

FROM CLIMATE CHANGE AWARENESS TO CLIMATE CRISIS ACTION

**PUBLIC PERCEPTIONS IN EUROPE
AND THE UNITED STATES**

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EXECUTIVE SUMMARY

This study presents results from a representative survey of people aged 18 to 74 in nine countries (Germany, France, Italy, Spain, Sweden, Poland, Czech Republic, United Kingdom, and United States of America).

Our results reveal that a clear majority of Europeans and US-Americans are aware that the climate is changing and that human activities are an important contributor.

- The overwhelming majority of respondents, in all nine countries surveyed, say that the climate is probably or definitely changing — ranging from 83 per cent in the USA to 95 per cent in Germany.
- The large majority of respondents is also aware that human activity is an important cause of climate change — ranging from 79 per cent in the USA to 90 per cent in Italy.

However, our study also finds that a significant group of Europeans and US-Americans still underestimate the *degree* of humanity's contribution to recent climate change as well as the *severity* of its impact.

- A significant group of people (at least 35 per cent) in all nine surveyed countries is unaware of the scientific consensus on climate change — in Poland, the Czech Republic, and the USA this group even makes up a majority.
- There is a considerable group of 'soft' skeptics who believe that climate change is caused equally by human activities and natural processes — ranging from 17 per cent in Spain to 44 per cent in France.

- Those who deny or underestimate humanity's contribution to recent climate change (those who think that climate change is equally, mostly or entirely caused by natural processes) together are in the majority in France, Poland, the Czech Republic, and the USA.
- A significant group of respondents in all nine surveyed countries appears to believe that the global impact from climate change will be relatively modest.
- Many respondents tend to be particularly skeptical that climate change will have any significant local impact.

Although a majority of people in all surveyed countries think that their lives would be affected by climate change if nothing was done to mitigate it, in seven of the nine countries most of them are convinced that their lives would only change 'somewhat' and that they would 'merely' have to adapt to the new circumstances.

- Awareness of the anthropogenic causes of climate change is strongly related to respondents' sense of urgency and level of personal concern about the impact of climate change. Increasing people's knowledge about climate change is likely to enhance their sense of urgency.

- While demographic factors do not seem to have a strong impact on respondents' level of concern, political orientation does, but to a different extent in different countries. Political polarization is most pronounced in the USA.

The large majority of Europeans and US-Americans agree that climate change requires a collective response, are prepared to make changes to their daily (consumption and travel) behavior, and generally support government climate action — though there is variation between countries.

- A large majority of respondents in all nine countries agree that climate change requires some form of collective action – whether it is to mitigate climate change or to adapt to its challenges.
- Majorities in Spain (80%), Italy (73%), Germany (64%), Poland (64%), France (60%), the UK (58%) and the USA (57%) even agree with the statement that “we should do everything we can to stop climate change”.
- A majority of all respondents say that they have already cut down on their plastic consumption (62%), their air travel (61%), or their car travel (55%).
- A majority also says that they either already have or are planning to reduce their meat consumption, switch to a green energy supplier, vote for a party because of their climate change program, buy more organic and locally produced food, and convince friends to behave in a more climate-conscious way. However, there is significant country variation in the extent to which this applies.
- A significant proportion of respondents would be willing to accept at least a small increase in their own taxes for action against climate change.

Although many respondents support climate action in principle, they show more ambivalence in their actual behavior and support for concrete policies.

- Many say that they intend to change their behavior, but have not necessarily acted on that intention.
- People are more likely to consider changing their consumption and travel habits than they are to consider participating in civic engagement actions.
- Most people have no intention of participating in an environmental protest (67%), joining an environmental organization (65%) or donating to one (54%).
- Although respondents generally support government action on climate change, they appear reluctant to support policies with clear trade-offs.
- The banning, curbing, or taxing of activities that harm the climate is generally not very popular — making ambitious climate mitigation action more difficult, if public approval is sought.
- Rather, on average, respondents prefer policies that either offer other types of benefit (such as cheaper public transport) or that do not have obvious downsides (such as public awareness campaigns).

Respondents' awareness or skepticism about the anthropogenic causes and adverse impact of climate change has an important impact on their willingness to engage in and support climate action.

- In particular, a respondent's awareness of the human causes of climate change appears to be an important indicator of support for climate action.

Climate change communicators, activists, and scientists are therefore advised to focus first and foremost on challenging the common misconception that scientists are somehow divided on the causes of global warming and on closing the gap between the public and scientific consensus on climate change.

- It should not be assumed that publics have already understood the severity of the climate crisis sufficiently to induce personal behavior change and support for extensive government actions.

However, communication efforts and awareness campaigns alone are unlikely to sufficiently alter people’s sense of urgency and engagement. It is up to policymakers to lead by example, persuade publics of the urgency, and to implement the types of policies that meet the immediacy of the crisis.

- While a significant group of respondents feels a basic sense of personal responsibility in responding to climate change, a majority feels that the primary responsibility lies with their national government and—in the case of EU member states—the EU.
- Policymakers therefore have a responsibility to provide a sense of direction and take the first steps toward more ambitious climate action.

INTRODUCTION

Climate change presents us with one of the most urgent and important challenges of our time. According to the Intergovernmental Panel on Climate Change (IPCC) we have only very little time left to keep the global temperature from rising above the critical value of 1.5 degrees Celsius and prevent long-lasting and irreversible adverse consequences¹. The Panel suggests that the situation requires “far-reaching, multilevel, and cross-sectoral” mitigation and adaptation policies. The COVID-19 pandemic has shown that states can act decisively and adopt far-reaching measures in the face of an emergency. Yet the response to the climate crisis has so far been relatively cautious. Despite the urgency and potential consequences involved, there is still a significant gap between the types of behavioral and policy changes needed to effectively mitigate climate change, its impact and the actual climate action taken². In this report, we aim to explain this gap. We do so by investigating and comparing public climate change perceptions in eight European states³ and the United States of America.

In recent years, the European countries and the United States have significantly diverged in their response to the climate crisis. The EU is aspiring to be a ‘climate leader’ and has taken several—though not necessarily sufficient—steps to reduce its carbon footprint, with the European Commission most recently proposing to cut greenhouse gas emissions by at least 55% by 2030⁴. On the other hand, in the United States, President Trump famously called climate change a hoax, pulled out of the Paris Agreement and rolled back a lot of its climate and environmental policies⁵. Under a Biden presidency, US climate policy may well be brought more in line with that of the EU. However, even the EU is in danger of not meeting its own climate goals⁶. Moreover, not all European countries are equally committed to addressing the climate crisis and it is still unclear what the fallout from Brexit will mean for British and EU climate policy.

1 IPCC. “Summary for Policymakers.” *Global Warming of 1.5° C* (2018). <https://www.ipcc.ch/sr15/chapter/spm/>

2 Hagen, Bjoern, Ariane Middel, and David Pijawka. “European Climate Change Perceptions: Public Support for Mitigation and Adaptation Policies.” *Environmental Policy and Governance* 26, no. 3 (2015): 171.

3 We conducted representative surveys in the following eight European states: Germany, France, the United Kingdom, Spain, Italy, Sweden, Poland, and the Czech Republic.

4 European Commission. “2030 Climate Target Plan.” Accessed November 5, 2020. https://ec.europa.eu/clima/policies/eu-climate-action/2030_ctp_en

5 Holden, Emily. “How bad can the climate crisis get if Trump wins again?” *The Guardian*. January 12, 2020. <https://www.theguardian.com/environment/2020/jan/12/climate-crisis-if-trump-wins-again>

6 European Environment Agency. “The European environment – state and outlook 2020: knowledge for transition to a sustainable Europe”. Last modified June 8, 2020. <https://www.eea.europa.eu/soer/2020>

Both Europe and the USA will have to significantly increase their ambitions if they are to effectively address the climate crisis. This leaves political representatives with a huge responsibility, not only in putting forward far-reaching climate policies, but also in engaging the public and persuading them of the urgency of such measures. That effort is not just important in its own right, but also because certain actors actively work on convincing publics that climate change is not that big an issue, aiming to halt the increasing salience of the topic.⁷ These activities connect political and corporate actors in Europe and the USA, with efforts in Europe receiving significant funding from US-American actors.⁸

As it stands, the public's sense of urgency is rather modest. Recent research has shown that although most Europeans and US-Americans agree that climate change is a real problem and requires a response, many are not convinced that it will affect them personally and are unwilling to engage in

or support structural changes⁹. This study largely confirms these findings. However, it finds that public engagement could be significantly increased by improving people's awareness of the causes and impact of climate change and by closing the still significant gap between the public and scientific consensus on climate change.

Drawing on representative surveys conducted in the nine countries¹⁰, this report shows that strides have certainly been made in raising public awareness of the existence, causes, and impact of climate change¹¹. Our results reveal that a clear majority of Europeans and US-Americans are aware that the climate is warming, that human activities are an important contributor, and that global warming is likely to have adverse consequences for life on earth. However, our results simultaneously reveal that a significant group of respondents is skeptical or unaware that human activities are the *primary* cause of recent climate change and that the impact is likely to be *severe*.

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- 7 Gardiner, Beth. "For Europe' Far-Right Parties, Climate Is a New Battleground." *YaleEnvironment360*. October 20, 2019. <https://e360.yale.edu/features/for-europes-far-right-parties-climate-is-a-new-battleground>
- 8 Balanya, Belen. "Secret funding for climate deniers" *Corporate Europe Observatory*. December 7, 2010. <https://corporateeurope.org/en/pressreleases/secret-funding-climate-deniers>
- 9 European Commission. *Special Eurobarometer 490—Climate Change*. European Commission: Brussels, Belgium, 2019. https://ec.europa.eu/clima/sites/clima/files/support/docs/report_2019_en.pdf; Hagen et al, "European Climate Change Perceptions"; Leiserowitz, Anthony. "Climate change risk perception and policy preferences: The role of affect, imagery, and values." *Climatic change* 77, no. 1-2 (2006): 45-72; Lorenzoni, Irene, and Nick F. Pidgeon. "Public views on climate change: European and USA perspectives." *Climatic change* 77, no. 1-2 (2006): 73-95; Poortinga, Wouter, Stephen Fischer, Gisela Bohm, Linda Steg, Lorraine Whitmarsh, and Ogunbode, Charles. "European attitudes to climate change and energy. Topline results from Round 8 of the European Social Survey." *European Social Survey* (2018). https://www.europeansocialsurvey.org/docs/findings/ESS8_toplines_issue_9_climatechange.pdf
- 10 The data collection for the survey began on August 7 and was completed on August 25 2020 by survey provider Bilendi. In total, the survey is based on the responses of 10,233 people aged 18 to 74. In each country just over 1000 were interviewed (ranging from 1003 to 1043), except for Germany, where 2058 people were interviewed. The data collection was carried out online using a comprehensive questionnaire. Participant recruitment was done to obtain samples representative of the population overall. To achieve this, recruitment was stratified by age, gender, education level and geographical region, as well as matching age and education quotas within each geographical region to official statistics. Weights were designed to account for deviations from key population parameters. However, deviations were small and the quality of the sample high overall. A detailed note on the survey methodology employed can be found online at <https://dpart.org/climate-crisis-messages/>.
- 11 While we, as authors, consider the term 'climate crisis' more appropriate to describe the severity of the issue, we used 'climate change' in most questions posed to respondents, as we wanted to be able to capture perceptions across the full range of understandings within the public. Previous research has shown sensitivity to the wording in some parts of publics, so we wanted to use wording that ensured we were able to examine the widest scope of views. For an example demonstrating wording sensitivity, see Schuldt, J., Enns, P., and Cavaliere, V. "Does the label really matter? Evidence that the US public continues to doubt 'global warming' more than 'climate change'". *Climatic Change* 143 (2017): 271-280.

In this report, we show that the degree of respondents' awareness of the existence, causes, and impact of climate change significantly affects their sense of urgency and willingness to personally engage in or support government climate action. Climate change communication efforts should therefore be focused on raising people's awareness of the primary causes and magnitude of the impact of climate change. However, we also find that climate change skepticism and a lack of awareness alone cannot account for the public's moderate sense of urgency. Many respondents support climate action in principle, but show more ambivalence in their actual behavior and support for concrete policies. We therefore suggest that it is up to policymakers to show political leadership, provide a sense of direction, and act on the public's general support for a response.

This report is divided into three sections. The first section reflects on respondents' awareness of the existence, causes, and impact of climate change. It will show how climate change awareness, political orientation and demographic factors affect respondents' climate change concerns. The second section discusses respondents' own engagement in actions against climate change and their support for government measures, showing how respondents' climate change awareness affects their climate behavior and support for climate policy. Finally, the third section wraps up the report with some concluding remarks and recommendations for climate change communicators, activists, and policymakers.

PUBLIC AWARENESS OF THE EXISTENCE, CAUSES, AND IMPACT OF CLIMATE CHANGE

Significant efforts have been made over the past few decades to raise public awareness of climate change, to inform people of the scientific consensus that global warming is caused (almost) entirely by human activities, and to educate people about its adverse effects. Our study demonstrates that these efforts have not been without success. However, it also shows that significant skepticism about, in particular, the causes and impact of recent climate change persists – which, as this report demonstrates, presents a significant barrier to more ambitious climate action.

Climate change skepticism is often discussed in a simplistic binary form, in which people are either seen as supporting all necessary action against the climate crisis or as effectively rejecting climate change altogether. But as several studies have shown, views are much more nuanced for most people¹². Rahmstorf developed a useful typology distinguishing between different manifestations of types of climate change skepticism, allowing for that necessary nuance to be taken into account¹³. He

distinguishes between three types of climate change skepticism: trend skepticism, attribution skepticism, and impact skepticism. *Trend skepticism* quite simply refers to the denial of global warming, *attribution skepticism* refers to the belief that global warming has natural (rather than human) causes, and *impact skepticism* refers to the belief that global warming is harmless or even beneficial. While we find trend skepticism to be rather rare among the European and US-American public, soft attribution and impact skepticism are much more common, as we discuss in detail below.

PUBLIC AWARENESS OF THE EXISTENCE OF CLIMATE CHANGE

Despite climate change often being depicted as a polarizing topic, we find that there is actually significant public agreement on the most fundamental issue, namely the existence of climate change in the first place. Figure 1 shows that the overwhelming majority of respondents, in all nine

12 Hagen et al, “European Climate Change Perceptions”; Poortinga, Wouter, Alexa Spence, Lorraine Whitmarsh, Stuart Capstick, Nick F. Pidgeon. “Uncertain climate: An investigation into public scepticism about anthropogenic climate change.” *Global environmental change* 21, no. 3 (2011): 1015-1024.

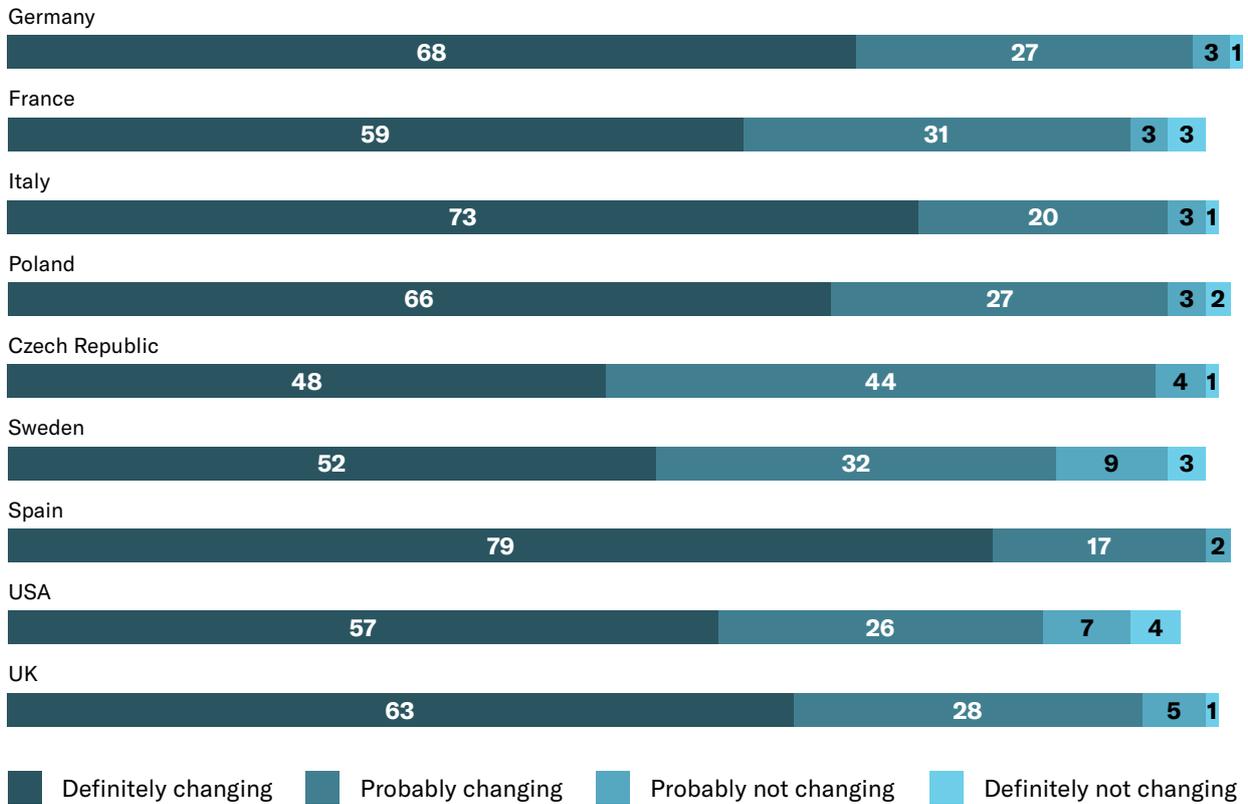
13 Rahmstorf, Stefan. *The Climate Sceptics*. Potsdam Institute for Climate Impact Research, 2004, 77. [http://www.pik-potsdam.de/~stefan/Publications/Other/rahmstorf climate sceptics 2004.pdf](http://www.pik-potsdam.de/~stefan/Publications/Other/rahmstorf%20climate%20sceptics%202004.pdf)

countries surveyed, say that the climate is probably or definitely changing — ranging from 83 per cent in the USA to 95 per cent in Germany. In fact, in eight of the nine surveyed countries, a majority is absolutely certain that the climate is changing — only in the Czech Republic is this group not a majority (48%). The fact that a relatively significant group of Europeans and US-Americans deem it likely but not certain that the climate is warming suggests that efforts to educate the public on the evidence for

global warming are still necessary. Yet the group of outright climate change deniers is relatively small. The USA and Sweden have a slightly bigger group of people who either doubt climate change or are convinced that climate change is not happening in comparison to the other countries, but that group still ‘only’ makes up 11 and 12 per cent respectively. Trend skepticism, then, is relatively rare in all of the surveyed countries.

FIGURE 1

Awareness of climate change by country (%)¹⁴



14 “You may have heard the idea that the world’s climate is changing due to increases in temperature over the past 100 years. What is your personal opinion on this? Do you think the world’s climate is changing?”; Missing responses to make up 100%: Don’t know

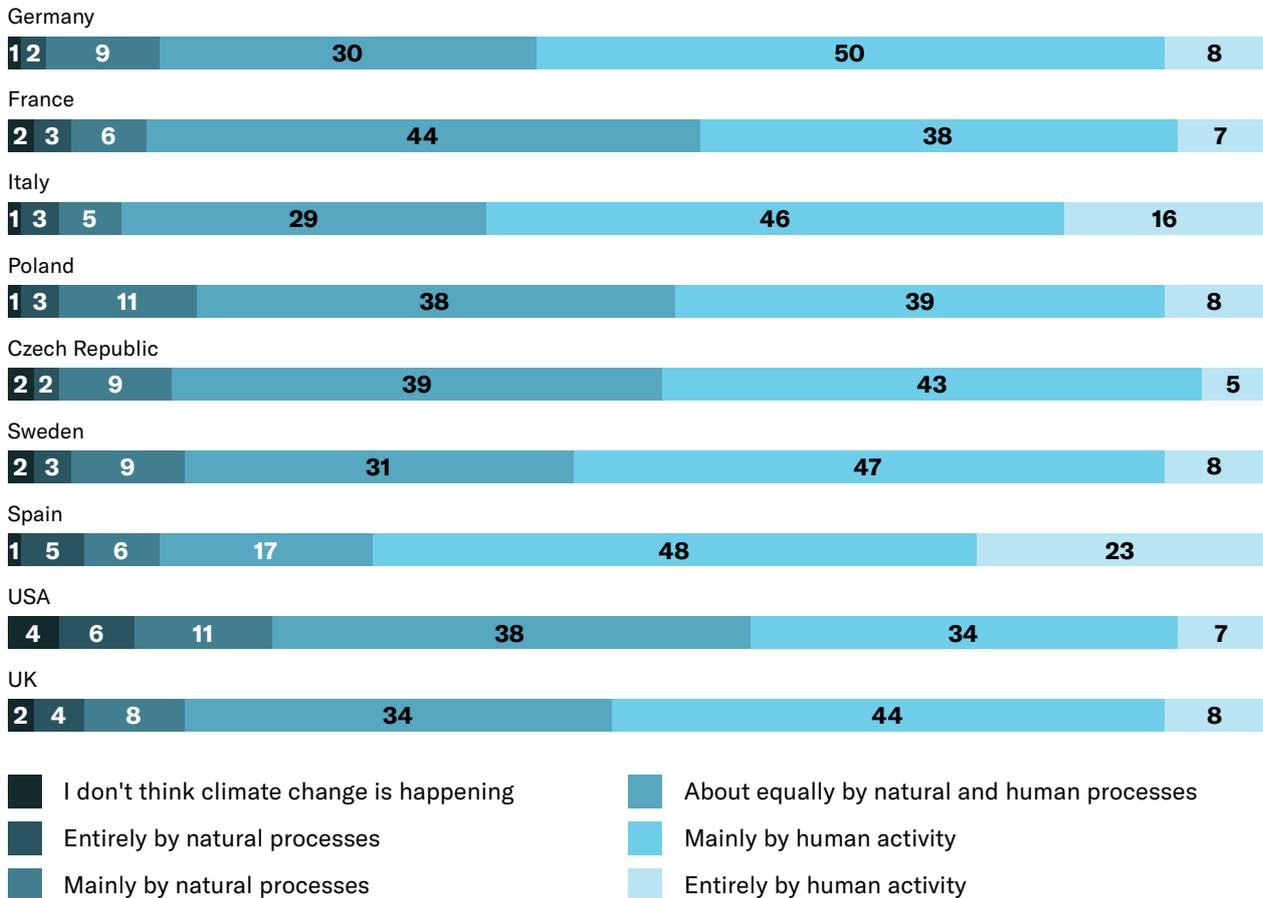
PUBLIC AWARENESS OF THE CAUSES OF CLIMATE CHANGE

In addition to being aware of the fact that the climate is changing, the large majority of respondents is also aware that human activity is an important cause of climate change — ranging from 79 per cent in the USA to 90 per cent in Italy. In figure 2, we show that majorities in the UK (52%), Sweden (55%), Germany (58%), Italy (62%), and Spain (71%) even follow the scientific consensus that human activity is the *primary* cause of recent climate change¹⁵. The

graph clearly demonstrates that those who doubt or outright reject the existence of anthropogenic climate change, are in the minority in all of the surveyed countries. Yet there is a significant group of ‘soft’ attribution skeptics who believe that climate change is caused equally by human activities and natural processes — ranging from 17 per cent in Spain to 44 per cent in France. In fact, those who deny or underestimate humanity’s contribution to recent climate change altogether make up the majority in France, Poland, the Czech Republic, and the USA.

FIGURE 2

Attribution of climate change to nature or humans by country (%)¹⁶



15 Cook, John, et al. “Quantifying the consensus on anthropogenic global warming in the scientific literature.” *Environmental research letters* 8, no. 2 (2013): 024024.

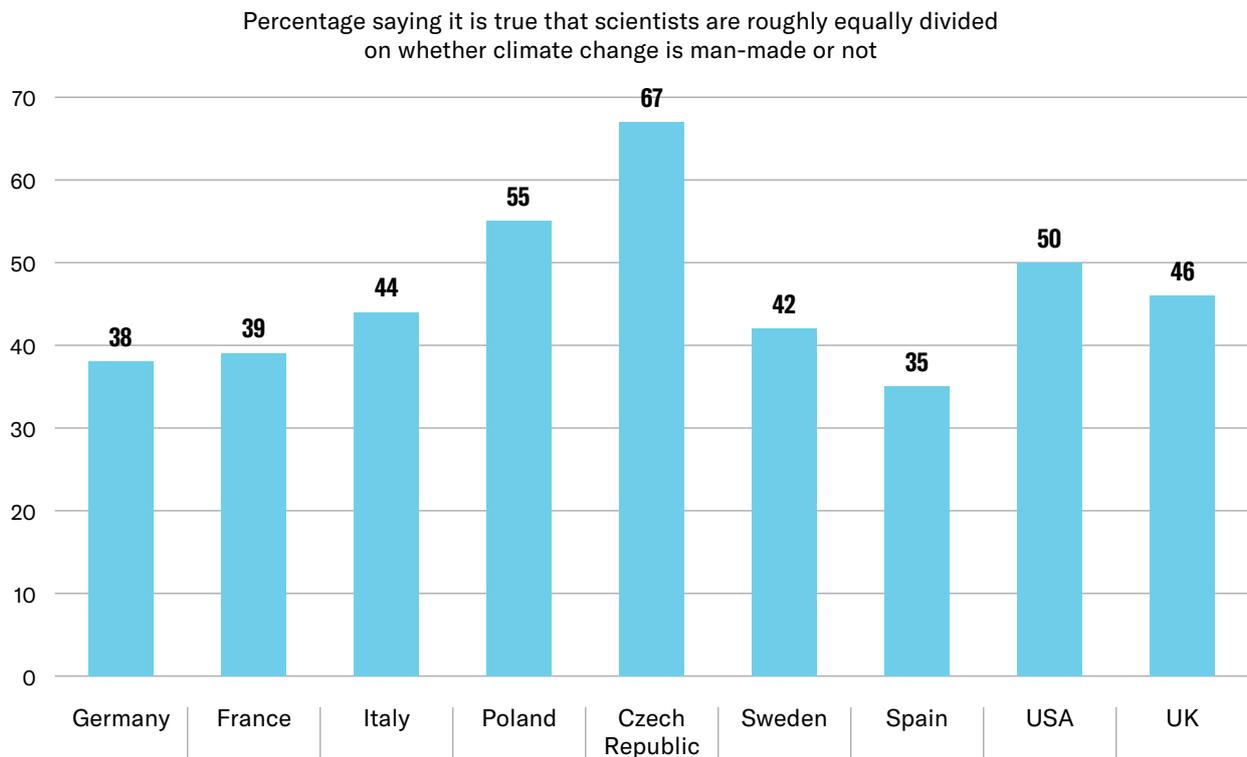
16 “Do you think that climate change is caused by natural processes, human activity, or both?”; Missing responses to make up 100%: Don’t know

The fact that the public consensus is still trailing the scientific consensus may have something to do with the fact that the latter is still unknown to a large part of the public. In figure 3 we show that a significant group of people in all nine countries believe scientists to be roughly evenly divided on the anthropogenic causes of global warming – in Poland, the Czech

Republic, and the US this group even makes up a majority. In fact, 97% of climate scientists are in agreement that humans have caused recent global warming¹⁷. In other words, there is still considerable room for improvement in raising awareness of the scientific consensus on climate change and the dominant human influence on recent global heating.

FIGURE 3

Knowledge of scientific consensus by country (%)¹⁸



PUBLIC AWARENESS OF THE IMPACT OF CLIMATE CHANGE

There is also still significant room for improvement in raising awareness of climate change’s global,

regional, and local impact. Our study finds that while most respondents are aware that global warming will have some negative impact on life on earth, many respondents still underestimate the severity of the impact, which researchers expect to be felt strongly by everyone¹⁹.

17 Cook et al, “Quantifying the consensus on anthropogenic global warming in the scientific literature.”

18 “For each of the following statements, please indicate whether you think the statement is TRUE or FALSE: Scientists are roughly equally divided in their views on whether climate change is man-made or not.”

19 Cho, Renee. “10 Climate Change Impacts That Will Affect Us All”. State of the Planet – Earth Institute, Columbia University, 2019. <https://blogs.ei.columbia.edu/2019/12/27/climate-change-impacts-everyone/> (accessed October 25 2020).

FIGURE 4

Expected impact of climate change on life on earth by country (%)²⁰

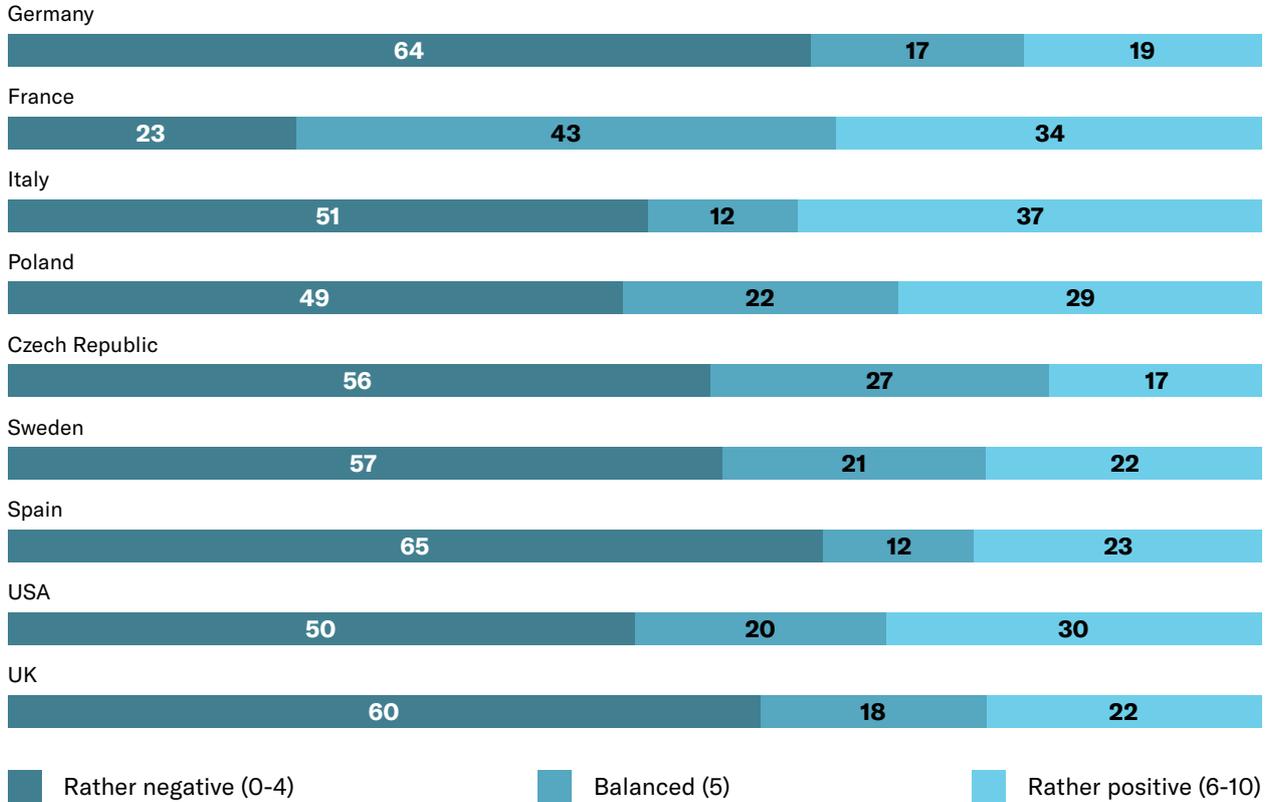


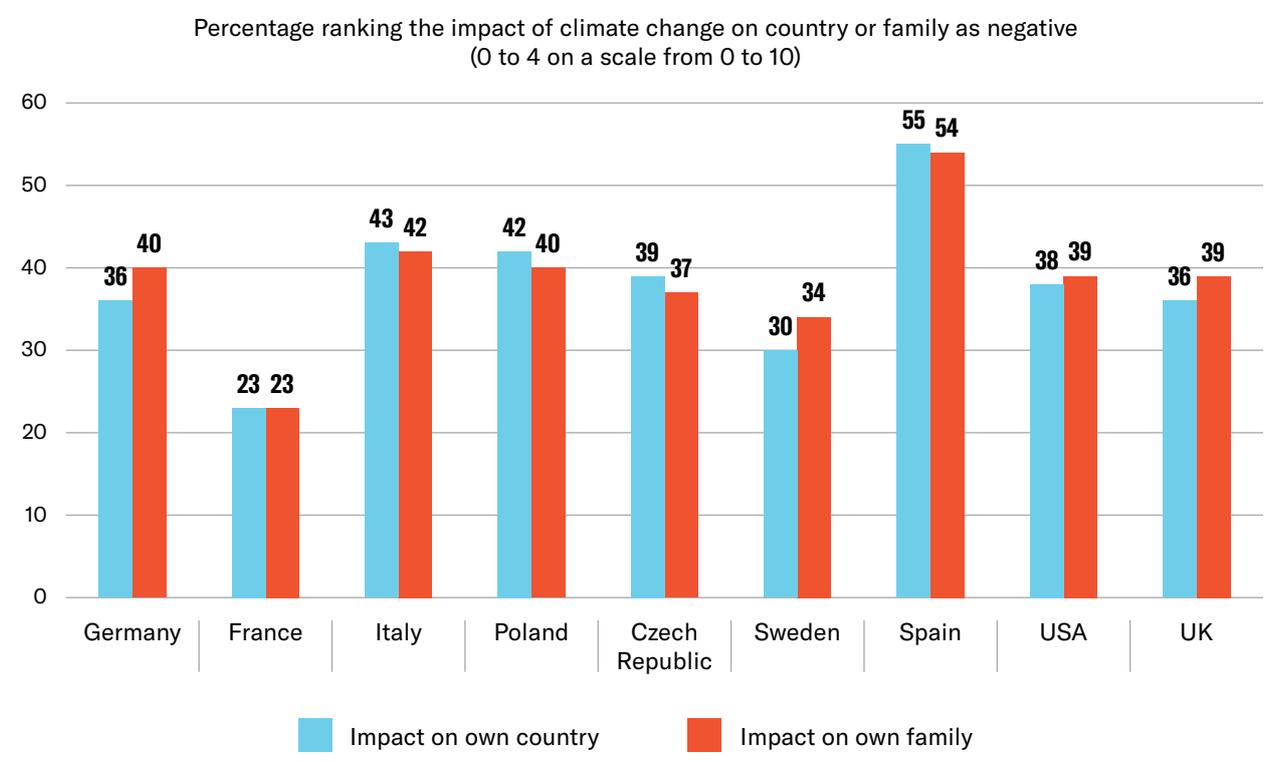
Figure 4 shows that in Spain (65%), Germany (64%), the UK (60%), Sweden (57%), the Czech Republic (56%) and Italy (51%) a majority believes that climate change will have clearly negative consequences for life on earth. However, the graph also shows that a significant group of respondents in all nine surveyed countries appears to believe that the negative consequences of global warming are either balanced or even outweighed by its positive consequences. Those who position themselves in the middle—ranging from 12 per cent in Spain to 43 per cent in France—might not see global warming as harmless

per se, but do seem to think that the consequences will be relatively modest or will also be (partially) positive. The ‘hard’ skeptics, who say that the overall impact would be more positive than negative, range from 17 per cent in the Czech Republic to 34 per cent in France. It must be noted that later results seem to indicate that not all these ‘impact skeptics’ necessarily believe global warming to be clearly outweighed by the positive consequences, but that some are ‘merely’ expressing their skepticism as to the severity of the impact.

20 “How good or bad do you think the impact of climate change will be for each of the following: For life on earth?”; Response scale: 0 – extremely bad to 10 – extremely good.; missing answers excluded.

FIGURE 5

Expected impact of climate change on own country and family by country (%)²¹



Respondents tend to be more skeptical that climate change will have any significant national and local impact than they are that it will have a significant global impact. Figure 5 shows that only in Spain does a majority of respondents believe that climate change will primarily have a clearly negative impact on their country, their family, and them personally. In all other countries, the majority is less concerned. So while overall, people acknowledge climate change and largely expect some negative impacts globally, fewer people feel that is going to significantly and negatively impact them directly. This seems to be in line with other research which found that many people still view climate change as an “issue removed

in time and space that will primarily impact future generations in other countries”.²²

PERSONAL CONCERNS ABOUT CLIMATE CHANGE AND THEIR RELATIONSHIP TO ATTITUDINAL AND DEMOGRAPHIC FACTORS

This limited concern about personal impacts of the climate crisis is underlined in figure 6. We asked respondents to what extent they thought their lives would be changed by climate change

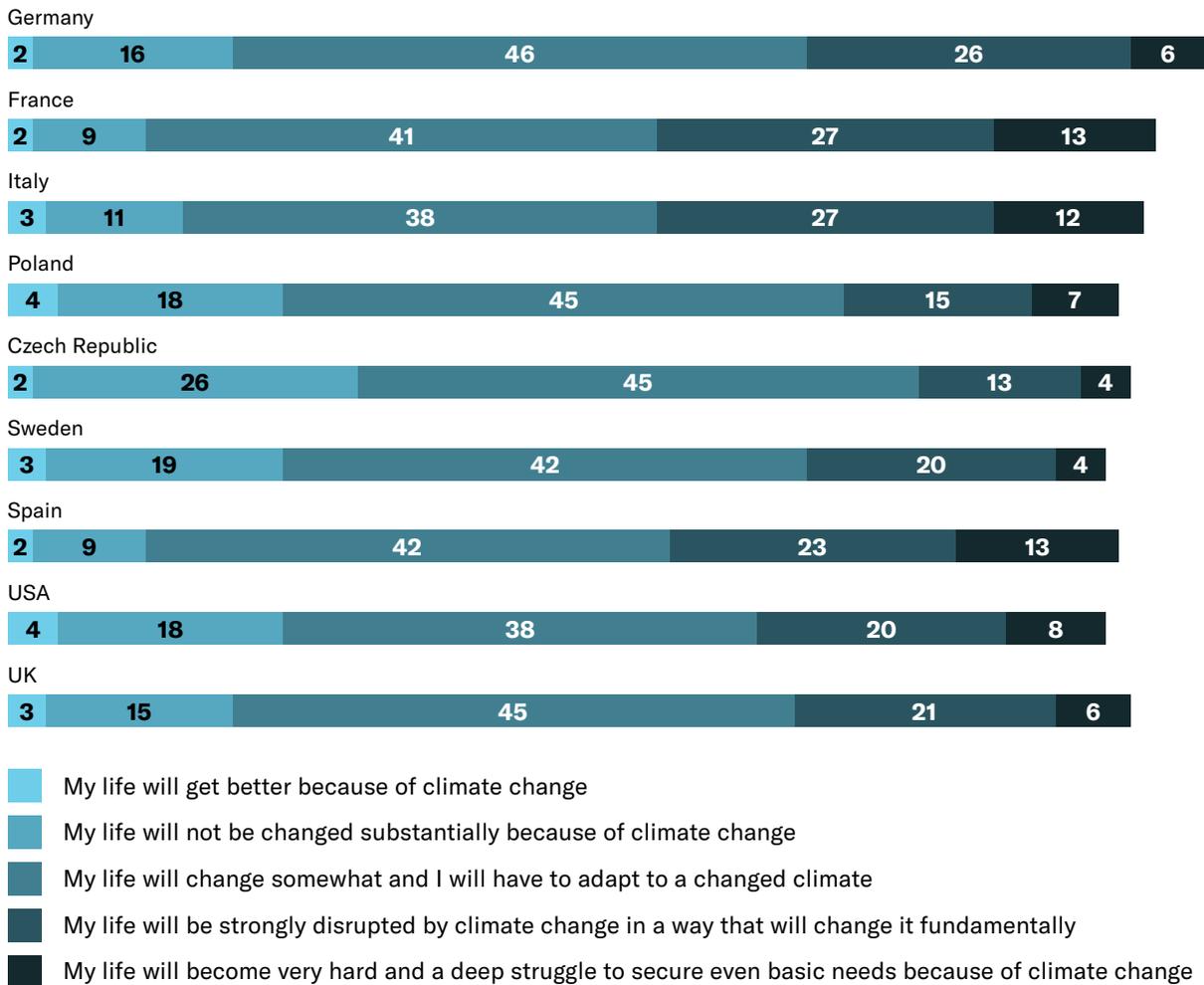
21 “How good or bad do you think the impact of climate change will be for each of the following: For [COUNTRY of respondent] compared to most of the rest of the world?/Your family”; Response scale: 0 – extremely bad to 10 – extremely good.; missing answers excluded.
 22 Hagen et al, “European Climate Change Perceptions”, 171. See also: Lorenzoni and Pidgeon, “Public views on climate change: European and USA perspectives.”

by 2035 if nothing was done to mitigate it. Only a negligible number (below 5 per cent) thinks that their lives would actually improve. However, a bigger minority thinks that their lives would not be changed at all. This group is most pronounced in the Czech Republic (26%), followed by Sweden (19%), the USA and Poland (18%), Germany (16%) and the UK (15%), but smaller elsewhere. A majority of people in all countries think that their lives would be affected. However, in seven of the nine countries, most of these respondents are convinced that their lives would only change ‘somewhat’ and

that they would ‘merely’ have to adapt to the new circumstances. Only a minority, albeit a significant one, of the respondents in those countries thinks it will fundamentally affect and disrupt their lives. The exceptions are Italy and France where the two groups are roughly equal in size. These findings partially qualify the results presented in figures 4 and 5. Those who do not rate climate change as more clearly having a negative impact do not necessarily deem it to create much positive change — rather, they doubt that there will be much impact on their lives at all.

FIGURE 6

Expected impact of climate change on own life by 2035 (if nothing is done) by country (%)²³



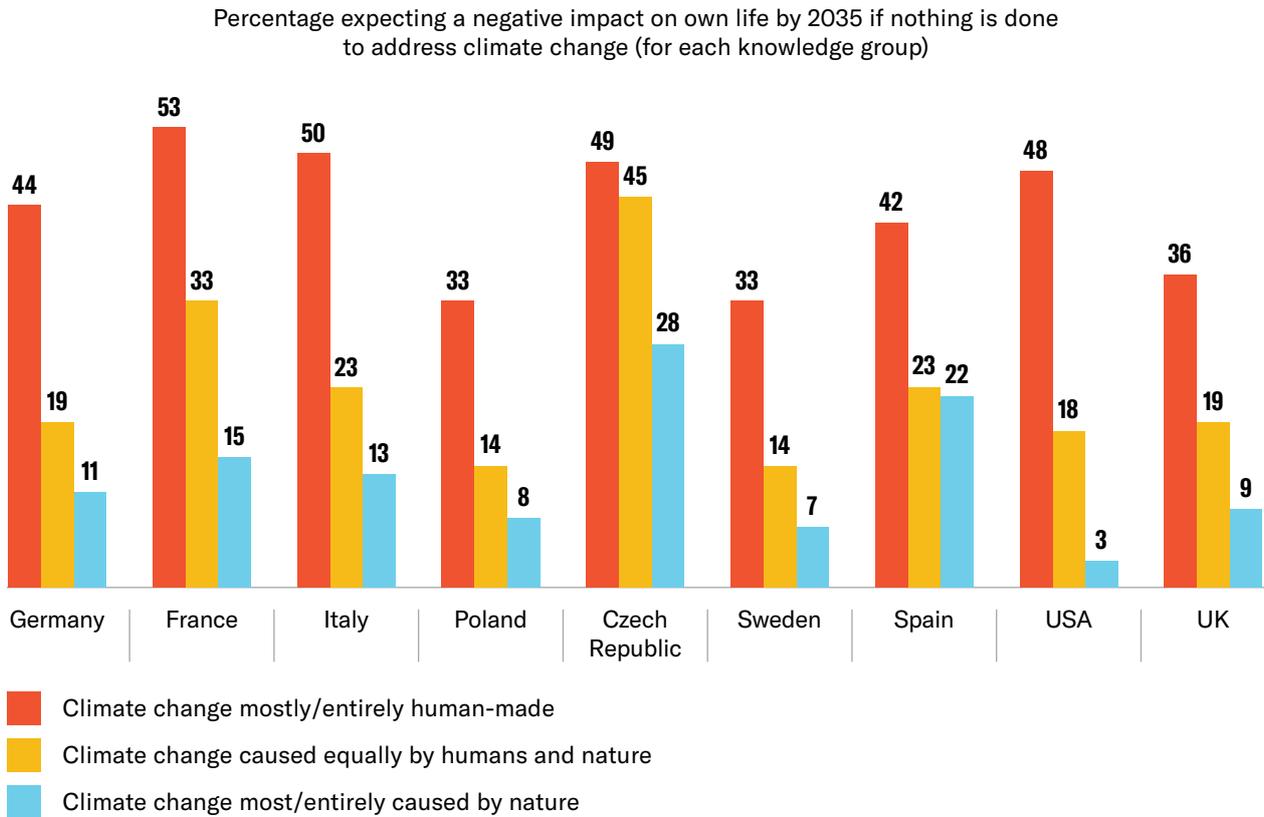
²³ "If no action is taken to address climate change, to what extent do you think your life will be changed by 2035?"; missing responses to make up 100%. Don't know

However, while most people expect an impact on their lives if nothing is done, the magnitude of any possible consequences is not seen as particularly drastic by most. This is a challenge to those advocating for an intensification of efforts, as the scale of the problem is clearly underestimated by a large part of the populations studied.

People’s level of personal concern is crucially related to their awareness of the human causes of global heating. Figure 7 shows that those people who know that climate change is mostly attributable to human activity are significantly more likely to expect that climate change would negatively affect them if nothing was done to address it.

FIGURE 7

Expected impact of climate change on own life by awareness of causes of climate change and country (%)



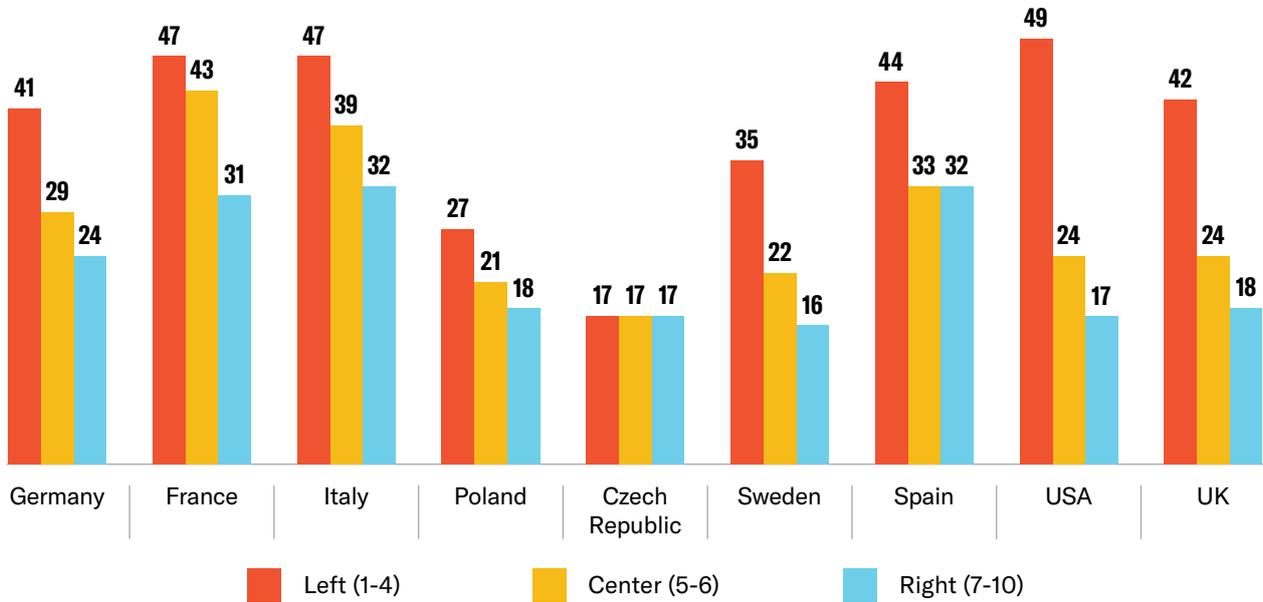
The size of the awareness effect varies greatly between countries, however. In the Czech Republic and Spain, those who acknowledge human activity as the primary cause of global warming are roughly twice as likely to expect a negative impact as those who think climate change is mostly attributable to natural causes. In other countries, that gap is much larger. It is most pronounced in the USA, where hardly any of those who primarily view climate change as part of a natural process expect negative consequences for their lives, while roughly half of those who are aware of the anthropogenic causes

do. Except for in the Czech Republic, significant differences also exist between respondents who believe that human and natural influences play an equally important role in causing climate change and those who are aware that human activities are the primary cause. In most of the other eight countries (except France) the latter group is roughly at least twice as likely to expect negative consequences for their own lives. Again, the gap is most pronounced in the USA (49 to 18 per cent), followed by Germany (44 to 19 per cent) and Sweden (33 to 14 per cent).

FIGURE 8

Expected impact of climate change on own life by political orientation and country (%)²⁴

Percentage expecting a negative impact on own life by 2035 if nothing is done to address climate change (for each political orientation group)



Knowledge about climate change is crucial in understanding people’s level of personal concern. However, people’s climate change concerns are also related to their political orientation. Apart from in the Czech Republic²⁵, there is a significant difference in how concerned people are about climate change according to whether they identify as more left or right politically. In the other eight countries, those who lean to the left are more likely to say that climate change would have a negative impact on their lives if nothing was done to mitigate it than those who lean to the right. However, the extent of the effect varies greatly by country and is more modest in Poland and

Spain, for example. The effect is most pronounced in the USA. While attitudes on the topic itself were not that different overall, US-Americans’ views are the most polarized according to political outlook. Those who identify as rather left are nearly three times as likely to expect a negative impact on their own lives (49%) compared to those who identify as more on the right (17%). The second most polarized countries are the United Kingdom and Sweden, where those on the left are more than twice as likely than those on the right to expect a negative personal impact from climate change.

24 “In political matters, people often talk of ‘the left’ and the ‘the right’. Generally speaking, how would you place your views on a scale where ‘1’ means ‘the left’ and ‘10’ means ‘the right’?”

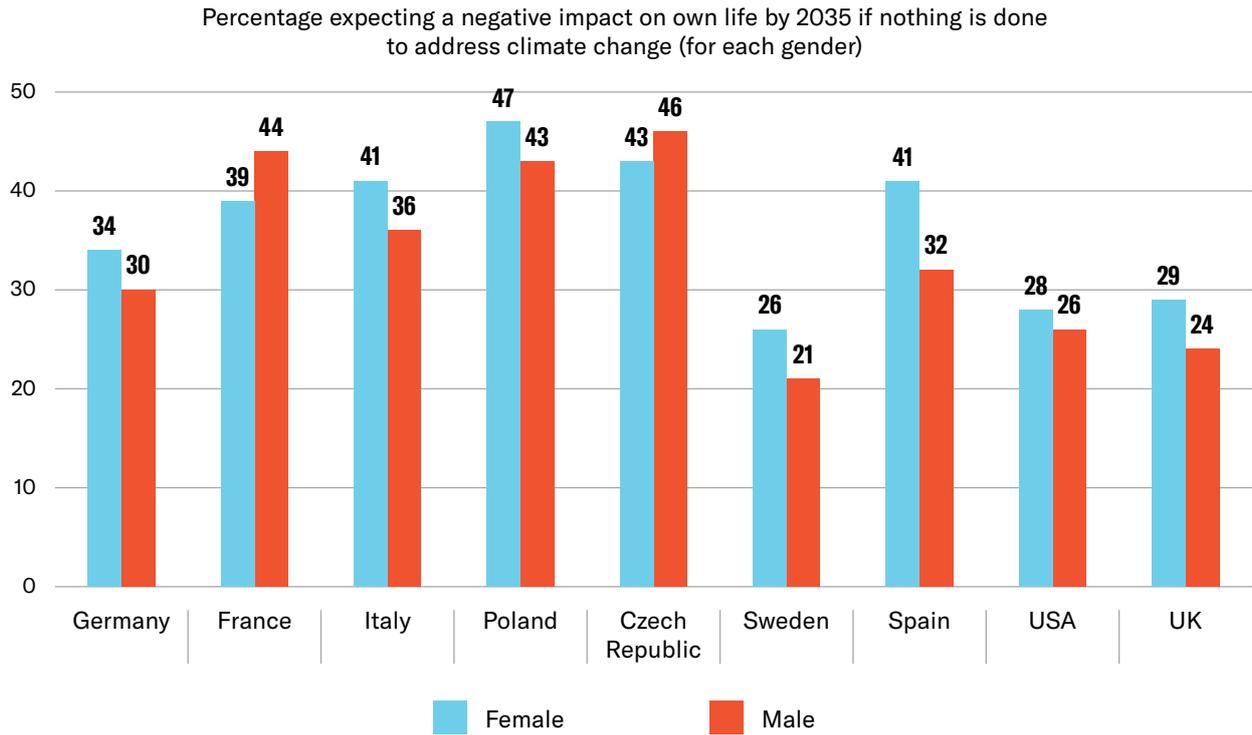
25 In part this could be due to a different meaning of the left-right typology in former Eastern European countries. See also: McCright, Aaron M., Riley E. Dunlap, and Sandra T. Marquart-Pyatt. “Political ideology and views about climate change in the European Union.” *Environmental Politics* 25, no.2 (2016): 338-358.

The impact of climate change awareness and political orientation on people’s climate change concern is much more pronounced than the impact of demographic factors. Figure 9 compares the views of women and men. In most countries women are

slightly more likely to expect a negative impact from climate change on their lives (except for France and the Czech Republic), but the differences are very modest (less than 10 percentage points for all countries).

FIGURE 9

Expected impact of climate change on own life by gender and country (%)



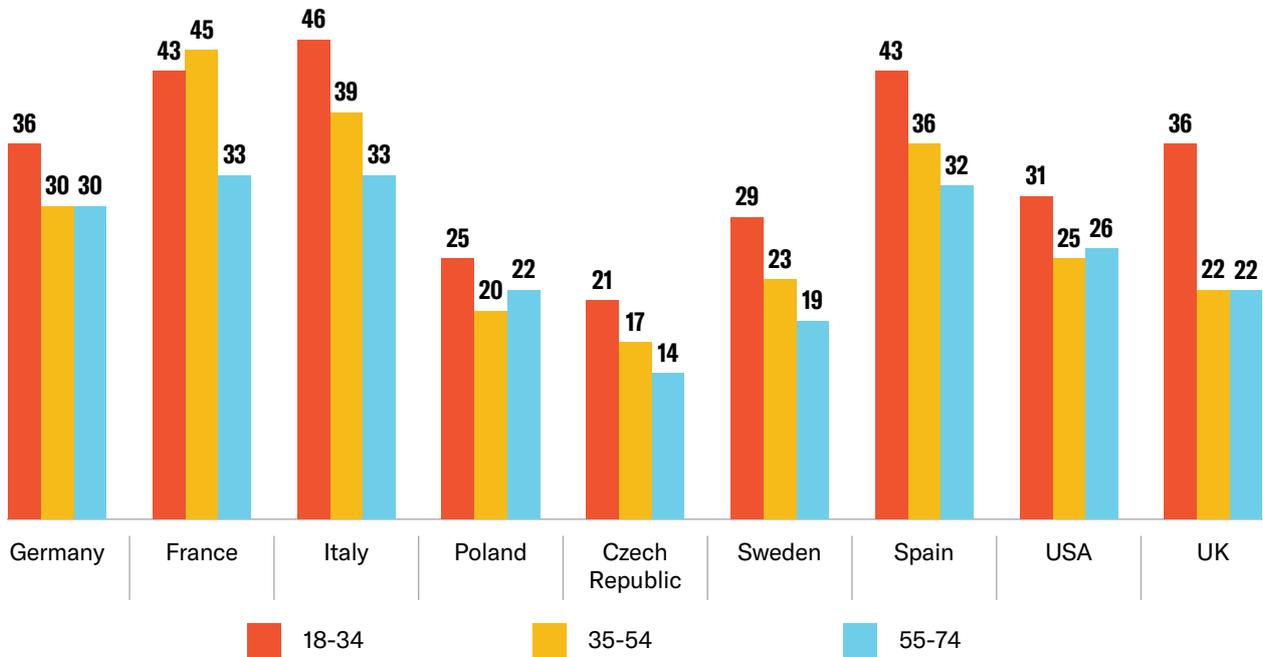
Age differences are somewhat more pronounced, but only in certain countries. Overall, younger people tend to be more likely to expect negative impacts of climate change on their lives (Figure 10). However, those differences are only substantially visible (a difference of at least 10 percentage points between

those aged 18-35 and 55-74 respectively) for the UK, Italy, Spain, France and Sweden. Compared to knowledge about the human causes of climate change and political orientation, those differences are much less significant.

FIGURE 10

Expected impact of climate change on own life by age and country (%)

Percentage expecting a negative impact on own life by 2035 if nothing is done to address climate change (for each age group)

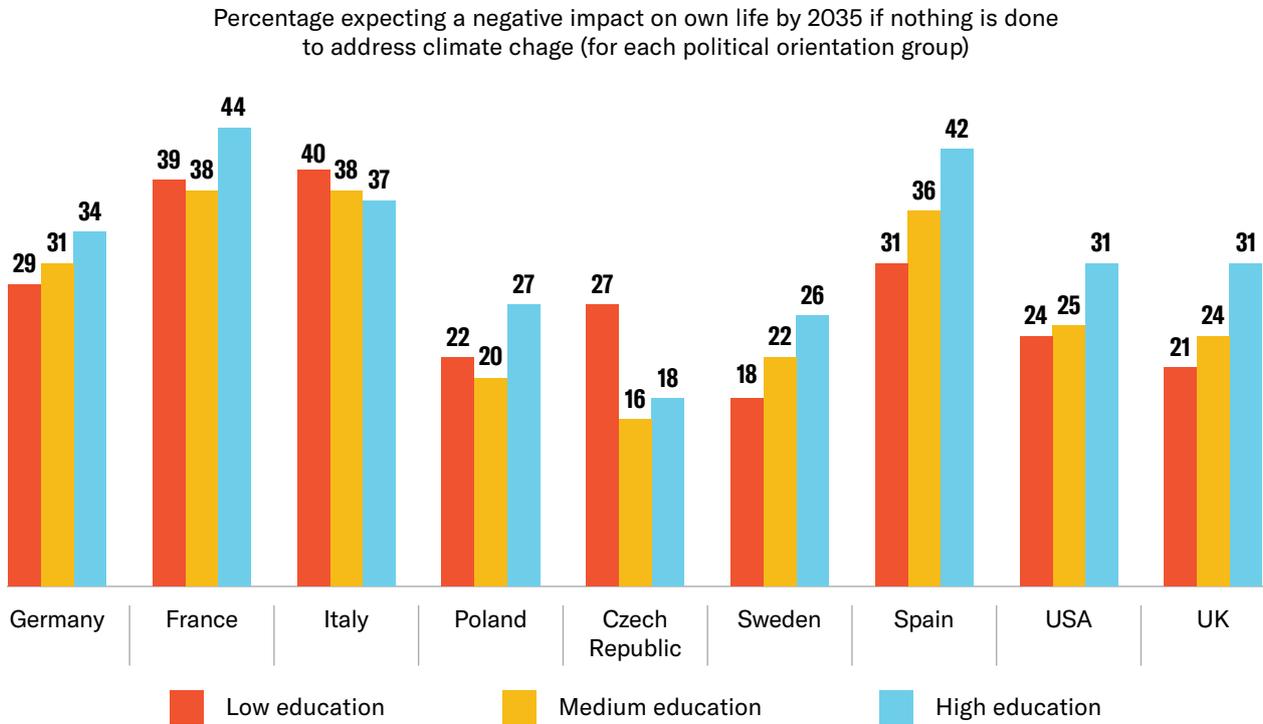


We can observe a similar result for formal education. In most countries (except Italy and the Czech Republic), those who have higher levels of education are more likely to expect that climate change will negatively affect their lives. However, the differences are moderate. The UK and Spain are the only countries where the difference between those in the highest and lowest educational category

is at least 10 percentage points. This is noteworthy, because we saw earlier that knowledge about climate change specifically was strongly associated with respondents' climate change concern. Formal education in itself is therefore not a strong predictor of people's concerns about climate change. Topic-specific knowledge, on the other hand, is.

FIGURE 11

Expected impact of climate change on own life by education and country (%)



SUMMARY

Our study finds that most Europeans and US-Americans are aware that the climate is warming, that anthropogenic factors are an important cause, and that global warming is likely to have some negative impact on life on earth. However, it also finds that a significant group of Europeans and US-Americans still underestimate humanity’s contribution to recent climate change as well as the severity of its impact. We find trend skepticism to be relatively rare, but soft attribution and impact skepticism to be much more common — especially in France, Poland, the Czech Republic, and the USA.

The results demonstrate that knowledge about the human causes of climate change is strongly related to respondents’ climate change concern. The results further demonstrate that while demographic factors do not seem to have a strong relationship with respondents’ level of concern, political orientation does. Yet the extent to which climate change awareness and political orientation affect people’s climate change concerns varies greatly between countries. In the next section we move on from these general attitudes and explore how the different levels of awareness or skepticism affect respondents’ willingness to engage in and support climate action.

PUBLIC WILLINGNESS TO ENGAGE IN AND SUPPORT CLIMATE ACTION

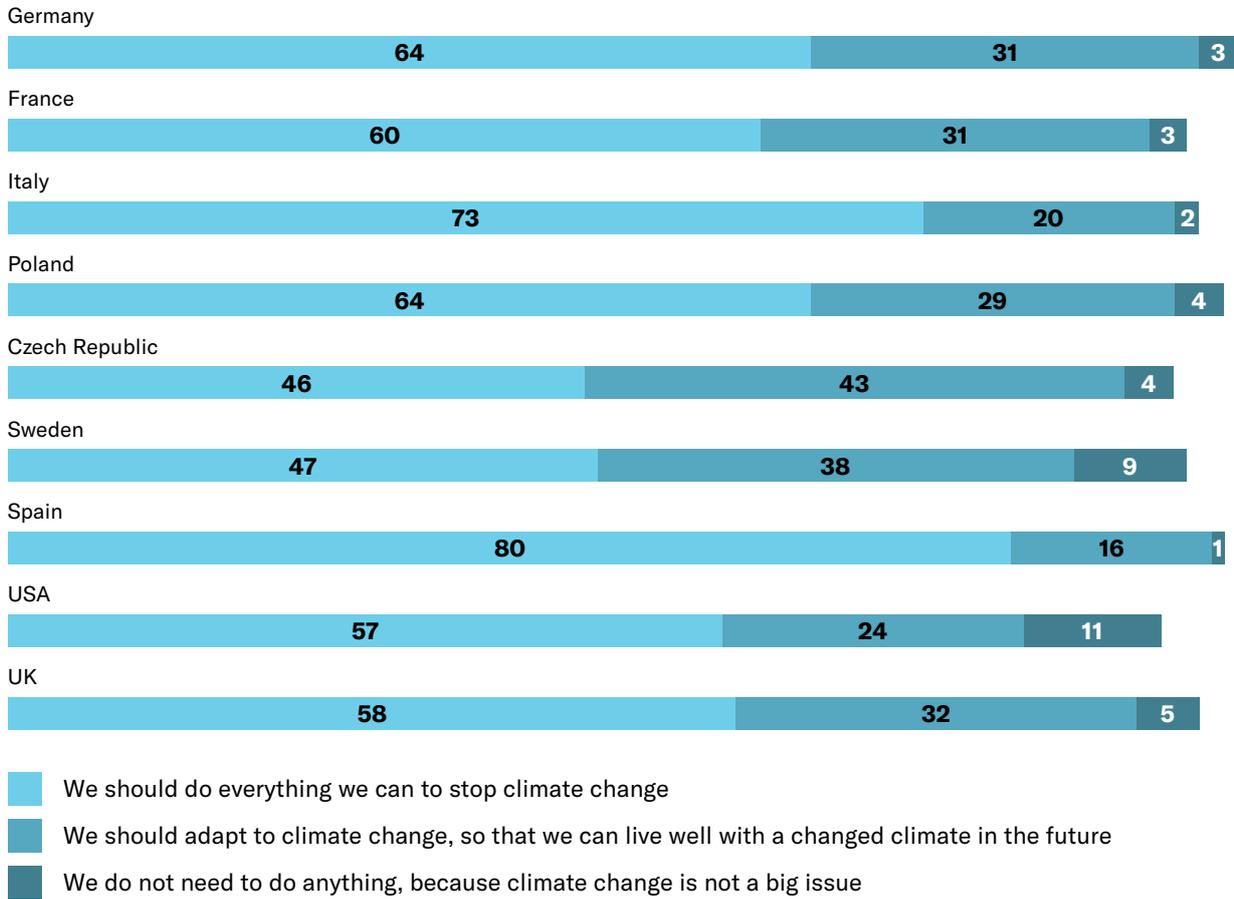
In the previous section we saw that a majority of Europeans and US-Americans have at least a basic awareness of the existence of anthropogenic climate change. Our results show that this awareness translates into a basic public willingness to engage in climate action and to support a government reaction to global warming. Yet the degree of willingness and support greatly varies between countries and according to respondents' awareness of the causes and impact of climate change.

LARGE OVERALL SUPPORT FOR A RESPONSE

On the most basic level, a large majority of respondents in all nine countries agree that climate change requires some form of collective action — whether it is to mitigate climate change or to adapt to its challenges. In fact, majorities in Spain (80%), Italy (73%), Germany (64%), Poland (64%), France (60%), the UK (58%) and the USA (57%) even agree with the statement that “we should do everything we can to stop climate change” (figure 12). In Sweden (43%) and the Czech Republic (38%) there is a particularly significant group of people who think we should predominantly adapt to the reality of a changed climate — though the group that is in favor of mitigation is still bigger in both countries. Except for Spain, those who favor adaptation make up at least a fifth and up to a third of the population in the other six countries. Only a very small minority thinks that no action is necessary at all (with the greatest approval in the USA at 11 per cent).

FIGURE 12

Support for response to climate change by country (%)²⁶



Once again, awareness matters. Similar to our findings on personal climate change concerns before, those who correctly attribute climate change to human causes are much more likely to favor mitigating changes rather than an adaptive approach or no action at all (figure 13). Lower levels of attribution skepticism are associated with greater levels of support for action against climate change

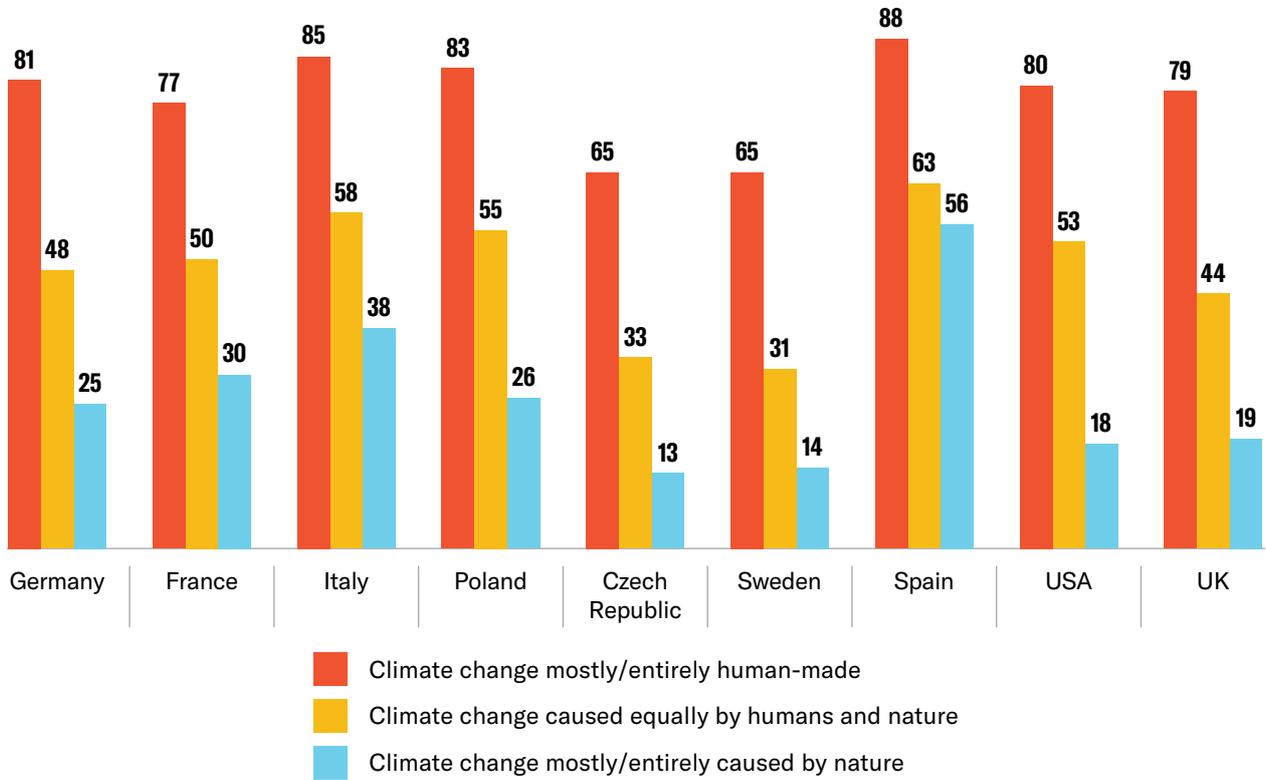
in all countries. The differences are particularly pronounced in the USA, UK, Sweden and the Czech Republic, where those who attribute climate change mostly to human activities are more than four times as likely to favor mitigating action than those who attribute climate change predominantly to natural processes, followed by Germany and Poland, where the difference is still more than three-fold.

²⁶ "Taken together, what should people in [Respondent's COUNTRY] do to respond to climate change overall?"; missing responses to make up 100%: Don't know

FIGURE 13

Support for mitigation measures by awareness of causes of climate change and country (%)

Percentage saying that “we should do everything we can to stop climate change” (for each knowledge group)



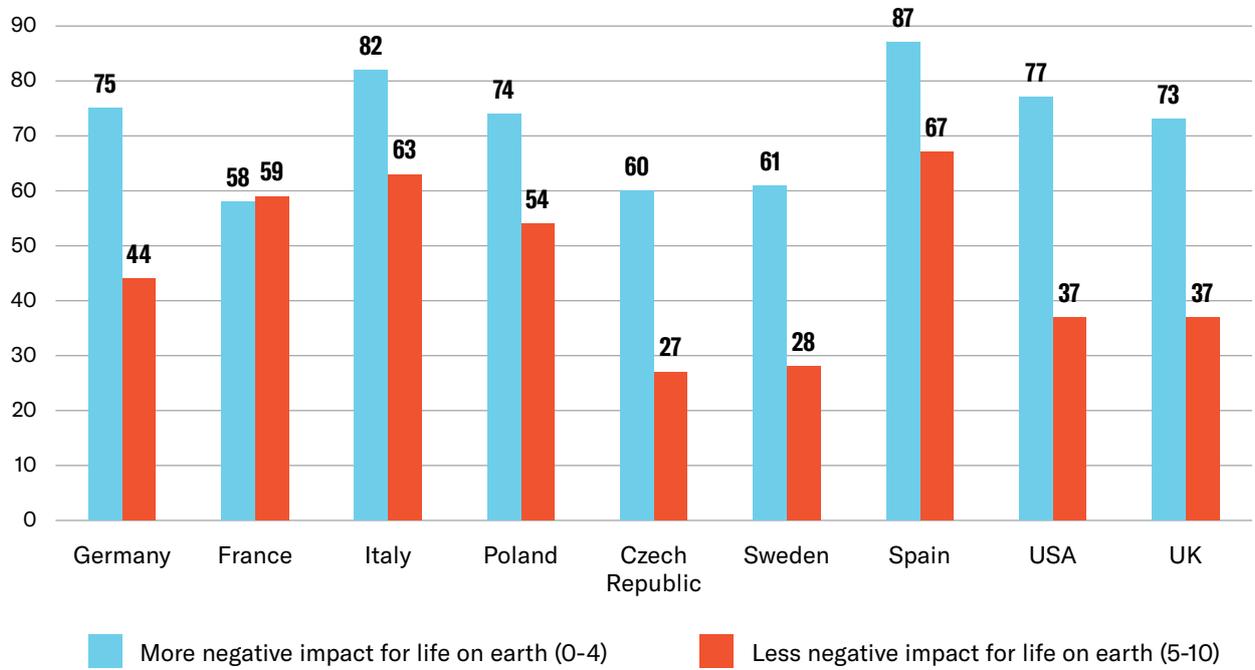
In most countries, except France, there is also a significant relationship between impact awareness and views on climate change action. Those who expect a more negative global impact from climate change are much more likely to favor climate action. Reduced impact skepticism and a greater awareness of the consequences of climate change are associated with a preference shift from adaptive to mitigation

measures. The relationship is again strongest in the Czech Republic, Sweden, the USA and the UK with those who expect a significant negative impact for life on earth being roughly twice as likely to favor stronger action against climate change than those who do not. Note, however, that even many—and in some cases a majority of—‘impact skeptics’ are in favor of mitigation measures.

FIGURE 14

Support for mitigation measures by awareness of impact of climate change and country (%)

Percentage saying that “we should do everything we can to stop climate change” (for each impact perception group)



PUBLIC WILLINGNESS TO ENGAGE IN CLIMATE ACTION

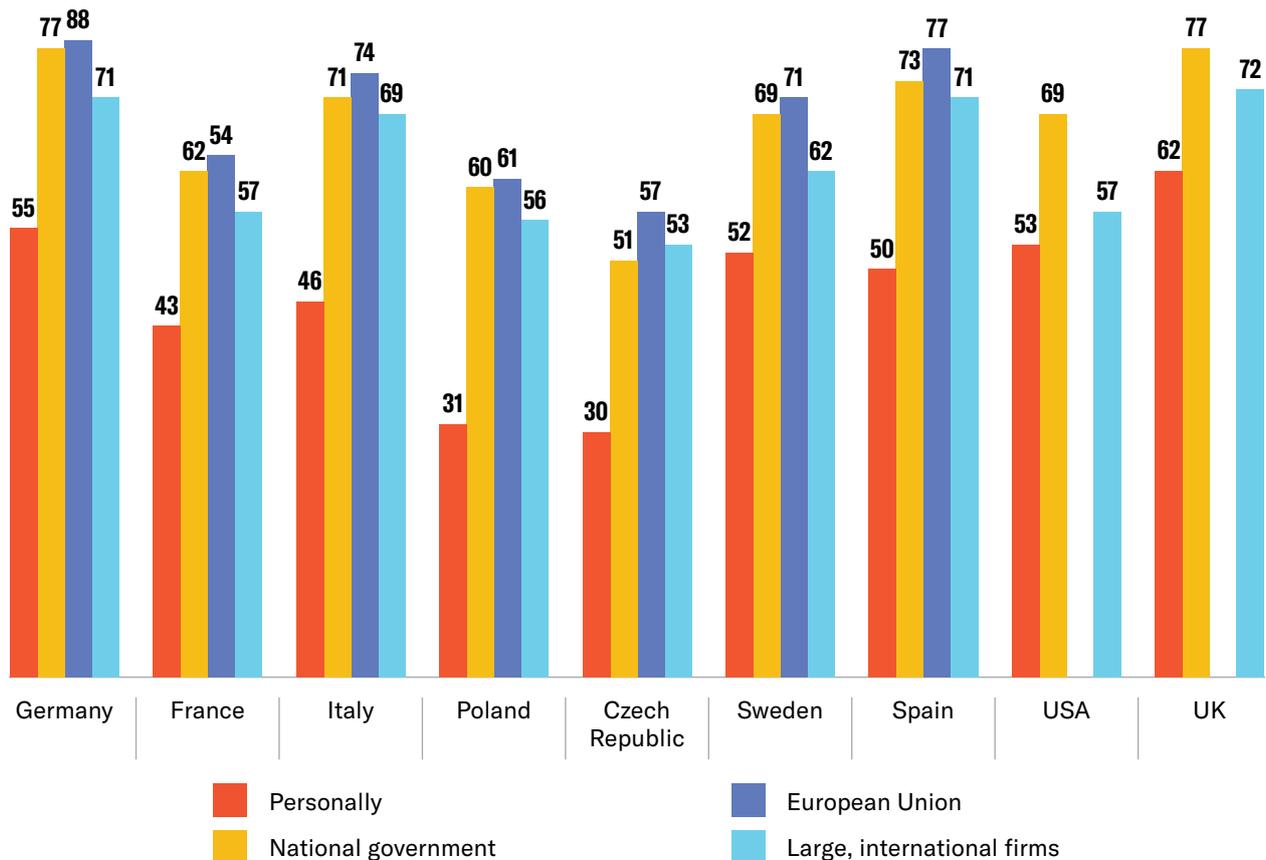
Overall, respondents tend to accord more climate responsibility to their national government than to themselves personally (figure 15). A majority of people in all countries studied say that their national government has a high degree of responsibility for reducing climate change. Support for this perspective ranges from 51 per cent in the Czech Republic to 77 per cent in Germany and the UK. In European Union member states, people tend to attribute at least similar or even slightly greater levels of

responsibility to the EU in addressing the issue (such as in the Czech Republic). Respondents also assign significant responsibility to big business, but not as much as to their government—except for in the Czech Republic—or the EU. A significant number of people in each country feel personally responsible for reducing climate change, but to a lesser extent. Only in the UK (66 per cent), Germany (55 per cent), the USA (53 per cent), Sweden (52 per cent) and Spain (50 per cent) do we find a majority of people who feel a high sense of responsibility themselves. In Poland and the Czech Republic, only a little less than one third of people feels that way.

FIGURE 15

Responsibility for climate change action by actor and country (%)²⁷

Percentage seeing high responsibility for respective actor to reduce climate change (ratings of 8 to 10 on a scale from 0 to 10)



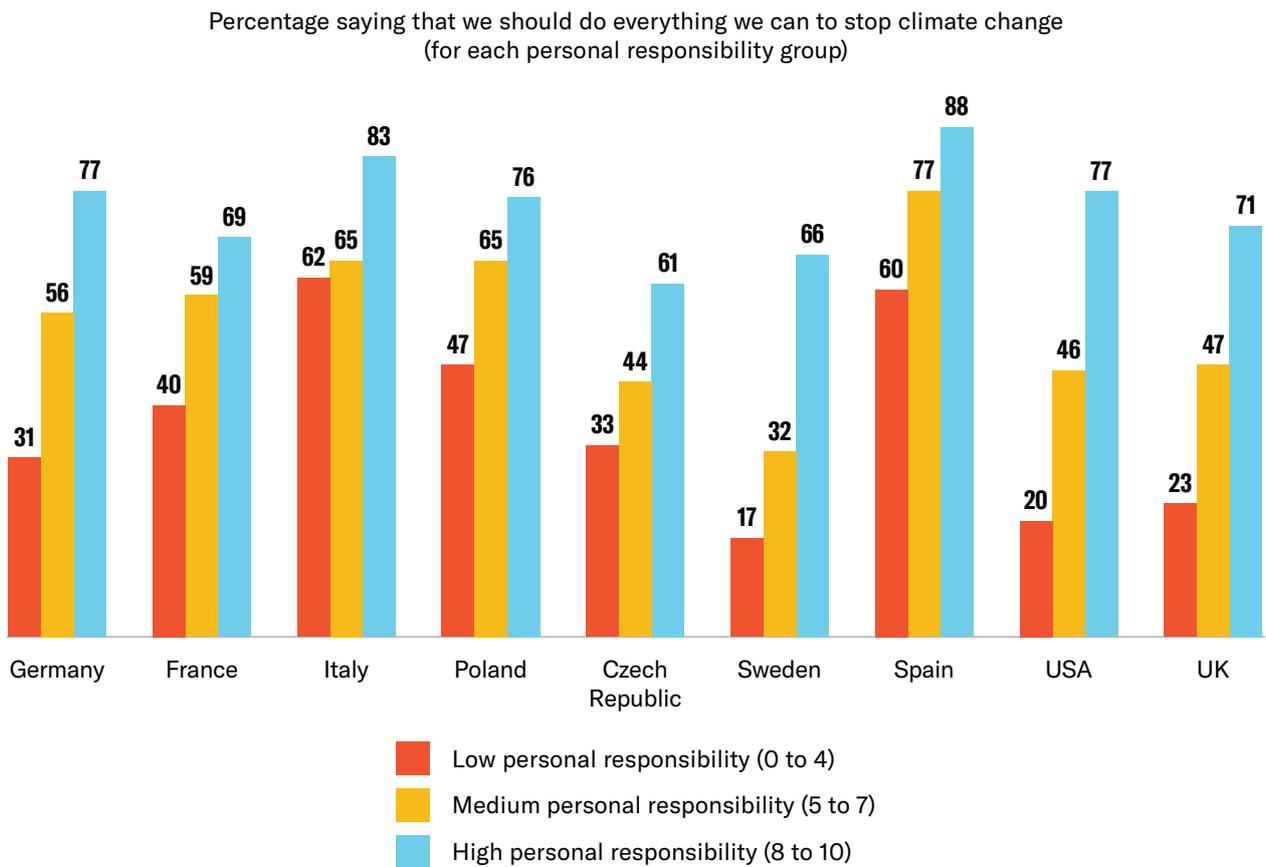
²⁷ “To what extent do you feel it is the responsibility of each of the following to reduce climate change?”

A greater sense of personal responsibility is associated with greater support for taking action against climate change (figure 16) in all countries. The effect is particularly pronounced in Sweden, the USA and the UK, where those who feel a very high

degree of personal responsibility are more than three times as likely to say that “we should do everything we can to stop climate change”, compared to those who only feel a low level of personal responsibility.

FIGURE 16

Support for mitigation measures by sense of personal responsibility and country (%)

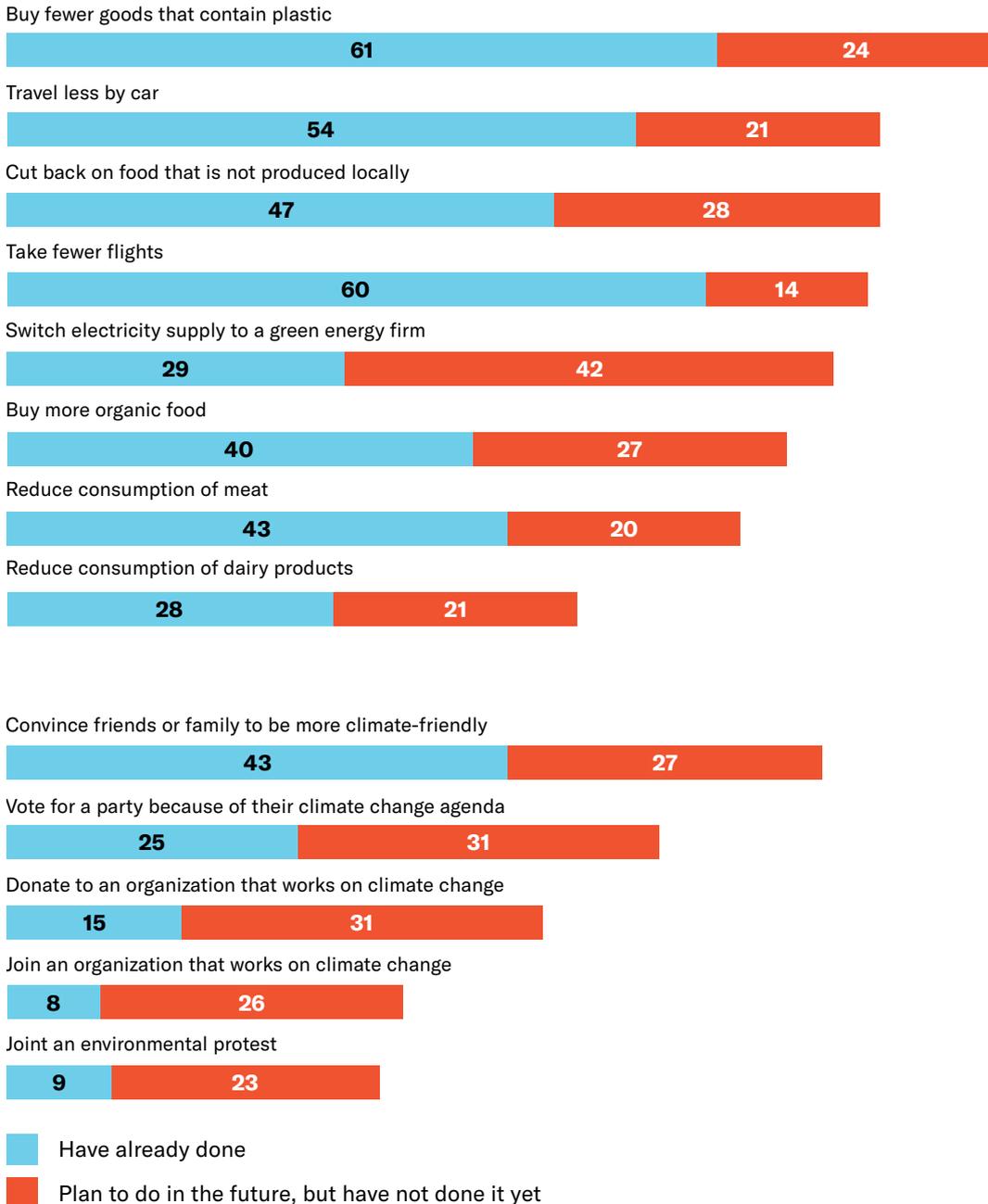


While we see variation in the extent to which people feel personally responsible, we find a significant number of people who have already engaged in some

practices to reduce their own impact on climate change (figure 17).

FIGURE 17

Actions against climate change that respondents have taken or are planning to take (%), results for respondents across all countries²⁸



28 "Of the following, which, if any at all, have you personally already done or plan to do in the future to reduce your impact on climate change?"; Responses missing to make up 100%: "Haven't done it and don't plan to do it in the future." The German sample was weighted down for this graph by half to ensure each country sample had an equal impact on the results.

A majority of all respondents say that they have already cut down on their plastic consumption (61%), their air travel (60%), or their car travel (54%). A majority also says that they either already have or are planning to reduce their meat consumption, switch to a green energy supplier, vote for a party because of their climate change program, buy more organic and locally produced food, and convince friends to behave in a more climate-conscious way.

But respondents' willingness to undertake personal action has its limits. Many say that they intend to change their behavior, but have not necessarily actioned that intention. For example, 42 per cent of respondents say that they are planning to switch to a greener electricity provider, whereas only 29 per cent have actually done so.

Furthermore, people are much more likely to make changes to their consumption and travel habits than they are to participate in civic engagement on climate change, although it has been argued repeatedly that collective engagement is crucial in terms of maximizing the impact of people's actions²⁹. Most people have no intention of participating in an environmental protest (68%), joining an environmental organization (66%) or donating to one (54%). Easier forms of civic engagement, such as voting for a political party because of their climate change agenda or trying to influence friends and family are more popular. But overall, for most people, changing their consumption and travel behavior is what they are prepared to consider most at the moment.

29 Adams, Matthew. "Individual action won't achieve 1.5°C warming – social change is needed, as history shows." *The Conversation*, October 10, 2018. <https://theconversation.com/individual-action-wont-achieve-1-5-warming-social-change-is-needed-as-history-shows-104643>

The greater prevalence of consumer-oriented action compared to community and civic activities may have something to do with respondents' views on the relative efficacy of specific climate actions (table 1). When we asked respondents to select, from a range of options, the best action an individual could take to respond to climate change, the most selected answer was 'reduce waste and recycle more' in all countries. In Spain, Poland, Italy and the Czech Republic a majority of all respondents selected this as the best possible action. While recycling has been shown to help increase people's awareness of sustainable practices, its efficacy in terms of reducing emissions directly is limited especially when compared to the

other options presented³⁰. No other option from the list was selected by a particularly large proportion of the population, with the exception of 'taking fewer flights' with 27 per cent in Germany, 19 per cent in Sweden and 18 per cent in France. Importantly, the two activities that could be qualified as civic activities (the more proactive 'supporting organizations that fight climate change' and the more passive 'voting for parties that address climate change') are only considered by a small minority of people as the best course of action. Taken together, no more than just over 20 per cent (in Spain, Germany, the USA, the UK and Sweden) considers one of these types of activities as most effective.

TABLE 1

View on the best action an individual can take against climate change (%)³¹

	GERMANY	FRANCE	ITALY	POLAND	CZECH REPUBLIC	SWEDEN	SPAIN	USA	UK
Reduce waste and recycle more	28	38	55	58	52	35	60	37	40
Take fewer flights	27	18	3	6	11	19	4	3	13
Support organizations that fight climate change	10	11	14	9	12	8	12	10	11
Drive cars less	13	9	7	8	10	8	4	12	12
Vote for parties that address climate change	10	7	5	6	6	12	9	10	9
Get electricity from a green energy supplier	5	5	10	5	2	7	8	12	9
Nothing, because climate change is not a big problem	4	5	2	5	5	7	1	10	5
Only buy organic food	1	6	2	1	1	2	2	2	1
Only buy second-hand clothing	1	1	1	2	0	2	1	1	1

30 Wynes, Seth, and Kimberly A. Nicholas. "The climate mitigation gap: education and government recommendations miss the most effective individual actions." *Environmental Research Letters* 12, no.7 (2017): 074024.

31 "There are many different views about what the best thing is individuals can do in response to climate change, if anything at all. In your opinion, of the following, which is the best thing one could do to address climate change personally?"

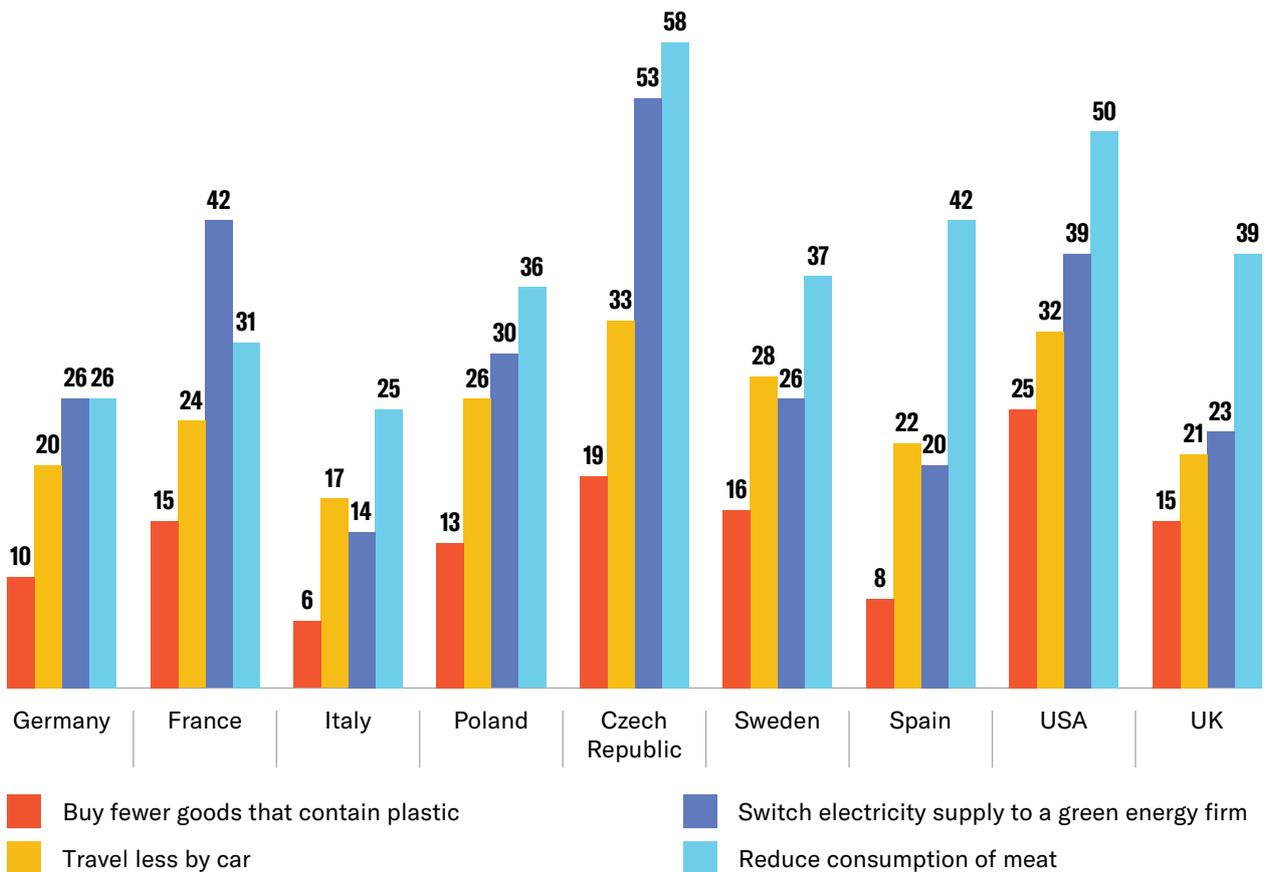
While many people have already or are considering changing their behavior, there is also a significant group of respondents which is less willing to change their behavior in certain areas, although this group varies in size across the different countries. As figure 18 shows, only a minority of people in all countries are not planning to reduce their plastic consumption. However, roughly a third of people in the Czech Republic and the USA say that they are not planning to reduce their car travel, while the figure is below or around 20 per cent in Italy, Germany, the UK and Spain. Country differences become particularly apparent when we look at energy supply. The

majority of people in the Czech Republic say that they are not planning to switch to a green energy firm and around 40 per cent of respondents in France and the USA hold the same view. In Italy (14%) and Spain (20%) the numbers are half, or even less. A similar pattern emerges when we look at meat consumption. Only a quarter of people in Italy and Germany are unwilling to reduce their meat consumption, but a majority of people in the Czech Republic (58%) and the USA (50%), as well as more than a third and up to around 40 per cent of people in Spain, the UK, Sweden and Poland, are unwilling to do so.

FIGURE 18

Disinclination to make changes in certain consumption and travel habits by country (%)

Percentage saying they have not done and are not planning to undertake these activities



We also see some variation in terms of the community or civic engagement actions people are willing or not willing to consider participating in (figure 19). While only small minorities in Italy (11%) and Spain (18%) have no intention of convincing friends or family to behave in a more climate-conscious way, nearly 40 per cent of people in the Czech Republic, France, the USA and the UK are not inclined to do so. In France, only a minority of 43 per cent already has or would consider voting for a party because of its climate change agenda and in the Czech Republic, Sweden, the UK and Germany, over 40 per cent of the population is not planning on doing so. The disinclination to join an environmental organization that combats climate change is smallest in Italy and Spain, where the population is roughly split in half on this question, while only 21 per cent in France and 24 per cent in the Czech Republic would contemplate doing so. Those countries also have the fewest people who would consider joining an environmental protest (just over 20 per cent), while people in Spain (57%), Italy (46%) and Poland (41%) would be most likely to consider it.

These results show that there is still much room for improvement in convincing people to meaningfully change their own consumption and travel behaviors, as well as in encouraging them to consider engaging in community and civic action. However, this room for improvement is clearly greater in some countries than others and we also see substantial differences in what activities people are likely to consider undertaking.

We found that people’s willingness to make behavioral changes to combat climate change is strongly related to their degree of awareness of its anthropogenic causes. Those who know that climate change is largely attributable to human actions are more likely to have made changes to their consumption and travel habits (figure 20). The difference is most pronounced in Sweden, where those who are aware that climate change is largely caused by human activities have made nearly twice as many behavioral changes (59 per cent) as those who think it is mostly due to natural causes (31 per cent).

FIGURE 19

Disinclination to engage in certain civic engagement actions on climate change by country (%)

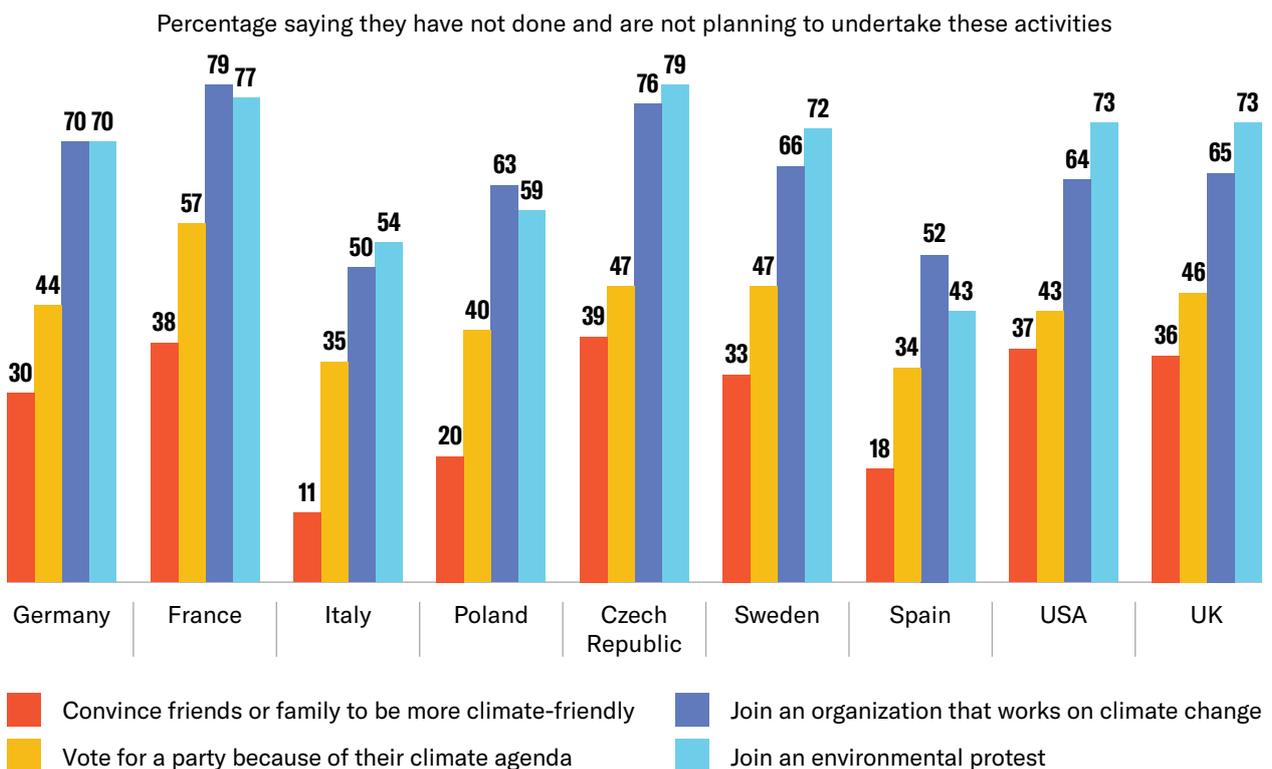
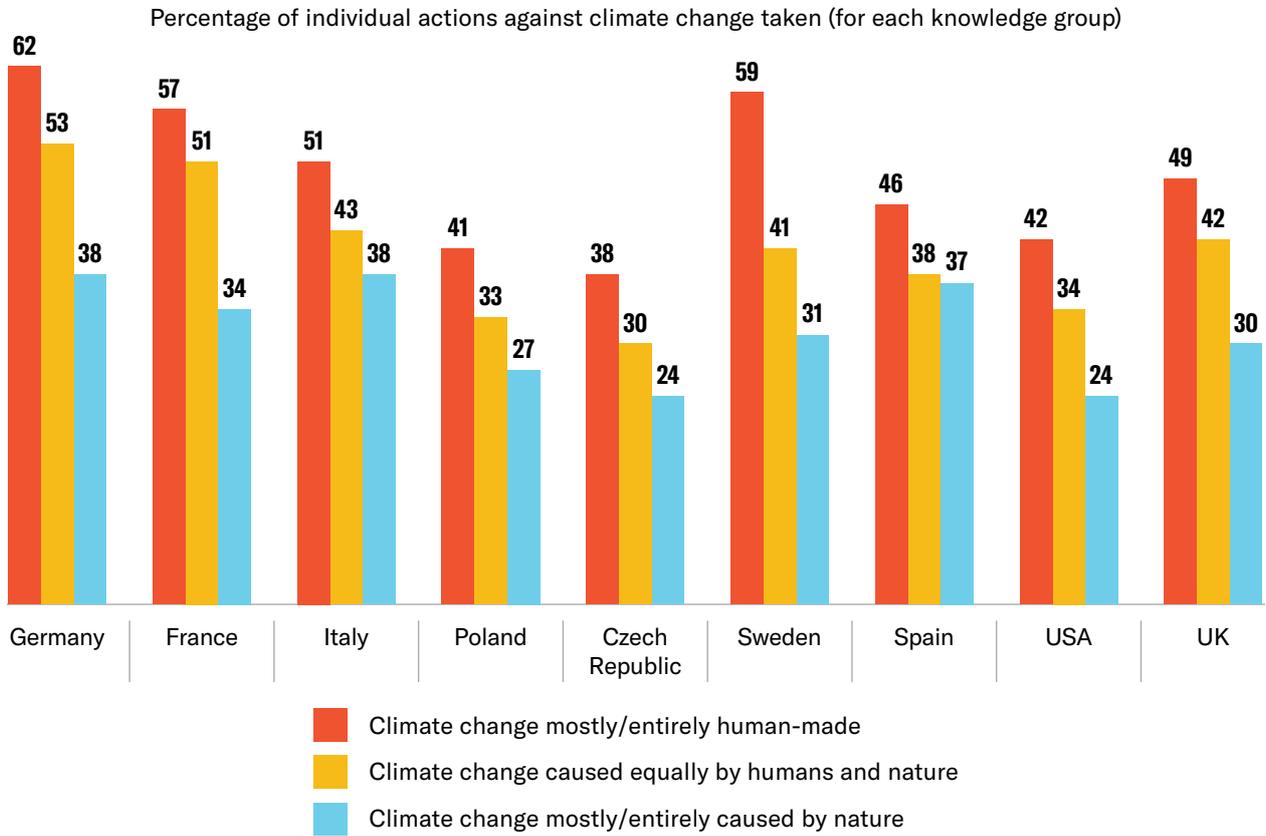


FIGURE 20

Behavioral changes made to combat climate change by awareness of the causes of climate change and country (%)³²



³² See figure 17 for the full list of possible actions presented.

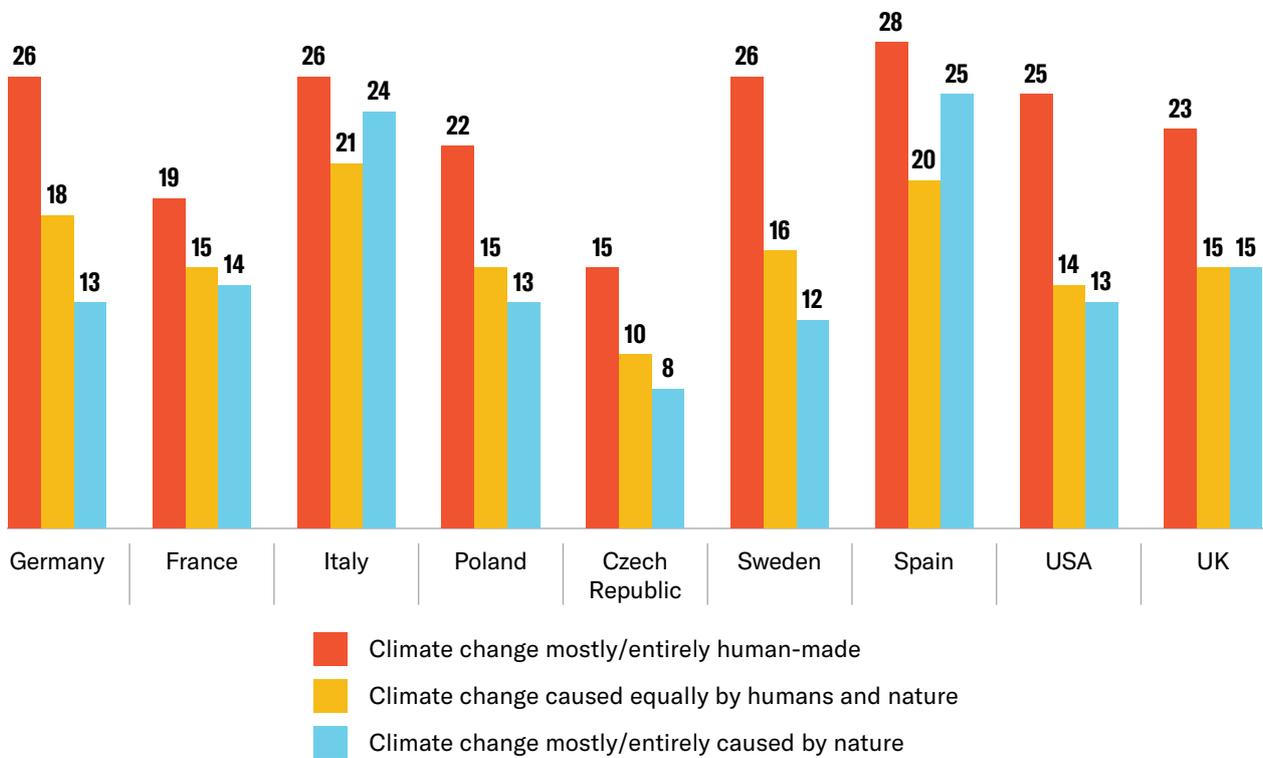
We find a similar pattern for civic engagement actions (see figure 21). However, the pattern is not as strong and cohesive in all countries. While each level of attribution awareness is associated with a greater range of behavioral changes, the same is not true for civic engagement actions. In France, Poland, the Czech Republic, Italy, Spain, USA and the UK, those in the middle group, who think climate change is caused equally by human activities and natural

processes are not notably more likely to undertake civic actions than those who attribute climate change primarily to natural causes. However, in Sweden, Germany and the USA those who mostly attribute climate change to human activities, on average, have engaged in at least around twice as many different civic engagement activities as those who show the greatest degree of attribution skepticism.

FIGURE 21

Civic engagement actions taken by awareness of the causes of climate change and country (%)³³

Percentage of collective civil-society-oriented actions against climate change taken (for each knowledge group)



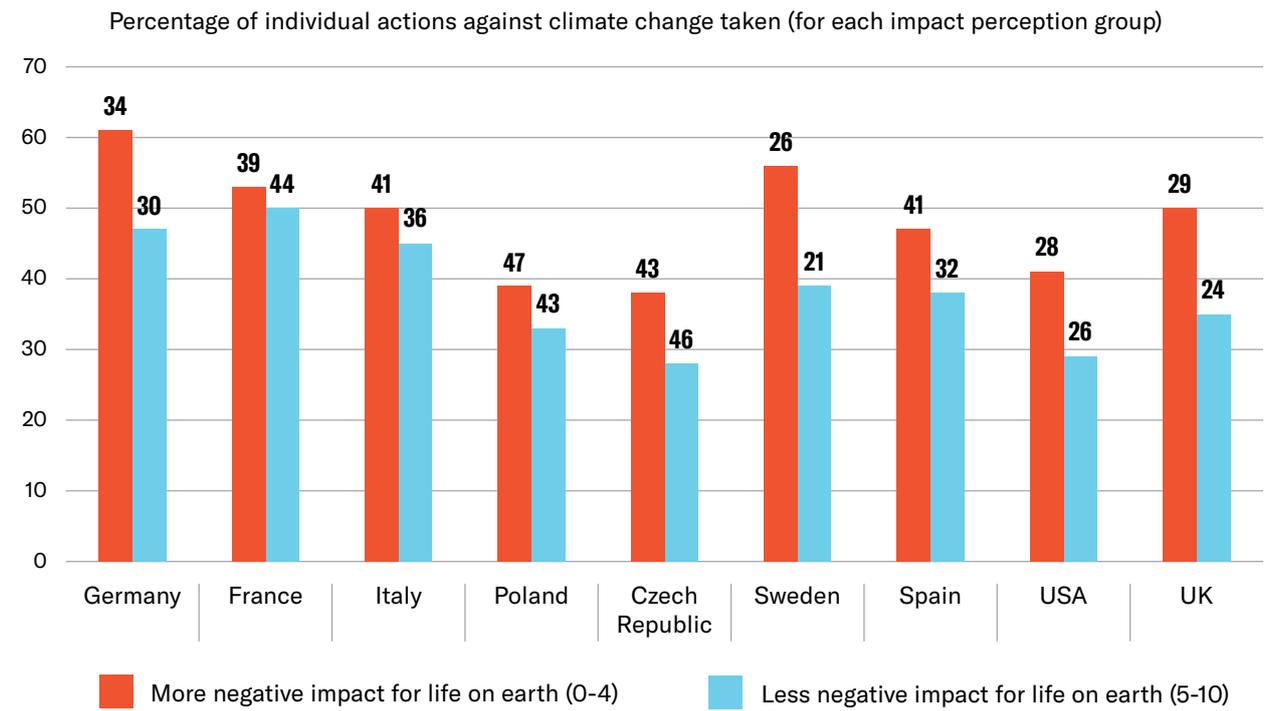
³³ See figure 17 for the full list of possible actions presented.

Respondents' level of awareness of the severity of the impact of climate change is also related to the extent to which they take action against it. People who are more concerned about the negative impact of climate change on life on earth are more likely

to make more behavioral changes to combat it (see figure 22). However, the extent of this effect varies between countries. It is most pronounced in Sweden, Germany and the UK, but the differences are rather small for France, Italy and Poland.

FIGURE 22

Behavioral changes made to combat climate change by awareness of the impact of climate change and country (%)³⁴



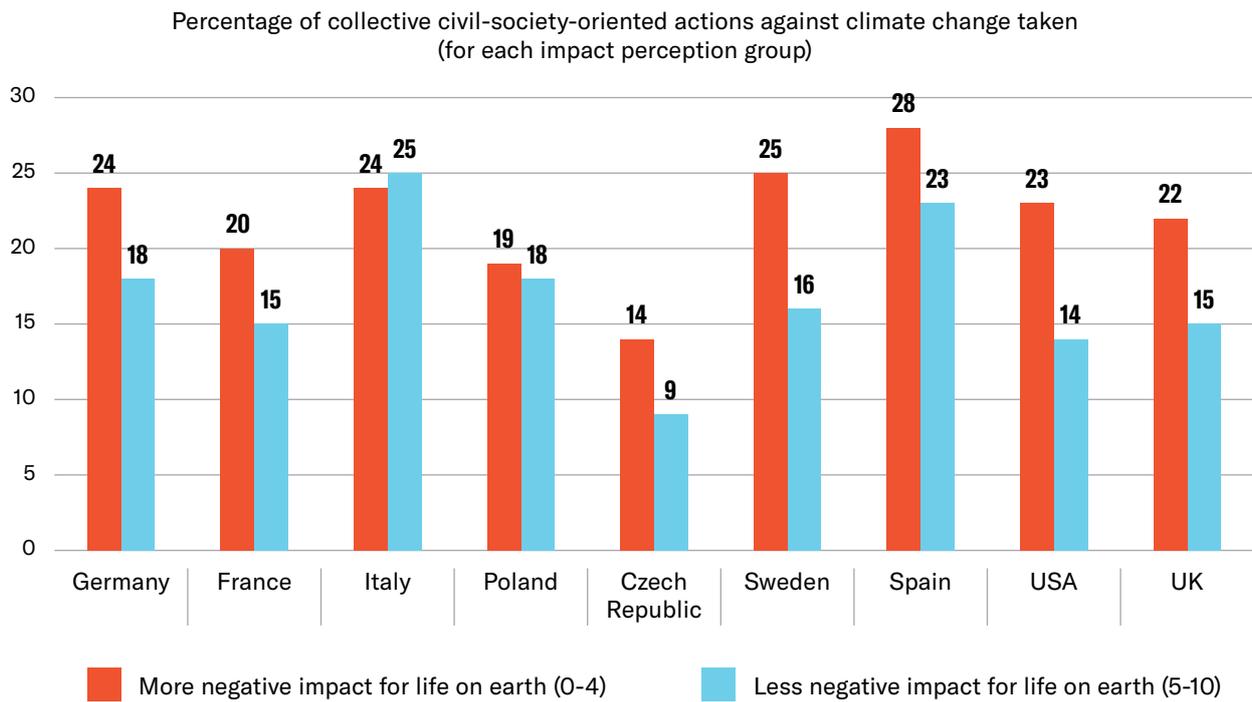
34 See figure 17 for the full list of possible actions presented.

Overall, we find the same pattern for civic engagement actions on climate change (figure 23), albeit, once again, not as comprehensively as for consumption and travel behavior. In most countries (except Italy and Poland) those who expect climate

change to have a more negative impact on life on earth are more likely to engage in a wider range of civic engagement actions to reduce climate change. The differences are most pronounced in Sweden and the USA.

FIGURE 23

Civic engagement actions taken by awareness of the impact of climate change and country (%)³⁵



Overall, we see that respondents’ awareness of the causes and impact of climate change is not only related to their support for a mitigation response, but also to the likelihood they will make changes in

their own behavior and participate in civic action on climate change. However, the lack of awareness of the relative efficacy of some actions, in particular civic-oriented ones, is something to be addressed.

³⁵ See figure 17 for the full list of possible actions presented.

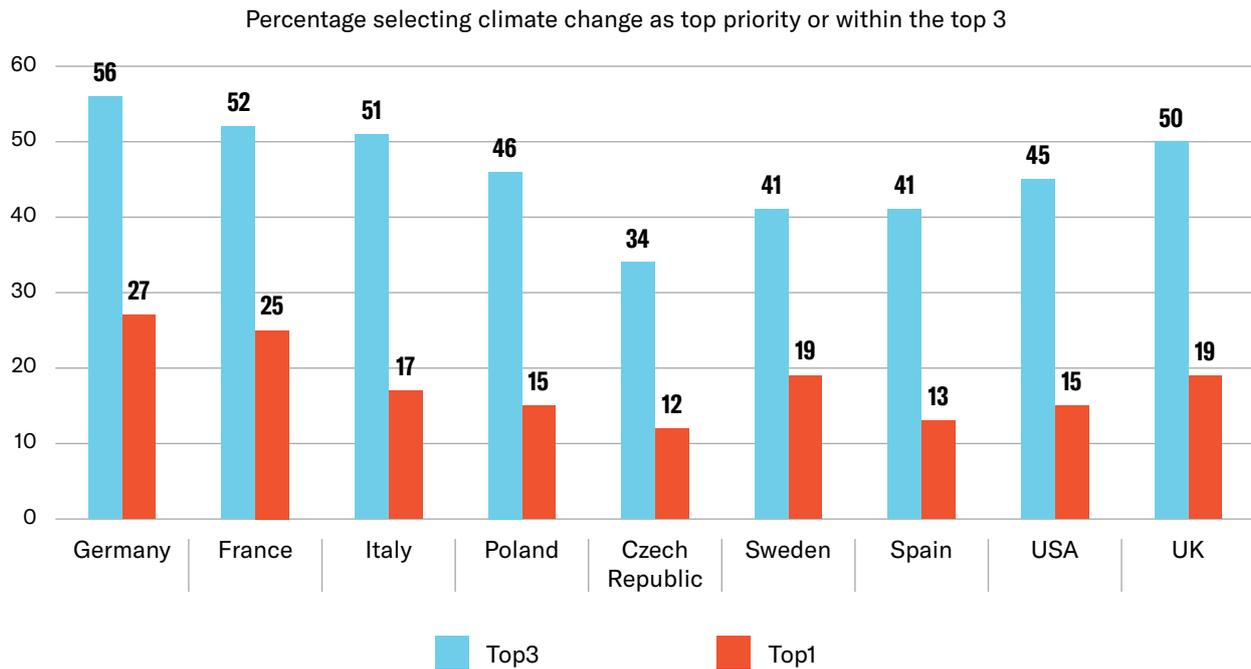
PUBLIC SUPPORT FOR GOVERNMENT CLIMATE ACTION

As shown in figure 15, people accord a high level of responsibility to their national government and, in the case of its member states, the EU in addressing climate change. Quite a few Europeans and US-Americans believe that their government should make climate change an absolute priority. When we ask respondents to select from a list of ten issues—such as climate change, migration, healthcare, education, security, and employment—the one they believe should be on top of their government’s agenda, ‘climate change’ is the most selected option

in France and Germany, the second most selected option in the UK, Sweden, Poland, and France, and the third most selected option in the US and Spain. Only in the Czech Republic does climate change not make the top three of most selected issues—it comes in fifth. Perhaps not surprisingly, considering the current pandemic, the most selected option overall was ‘healthcare’. Respondents were also asked to select their second and third choice. In figure 24, we show that a majority in Italy (51%), France (52%), and Germany (56%), half in the UK (50%), and significant minorities in the US (45%), Spain (41%), Sweden (41%), Poland (46%) and the Czech Republic (35%) mentioned climate change in their top-three selection.

FIGURE 24

Climate change as government priority (%)³⁶



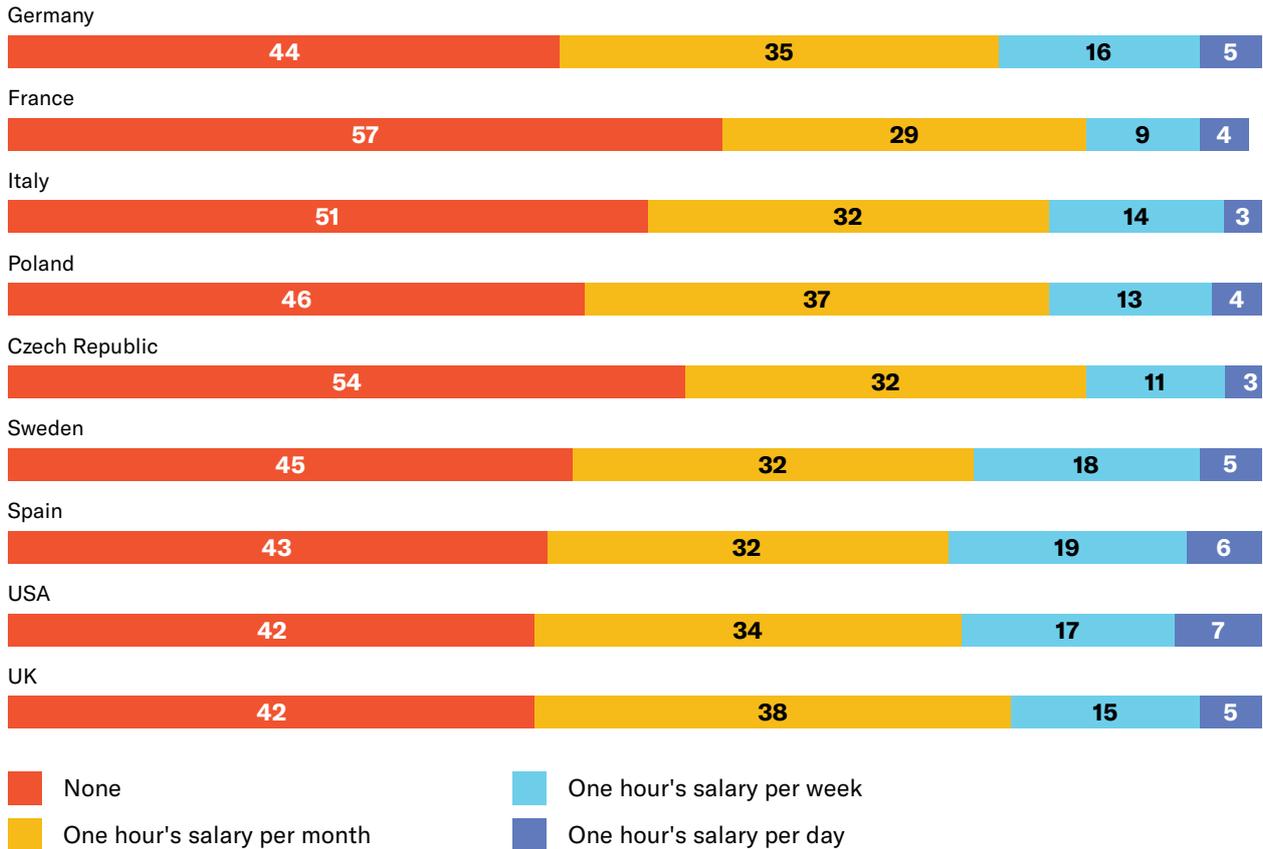
36 See figure 17 for the full list of possible actions presented.

Climate change is clearly a highly relevant topic for many people, and a significant proportion would also be willing to accept at least a small increase in their own taxes for action against it (figure 25). Apart from in France, Italy and the Czech Republic, there is a

small majority willing to pay some additional taxes. However, the percentage of people that would be willing to pay more than a small amount (one hour’s wages per month) is limited in all countries, only reaching a quarter in Spain and the USA.

FIGURE 25

Willingness to pay higher taxes for climate action by country (%)³⁷



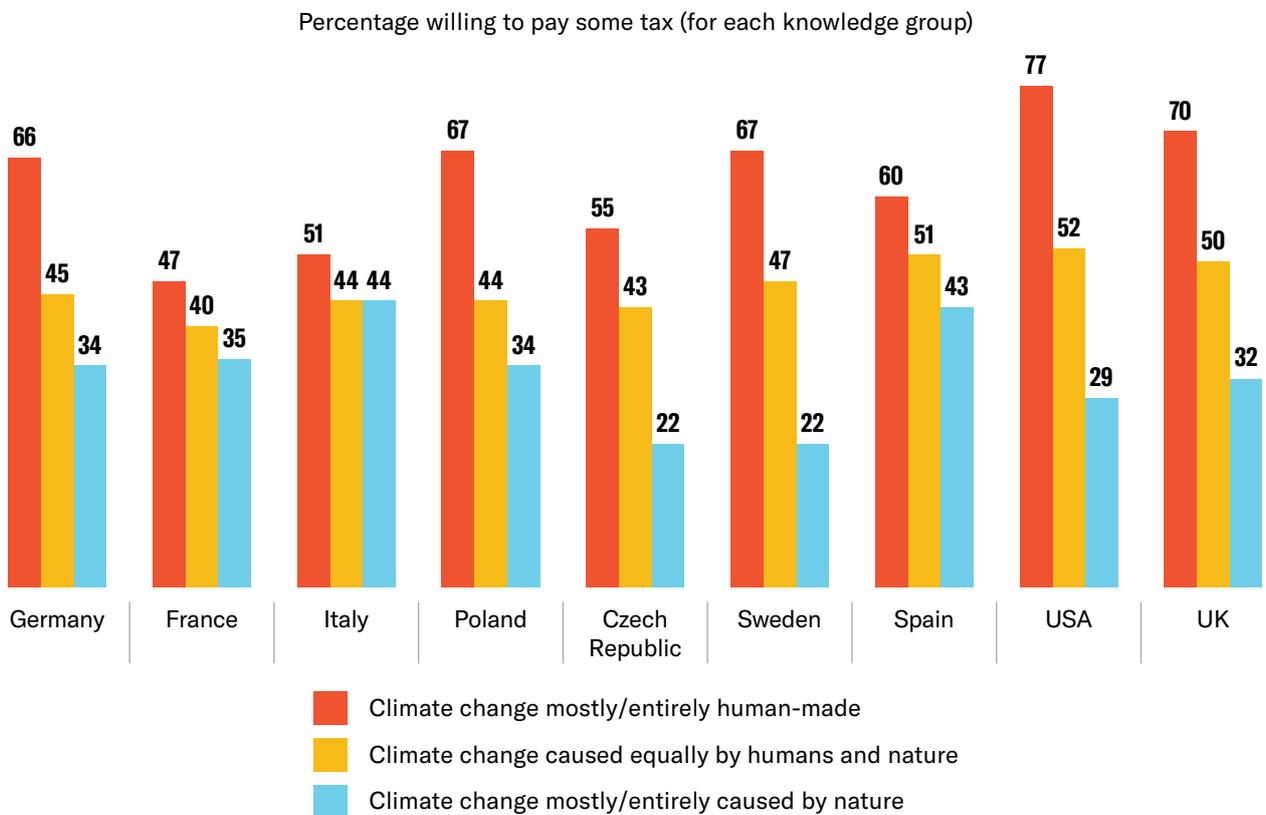
37 "To what extent would you be willing or not willing to accept paying higher taxes to combat climate change?"; Missing responses to make up 100%: Don't know

Once again, we find a significant relationship with awareness of the anthropogenic causes of climate change. The more people are convinced that climate change is mostly caused by human activity, the more likely they are to accept paying some tax for climate action (figure 26). However, this relationship is not as pronounced everywhere. The differences are rather small in Italy, for example, and moderate in France

and Spain. In Sweden, on the other hand, those who attribute climate change mostly to human activity are three times as likely to accept higher taxes, compared to those who think climate change is largely driven by natural causes. The difference is also almost or more than double in Germany, the Czech Republic, the USA, and the UK.

FIGURE 26

Willingness to pay higher taxes for climate action by awareness of causes of climate change and country (%)

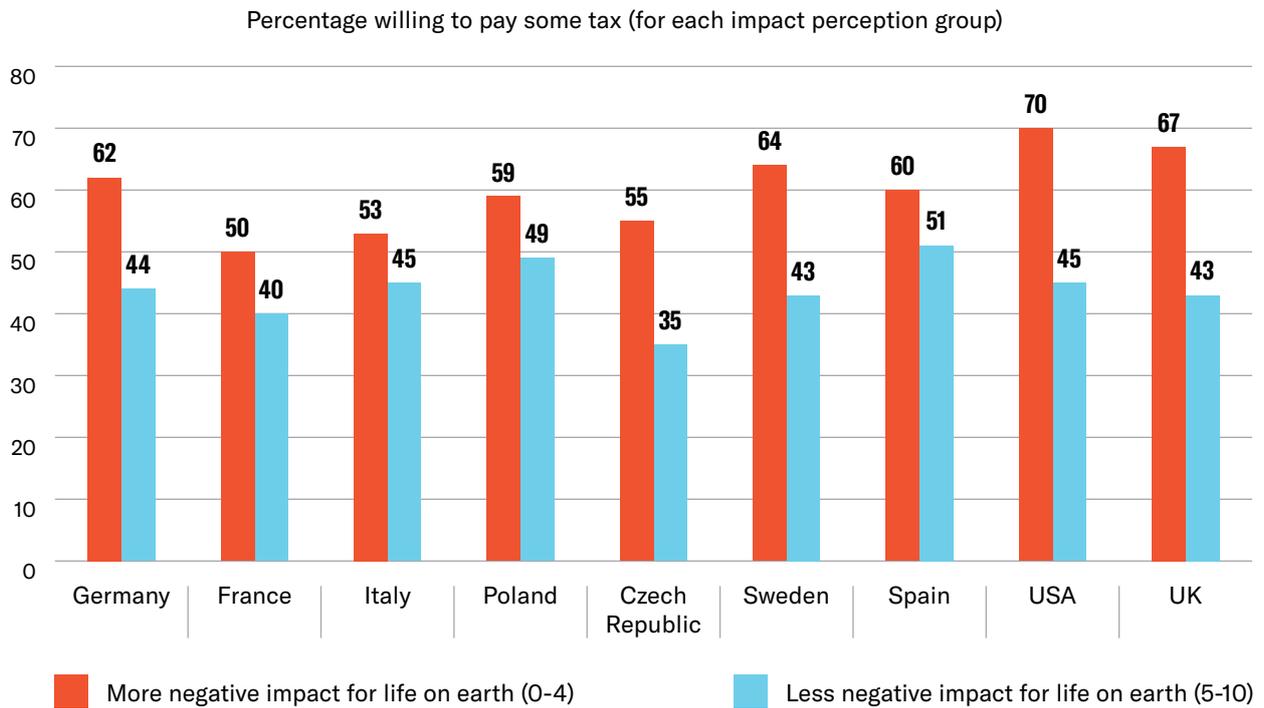


Overall, the pattern is similar for impact awareness (figure 27). Those who expect climate change to have a greater negative impact on life on earth are significantly more likely to accept paying higher taxes to address it. Again, there is variation between countries, with the pattern being most pronounced

for the USA, the UK, Germany, Sweden and the Czech Republic. But we see a clear indication that the degree of attribution and impact awareness affects people’s willingness to financially support government climate action.

FIGURE 27

Willingness to pay higher taxes for climate action by awareness of impact of climate change and country (%)



Although respondents generally support government action on climate change, they appear reluctant to support policies with clear trade-offs. The banning, curbing, or taxing of activities that harm the climate is generally not popular — making ambitious climate mitigation action more difficult. Instead, respondents, on average, prefer policies that either offer other types of benefit (such as cheaper public transport) or that do not have obvious downsides

(such as public awareness campaigns). For instance, when respondents are asked to choose their preferred overall climate change policy from a range of options (see table 2) they tend to prefer ‘free public transport’ and ‘community based renewable energy’ over a ‘carbon tax’, a ‘meat tax’, or a ‘flight tax’. The country context matters, however, and we see some variation. For example, in the US, respondents prefer a carbon tax over free public transport.

TABLE 2Best policy for government to take against climate change (%)³⁸

	GERMANY	FRANCE	ITALY	POLAND	CZECH REPUBLIC	SWEDEN	SPAIN	USA	UK
Make public transport free of charge	34	29	22	25	25	24	23	10	27
Allow communities of households to generate their own energy with shared renewable sources, such as local solar or wind	8	17	28	28	16	14	27	22	16
Only give out government funding to businesses that engage in environmentally sustainable activities	14	20	18	9	18	9	15	14	14
Apply a tax on all carbon emissions	12	7	11	13	8	10	15	15	12
Apply a higher tax on all flights people take	12	7	4	3	6	10	3	4	8
Increase the number of nuclear energy plants	4	6	2	9	10	15	4	8	6
Increase the price of meat by adding a special meat tax	7	2	2	3	2	4	3	4	3
The government should not pursue any of these policies	2	2	2	4	3	4	2	10	4

38 "In your opinion, which of the following policies should the [COUNTRY_ADJ] government pursue to best address your concerns about climate change, if any at all?"; missing responses to make up 100%: other policies or don't know

Nearly everyone wants some government policies to be enacted. Only a very small minority (up to 10 per cent in the USA) says the government should not do anything. We can also see this when we look at specific areas of policy making that are currently under consideration in public policy debates. When we ask respondents a set of questions about their preferred policies for reducing the emissions from car travel, air travel, livestock production, and the building of new homes, most respondents in all nine countries tend to prefer measures that incentivize climate-responsible individual behavior rather than banning or taxing climate harmful behavior (tables 3 to 6).

For instance, when asked about how to mitigate the climate impact of livestock production, in seven of the nine countries, ‘running a public awareness and education campaign’ came out as the most popular option. Only in Germany and France did more people favor banning the large-scale farming of animals instead — and with very large support of 53 and 43 per cent respectively. So while we can observe overall patterns, national differences can be found in the precise outlook on specific policy choices. Raising a tax on meat or banning all-non organic meat production was unpopular everywhere.

TABLE 3Best policy on meat production (%)³⁹

	GERMANY	FRANCE	ITALY	POLAND	CZECH REPUBLIC	SWEDEN	SPAIN	USA	UK
Do not change anything	7	10	9	16	28	21	13	24	20
Run public awareness and education campaigns	12	19	38	41	31	23	35	28	30
Ban large-scale farming of animals	53	43	20	12	7	12	24	12	14
Ban all non-organic meat production	6	9	11	7	5	12	7	5	10
Cut subsidies (financial help) currently given to animal farmers	9	6	6	9	10	7	6	8	6
Raise a tax on meat	8	3	4	4	3	9	3	8	9

39 “Raising animals for meat consumption has a strong impact on emissions that contribute to climate change. Which of the following do you consider the best response the [COUNTRY of respondent] government could choose?” Missing responses to make up 100%: Don’t know

When asked about measures to reduce emissions from car travel, respondents tend to prefer policies that result in infrastructure improvements or provide financial incentives to make more climate-conscious choices individually. Free public transport was by far the most popular option in Germany, France, Poland,

Sweden, the Czech Republic and the UK, while it was level with financial support for purchasing non-petrol vehicles in Italy, Spain and the USA. Banning cars from city centers, using tolls or increasing speed limits are not popular choices in any of the countries.

TABLE 4

Best policy on car travel emissions (%)⁴⁰

	GERMANY	FRANCE	ITALY	POLAND	CZECH REPUBLIC	SWEDEN	SPAIN	USA	UK
Do not change anything	5	7	4	8	8	11	4	14	6
Make public transport free of charge	40	37	22	28	28	33	23	18	29
Provide financial support for people to buy cars that don't use petrol (e.g. electric cars)	11	18	26	19	21	12	25	20	19
Improve the infrastructure for electric cars (e.g. more charging stations)	8	9	18	13	9	12	19	19	19
Improve the infrastructure for bicycles (e.g. better cycle paths)	9	10	11	13	10	10	9	10	9
Ban cars from city centers	6	8	9	9	14	8	8	3	8
Reduce the speed at which cars can travel on all motorways	14	3	5	3	2	4	4	6	3
Introduce or increase tolls for all highways	4	2	2	3	2	3	2	3	2

40 "Car traffic has a strong impact on emissions that contribute to climate change. Which of the following do you consider the best response the [COUNTRY of respondent] government could choose?"; missing responses to make up 100%; Don't know

When it comes to measures to reduce the emissions from air travel, in all countries, by far the most popular option is the improvement of train and bus networks, which is chosen as the best policy by a majority of respondents in Spain, Italy and Poland. There is less, albeit significant support for taxing flights more strongly — ranging from 18 per cent in

Spain to 36 per cent in the UK. However, support for taxation is split between those who think all flights should be taxed equally and those who think that taxes should only be applied to those who fly more often. Banning flights, even just within one's own country, is not popular with many people (except a minority of 14 per cent each in France and Germany).

TABLE 5**Best policy on air travel emissions (%)⁴¹**

	GERMANY	FRANCE	ITALY	POLAND	CZECH REPUBLIC	SWEDEN	SPAIN	USA	UK
Do not change anything	5	6	5	13	11	12	7	17	9
Improve train and bus networks, making them cheaper and faster with more routes	42	47	58	50	49	47	59	38	41
Increase taxes on flights, but only for people who fly more than 3 times a year	14	14	12	12	13	13	11	18	23
Increase taxes on all flights	18	10	9	10	13	16	7	12	13
Ban flights within your country	14	14	3	4	4	3	5	2	6
Ban all flights	3	2	3	2	2	3	2	3	3

When it comes to measures to reduce the emissions from construction, the patterns seen for other policy areas largely hold in most countries. Providing financial support for people to build new homes that are more energy efficient was the most popular option in most countries, except for the UK, where more people actually preferred a ban on building

new non-energy efficient homes. Such a ban was the second most popular choice in France, Italy and Spain. Building state-owned energy efficient housing for rent at a large scale was joint first in Sweden and the second most popular option in the Czech Republic and Germany.

41 "Flights have a strong impact on emissions that contribute to climate change. Which of the following do you consider the best response the [COUNTRY of respondent] government could choose?" Missing responses to make up 100%: Don't know

TABLE 6Best policy on housing construction (%)⁴²

	GERMANY	FRANCE	ITALY	POLAND	CZECH REPUBLIC	SWEDEN	SPAIN	USA	UK
Do not change anything	4	3	3	6	7	7	4	14	7
Provide support for people building new homes to make them more energy efficient	31	33	32	36	45	23	25	28	15
Ban the construction of new homes that are not highly energy efficient	15	24	22	7	8	12	19	11	24
Build many new, state-owned energy efficient homes to rent to people	19	17	14	15	22	23	14	11	15
Make it mandatory for all new homes to have solar panels installed	14	12	14	14	6	16	18	16	20
Pay for improvements to insulation in people's homes	13	2	8	17	6	8	15	13	13

Political actors in all nine countries find publics who are willing to consider policies that address climate change in general and in specific areas of concern. However, in many instances, policies that require some personal trade-offs are less popular. That does not mean people reject those ideas, but it is clear that providing alternative infrastructure and incentives for climate-friendly consumer choices are preferred. There are exceptions to the rule, for example the banning of large-scale farming, which has large support in Germany and France. If policymakers want to convince more people of the need for taxation and mitigation policies as primary policy options, they have more work to do in all these countries.

SUMMARY

While the large majority of Europeans and US-Americans agree that climate change requires a collective response, are prepared to make certain changes to their daily (consumption and travel) behavior, and support government climate action, they do so to different degrees — varying between countries and according to their awareness of the causes and impact of climate change. Moreover, while many respondents agree with the statement that “we should do everything we can to stop climate change”, not all necessarily follow through on that statement – not always acting on their willingness to engage in climate action, and being reluctant to support policies that directly affect them. The next section discusses the implications of these results.

42 “How we construct homes has a strong impact on emissions that contribute to climate change. Which of the following do you consider the best response the [COUNTRY of respondent] government could choose?” missing responses to make up 100%: Don't know

CONCLUSIONS AND RECOMMENDATIONS

1. It is not enough to build on the existing soft consensus that climate change is happening. Many people are not aware of the role humans play, the scientific consensus or the severity of the crisis.

This report has shown that efforts over the past few decades to raise public awareness of climate change are at least somewhat reflected in public perceptions. A clear majority of Europeans and US-Americans are aware that the climate is warming, that human activities are an important cause, and that this development is likely to have some negative impact on life on earth. However, there is still much more work to do. Whereas only a marginal group of Europeans and US-Americans fundamentally reject or doubt the existence of anthropogenic climate change, there is a significant group who still underestimate humanity's contribution to recent global warming. Moreover, while most respondents are aware that climate change will have an impact on life on earth, many still underestimate the severity of this impact and even more deem it unlikely that climate change will have significant consequences for their own life. As a (partial) result, the public's sense of urgency and support for structural change remains modest.

2. Shifting the knowledge on climate change is likely to increase people's willingness for personal and government action at larger scale. This requires focus and leadership from political and civil society actors.

Our study finds that public engagement could be (significantly) increased by improving people's awareness of the causes and impact of climate change. In the second section of this report we demonstrated that respondents' awareness or skepticism regarding the anthropogenic causes and adverse impact of climate change has a significant effect on their willingness to engage in and support climate action. In particular, a respondent's awareness of the human causes of global heating appears to be an important predictor of support for climate action. We therefore advise climate change communicators, activists, and scientists to focus first and foremost on challenging the common misconception that scientists are somehow divided on the anthropogenic causes of global warming, and on closing the gap between the public and scientific consensus on climate change. In addition, specific efforts to address impact skepticism are necessary. Although awareness of the global impact from climate change is less consistently related to support for climate action than awareness of its human causes, those who acknowledge the considerable adverse global consequences of climate change are overall more likely to engage in and support climate action than those who do not.

3. Strategies to implement shifts in knowledge on the climate crisis have to be country-specific, as the status of existing perceptions varies significantly.

In raising awareness and support for climate action, climate change communicators will have to take into account that the level of public awareness varies greatly across countries. This means that in some countries, climate change communication efforts have a bigger task to shift people's knowledge of climate change attribution and impact, whereas in others more attention could be given to turning people's general willingness to engage in and support climate action into more concrete activity. Both types of efforts are necessary in all countries, but those with lower levels of attribution skepticism and a greater overall agreement that action countering climate change is needed, like Italy and Spain, could benefit from a greater emphasis on the latter set of goals. On the other hand, countries with a larger degree of soft skepticism about the primary attribution of climate change to human activity and a lower sense of the need for transformative action, most prominently the Czech Republic, require considerable efforts to increase basic knowledge about the scale of human influence on climate change, and its negative impacts.

4. Political leanings affect people's views on the crisis, but to a different extent in different countries. Engagement strategies need to take account of the respective political landscapes.

There is also strong variation between countries in the extent to which people's political orientation affects their climate change awareness and level of concern. On average, people on the left tend to be more concerned about climate change than those on the right. These differences are more important than demographic variation in most countries. Climate change communicators may want to adapt their approach and target specific groups accordingly. However, country context matters and a one-size-fits-all model is unlikely to be successful. Polarization on climate change in terms of political ideology is very pronounced in the USA, UK and Sweden, but not very marked in Poland or the Czech Republic.

5. Political actors need to exercise leadership and build on people's desire for governments to take responsibility. This applies at the national and, for member states, the European Union level.

In getting people to respond to climate change and to support ambitious government climate action, raising awareness is crucial, but it is not enough. We find that many respondents support climate action in principle, but show more ambivalence in their actual behavior and support for concrete policies. We suggest that climate change communication efforts should therefore be focused not only on raising people's awareness of the primary causes and impact of climate change, but also on activating that awareness and motivating people to follow up on their abstract support for a response. It must be noted that communication efforts and awareness campaigns alone are unlikely to sufficiently alter people's sense of urgency and engagement. It is up to policymakers to lead by example and to implement the types of policies that meet the immediacy of the crisis. We have shown that, while a significant group of respondents feels a basic sense of personal responsibility in responding to climate change, a majority feels that the primary responsibility lies with their national government and—in the case of its member states—the EU. Policymakers therefore have a responsibility to provide a sense of direction and take the first steps toward more ambitious climate action. In doing so, they can rely on broad public support for a government response.

6. There are significant country differences in policy preferences. However, in general political actors will find it harder to gain support for actions that are focused on taxation or prohibition. More work is required by communicators on the topic to enable people to understand the relative efficacy of different actions.

In all countries people want the state to act, and in specific policy areas relevant to climate change. However, some policy types are notably more popular than others. People often choose rewards for climate-friendly behavior for themselves or the provision of infrastructure that makes climate-

friendly choices easier. Prohibitions and taxes are often less popular. However, once again, the country context matters. In the USA fewer people than elsewhere focus on public transport infrastructure, and in Germany and France significantly more people favor a ban on large-scale farming.

7. Changing people's understanding of the nature and impact of climate change can potentially help to persuade people of the necessity of collective action and comprehensive policy measures.

Overall, people in all countries see action on climate change largely through a rather personal lens. They are more likely to consider changing their personal consumption than to engage in collective action. In terms of policy, they are in favor of a government response, but seem reluctant to support policies that directly affect them in a costly way. Greater

knowledge about the causes of climate change and the severity of its impact, however, are associated with greater personal engagement and support for policy action overall. So policy makers will find publics who are in principle open to individual and government climate action, but have more work to do to shift people's willingness to engage in wider, more systemic change.

This is why it will be important for policymakers to cooperate with climate change communicators, activists and scientists to ensure that policy initiatives are explained to the public effectively, backed up by scientific evidence, and speak to the public's general support for action — but do not simply stop there. Instead, a concerted effort can shift people along the scale of understanding the severity of climate change and the importance of human action. If done effectively, people's openness can be translated into more comprehensive and extensive forms of action.

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