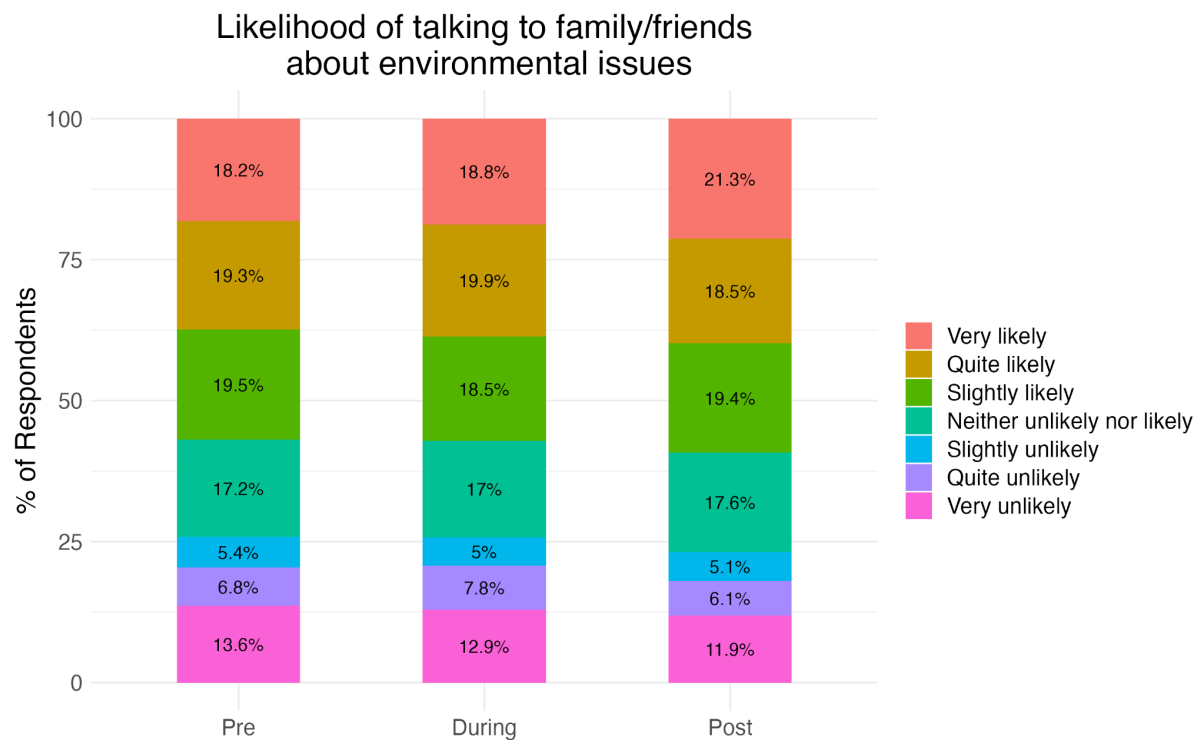


Figure 6: Discontent with the government's action on climate change (i.e. those taking the view that the government is taking too little action on climate change), grouped by the period in which the respondent was surveyed.

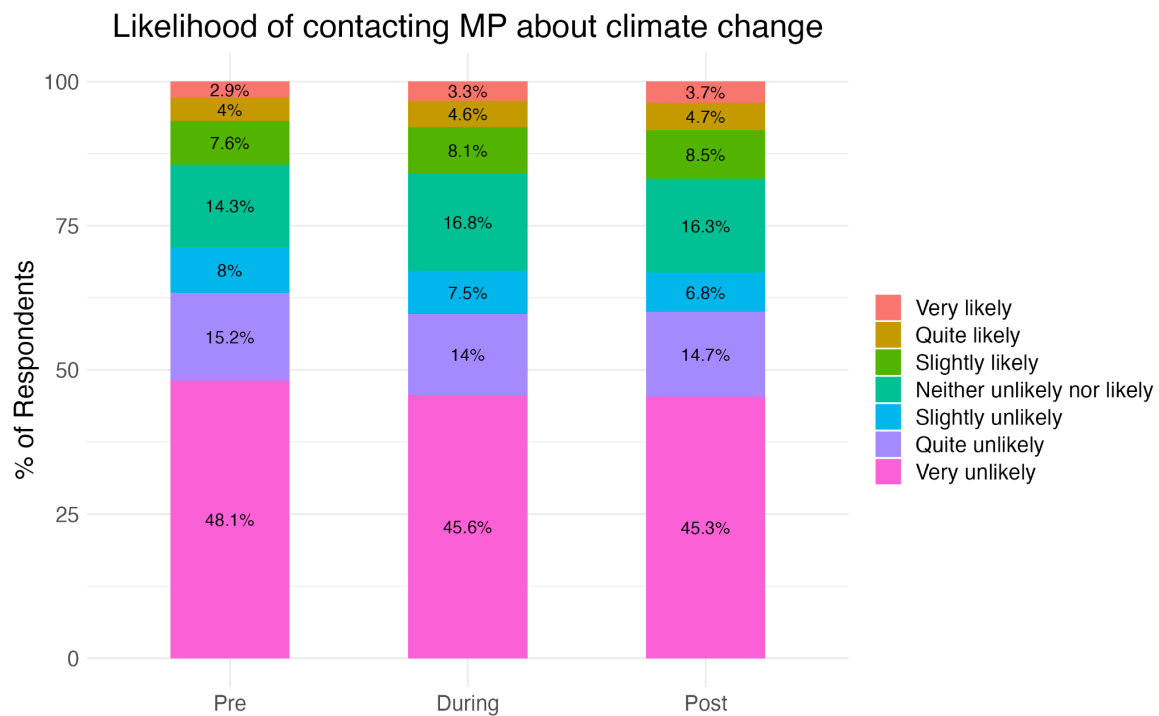
Respondents were asked whether they agreed or disagreed with the statement 'The government is doing a lot to tackle climate change'. There was no statistically significant change from before the protests to after the protests - the mean response (from 1 to 7, with 1 being 'Strongly Disagree' and 7 being 'Strongly Agree') increased from 3.56 to 3.58 ($p = 0.71$).

Likelihood of talking with others about environmental issues



After the protests occurred, more respondents were willing to say that they were very likely to talk to others about environmental issues. The percentage of respondents saying they were 'very likely' to 'talk with others (e.g. spouse, partner, parent(s), children, friends) about environmental issues' increased from 18.2% before the protests to 21.3% after the protests, and the mean rating between 1 ('Very unlikely') and 7 ('Very likely') increased from 4.53 to 4.67 ($p = 0.015$).

Likelihood of contacting MP about Climate Change



The percentage of people saying they were likely to contact their MP about climate change also increased after the protests, although a majority of respondents continued to say that this was unlikely. The mean rating on the 1 to 7 scale increased from 2.41 to 2.57 ($p = 0.004$).

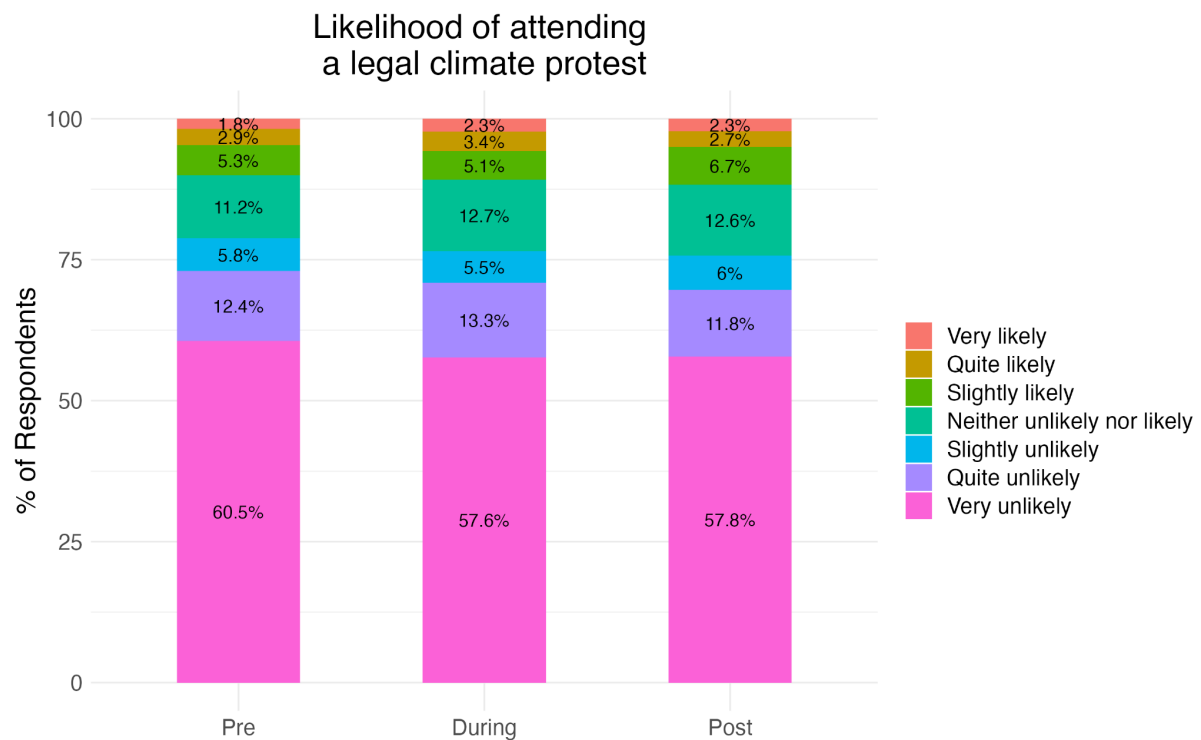
The mean rating for this scale also increased by a statistically significant amount from Before (March 29th) to During (April 9th), from 2.41 to 2.55 ($p = 0.016$).

Likelihood of volunteering for or donating to an environmental cause

There was no statistically significant increase in the number of respondents saying that they were likely to volunteer for an environmental cause after the protests, or the number of respondents saying that they would donate to an environmental cause from Before (March 29th) to After (April 19th) of the protests.

However, the mean rating for “willingness to volunteer to an environmental cause” increased by a statistically significant amount from Before (March 29th) to During (April 9th), from 2.59 to 2.73 ($p = 0.01$). For the After (April 19th) survey, this fell down to levels below statistical significance to 2.68 ($p = 0.09$).

Likelihood of participating in legal protests



The percentage of people saying they were likely to participate in peaceful climate protests increased after the protests, although a majority of respondents continued to say that this was unlikely. The mean rating on the 1 to 7 scale increased from 2.04 to 2.16 ($p = 0.02$).

Likelihood of participating in Civil Disobedience

There was no statistically significant increase in the number of respondents saying that they were likely to participate in civil disobedience (such as blocking roads) from Before (March 29th) to After (April 19th) of the protests.

However, the mean rating for “willingness to participate in Civil Disobedience” increased by a statistically significant amount from Before (March 29th) to During (April 9th), from 1.8 to 1.92 ($p = 0.01$). For this After (April 19th) survey, this fell down to levels below statistical significance to 1.85 ($p = 0.23$).

Additional Limitations

Climate-related External Events

We also found an increase in some variables, namely “Awareness of the impact of fossil fuels”, “willingness to volunteer for an environmental cause” and “willingness to engage in peaceful and disruptive nonviolent civil disobedience” from the Before to During survey, which all dropped to levels below statistical significance for the After survey. The p-values and effect sizes for this can be seen in the [Appendix](#). One might infer from this that the IPCC report (and potentially the British Energy Security Strategy report) caused a short-term increase in likelihood to take part in these two forms of climate activism, which returned to near-baseline after approximately two weeks.

Participants repeating the survey

123 out of 2160 participants who took part in the After survey had previously done either the Before or During survey. It was necessary that these people were present in later surveys to ensure our sample was nationally representative, as they made up otherwise hard to reach demographics. This introduces some possible bias, particularly within the 60 participants who did the During survey, as they might now anticipate the survey is related to the actions of Just Stop Oil and climate protest. It's plausible that this could invoke positive or negative reactions within people depending on their views of Just Stop Oil, which would then influence their answers on the After survey. As this proportion of people who would have known this survey is gauging opinions around Just Stop Oil is very small (2.8% of the total sample size), we think this is not a significant factor that would influence our results. In addition, the 10-day gap between our During and After survey might mean they will have forgotten about the previous survey to some degree.

Lack of media coverage

Neither the Just Stop Oil protests nor the Extinction Rebellion protests occurring at the same time received as much media coverage as some previous environmental protests in the UK, such as the 2019 London April or October Rebellion. For example, [internal analysis](#) by XR suggests that there were over 70,000 pieces of content about XR up until October 2019.

¹Although most people surveyed did say that they were familiar with Just Stop Oil's protest activity, only 5.3% of respondents said that they knew 'a great deal' about Just Stop Oil. It may be the case that particularly prominent disruptive protests change peoples' views in a way that was not observed in this research.

Full Survey Questions

Breakdown of various questions:

- 2 items measuring general attitudes towards climate change
- 1 item measuring salience of impact of fossil fuel (in line with protest focus)
- 3 items measuring support for demands of protest groups
- 1 item measuring public discontent with government action on demands of protestors

¹ Although the polling only dates back to late 2020, [YouGov finds that](#) in 2020, over 70% of the UK public had heard of XR.

- 2 items measuring strength of oppositional narrative (backfire effect)
- 6 items about willingness to take action on climate issues (e.g. lobby your MP, post on social media, go to a protest, etc.)
- 1 item to see if participants have heard of, seen or aware of the protests happening
- 1 item asking whether participants support or oppose protestors' actions

Measuring: Public concern around climate change

To what extent do you agree or disagree with the following statements...

1. "Climate change is one of the greatest threats facing humanity"
 - a. Likert scale from 1-7:
 - i. Strongly disagree
 - ii. Disagree
 - iii. Somewhat disagree
 - iv. Neither disagree nor agree
 - v. Somewhat agree
 - vi. Agree
 - vii. Strongly Agree
2. "I feel frightened at the prospect of climate change and the impact it may have"
 - a. Likert Scale 1-7

Measuring: Public awareness of fossil fuel impacts

3. To what extent do you agree or disagree with the following statement?
Fossil fuels (oil, natural gas and coal) are major contributors to climate change and environmental damage.
 - a. Likert Scale 1-7
 - i. Strongly disagree
 - ii. Disagree
 - iii. Somewhat disagree
 - iv. Neither disagree nor agree
 - v. Somewhat agree
 - vi. Agree
 - vii. Strongly Agree

Measuring: Public support of government action to stop fossil fuels (in agreement with demands of protest groups)

4. The UK government should stop exploration of oil and other new fossil fuels
 - a. Strongly oppose
 - b. Oppose
 - c. Tend to oppose
 - d. Neither support nor oppose
 - e. Tend to support
 - f. Support
 - g. Strongly support
5. The UK government should no longer grant new licences for oil and gas production
 - a. Likert scale as above: 1-7 Strongly oppose to strongly support

6. The UK government should make companies extracting fossil fuels spend their profits on transitioning the UK to a low-carbon economy
 - a. Likert scale as above: 1-7 Strongly oppose to strongly support

Measuring: Oppositional narrative (and existence/strength of backfire effect)

To what extent do you agree or disagree with the following statements?

7. Given the current high fuel prices, it's not appropriate for the UK to reduce extraction of oil and gas.
 - a. Likert scale: 1-7
8. Because of the war in Ukraine we need to maintain our country's own production of oil and gas.
 - a. Likert scale: 1-7
 - i. Strongly disagree
 - ii. Disagree
 - iii. Somewhat disagree
 - iv. Neither disagree nor agree
 - v. Somewhat agree
 - vi. Agree
 - vii. Strongly Agree

Measuring: Public discontent with government climate policy

To what extent do you agree or disagree with the following statement?

9. The government is doing a lot to tackle climate change
 - a. Likert Scale 1-7
 - i. Strongly disagree
 - ii. Disagree
 - iii. Somewhat disagree
 - iv. Neither disagree nor agree
 - v. Somewhat agree
 - vi. Agree
 - vii. Strongly Agree

Measuring: Willingness of people to take action on climate issues

10. How likely or unlikely are you **personally** to do each of the following within the next 12 months" with the following six items:
 - a. Talk with others about environmental issues (e.g., spouse, partner, parent(s), children, or friends).
 - b. Write letters, email, or phone your MP about climate change
 - c. Volunteer for an environmental cause
 - d. Donate to an environmental cause
 - e. Go to a legal protest (e.g. a march)
 - f. Participate in peaceful and disruptive civil disobedience (e.g. sit-ins or blocking roads) against corporate or government activities that make climate change worse
 - i. 1(Very unlikely) to 7(Very likely).

Measuring: Salience and support of protests (only in 2nd and 3rd surveys)

11. How much, if anything, have you heard about the climate protests organised by Just Stop Oil?

a. Likert scale 1-4: A great deal, a fair amount, not very much, nothing at all

In the last week, an organisation called “Just Stop Oil” has organised protests to raise awareness about the impact of fossil fuels on accelerating climate change. They’ve blocked several roads that lead to oil refineries across the country.

12. To what extent, if at all, do you support or oppose the protesters’ actions?

a. 7-point Likert scale: Strongly support -> strongly oppose