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## 1. Introduction

Climate policies encounter various political obstacles that make them difficult to pass. Indeed, those policies generally imply a profound change in our habits or standard of living. Moreover, they often face a strong opposition due to their distributional impacts – both real and perceived – at the national and international levels, between and within socio-economic groups. Climate policies can only succeed if they meet public acceptability. Therefore, they have to address not only legitimate concerns about distributional and lifestyle impacts, but their design should also account for people's perceptions of climate change and the effects of climate policies on the economy and the environment, including potential misperceptions.

With this project, our purpose is to provide country-specific advice on policies that aim to decarbonize the economy. Our goal is to understand people's perceptions about climate change and preferences over climate policies. Using large-scale surveys, we are able to answer several questions. How values and perceptions drive support or opposition for climate policies across socio-economic groups? How attitudes on climate change and climate policies differ between countries? How perceptions are affected by new information on the effects of policies or climate change and how it translates into policy support?

### 1.1. Related Literature

Our work adds to a growing literature that studies the determinants of support for different climate policies. The key contribution is to offer comparable cross-country evidence covering both OECD and non-OECD countries. Previous work has mostly focused on single countries, making it less clear how generalizable the evidence is for other countries. This study aims to identify country-specific preferences for matters such as policy design, compensation mechanisms or level of ambition, as well as the effect of information treatments on them. Contrary to most studies, our survey also measures the effect of information on willingness to pay or take action through real stakes question, including an incentive-compatible payment (in the form of a lottery). A lot of attention has been drawn on carbon pricing, while few studies focus on other climate policies, this work looks to fill this gap.

The literature has studied how the support for different climate policies depends on their respective features. The literature usually distinguishes “pull” measures, that are noncoercive and reward pro-environmental behaviors (e.g., subsidies), from “push” measures, that are coercive and punish environmentally unfriendly behaviors (e.g., taxes). For instance, when asked directly people usually support subsidies over taxes (Cherry et al., 2012; de Groot and Schuitema, 2012; Kallbekken and Aasen, 2010). Steg et al. (2006) find push measures to be more acceptable if revenues are allocated to energy-related measures, while the funding of pull measures does not affect their acceptability. However, Fischer et al. (2011) find that if people think other people are selfish and consumption-oriented, only strict regulations can achieve widespread behavioral change while voluntary behavioral changes are insufficient. Jagers and Hammar (2009) study the Swedish carbon tax and insist on the role of perceived costs. They show that people tend to overestimate the costs of taxes while underestimating the costs of subsidies or investments in public transport. More importantly, people often reject a policy because they perceive it as ineffective. This is particularly the case for carbon tax as noted by Hsu et al. (2008) in North America or Baranzini and Carattini (2017) in Switzerland. Fairness concerns are also

at play: Brannlund and Persson (2012) show that Swedish people prefer a progressive instrument rather than a regressive one. Regarding preferences for international burden-sharing, Gampfer (2014) insists on the role of fairness criteria and explains that low-income countries may refuse to take climate action absent a fair burden-sharing.

Apart from the policy's characteristics, people's own views are also a main driver of the support. In particular, left-wing or trustful people are consistently found to be more climate friendly (Leiserowitz et al., 2013; Fairbrother et al., 2021). Dietz et al. (2007) explain political orientation by underlying worldviews. Drews and van den Bergh (2016) underline the role of socioeconomic and psychological factors as shaping those views. Clearly, the perception of the negative consequences of climate change is an important factor as well, and informing people about them is effective to increase support (DeBono et al., 2012). However, Krosnick et al. (2006) point out that increasing knowledge about climate change will translate into a broader support for policies only if beliefs about the existence of climate change, human responsibility, and positive attitudes towards global warming are in place. According to Stoutenborough and Vedlitz (2014), it is also important to distinguish between the subjective perception of knowledge and objectively assessed scientific knowledge of climate change, as they are often unrelated and therefore have different implications for policy support.

Few studies have focused on cross-country comparisons. Various methodologies have been employed, ranging from representative survey (Ipsos, 2020; Stokes et al. 2015; Umit and Schaffer, 2020), to collection of voluntary responses (UNDP, 2021), and including semi-representative surveys ran through Facebook (Leiserowitz et al., 2021). Questions are most often of general order and seldom allow to understand support for specific policies. However, some common trends emerge, there is a high concern for climate change across the world despite major variations between countries, and knowledge about climate change improves over time.

## 2. Methodology

### 2.1. Survey design - Data collection

In each country, we gather a sample of 2,000 respondents that is made representative by use of quotas strata. So far, we have administered the survey in three countries: the United States, France, and Denmark. Surveys are still ongoing and will cover 16 more countries: Australia, Canada, China, Germany, India, Indonesia, Italy, Japan, Mexico, Poland, Spain, South Africa, South Korea, Turkey, Ukraine, and the United Kingdom (see Figure 1). Those 19 countries cover around three quarters of global CO<sub>2</sub> emissions (Crippa et al., 2020).

To ensure the quality and representativeness of our samples, respondents are channeled through screening questions that ensure that the final sample are nationally representative along gender, age, income, region, and education or rural/urban categories. The national samples are finally reweighted so that the samples' characteristics exactly match each country's quotas. Table 1 shows the characteristics of our samples, weighted samples, and national population statistics. We also exclude inattentive and quickest respondents. The median time for completion of the survey was 28 minutes.

We contracted with the commercial company *Dynata* to distribute the surveys across the different countries. Those kind of companies have a large pool of survey respondents and typically work with consulting firms for "consumer surveys". Each respondent who

completes the survey is rewarded. Compensations can either be cash or discount, which allow to cover respondents in the higher percentiles. To avoid selection bias, when the link to the survey is sent to participant, neither the topic nor the organization that has sent it are mentioned. On the first page of the survey, we then inform the respondents that this is an academic research survey, destined solely for research purposes, and run by non-partisan researchers.

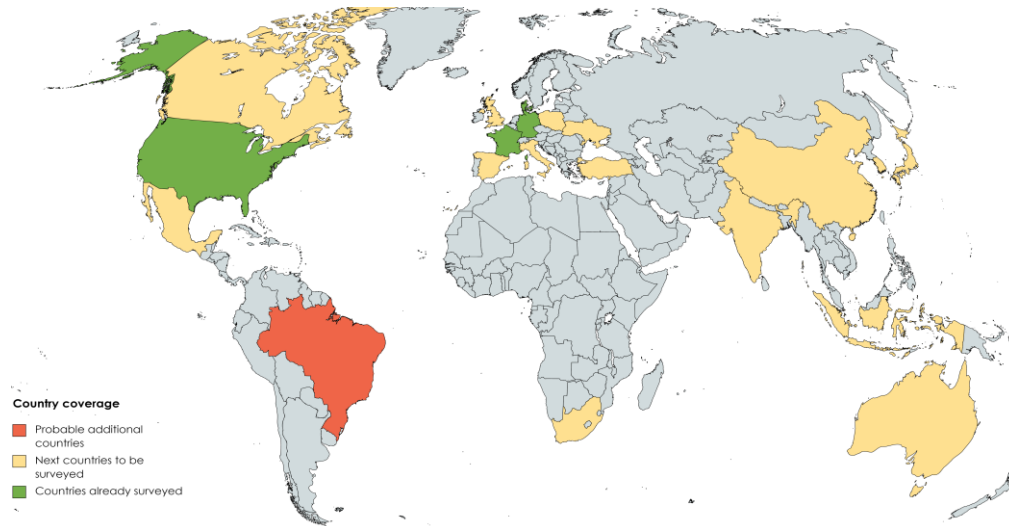


Figure 1. Countries coverage of the survey

	<i>U.S.</i>			<i>France</i>			<i>Denmark</i>		
	Raw Sample	Weighted Sample	Pop.	Raw Sample	Weighted Sample	Pop.	Raw Sample	Weighted Sample	Pop.
Sample size	2,010	2,010		2,006	2,006		2,013	2,013	
Male	0.48	0.50	0.49	0.44	0.49	0.48	0.50	0.50	0.50
18-24 years old	0.11	0.11	0.12	0.10	0.12	0.12	0.09	0.09	0.11
25-34 years old	0.18	0.18	0.18	0.15	0.15	0.15	0.12	0.12	0.17
35-49 years old	0.25	0.24	0.24	0.25	0.24	0.24	0.25	0.25	0.23
50-54 years old	0.25	0.25	0.25	0.25	0.24	0.24	0.27	0.27	0.25
More than 65 years old	0.22	0.22	0.21	0.25	0.25	0.25	0.27	0.27	0.25
Income Q1	0.24	0.21	0.25	0.31	0.26	0.25	0.29	0.26	0.25
Income Q2	0.28	0.25	0.25	0.31	0.26	0.25	0.26	0.23	0.25
Income Q3	0.27	0.25	0.25	0.23	0.25	0.25	0.27	0.28	0.25
Income Q4	0.21	0.30	0.25	0.14	0.23	0.25	0.19	0.23	0.25
Region 1	0.19	0.17	0.17	0.19	0.19	0.19	0.30	0.32	0.32
Region 2	0.20	0.21	0.21	0.22	0.20	0.20	0.23	0.23	0.23
Region 3	0.23	0.24	0.24	0.24	0.22	0.22	0.10	0.10	0.10
Region 4	0.37	0.38	0.38	0.15	0.14	0.14	0.16	0.14	0.14
Region 5				0.20	0.25	0.25	0.21	0.21	0.21
Urban	0.72	0.73	0.73	0.59	0.59	0.60	0.53	0.53	0.53

Table 1. Comparison of population and sample characteristics

## 2.2. Survey design - Survey overview

A full questionnaire is available in Appendix III - Full Questionnaire, United Kingdom. The survey was translated into the different official languages of each country by native speakers. It contains several random informational branches and is split in blocks. We

summarize the content of the more important ones in this section (see Figure 2 for a chart of the survey flow).

**Background socio-economic questions:** We collect information on respondents' gender, age, income, wealth, place of residence, highest level of education achieved, ethnicity, marital status, number of children, employment status, sector of occupation, and political orientation among others. For the latter, we explore several dimensions. First, we ask respondents if themselves or relatives are environmentalists. Then, we ask them for whom they voted in the last main national election. Finally, respondents are asked to classify themselves in terms of their views on economic policy, along a spectrum ranging either from “very liberal” or “very left”, to “very conservative” or “very right.”

**Household energy characteristics:** In addition to the primary socio-economics characteristics, we also collect information on energy characteristics. This block allows us to estimate carbon emissions and consuming behaviors of the households, and therefore the effects of different climate policies on the households' consumption and behaviors. Questions relate to gas and heating expenditures, transportation and heating habits, as well as accommodation insulation and public transport availability. This block is followed by an open-ended question on the respondents' main considerations regarding climate change.

**Informational Treatment:** Respondents are then randomly split into four different groups, who are either shown one of two instructional videos, both videos, or neither (see Appendix II - Video script, United Kingdom for examples of full scripts). The “Climate” video focuses on explaining the impacts of climate change in the respondent's country and provides results from the current scientific consensus about climate change. The “Policy” video contains information about our three main climate policies, namely a ban of combustion engine cars by 2030, a green infrastructure investment program, and a carbon tax with cash transfers. Both videos are short (2-5 minutes), pedagogical and provide information in a neutral manner. The goal of this informational treatment is to understand how perceptions may change after receiving new information and how it translates into policy support.

**Knowledge:** In this block, we assess the respondent's knowledge about climate change. In particular, questions refer to the anthropogenic dimension of climate change, the dynamics of climate change, the elements that contribute to climate change, and the possible consequences of climate change. Moreover, respondents are asked to relatively rank items in terms of greenhouse gases emissions for different topics, including food, mode of transportation, source of electric energy, and regional emissions (either total or per capita).

**Attitudes and Risks:** Here, we ask respondents about their views on what should be done to stop climate change, on the perception of climate change and climate policies on themselves and others, and what they are really to do in order to stop climate change as well as the factors that shape this.

**Preferences for climate policies:** First, we have a set of detailed questions on each of our three main policies. Questions tackle issues such as the effects of the policy, the perceived distributional impacts (“Who will win or lose”), the fairness, as well as the respondent's support for the policy. Respondents are then asked questions about their support for different climate policies (e.g., a tax on flying, subsidies for low-carbon technologies) and their support for a carbon tax depending on the revenue recycling (e.g., equal cash transfers to all households, cash transfers to the poorest households).

**Willingness to Pay and real stake questions:** In this block we ask respondents how much they are willing to pay annually to limit global warming to safe levels. The question is in the form of a yes or no question and the amount we ask them to pay is randomized (with possible values ranging from the equivalent of \$10 to the equivalent of \$1,000). Moreover,

we also inform respondents that in entering the survey they were automatically enrolled in a lottery to win the equivalent of \$100. We then ask them how much of this prize they are willing to forfeit and donate to a charity that acts to reduce global greenhouse gases emissions through reforestation. This allows us to extract a willingness to pay for limiting climate change.

**International burden-sharing:** This block contains questions about international climate policies and how countries should split the burden of limiting climate change. Questions relates to the intervention of the respondent's national government depending on what other countries do, as well as how countries should bear the costs of fighting climate change depending on their income or emissions. Finally, we ask respondents if they support several international climate policies.

**Housing and cattle products:** In this section, which appears only in relevant countries, we measure preferences for ban policies through the lens of mandatory insulation and consumption of cattle products.

**Final questions:** Eventually, we ask people about their level of trust in other people and in the government, as well as about their views on inequality.

**Petition:** At the very end of the survey, respondents are asked if they are willing to sign a petition to “stand up for real climate action.” We inform them that we will send this petition to the highest governmental authority (either President or Prime Minister office).

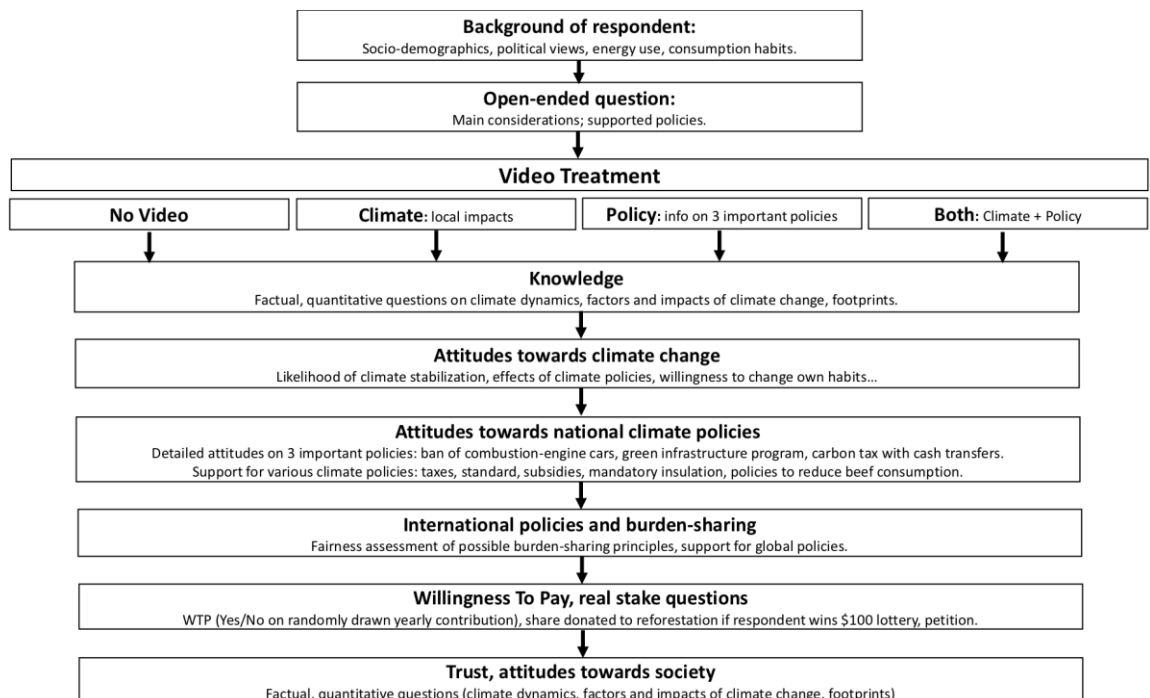


Figure 2. Survey Flow

### 3. Descriptive statistics

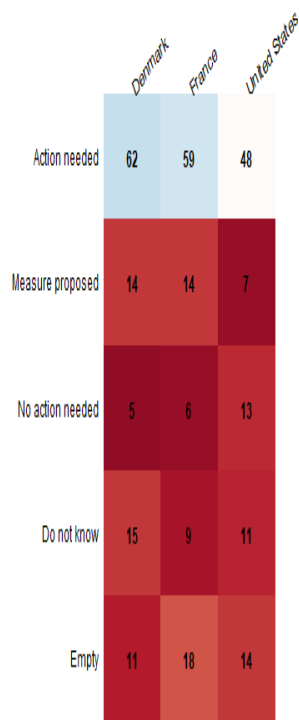
In this section, we describe the frequency of answers to the main questions of our survey in the countries covered so far. We restrict the sample to the control group and the reweighted samples.

The first questions cover socio-demographics and climate-related behavior. Figure 3 report the insights most relevant to climate change from these questions. For example, only 21% (U.S.) to 32% (France) of people talk or think about climate change (CC) at least several times a month. While most people overlook the climate issue and as polluting behaviors (driving, flying, eating beef) are ingrained, one understands the challenge to make climate policies accepted, as such policies will necessarily impinge on polluting behaviors.

Before showing the informational treatments, respondents are invited to write down their main considerations about climate change and what their government should do about this issue. We read one by one a random fourth of these open fields and recoded them in several categories in function of what they mention. Figure 4 presents the percentage of occurrences of our broader set of categories. Almost every respondent leaves a meaningful (i.e., not “Empty”) text, be it “I don’t know.” A majority of people either expresses concern for climate change, willingness for climate action, or mentions a sector where decarbonization is particularly needed; we regroup this type of answers under the topic “Action needed.” Conversely, few people express doubts against the reality of climate change, its gravity, or the need for climate action: we regroup them under “No action needed.” That being said, those who mention a specific decarbonization measure are also quite few. Overall, it seems that many people support changes in various sectors but are not fully aware of nature of these changes, let alone the policies that could bring them about.

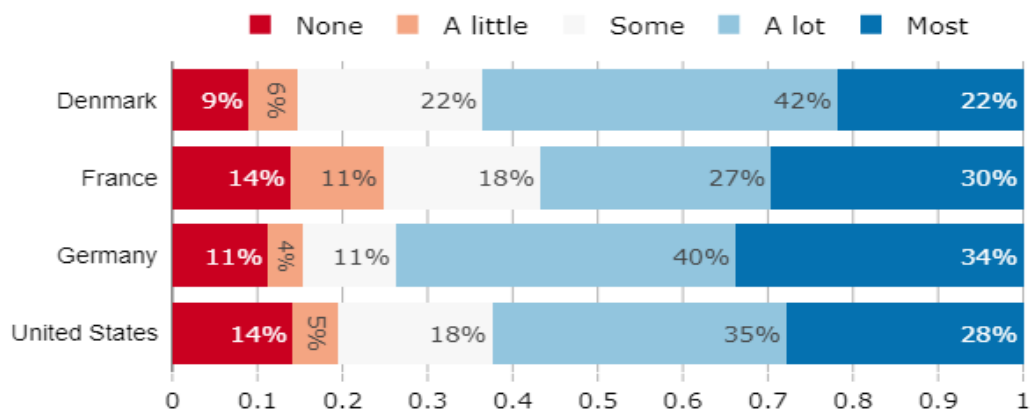
	Denmark	France	United States
At least one flight between 2017 and 2019	62	50	68
More than one flight per year on average	40	28	46
Eat beef at least once a week	66	45	59
Commutes by car/motorbike	39	44	57
Talks or thinks of CC several times a month	26	32	21
Is member of an environmental organisation	8	4	11

Figure 3. Climate-related behaviors (in %).



**Figure 4. Themes mentioned in the open field – When thinking about climate change, what are your main considerations? What should [country] government do regarding climate change? (in %)**

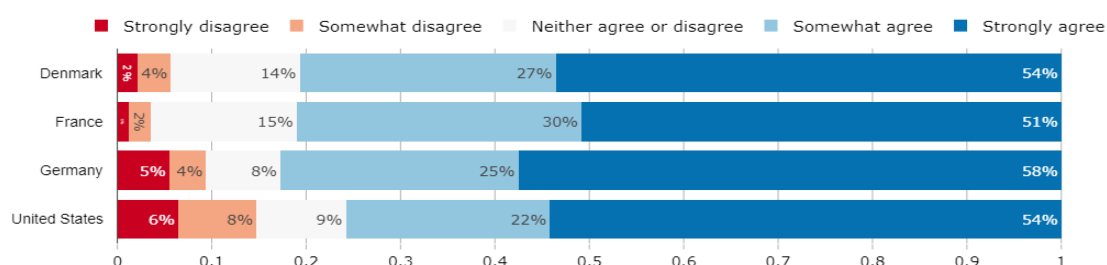
Although about 60% of respondents attribute climate change to human causes, Figure shows that only a quarter knows that most (if not all) of climate change is anthropogenic. When looking for the principal components within knowledge questions, this question singles out as the most important factor that predicts knowledge relative to climate change.



**Figure 5. CC anthropogenic – What part of climate change do you think is due to human activity? Correct answer: Most. Those who do not believe that climate change is real are recoded as None.**

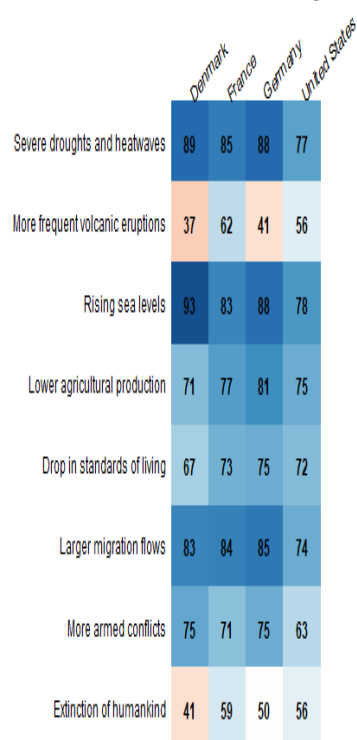
Despite widespread ignorance of the climate science, about 80% of people agree that climate change is an important problem, and a majority even strongly agrees (Figure ).





**Figure 6. CC an important problem – Do you agree or disagree with the following statement: “Climate change is an important problem.”?**

This concern relates to the widespread view that climate change will likely cause all possible damages, from the scientifically sound ones (droughts and heatwaves, sea-level rise) to the very unlikely and remote extinction of humankind (Figure ). Again, the ignorance of climate science combined with a deep worry shows up as in most countries, a majority of people mistakenly believe that climate change will make volcanic eruptions more frequent. Whereas, results appeared broadly similar across countries until now, knowledge of climate change seems higher in Denmark compared to other countries. Danes are less mistaken about volcanos, a higher share of them consider themselves knowledgeable, and they make fewer mistakes when asked to find out which gases are greenhouse gases (GHG), as shows in Figure .



**Figure 7. CC impacts – If nothing is done to limit climate change, how likely do you think it is that climate change will lead to the following events? ("Likely" and "Very likely" responses, in %). Items for which there is scientific certainty: droughts, sea levels (*Very likely*); volcanos (*Very unlikely*).**

Figure summarizes the knowledge block. It shows that a large group of people do not realize the extent of efforts needed to halt climate change (as they mistakenly think that cutting emissions by half will suffice) nor do they realize who should bear the efforts (as they think that China's carbon footprint per capita is higher than their own region's).

	Denmark	France	United States
CC exists, is anthropogenic	0.6	0.5	0.6
Considers one's self knowledgeable	0.2	-0.1	0.1
Cutting emissions by half enough to stop global warming (False)	0.4	0.4	0.5
Score to knowledge of greenhouse gases in [0;+4]	3.2	2.6	2.8
Knowledge score of impacts in [0;4] (droughts, sea-level, volcanos)	2.7	2.2	2.1
Correctly compares p.c. emissions of e.g. own region vs. China	0.5	0.7	0.4

**Figure 8. Knowledge. Average of answers, recoded in [-2;2] (items 1, 2,); [0;1] (3, 6); or [0;4] (4, 5).**

Regarding their view of the future (Figure and 10), the population is divided between the pessimistic, the optimistic, and those who do not take a side. Although these three groups are generally not far from balance, pessimism dominates when it comes to what will happen (in terms of prosperity or climate), while optimism dominates when guessing what would happen (to one's lifestyle or to the economy) in case of ambitious climate policies.

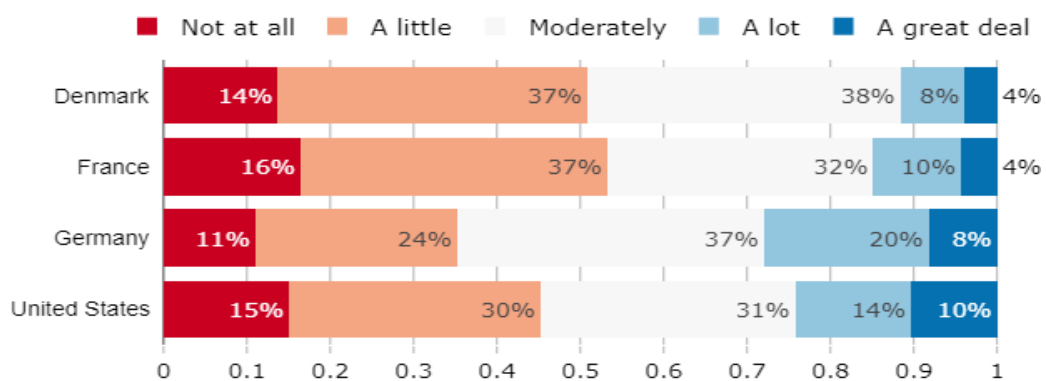


Figure 9. Ambitious climate policies damaging to own lifestyle – If we decide to halt climate change through ambitious policies, to what extent do you think it would negatively affect your lifestyle?

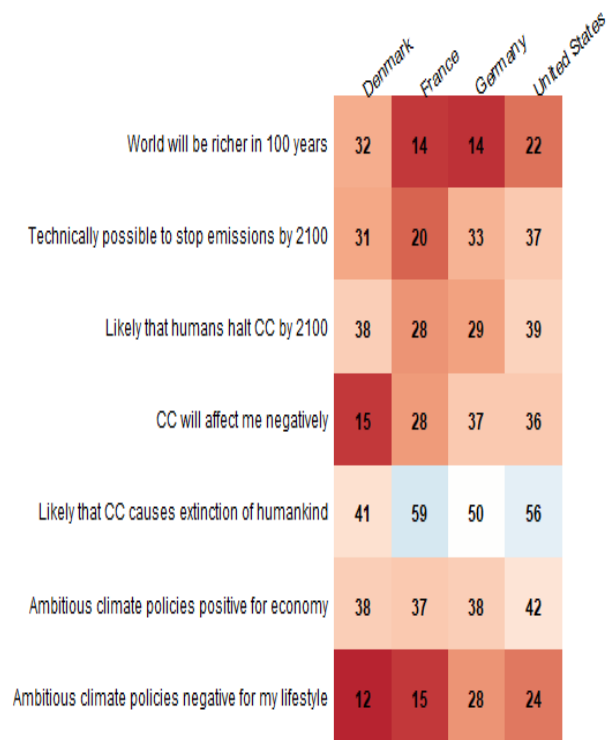


Figure 10. Views about future pathways' likelihoods and effects (in % of agreement with statement).

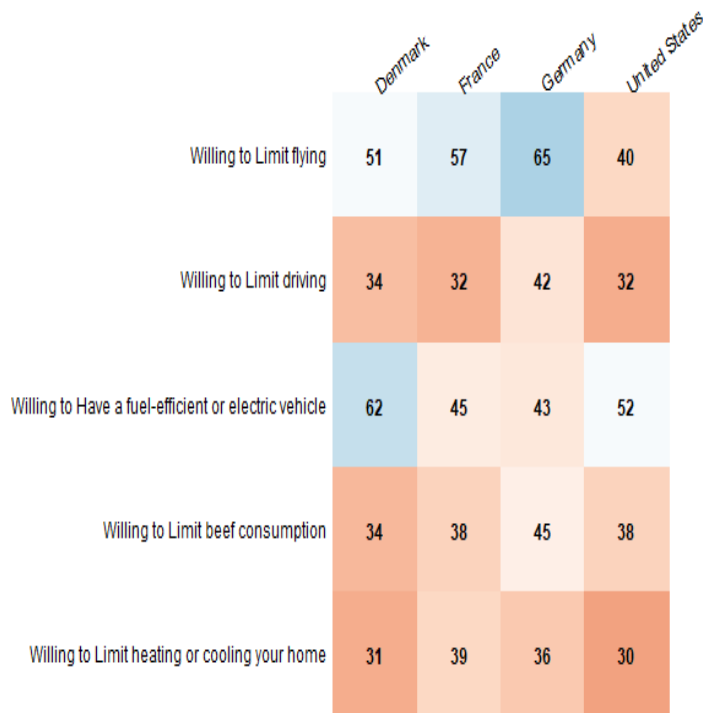


Figure 11. Willingness to change habits – Here are possible behaviors that experts say would help reduce greenhouse gas emissions. To what extent would you be willing to adopt the following behaviors? (% of willingness to change “A lot” or “A great deal”).

If many people are grim concerning the likelihood of halting climate change, it may be because they are lucid of the reluctance of people to change their (polluting) habits (Figure ). To understand why so many people are not willing to change their habits a lot despite the widespread view that ambitious climate policies would not affect their lifestyle negatively, it is useful to look at the conditions under which people would be ready to change their behaviors. Figure suggests that the changes in others' behaviors may be pivotal, and in particular from the most well off. In a nutshell, many people are ready to change, but at the condition that the transition is universal and fair.

	Denmark	France	Germany	United States
Ambitious climate policies	47	41	56	36
Having enough financial support	49	45	64	55
People around you also changing their behavior	57	39	54	47
The most well off also changing their behavior	58	59	62	54

**Figure 12. Conditions to change – How important are the factors below in order for you to adopt a sustainable lifestyle (i.e. limit driving, flying, and consumption, cycle more, etc.)? (% agreement)**

The next blocks enquire attitudes regarding climate policies, starting with our three main policies of interest: a carbon tax whose revenue would fund an equal cash transfer to each adult, a ban on combustion-engine cars in 2030, a green infrastructure program financed by public debt. As the opinions about their effects and incidence are very similar across the three policies, Figure presents the opinions averaged over these policies. Even though most people agree that the policies would be effective and efficient to reduce GHG emissions, and similarly effective against air pollution, people generally think that only the richest would win from the policy, and often think that their household would lose out financially. Contrary to the question presented above about generic climate policies, people tend to foresee negative economic effects when judging these specific policies. Figure shows support for our three main policies. In all countries, there is a relative majority against a carbon tax with cash transfers, although the “median” respondent is indifferent. The same is true for a ban on combustion-engine cars, even if the latter obtains a relative majority support when public transport are made widely available. This shows the importance of complementarity between measures and the pivotal role of a green infrastructure program, whose an absolute majority supports. Relatedly, another question shows that the most favored source of funding for such investments would be a tax on the wealthiest.

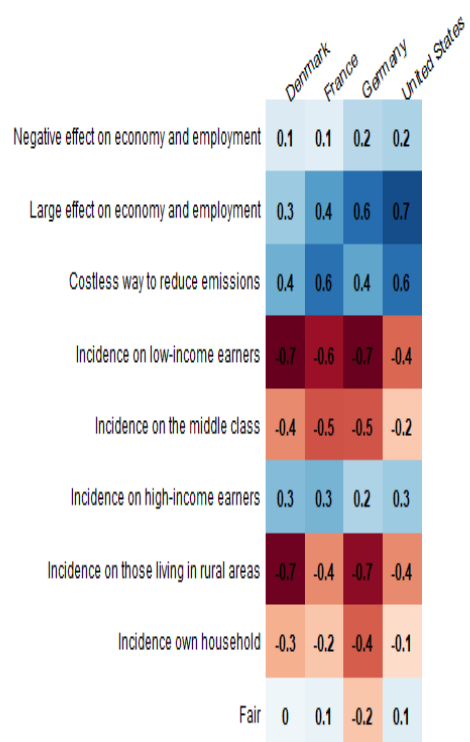


Figure 13. Average attitudes to the main policies (mean among the three policies recoded in [-2;2]).



Figure 14. Main policies' support – Do you support or oppose the following policy? (% of support)

Other policies receive more support (Figure ). Banning the most polluting cars from city centers is surprisingly popular given the relative majority against a ban on combustion-engine cars. Mandatory insulation of buildings before 2040 combined with government subsidies covering half the costs also obtains a solid majority in all countries. However, taxes are rarely supported by a majority, except when combined with green investments (Figure ). It is noteworthy that, contrary to other countries (which probably have lower taste for redistribution), a majority of French people would support a carbon tax if its revenues are used to compensate the poorest households or those most constrained to use fossil fuels.

Figure focuses on beef consumption, a habit that will be challenging to change as it conveys a hardly substitutable pleasure. Most people correctly find that beef has a higher GHG footprint than chicken, pasta or rice. About one third of people are willing to limit a lot their consumption of beef, and the same share of people supports the policies that would be most efficient to reduce beef consumption. The only policy related to this topic obtaining a majority support in all countries is the one not directly related to beef: subsidies on healthy plant-based food. French people appear the most keen on addressing beef consumption as a majority of them also supports a ban on intensive cattle farming.

Turning to the international policies block, an overwhelming majority thinks climate policies should be implemented at the global level; far less consider more local levels of implementation. (Figure ). Solid majorities support a global democratic assembly to draft climate treaties, or a global tax on millionaires to finance public services in low-income countries that comply with international standards regarding climate action. The most preferred fairness principle is by far the *polluter pay* principle, although in all countries, a relative majority acknowledges that transfers from high-income countries to vulnerable ones are needed.

	Denmark	France	United States
Tax on flying (+20%)	59	46	33
Tax on fossil fuels (\$45/tCO <sub>2</sub> )	44	32	35
Ban polluting cars in city centers	66	58	49
Subsidies to low-carbon technos	66	58	58
Funding clean energy in LDC	54	49	48
Mandatory, subsidised insulation	64	61	53

Figure 15. Other policies' support – Do you support or oppose the following policies? (% of support)

	Denmark	France	Germany	United States
Cash for constrained HH	37	56	46	44
Cash for the poorest	43	57	47	44
Equal cash for all	27	45	31	36
Reduction in income tax	39	64	52	46
Reduction in corporate tax	25	37	24	29
Tax rebate for affected firms	37	53	33	38
Funding green infrastructure	60	65	61	57
Subsidies to low-carbon technos	53	58	66	54
Reduction in the deficit	34	52	41	47

**Figure 16. Support for carbon tax depending on revenue use – Governments can use the revenues from carbon taxes would raise gasoline prices by 10 centimes per liter, if the government used this revenue to finance... (% support)**

	Denmark	France	Germany	United States
Eats beef at least once a week	66	45	75	59
Knows that beef has high GHG footprint	86	73	85	76
Willing to limit beef consumption	34	38	45	38
Support for tax on cattle products that would double beef price	33	29	38	33
Support for subsidies on organic and local vegetables, fruits, and nuts	61	53	56	44
Support for removal of subsidies for cattle farming	33	29	39	41
Support for ban of intensive cattle farming	31	56	48	37

**Figure 17. Beef consumption habits, knowledge, and related policies' support. (in %) in different ways. Would you support or oppose introducing a carbon tax that**



	Denmark	France	United States
Level of climate policies needed: global	0.8	0.9	0.7
All countries should pay in proportion to current emissions	0.6	1	0.8
Richest countries should pay even more to help vulnerable ones	0.2	0.5	0.1
Global democratic assembly on climate change	0.4	0.5	0.3
Global tax on millionaires to finance low-income countries	0.5	0.9	0.4

Figure 18. International climate policies. Average support recoded in [-2;2] except item 1: in [0;1].

#### 4. Highlights

Figure offers the main insights gained from the descriptive statistics, by showing average answers, recoded on a [-2; +2] scale, to most relevant questions, in particular support for policies. It appears, that attitudes are similar among the three countries covered so far, Denmark, France, and the United States. Moreover, about half of the population lacks knowledge of climate science critical to understand the extent of efforts required by decarbonization. Despite a lack of knowledge, most people are concerned with climate change, support a national policy to fight it, and support policies at the global level even more. When it comes to national policies, mandatory insulation of buildings and a green infrastructure program obtain a large support. Yet, support is mixed for a carbon tax with cash transfers, and a ban on combustion-engine cars, that fail to obtain a majority. The lack of support is highly correlated with a perceived lack of fairness, indeed policies are often seen as regressive and detrimental to one's budget. Therefore, the support rises when a policy is complemented by the procurement of alternative to fossil fuels through green investments, or by taxes on the wealthiest. Fairness also plays a major role at the global level, where the polluter pay principle together with redistributive transfers are largely supported. Finally, our treatments show that providing neutral information can improve support for climate policies, be it on the local impacts of climate change or on the policies themselves. The information on the carbon tax with cash transfers is particularly effective in making people understand that poorer households would actually win from such policy, and its mechanism on the support seems to be mediated through the belief in the policy's fairness.

	Denmark	France	United States
CC exists, is anthropogenic	0.6	0.5	0.6
CC is an important problem	1.3	1.3	1.1
[Country] should fight CC	1.1	1.1	1
Willing to limit driving	0.1	-0.1	-0.1
Ban on combustion-engine cars	0	-0.3	0
Green infrastructure program	0.5	0.5	0.4
Carbon tax with cash transfers	0	-0.2	0
Ban on intensive cattling	-0.2	0.5	-0.1
Mandatory insulation of buildings	0.7	0.7	0.4
Countries pay in proportion to emissions	0.6	1	0.8
Global tax on millionaires funding LDC	0.5	0.9	0.4

Figure 19. Summary of attitudes on CC and climate policies (mean of answers recoded in [-2;2]).

## 5. References

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## Appendix

### 1. Appendix I - Full Literature Review

#### 1.1. Preferred policies and policy characteristics

The literature has identified several trends regarding people's preferences over climate change mitigation policies<sup>1</sup>. First, it appears that the actual attributes of a given policy can explain those preferences.

##### *1.1.1. Coercive dimension*

Results from social psychology point that people usually prefer policies perceived as less coercive (i.e. restrictive). The literature usually distinguishes "pull" measures, that are noncoercive and reward pro-environmental behaviors (e.g., subsidies), from "push" measures, that are coercive and punish environmentally unfriendly behaviors (e.g., taxes). For instance, when asked directly people usually support subsidies over taxes (Cherry et al. (2012); de Groot and Schuitema (2012); Kallbekken and Aasen (2010); Steg et al. (2006)). Steg et al. (2006) find push measures to be more acceptable if revenues are allocated to energy-related measures, while the funding of pull measures does not affect their acceptability. Similarly, in a U.S. survey Attari et al. (2009) find that for transports behavior "soft regulations" (e.g., tax break for compact cars) were preferred over voluntary changes, while "hard regulations" (e.g., restricting the purchase of SUV) were the less preferred measures. People opposed to these measures mentioned the loss of "personal freedom" and "need for choice." Moreover, de Groot and Schuitema (2012) find that if push measures target high-cost behavior (e.g., driving less) or if the policy is seen to be accepted by a minority of the public, public support will be lower. However, Kotchen et al. (2013), using randomized treatment within a survey, find that the willingness-to-pay (WTP) does not vary substantially for a cap-and-trade program, a carbon tax, or a GHG regulation (although sociodemographic characteristics do vary).

Fischer et al. (2011) can provide an interesting explanation for this fact. They use qualitative interviews from five European countries to show that people back up their argument with generalized characteristics of human kind. In particular, people think other people are selfish and consumption-oriented and therefore that only strict regulations can achieve widespread behavioral change and that voluntary behavioral changes are insufficient.

##### *1.1.2. Perceived costs and effectiveness*

Jagers and Hammar (2009) study the Swedish carbon tax and show that people associate carbon taxes with high personal costs. More interestingly, those high personal costs are often related to misperceptions, for instance the costs of a carbon tax are often overestimated while its benefits underestimated (Carattini et al. (2018); Odeck and Bråthen (2002); Schuitema, Steg et al. (2010)).

Depending on the policy, people may either overestimate or underestimate the costs. In particular, Jagers and Hammar (2009) show that people tend to overestimate the costs of

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<sup>1</sup> For other reviews see for instance Brechin (2010); Ziegler (2017); Maestre-Andrés, Drews, and van den Bergh (2019); Drews and van den Bergh (2016).

taxes, while underestimating the costs of subsidies or investments in public transport. Douenne and Fabre (2019) show that French people overestimate the negative impact of a carbon tax on their purchasing power, and at the same time do not perceive this policy to be effective.

Kallbekken and Sælen (2011) show that, in Norway, support for a fuel tax increases if people believe that the tax is going to limit driving and will have a positive effect on climate change. Moreover, experiencing the effectiveness of a measure can help quickly update one's beliefs and increase support for the policy. Eliasson and Jonsson (2011) study the congestion price implemented in Stockholm and show that the evolution of the perceived effectiveness was a major determinant for the acceptability of the policy: Before the trial implementation, 30% of the population supported the congestion price, whereas 70% supported it at the end of the trial as they had experienced its effectiveness. Heres et al. (2017) in a laboratory experiment ask participants about Pigouvian taxes and subsidies that theoretically should produce identical outcomes, they find that the greater support for subsidies can be explained because people expect subsidies to increase their payoffs more than a tax. Moreover, when adding uncertainty on how the tax revenues would be used the results are even stronger.

More importantly, people often reject a policy because they perceive it as ineffective. This is particularly the case for carbon tax as noted by Hsu et al. (2008) in North America or Baranzini and Carattini (2017) in Switzerland. Finally, carbon taxes are often perceived as ineffective to discourage carbon-intensive activities (Klok et al. (2006); Steg et al. (2006)) and this is often one of the main reasons why carbon taxes are rejected by people (Baranzini and Carattini (2017); Hsu et al. (2008)).

### *1.1.3. Fairness of the policy/Distribution of costs*

When a policy is implemented nationally or locally, justice considerations within a country or a region (e.g., concerns for regressivity and negative effects on low-income households) affect the acceptability of a given policy and often need to be counterbalanced to increase the acceptability of a carbon tax. Therefore, the perceived fairness of the policy plays an important role for its support. Brannlund and Persson (2012) show that in Sweden, people preferred an instrument with progressive cost distribution rather than a regressive one. Regarding international burden-sharing, Klinsky et al. (2012) with a qualitative study show that the most frequent arguments are the causality of emissions, the ability to bear costs, punishing bad behaviors, equality of burdens, relationship with other stakeholders, and the cost effectiveness. Cai et al. (2010) study, with respondents from the U.S. and Canada, the distribution of costs among different subgroups of the population. They show that the WTP decreases if greater responsibility is assigned to taxpayers, while it increases if industry (investors) and energy users are targeted. However, when Baranzini and Carattini (2017) ask directly about preferences between redistribution towards affected household, tax rebates or revenue recycling for environmental purposes, 60% of the respondents prefer the third option.

Regarding international burden-sharing, Gampfer (2014) insists on aspects such as vulnerability, historical responsibility or ability to pay. Bechtel and Scheve (2013) ask people in the U.S., UK, Germany, and France about international burden sharing and show that an agreement where only rich countries would pay is mainly rejected. Meilland (2020), using surveys in both the U.S. and France, shows that respondents favor an equal distribution of per capita emissions between countries (rather than a territorial distribution) and that emissions since 1990 should be taken into account. Moreover respondents disagree that China and India are taking their fair share.

#### *1.1.4. Effect on economy as a whole*

The impact on the economy as a whole can also undermine the support for a carbon tax. People are often concerned about the impact on competitiveness and employment Carattini et al. (2017). It also appears that those concerns can be overestimated by people. Focusing on Switzerland, Thalmann (2004) sees that respondents to his survey express concern for unemployment while people in the survey were not subject to unemployment risks, which leads Carattini et al. (2018) to interpret this as an "overreaction". Spash and Lo (2012), in a study on Australia, underline that campaigns by companies from the energy sector could increase fears for those concerns.

### **1.2. Personal views**

Apart from the policy's characteristics, people's own views are also a main factor regarding the support of climate mitigation policies.

#### *1.2.1. Political orientation and cultural views*

Drews and van den Bergh (2016) underline the role of socioeconomic and psychological factors on the support or not of climate policies. Studies in Switzerland Tobler et al. (2012) or Sweden (Harring and Jagers (2013); Hammar and Jagers (2007)) underline the positive effect of left-wing orientation on positive attitudes toward climate policies. In the U.S. context Leiserowitz et al. (2013) uses a large-scale survey (conducted from November 2002 to February 2003) and finds that an identification to the Democrat and a liberal political ideology lead to stronger support for climate policies. Furthermore, Kotchen et al. (2013) find that Democrats express a higher WTP than Republicans in regard to climate change mitigation. Moreover, McCright (2008) finds that Democrats and liberals express more scientifically accurate beliefs about climate change than conservatives and Republican.

However, Drews and van den Bergh (2016) underline that the driving factor might not be political orientation but rather the personal views of people. Dietz et al. (2007) with a survey on 316 people from Michigan and Virginia find that the strong effect of political orientation is only indirect as it relates to people's values and worldviews. Leiserowitz (2006) finds that egalitarian values have a strong positive effect while individualists people are more likely to oppose climate policies as they fear more restrictions on their autonomy. Therefore, individualists will rather favor market-based strategies and technology. Cherry et al. (2017) underline the importance of cultural worldviews, in particular individualist or communitarian views affect the most support for coercive policy instruments in their laboratory market study, while hierarchical or egalitarian views strongly affect support for redistributive tools. Moreover, Kahan et al. (2011) show, with a large sample size survey ( $N = 1,540$ ), that being scientifically literate or able to engage in technical reasoning does not lead to consider climate change more as a serious threat than other people but is rather associated with an even greater "cultural polarization": People do not converge more on climate risks supported by scientific evidence but form risk perceptions that are in line with their own cultural values.

In addition to those factors, the literature has also studied the role of emotions. Smith and Leiserowitz (2014) find that (self-reported) "discrete emotions" (e.g., worry, interest, hope) are stronger predictors than cultural worldviews when it comes to support for climate policies. Sundblad et al. (2014) focus on worry and find, using data from Sweden, that concern for the consequences of climate change increases the intention to change personal behavior to reduce GHG emissions.

### *1.2.2. Beliefs and knowledge*

Beliefs about climate change are also key determinants for policy support. Sibley and Kurz (2013) with data from New Zealand, show that beliefs about the existence of climate change are more predictive than beliefs about the role of humans in causing climate change or self-reported pro-environmental behavior. Although there is an effective interaction effect between beliefs about the existence of climate change and the role of humans in it. Clearly, the perception of the negative consequences of climate change is an important factor as well. DeBono et al. (2012) using data from a telephone survey in Malta show that perceptions about the negative effects of climate change on health and well-being (e.g., disease, standard of living, water shortages) are a very strong driver for supporting climate change mitigation policy. However, Krosnick et al. (2006) point out that increasing knowledge about climate change will not necessarily translate into a broader support for policies, and that it will do so only if the required beliefs and attitudes about climate change are in place. According to Stoutenborough and Vedlitz (2014), it is also important to distinguish between the subjective perception of knowledge and objectively assessed knowledge. McCright (2008) finds that self-reported knowledge of global warming has no robust effect on support for climate policies. On the other hand, Adaman et al. (2011) in Turkey and Park and Vedlitz (2013) and Zahran et al. (2006) in the U.S. find that higher objective knowledge is correlated with greater policy support. Absent of personal knowledge, Ding et al. (2011) and McCright et al. (2013), using representative survey data from the U.S., find that heuristics such as (mis)perception about scientific agreement are determinant for supporting climate policy. However Funk and Kennedy (2016), with a U.S. survey on 1,534 adults, insist on the major partisan divides in the way people interpret the scientific consensus on climate change. Finally, Sunstein et al. (2016) underline the existence of asymmetrical updating when confronted to new information on climate policies: People not sure about the human causation of climate change update their beliefs in response to unexpected good news but will not update them if they are presented unexpected bad news. On the other hand, people who strongly believe in the human causation of climate change update their beliefs far more in response to unexpected bad news than in response to unexpected good news. However their sample size is quite small ( $N = 302$ )

### *1.2.3. Government motives*

Finally, government motives are often questioned as people perceive carbon taxes as just another way for the government to raise more revenue. This concern must be linked to the previous one about the belief that carbon taxes are not effective at reducing emissions. Additionally, this lack of trust is also related to broader concerns about tax policy and government intervention (Baranzini and Carattini (2017); Beuermann and Santarius (2006); Dietz et al. (2007)).

Lack of trust in government plays an important role in public approval in particular in the U.S. Zahran et al. (2006).

Regarding those last points, it is interesting to note that people usually oppose double-dividend propositions (i.e. using the revenue from carbon tax to reduce other distortionary taxes). Some studies (Klok et al. (2006); Beuermann and Santarius (2006); Dresner et al. (2006)) hint toward the fact that people do not link the goals of reducing greenhouse gas emissions and reducing taxes in other areas. Moreover, the lack of trust in policy-makers also lead people to believe that this kind of policy would not be implemented correctly. As noted by Klok et al. (2006) they can suspect that the goal of the tax is not to really reduce GHG but to increase government revenues. Fairbrother (2017) indicates that generalized distrust of scientists is rare and distinguishes several types of distrusters. On one hand there



are hard core distrusters who do not believe in all elite social institutions (including experts), while on the other hand there are distrusters who believe in experts and scientists but not in policymakers which might explain why they do not ask for better climate policies.

On a more quantitative aspect, Rafaty (2018) tests the causal-relationship between the public perception of political corruption and the strength of national climate change mitigation policies through a cross-country time-series cross-section analysis. While he does not establish a direct causal relationship, his results show that when controlling for trust or corruption, most other structural and political variables become insignificant.

### **1.3. Along which margins do people react**

It is also important to understand which factors directly affect the support for a given policy. For instance, Shwom et al. (2010) try to elucidate the reasons people invoke after voting for specific policies. They identify four groups of rationales: economic rationales, political rationales, technological rationales, and moral rationales. They identify personal costs as the biggest reason for policy support, while positive rationales are often associated with positive policy support.

#### ***1.3.1. Earmarking***

Bristow et al. (2010), in a study in the UK, underline the role of earmarking revenues to increase support for a carbon tax (which can increase support up to 20 percentage points). Hsu et al. (2008) show that in Canada revenue recycling (e.g., reducing income tax) increases policy support. Kallbekken and Aasen (2010) insist on the destination of the revenue earmarked. They show that Norwegians prefer revenue to be earmarked to environmental projects. Lachapelle et al. (2012) show that in the U.S. and Canada, people prefer the revenue collected from carbon pricing policies to be used for R&D for renewable energy and that only a smaller share favors tax rebates. Earmarking also allows to address the lack of trust in government highlighted above, as well as perceived effectiveness if used to finance other climate-related policies. Interestingly, Carattini et al. (2017) find, in the Swiss context, that providing information on the effectiveness of a carbon tax reduces the demand for revenue recycling.

#### ***1.3.2. Offer alternatives***

Kallbekken and Aasen (2010) also underline the need to offer alternatives to fossil fuel in order to increase public acceptance of a carbon tax. This kind of barrier is also identified by Douenne and Fabre (2020) in the French context, who also insist on the need to supplement a carbon tax with complementary policies in order to alleviate the main reasons of opposition.

#### ***1.3.3. Communication and Media Exposure***

Akter and Bennett (2011) find that in Australia willingness to take action against climate change is significantly influenced by mass-media exposure (e.g., watching *An Inconvenient Truth*). On the other hand, Morrison and Hatfield-Dodds (2011) identify that exposure to media coverage of *An Inconvenient Truth* and the *Stern Report* might have a negative effect on low to medium impact policies because of the complexity of the information. Krosnick et al. (2000) examine the effect of the campaign to build support for the Kyoto treaty and see no changes in public opinion at the national level and only political affiliation effects (strong Democrats endorsed the positions of the Clinton administration, while strong Republicans were less inclined to do so). Source of information also appears to matter,

Zhao et al. (2011) show that people paying more attention to political news express less support, while people following scientific and environmental news express more support. Spash and Lo (2012) also underline how emissions-intensive industries led information campaigns to exploit concerns about economic recession when the Australian Government proposed a  $CO_2$ -equivalent tax.

The framing of the information is also an important component. Hardisty et al. (2010) show that in the U.S., Republicans are willing to pay more for a carbon price if it is named a 'carbon offset' rather than a 'carbon tax.'

#### ***1.3.4. Involve civil society***

Bernauer and Gampfer (2013) identify the importance of civil society involvement on public support for global environmental governance. Lo et al. (2013) study the importance of public deliberation in Australia for reaching a consensus on fundamental principles for climate policies such as trusted sources of information or transparent accountability. van der Linden et al. (2015) find that increasing the public perception of scientific consensus is causally associated with an increase belief in the existence of climate change, human causation and worrisome threats. These beliefs result in increased support for climate policies.

Finally, it should be noted that opposition to climate change mitigation policies does not always come from citizens. For instance, Oates and Portney (2003) offer a review of the role of various interest groups in the choice of environmental regulatory instruments.

### **1.4. Cross-country comparisons**

Few studies have focused on cross-country comparisons, yet it is worth mentioning some of them. Ipsos (2020) has created a barometer of the public opinion on climate change in 30 countries, with a sample size around 24,000 respondents (500 or 1,000 per country) with people age 16+. The study also took place in 2019 (Ipsos (2019)). They show that most concerned countries about climate change are some European countries, Canada, Australia, China and India. This barometer covers topics such as the link between the COVID-19 pandemic and climate change, preferences between giving priority to the environment or economic growth and jobs, concerns about climate change, knowledge about climate change, its causes and consequences, as well as attitudes regarding solutions to fight climate changes. A recent survey from the UNDP (UNDP (2021)) with 1.2 million respondents from 50 countries aims to provide reliable information to policymakers on people's considerations about climate change and how they would like their countries to respond. The survey identifies the most popular policies (e.g., conservation of forests and land, investing more in green business and jobs) and socio-demographic drivers of belief in climate emergency (e.g., educational background, age). Stokes et al. (2015) study regional differences in the perceptions of climate change problems over 40 countries. Umit and Schaffer (2020) use data from the European Social Survey ( $N = 44,387$ ) to study public attitudes towards carbon taxes and observe a widespread aversion to them. They also show that higher political trust leads to higher support for carbon taxes, while people who depend highly on energy or live in rural areas have a lower level of support. They interpret those results as an evidence of the importance of self-interest for the attitudes to carbon taxes. Leiserowitz et al. (2021) using Facebook data study climate change beliefs, attitudes and policy differences in 31 countries and territories.

## 1.5. Local treatment

The literature seems inconclusive regarding the impact of psychological distance (i.e. the extent to which an object is distant from someone, either geographically, socially, or in time) on support for climate change mitigation policies. McDonald et al. (2015) propose a review of studies that examine psychological distance and their results suggest that reducing psychological distance is not always beneficial. They underline the need to carefully frame this psychological distance, as factors such as values, beliefs, and the need to avoid provoking fear play a major role. Furthermore, if climate change is too psychologically close, it is likely to be associated with intense emotional reactions, which have the potential to provoke avoidance, as noted by Brügger (2013) for instance.

Manning et al. (2018) find no significant effect for spatial distance when assigning Minnesotans to read a short scenario about the effects of climate change in Minnesota or Kenya. However the sample size remains low ( $N = 160$ ) and the variable of interest is only the willingness to donate.

Owen et al. (2012) show that experiencing extreme weather events immediately affect supports for environmental policies. However, Park and Vedlitz (2013) find no evidence for this hypothesis in the U.S. for people who live in areas that suffered from Hurricanes Katrina and Rita, and that it is rather the information about risks that contributes to fostering proactive climate responses.

Some studies such as Chu and Yang (2018) find a significant effect on policy support of framing with local impact of climate change on an important sample ( $N = 1,086$ ). However, to test global effect they only provide information about Indonesia (either on the effects of climate change on Babesiosis, a tick-borne disease or coffee) to test for the global framing (while the other groups receive information about the U.S.).

Brügger (2013) demonstrates, with surveys in the UK and Switzerland, that the spatial perception of the effects of climate change might be related to the type of climate actions to undertake. He shows that perceptions of local climate risks are often associated with individual behavior changes, while the perception of global risks is associated with climate policies. However, as Spence and Pidgeon (2010) underline this might be related to the fact that people often perceive distant impacts of climate change as more severe than local impacts.

Hart and Nisbet (2012) focus on the political dimension of spatial distance. They find that conservatives tend to express more support for action when exposed to socially near victims, whereas the opposite tends to be true for liberals. Indeed, to increase the willingness to act on climate change among conservatives, it may be beneficial to decrease the perceived social distance of climate change by focusing on impacts on similar others. There is empirical support for the notion that framing climate change impacts in terms of increasing consideration for others, is associated with increased willingness to act pro-environmentally among climate change deniers (Bain et al. (2012)).

## 1.6. Areas to explore and contributions of our study

From this review, it appears that several topics could be explored to complement the knowledge of those issues.

First, support for policies is often tested for one policy at a time, but as indicated by Stiglitz et al. (2017) a single price instrument might not be the best solution to tackle climate

change, therefore testing preferences for different bundles of policies might be worth investigating. Moreover, a lot of attention has been drawn on carbon pricing, while few studies focus on other climate policies. Furthermore, few studies have tried to frame the same policy differently and therefore it could be interesting to better know the implication of different communication strategies. In line with this, it also appears we lack evidence on which population to target and how to adapt communication strategies to different populations. There is also a need as to better understanding the conditions under which information asymmetry can be addressed. Additionally, the relative effects of each factor is also a topic that needs further investigation.

The key contributions of our study to this literature will be to offer comparable cross-country evidence covering at the same time OECD and non-OECD countries. Previous work has mostly focused on single countries, making it less clear how generalizable the evidence is for other countries. This study aims to identify country-specific preferences for matters such as policy design, compensation mechanisms or level of ambition, as well as the effect of information treatments on them. Moreover, the study will also include an incentive compatible payment element (in the form of a lottery). Most previous studies do not have such item, therefore our study will be more credible in expressing people's willingness to support climate change mitigation policies.

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## 2. Appendix II - Video script, United Kingdom

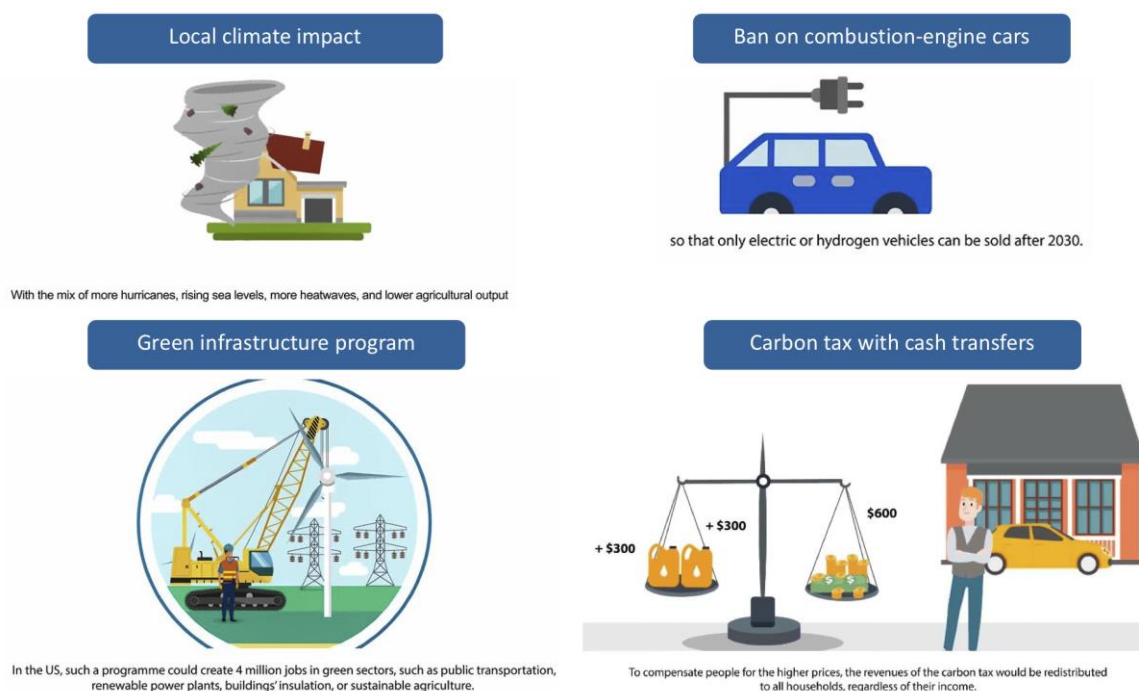


Figure A-1. Extracts from the videos

### 2.1. Policy video script

To fight climate change and avoid an ever-warming climate, we need an array of policies. Climate policies are needed to transform the way we produce energy, to make buildings greener, to put greener cars on the roads and reduce our fuel consumption. But these policies also need to protect people's jobs and incomes. Let's have a closer look on three possible climate policies. Let's start with a policy that forces car producers to produce greener cars – a ban on combustion-engine cars. With a ban on combustion-engine cars, car producers are first required by law to produce cars that emit less CO<sub>2</sub> per kilometre. The emission limit is lowered every year, so that only electric or hydrogen vehicles can be sold after 2030. Note that electric vehicles currently cannot travel as far and can be more expensive than cars that run on petrol. Together with a plan to produce electricity from clean sources, a ban on combustion-engine cars would accomplish the transition needed in the car industry. Now, let's turn to a national policy that combines a tax on carbon emissions to reduce emissions and cash transfers to protect people's purchasing power. With a carbon tax, all products that emit greenhouse gases would be taxed. For example, the price of gasoline would increase by 8 cents per litre. With a carbon tax, companies and people pay for the greenhouse gases they emit. This pushes them to reduce their emissions. To compensate people for the price increases, the revenues of the carbon tax would be redistributed to all households, regardless of their income. Each adult would thus receive 150£ per year. On average, poorer people own smaller cars, live in smaller houses and fly less, so they use less fossil fuels than average. As they would receive the same cash transfer as everyone else, poorer people will generally gain from a carbon tax with cash transfers. Conversely, rich people will tend to lose. Does this policy work? Yes! The Canadian province of British Columbia has a carbon tax with cash transfers since 2008. Research has shown that this policy has decreased carbon emissions, increased employment, and made a majority of people richer. The last policy is a large program of public investment in green

infrastructure, which would be financed by additional debt taken up by the government. A green infrastructure program would bring about the transition in energy infrastructure needed to halt climate change but it could come at the expense of other possible projects funded by the government. In the UK, such a program could create 650,000 jobs in green sectors, such as public transportation, renewable power plants, buildings' insulation, or sustainable agriculture, but 250,000 people could lose their job in the fossil fuel industry. In general, all climate policies have the potential to transform the economy into a greener, safer, less polluted world. This green transformation has some downsides: people will have to change their habits, and some people will even have to change job. For example, there will be less demand for polluting sectors such as coal mining. But re-training options would be offered to workers in these sectors to ensure that they could find a new job elsewhere. And the green transition also comes with benefits: a safer world for future generations of course, but also less pollution. And climate policies can be designed to protect poor and middle-class households, as they can have more income with the carbon tax with cash transfers, and more jobs with a green infrastructure program. We have focused on three important policies, but many others would be useful to fight climate change, including funding research into green technologies, subsidising the insulation of buildings, or stopping deforestation. To stop climate change, we probably need all of them together.

## **2.2. Climate video script**

Over the past decades, humans have been burning more and more fossil fuels like coal, gas or oil. Burning fossil fuels releases CO<sub>2</sub> into the atmosphere. Today, the concentration of CO<sub>2</sub> in the atmosphere is higher than at any point in time over the last 800,000 years. And it's the concentration of greenhouse gases like CO<sub>2</sub> that drives global temperature. Climate scientists agree: the build-up of greenhouse gases released by human activity in the atmosphere causes climate change. A rapid transition away from fossil fuels is possible and could contain global warming below +2°C. But if greenhouse gas emissions continue on their current trend, the average global warming will be +4°C in 2100 and +7°C in 2200. This may seem far away, but climate change is already affecting us right now in the places where we live. In 2015, 80% of Londoners experienced overheating in their homes, while the heatwave of 2003 caused business losses of about 500 million pounds. Air pollution generated by fossil fuel combustion is already responsible for 30,000 deaths per year in the UK. Without ambitious measures to stop climate change, the impacts expected by scientists will be much worse: In 50 years from now, the number of properties exposed to flood risk in London will increase by 40%. Climate change puts at risk buildings worth £200 billion along the Thames. By 2050, the demand for water could exceed available supply by more than a half in many places around the UK. As a result crop production in areas of eastern England and Scotland could become unviable. To tackle climate change, we need to bring greenhouse gas emissions close to zero. This is possible, but it requires a deep transformation in the sectors most responsible for emissions: energy, transport, and industry.

### 3. Appendix III - Full Questionnaire, United Kingdom

#### 3.1. Consent Form

This is a survey conducted for academic research purposes by researchers from Harvard University and the OECD. It will take approximately **25 minutes** to complete. The survey data is used for research purposes only, and the research is non-partisan. You will be compensated for this survey if you complete the survey and your responses pass our survey quality checks. These checks use statistical control methods to detect incoherent and rushed responses. It is very important for the validity of our research that you **answer honestly** and **read the questions carefully** before answering.

The survey collects personal data, including socio-demographic characteristics and political views. All of the answers you provide will remain anonymous and be treated with absolute confidentiality. The personal data we collect will be transferred and stored on secure servers. Only researchers working on the project will have access to the data, which is anonymized. Your participation in this survey is completely voluntary.

You are entitled to choose not to take part. If at first you agree to take part, you can later change your mind. Your decision will not be held against you in any way. Your refusal to participate will not result in any consequences or any loss of benefits that you are otherwise entitled to receive. You can ask any questions before you decide whether to participate.

If you have questions, concerns, or complaints, or think the research has offended you, you can contact the research team

at [socialeconomics.research2020@gmail.com](mailto:socialeconomics.research2020@gmail.com) or call the Harvard University Area Institutional Review Board ("IRB") at +1 617 496-2847. The

OECD is committed to protecting the personal data it processes, in accordance with its Personal Data Protection Rules

(<https://www.oecd.org/general/data-protection.htm>). If you have further queries or complaints related to the processing of your personal

data, please contact the Data Protection Officer ([DPO@oecd.org](mailto:DPO@oecd.org)). If you need further assistance in resolving claims related to personal data

protection you can contact the Data Protection commissioner ([DPC@oecd.org](mailto:DPC@oecd.org)).

**Do you agree to participate in the survey?**

Yes <input type="radio"/>	No <input type="radio"/>
------------------------------	-----------------------------

Figure A-2. Consent Page

#### 3.2. Background questions

1. What is your gender?  
*Male; Female; Other*
2. How old are you?  
*Below 18; 18 to 24; 25 to 24; 35 to 49; 50 to 64; 65 and above*
3. What is your Outcode (the left part of your postcode)?
4. What type of agglomeration do you live in?

*A rural area; A small town (5,000 - 20,000 inhabitants); A large town (20,000 - 50,000 inhabitants); A small city or its suburbs (50,000 - 250,000 inhabitants); A large city or its suburbs (250,000 - 3,000,000 inhabitants); A very large city or its suburbs (more than 3 million inhabitants)*

5. What is the nationality of your parents? (Multiple answers allowed)  
*British; European except United Kingdom; Other; Prefer not to say*
6. Do you live with your partner (if you have one)?  
*Yes; No or I don't have a partner*
7. What is your marital status?  
*Single; Married; Divorced or legally separated; Widowed*
8. How many people are in your household? The household includes: you, the members of your family who live with you (including children), and your dependents. This excludes flatmates.  
*1; 2; 3; 4; 5 or more*
9. How many children below 14 live with you?  
*0; 1; 2; 3; 4 or more*
10. What is the highest level of education you have completed?  
*No schooling completed; Primary school; Lower secondary school; Vocational degree; High school; College degree; Master's degree or above*
11. What is your employment status?  
*Full-time employed; Part-time employed; Self-employed; Student; Retired; Unemployed (searching for a job); Inactive (not searching for a job)*
12. (If “Full-time employed”, “Part-time employed”, or “Self-employed” to 11.) If you work in any of the following industries, please select one describing your industry best.  
*Oil, gas or coal; Other energy industries; Cement production; Construction; Automobile manufacturing; Iron and steel manufacturing; Chemical manufacturing; Plastics production; Pulp and paper production; Farming (crop or livestock); Air transport (e.g. airlines); No, none of the above*
13. (If “Retired”, “Unemployed (searching for a job)”, “Inactive (not searching for a job)” to 11.) If in your last job you worked in any of the following industries, please select one describing your industry best  
*Oil, gas or coal; Other energy industries; Cement production; Construction; Automobile manufacturing; Iron and steel manufacturing; Chemical manufacturing; Plastics production; Pulp and paper production; Farming (crop or livestock); Air transport (e.g. airlines); No, none of the above*
14. (If “Full-time employed”, “Part-time employed”, or “Self-employed” to 11.) What is the main activity of the company or organization where you work?  
*Agriculture, forestry, fishing, hunting; Mining, quarrying, oil, gas, extraction; Utilities; Construction; Manufacturing; Wholesale trade; Retail trade; Transportation and warehousing; Information technology (IT); Finance and insurance; Real estate and rental and leasing; Professional, scientific and*

*technical; Management of companies and enterprises; Administrative and support activities; Waste management and remediation; Educational services; Healthcare and social assistance; Arts, entertainment and recreation; Accommodation and food services; Other services; Public administration; Homemaker; None of the above / Other*

15. (If “Retired”, “Unemployed (searching for a job)”, “Inactive (not searching for a job)” to 11.) What was the main activity of the company or organization at which you last worked?

*Agriculture, forestry, fishing, hunting; Mining, quarrying, oil, gas, extraction; Utilities; Construction; Manufacturing; Wholesale trade; Retail trade; Transportation and warehousing; Information technology (IT); Finance and insurance; Real estate and rental and leasing; Professional, scientific and technical; Management of companies and enterprises; Administrative and support activities; Waste management and remediation; Educational services; Healthcare and social assistance; Arts, entertainment and recreation; Accommodation and food services; Other services; Public administration; Homemaker; None of the above / Other*

16. What was the annual income of your household in 2019 (before withholding tax)?

*Less than £13,500<sup>1</sup>; between £13,500 - £20,000; between £20,000 - £29,000; More than £29,000*

17. Have you or a member of your household been laid off or had to take a cut in your salary or wages due to the COVID-19 pandemic?

*Yes; No*

18. Are you a homeowner or a tenant? (Multiple answers are possible)

*Tenant; Owner; Landlord renting out property*

19. What is the estimated value of your assets, or the assets of your household if you are married (in £)? Include here all your possessions (home, car, savings, etc.) net of debt. For example, if you own a house worth £300,000 and you have £100,000 left to repay on your mortgage, your assets are £200,000. I estimate my assets net of debt to be:

*Less than £25,000; Between £25,000 - £110,000; Between £110,000 - £250,000; Between £250,000 - £500,000; More than £500,000*

### 3.3. Political views

1. To what extent are you interested in politics?

*Not at all; A little; Moderately; A lot; A great deal*

2. Are you a member of an environmental organization?

*Yes; No*

3. Do you have any relatives who are environmentalists?

*Yes; No*

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<sup>1</sup> Note: the amounts displayed are multiplied by the consumption unit (CU) - computed based on 8 and 9 - of the respondent. For instance, for a CU of two the first answer would be *Less than £27,000*

4. Did you vote in the 2019 general election?  
*Yes; No; I don't have the right to vote in the United Kingdom; Prefer not to say*
5. (If “Yes” to 4.) Which candidate did you vote for in the 2019 general election?  
*Conservative; Labour; Liberal Democrats; SNP; Green; Brexit Party; Other; Prefer not to say*
6. (If not “Yes” to 4.) Even if you did NOT vote in the 2019 general election, please indicate the candidate that you were most likely to have voted for or who represents your views more closely.  
*Conservative; Labour; Liberal Democrats; SNP; Green; Brexit Party; Other; Prefer not to say*
7. On economic policy matters, where do you see yourself on a scale from 1 to 5, where 1 is Left and 5 is Right?  
*1; 2; 3; 4; 5*

### 3.4. Household composition and energy characteristics

1. What is the main way you heat your home?  
*Electricity; Gas; Heating oil; Coal; Wood, solar, geothermal, or heat pump; District heating; Don't know, or prefer not to say*
2. In a typical year, how much do you spend on heating for your accommodation?  
*I don't know; Less than £200; £201-£800; £801-£1,300; £1,301-£2,000; More than £2,000*
3. Good insulation can keep a building warm in the winter and cool in the summer. How do you rate the insulation of your accommodation?  
*Very poor; Poor; Fair; Good; Excellent*
4. In a typical month, how much do you spend on gas for driving?  
*Less than £5; £5-£25; £26-£75; £76-£125; £126-£200; More than £200*
5. How many round-trip flights did you take between 2017 and 2019?  
*0; 1; 2; 3 or 4; 5 to 7; 8 to 14; 15 or more*
6. How often do you eat beef?  
*Never; Less than once a week; One to four times per week; Almost or at least daily*
7. Which mode of transport did you mainly use for each of the following trips in 2019?
  - Commute to work or place of study
  - Grocery shopping
  - Recreational and leisure activities (excluding holiday travel)*Car or Motorbike; Public Transport; Walking or Cycling; Other; Not Applicable*
8. How do you rate the availability (ease of access and frequency) of public transportation where you live?  
*Very poor; Poor; Fair; Good; Excellent*



### 3.5. Open-ended question

When thinking about climate change, what are your main considerations? What should the UK government do regarding climate change?

Please write as much as you would like, your response will be very useful.

### 3.6. Videos Treatments

Randomized groups of respondents see one of two videos, both videos, or neither.

#### 3.6.1. Local climate video

Recent academic studies have assessed the effects of climate change in the UK. We will now show you a 3 minute video (with sound) that summarizes the results of these studies.

Please pay attention to the information provided as you will be asked questions about it later. Do not skip forward or close the page while the video is running.

Please proceed to the next page when you are ready.

- Link to the video can be found here: [Local climate treatment](#)
1. Were you able to watch and listen to the video until the end?  
*Yes; No, there was a technical problem; No, I skipped part of the video*
  2. From what was said in the video, if greenhouse gas emissions continue on their current trend, what will be the rise in global average temperature in 2100?  
*0 °C; 1 °C; 4 °C; 7°C; Don't know*
  3. From what was said in the video, which of the following is *not* an expected effect of climate change in the UK?  
*Ozone hole; More rain; Flooding; Damaging of marine ecosystems; Don't know*

#### 3.6.2. Policy video

We will now show you a 5 minute video (with sound) that summarizes the features of some policies proposed to fight climate change.

Please pay attention to the information provided as you will be asked questions about it later. Do not skip forward or close the page while the video is running.

Please proceed to the next page when you are ready.

- Link to the video can be found here: [Policy treatment](#)
1. Were you able to watch and listen to the video until the end?  
*Yes; No, there was a technical problem; No, I skipped part of the video*
  2. The video presented three climate policies. What was the first policy about?  
*A ban on combustion-engine cars; A ban on short-haul flights; A ban on coal power plants; A ban on single-use plastic bags; Don't know*
  3. The green infrastructure program described in the video would be financed by:

*Additional government debt; Taxes on the wealthiest; Increase in the VAT (value-added tax); Reduction in social spending; Don't know*

### 3.7. Climate knowledge

1. How often do you think or talk with people about climate change?  
*Almost never; Several times a year; Several times a month*
2. In your opinion, is climate change real?  
*Yes; No*
3. (If “Yes” to 2.) What part of climate change do you think is due to human activity?  
*None; A little; Some; A lot; Most*
4. Do you agree or disagree with the following statement: “Climate change is an important problem.”  
*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*
5. How knowledgeable do you consider yourself about climate change?  
*Not at all; A little; Moderately; A lot; A great deal*
6. Greenhouse gases are gases that trap heat in the atmosphere and make the Earth warmer, causing climate change. In particular, the burning of fossil fuels and agricultural production emit greenhouse gases.  
Which of the following elements contribute to climate change? (Multiple answers are possible)  
*CO<sub>2</sub>; Hydrogen; Methane; Particulate matter*
7. Do you think that cutting global greenhouse gas emissions by half would be sufficient to eventually stop temperatures from rising?  
*Yes; No*

For the next three questions we would like you to rank the items according to the greenhouse gas emissions they emit, to the best of your knowledge (where 1 is the item that emits the most and 3 the item that emits the least). The greenhouse gas emissions of a product are those emitted at all steps involved in its production and distribution.

8. If a family of 4 travels 700 km from London to Glasgow, with which mode of transportation do they emit the most greenhouse gases?  
Please rank the items from 1 (most) to 3 (least) (by clicking and dragging the items).  
*Car (running on diesel or gasoline); Train; Plane*
9. Which dish emits the most greenhouse gases? We consider that each dish weighs half a pound.  
Please rank the items from 1 (most) to 3 (least) (by clicking and dragging the items).  
*A beef steak; One serving of paste; Chicken wings*

10. Which source of electric energy emits the most greenhouse gases to provide power for a house?

Please rank the items from 1 (most) to 3 (least) (by clicking and dragging the items).

*Gas-fired power plant; Nuclear power plant; Coal-fired power station*

11. Which region contributes most to global greenhouse gas emissions?

Please rank the regions from 1 (most) to 4 (least) and note that multiple regions may have the same rank.

- The U.S.
- The European Union
- China
- India

*1; 2; 3; 4*

12. Consider now per capita emissions: in which region does the consumption of an average person contribute most to greenhouse gas emissions?

Please rank the regions from 1 (most) to 5 (least).

- The U.S.
- The European Union
- China
- India
- The U.K.

*1; 2; 3; 4; 5*

13. If nothing is done to limit climate change, how likely do you think it is that climate change will lead to the following events?

- Severe droughts and heatwaves
- More frequent volcanic eruptions
- Rising sea levels
- Lower agricultural production
- Drop in standards of living
- Larger migration flows
- More armed conflicts
- Extinction of humankind

*Very unlikely; Somewhat unlikely; Somewhat likely; Very likely*

### 3.8. Attitudes and risks

1. To what extent are the following groups responsible for climate change in the UK?

- Each of us

- The high income earners
- The UK government
- Companies
- Previous generations

*Not at all; A little; Moderately; A lot; A great deal*

2. To what extent do you think that it is technically feasible to stop greenhouse gas emissions by the end of the century while maintaining satisfactory standards of living in the UK?

*Not at all; A little; Moderately; A lot; A great deal*

3. To what extent do you think climate change already affects or will affect your personal life negatively?

*Not at all; A little; Moderately; A lot; A great deal*

4. How likely is it that human kind halts climate change by the end of the century?

*Very unlikely; Somewhat unlikely; Somewhat likely; Very likely*

5. If we decide to halt climate change through ambitious policies, what would be the effects on the UK economy and employment?

*Very negative effects; Somewhat negative effects; No noticeable effects; Somewhat positive effects; Very positive effects*

6. If we decide to halt climate change through ambitious policies, to what extent do you think it would negatively affect your lifestyle?

*Not at all; A little; Moderately; A lot; A great deal*

7. Here are possible behaviors that experts say would help reduce greenhouse gas emissions.

To what extent would you be willing to adopt the following behaviors?

- Limit flying
- Limit driving
- Have an electric vehicle
- Limit beef consumption
- Limit heating or cooling your home

*Not at all; A little; Moderately; A lot; A great deal*

8. How important are the factors below in order for you to adopt a sustainable lifestyle (i.e. limit driving, flying, and consumption, cycle more, etc.)?

- Ambitious climate policies
- Having enough financial support
- People around you also changing their behavior
- The most well-off also changing their behavior

*Not at all; A little; Moderately; A lot; A great deal*

### 3.9. Policy 1: Ban on the sale of combustion-engine cars

To fight climate change, car producers can be required by law to produce cars that emit less CO<sub>2</sub> per kilometer of the cars they sell. The emission limit is lowered every year so that only electric or hydrogen vehicles can be sold after 2030. This policy is called *a ban on combustion-engine cars*.

We will now ask you a few questions regarding this specific policy.

1. Do you agree or disagree with the following statements? A ban on combustion engine cars would...

- reduce CO<sub>2</sub> emissions from cars
- reduce air pollution
- have a negative effect on the UK economy and employment
- have a large effect on the UK economy and employment
- be a costly way to fight climate change

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

2. In your view, would the following groups win or lose if a ban on combustion-engine cars was implemented in the UK?

- Low-income earners
- The middle class
- High-income earners
- Those living in rural areas

*Lose a lot; Mostly lose; Neither win nor lose; Mostly win; Win a lot*

3. Do you think that your household would win or lose financially from a ban on combustion-engine cars?

*Lose a lot; Mostly lose; Neither win nor lose; Mostly win; Win a lot*

4. Do you agree or disagree with the following statement: "A ban on combustion-engine cars is fair"?

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

5. Do you support or oppose a ban on combustion-engine cars?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

6. Do you support or oppose a ban on combustion-engine cars where alternatives such as public transports are made available to people?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

### 3.10. Policy 2: Green infrastructure program

A *green infrastructure program* is a large public investment program, which would be financed by additional public debt, to accomplish the transition needed to cut greenhouse gas emissions. Investments would concern renewable power plants, public transport, thermal renovation of buildings, and sustainable agriculture. We will now ask you a few questions regarding this specific policy.

1. Do you agree or disagree with the following statements? A green infrastructure program would...

- make electricity production greener
- increase the use of public transport
- reduce air pollution
- have a negative effect on the UK economy and employment
- have a large effect on the UK economy and employment
- be a costly way to fight climate change

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

2. In your view, would the following groups win or lose with a green infrastructure program?

- Low-income earners
- The middle class
- High-income earners
- Those living in rural areas

*Lose a lot; Mostly lose; Neither win nor lose; Mostly win; Win a lot*

3. Do you think that your household would win or lose financially from a green infrastructure program?

*Lose a lot; Mostly lose; Neither win nor lose; Mostly win; Win a lot*

4. Do you agree or disagree with the following statement: "A green infrastructure program is fair"?

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

5. Do you support or oppose a green infrastructure program?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

6. Until now, we have considered that a green infrastructure program would be financed by public debt, but other sources of funding are possible.

What sources of funding do you find appropriate for public investments in green infrastructure? (Multiple answers are possible)

*Additional public debt; Increase in the VAT (value-added tax); Increase in taxes on the wealthiest; Reduction in social spending; Reduction in military spending*

### 3.11. Policy 2: Carbon tax with cash transfers

To fight climate change, the UK government can make greenhouse gas emissions costly, to make people and firms change their equipment and reduce their emissions. The government could do this through a policy called a carbon tax with cash transfers. Under such a policy, the government would tax all products that emit greenhouse gas. For example, the price of gasoline would increase by 8 cents per liter. To compensate households for the price increases, the revenues from the carbon tax would be redistributed to all households, regardless of their income. Each adult would thus receive £150 per year. We will now ask you a few questions regarding this specific policy.

1. Do you agree or disagree with the following statements? A carbon tax with cash transfers would...

- encourage people to drive less
- encourage people and companies to insulate buildings
- reduce the use of fossil fuels and greenhouse gas emissions
- reduce air pollution
- have a negative effect on the UK economy and employment
- have a large effect on the UK economy and employment
- be a costly way to fight climate change

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

2. In your view, would the following groups win or lose under a carbon tax with cash transfers?

- Low-income earners
- The middle class
- High-income earners
- Those living in rural areas

*Lose a lot; Mostly lose; Neither win nor lose; Mostly win; Win a lot*

3. Do you think that your household would win or lose financially under a carbon tax with cash transfers?

*Lose a lot; Mostly lose; Neither win nor lose; Mostly win; Win a lot*

4. Do you agree or disagree with the following statement: "A carbon tax with cash transfers is fair"?

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

5. Do you support or oppose a carbon tax with cash transfers?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

6. Now, we consider a variant of the policy where the cash transfers are higher for low-income people compared to high-income people.

Do you agree or disagree that such a policy would be fair?

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

7. Do you support or oppose a carbon tax with cash transfers with higher transfers for low-income people compared to high-income people?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

### 3.12. Preferences on climate policies

1. To show that you are attentive, please select "a little" in the following list:

*Not at all; A little; Moderately; A lot; A great deal*

2. Do you support or oppose the following climate policies?

- A tax on flying (that increases ticket prices by 20%)
- A national tax on fossil fuels (increasing gasoline prices by 8 cents per liter)
- A ban of polluting vehicles in dense areas, like city centers
- Subsidies for low-carbon technologies (renewable energy, capture and storage of carbon...)
- A contribution to a global climate fund to finance clean energy in low-income countries

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

3. Governments can use the revenues from carbon taxes in different ways. Would you support or oppose introducing a carbon tax that would raise gasoline prices by 8 cents per liter, if the government used this revenue to finance...

- Cash transfers to households with no alternative to using fossil fuels
- Cash transfers to the poorest households
- Equal cash transfers to all households
- A reduction in personal income taxes
- A reduction in corporate income taxes
- Tax rebates for the most affected firms
- Funding environmental infrastructure projects (public transport, cycling ways, etc.)
- Subsidizing low-carbon technologies, including renewable energy
- A reduction in the public deficit

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*



### 3.13. Willingness to Pay and real stake questions

1. To fight global warming, the UK government could implement a policy package to reduce emissions, for example by investing in clean technologies (renewable energy, electric vehicles, public transport, more efficient insulation, etc.). The funding for these investments could be collected annually through an additional individual contribution for the foreseeable future. Assume that everyone in the UK as well as citizens of other countries would be required to contribute according to their means.

Are you willing to pay (£10 / £30 / £50 / £100 / £300 / £500 / £1,000

<sup>1</sup>) annually through an additional individual contribution to limit global warming to safe levels (less than 2 degrees Celsius)?

*Yes; No*

2. By taking this survey, you are automatically entered into a lottery to win £100. In a few days you will know whether you have been selected in the lottery. The payment will be made to you in the same way as your compensation for this survey, so no further action is required on your part.

You can also donate a part of this additional compensation (should you be selected in the lottery) to a reforestation project through the charity The Gold Standard. This charity has already proven effective to reduce 151 million tons of CO<sub>2</sub> to fight climate change and has been carefully selected by our team. The Gold Standard is highly transparent and ensures that its projects feature the highest levels of environmental integrity and contribute to sustainable development. Should you win the lottery, please enter your donation amount using the slider below:

*Slider going from 0 to 100*

### 3.14. International burden-sharing

1. At which level(s) do you think public policies to tackle climate change need to be put in place? (Multiple answers are possible)

*Global; European; National; Local*

2. Do you agree or disagree with the following statement: “The UK should take measures to fight climate change.”

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

3. How should UK climate policies depend on what other countries do?

- If other countries do more, the UK should do...
- If other countries do less, the UK should do...

*Much less; Less; About the same; More; Much more*

4. To achieve a given reduction of greenhouse gas emissions globally, costly investments are needed.

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<sup>1</sup> The amount is randomized among participants

Ideally, how should countries bear the costs of fighting climate change?

- Countries should pay in proportion to their income
- Countries should pay in proportion to their current emissions
- Countries should pay in proportion to their past emissions (from 1990 onwards)
- The richest countries should pay it all, so that the poorest countries do not have to pay anything
- The richest countries should pay even more, to help vulnerable countries face adverse consequences: vulnerable countries would then receive money instead of paying

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

5. Do you support or oppose establishing a global democratic assembly whose role would be to draft international treaties against climate change? Each adult across the world would have one vote to elect members of the assembly.

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

6. Imagine the following policy: a global tax on greenhouse gas emissions funding a global basic income.

Such a policy would progressively raise the price of fossil fuels (for example, the price of gasoline would increase by 8 cents per liter in the first years). Higher prices would encourage people and companies to use less fossil fuels, reducing greenhouse gas emissions. Revenues from the tax would be used to finance a basic income of \$30 (or £22) per month to each human adult, thereby lifting the 700 million people who earn less than \$2/day out of extreme poverty.

The average British person would lose a bit from this policy as they would face £42 per month in price increases, which is higher than the £22 they would receive.

Do you support or oppose such a policy?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

### 3.15. Housing and cattle products

1. (If “Owner” or “Landlord renting out” at Background Questions 18.) How likely is it that you will improve the insulation or replace the heating system of your accommodation over the next 5 years?

*Very unlikely; Somewhat unlikely; Somewhat likely; Very likely*

2. (If “Owner” or “Landlord renting out” at Background Questions 18.) What are the main hurdles preventing you from improving the insulation or replace the heating system of your accommodation? (Multiple answers are possible)

*The choice to insulate or replace the heating system is not mine; The upfront costs are too high; It is too much effort; It won't improve its energy efficiency; My insulation and heating systems are already satisfactory*

3. *GROUP 1.*

4. <sup>1</sup> Imagine that the UK government makes it mandatory for all residential buildings to have insulation that meets a certain energy efficiency standard before 2040. The government would subsidise half of the insulation costs to help households with the transition.

Do you support or oppose such policy?

*GROUP 2.* Imagine that the UK government makes it mandatory for all residential buildings to have insulation that meets a certain energy efficiency standard before 2040. The government would subsidise half of the insulation costs to help households with the transition.

Insulating your home can take long, may cause disruptions to your daily life during the renovation works, and may even require you to leave your home until the renovation is completed.

Do you support or oppose such policy?

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

5. Imagine that the UK government makes it mandatory for all residential buildings to have insulation that meets a certain energy efficiency standard before 2040. The government would subsidise half of the insulation costs to help households with the transition.

Insulating your home can take long, may cause disruptions to your daily life during the renovation works, and may even require you to leave your home until the renovation is completed.

Do you support or oppose such policy?

6. Imagine that, in order to fight climate change, the UK government decides to limit the consumption of cattle products like beef and dairy.

Do you support or oppose the following options?

- A high tax on cattle products, so that the price of beef doubles
- Subsidies on organic and local vegetables, fruits, and nuts
- The removal of subsidies for cattle farming
- The ban of intensive cattle farming

*Strongly oppose; Somewhat oppose; Neither support nor oppose; Somewhat support; Strongly support*

### **3.16. Trust, perceptions of institutions, inequality, and the future**

1. Do you agree or disagree with the following statement: “Most people can be trusted.”

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

2. Do you agree or disagree with the following statement: “Over the last decade, the UK government could generally be trusted to do what is right.”

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<sup>1</sup> Note: Respondents are randomized into one of the two groups.

*Strongly disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Strongly agree*

3. Some people think the government is trying to do too many things that should be left to individuals and businesses. Others think that the government should do more to solve our country's problems.

Which come closer to your own view?

*Government is doing too much; Government is doing just the right amount; Government should do more*

4. How big of an issue do you think income inequality is in the UK?

*Not an issue at all; A small issue; An issue; A serious issue; A very serious issue*

5. Do you think that overall people in the world will be richer or poorer in 100 years from now?

*Much poorer; Poorer; As rich as now; Richer; Much richer*

### 3.17. Feedback

1. Do you feel that this survey was politically biased?

*Yes, left-wing biased; Yes, right-wing biased; No, I do not feel it was biased*

2. The survey is nearing completion. You can now enter any comments, thoughts or suggestions in the field below.

### 3.18. Petition

1. Finally, are you willing to sign a petition to "stand up for real climate action"? As soon as the survey is complete, we will send the results to the Prime Minister's office, informing him what share of people who took this survey were willing to support the following petition.

"I agree that immediate action on climate change is critical. Now is the time to dedicate ourselves to a low-carbon future and prevent lasting damage to all living things. Science shows us we cannot afford to wait to cut harmful carbon emissions. I'm adding my voice to the call to world leaders in the UK and beyond -- to act so we do not lose ground in combating climate change."

Do you support this petition (you will NOT be asked to sign, only your answer here is required and remains anonymous)?

*Yes; No*