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Climate Tech Forward

Popular support for the science and technologies
that can help stop climate change

Introduction

What if moving forward with climate technologies is the only way people will sign up to tackling climate change?

The success of any climate policy depends on the efficacy of the solution—technically and economically—and on the political will to make it happen.

These two considerations have their own feedback loop. Detractors use doubts about performance, scale, and cost, to suppress political will. And without that will, solutions may fail to attract the investment needed to drive up performance and scale, and drive down cost.

Various technologies that can help stop climate change appear to be caught in this vicious cycle. Why support a technology that either won't work well in practice, or won't be allowed the chance?

But what if the political will is misreading the electorate? What if the positions taken by environmental activists who campaign against some of these technologies do not represent the will of the people? What if the people *want* these technologies? What if this is in fact the only way they will sign up to tackling climate change and species loss? Then the vicious cycle becomes virtuous. We need to know.

To find the answer, we worked with the research agency Savanta to ask 10,500 people in Germany, Nigeria, Poland, the UK and USA. We asked people from the general population whether they support different technologies with a role to play in stopping climate change. We asked why they support them when they do, and why they don't when they don't.

And we asked people where they stand personally on broader trade-offs about how we tackle climate change and other challenges, to understand their motivations, their perspectives on what we should be doing, and what they are and are not prepared to support.

The answer we found is compelling, and nuanced. There are important and non-obvious differences by technology, and by people's political leaning.

We lay out the story in 20 charts, in the following chapters:

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In summary...

People's clear preference is to innovate, using technology to grow our economy and stay within the limits of our planet.

People's confidence in science is strong. They are choosing to depend on science and technology to solve the dual challenges of climate change and species extinction, both of which cause widespread worry.

People are generally not prepared to compromise their prosperity. They have little appetite for reducing the size of our economy; their clear preference is to move forward with technology, innovating to grow our economy and still stay within the limits of our planet. This is not Plan B. This is Plan A.

People's support for the specific climate-related technologies we tested is strong but not universal. There is broad support for nuclear energy, especially on the political right. There is broad support for climate engineering—carbon dioxide removal in particular—especially on the political left. There is little support for food biotech, and a visceral rejection of cultivated meat.

Where support is given, it comes not from a grudging acceptance of a least worst option,

but from a positive aspiration for progress. Where support is withheld, the opposition comes from a fear of the technology *going wrong*, or from a sense of *doing wrong* in our relationship with nature.

The concerns about going wrong and doing wrong may have been stoked by environmental organizations that favour different and generally more disruptive transition paths. The stances that such non-profits have taken do not fit well with what the public wants and will accept.

In fact, some environmental organizations taking those stances appear not to be speaking for their members and supporters. In general we find that their members and supporters want to see a tech-led transition, and are *more* supportive of climate technologies than the population at large.

With familiarity low and many people still uncommitted, everything is still to play for. To chart our way forward we need to follow the science—and the social science.

1.
People's life priorities demand
technological solutions for climate

1.

People's life priorities demand technological solutions for climate

As societies, we have choices in how we respond to climate change—at least in theory.

We can choose to let it happen, and seek to adapt.

To limit or stop it, we can choose to cut back on the activities that contribute to it—such as driving, flying, shopping, eating—and seek well-being while compromising today's economic wealth.

Or, we can embrace technologies we have, and innovate others that are not yet fully developed, to decouple economic growth from the environmental impacts it has historically brought about.

Before we explore people's support for such technologies, we look at why that support matters. While we do have the choices described above, the priorities that people have in life are compatible only with the third choice. This is because:

- People worry about climate change, not just on the left but across the political spectrum;
- People have the trust in science that a technology-led approach depends on—especially among those most worried about climate change; and
- People want green growth that doesn't compromise their prosperity.

People across the political spectrum worry about climate change

Support for climate action is politically polarized in many countries. But people's worry about climate change itself is substantial regardless of their politics.

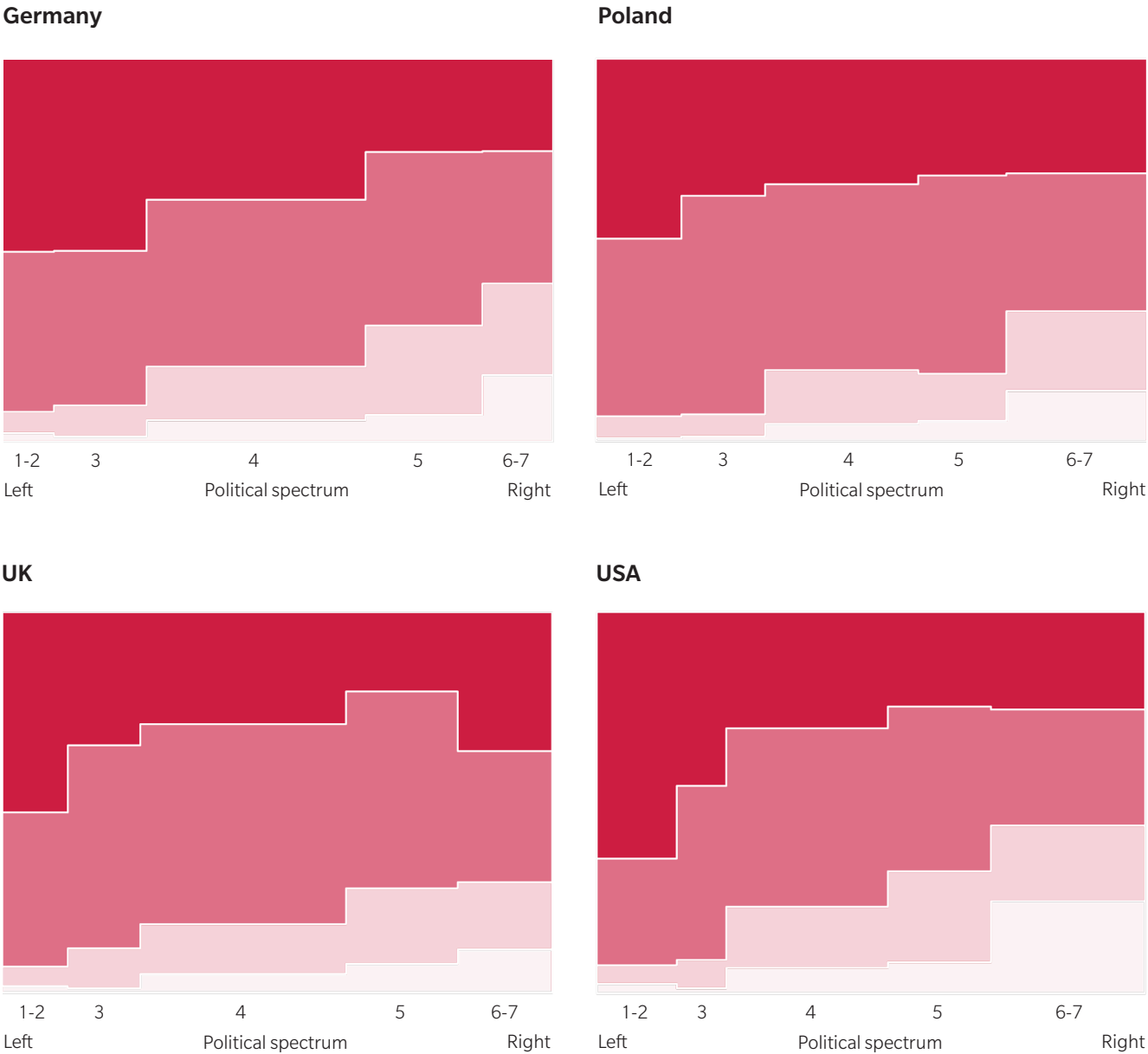
Figure 1 shows the levels of worry felt by people across the political spectrum in Germany, Poland, the UK and USA. (We asked people to position themselves on a seven-point scale from left to right, for easy comparison between countries. We matched this to their support for specific parties to validate the scale within each country.)

The charts do show a political effect: worry is deeper towards the political left, in all countries tested. Almost everyone on the left is either very or somewhat worried about climate change. But even on the right more than half of people are either very or somewhat worried about climate change—even in the USA.

In absolute terms there are as many climate-worried people on the far right as on the far left (a lower percentage, but of a larger group). Across the four countries in our survey, 13% of the population are climate-worried and score themselves as 6-7 on our political spectrum, with 12% climate-worried and scoring 1-2.

Figure 1. People across the political spectrum worry about climate change

- Very worried
- Somewhat worried
- Not very worried
- Not at all worried



How worried are you about climate change?
On a left-right scale from 1 to 7, with 1 indicating extreme left and 7 indicating extreme right, where would you place yourself?
Germany N=2,027, Poland N=2,103, UK N=2,079, USA N=2,508

People have trust in science

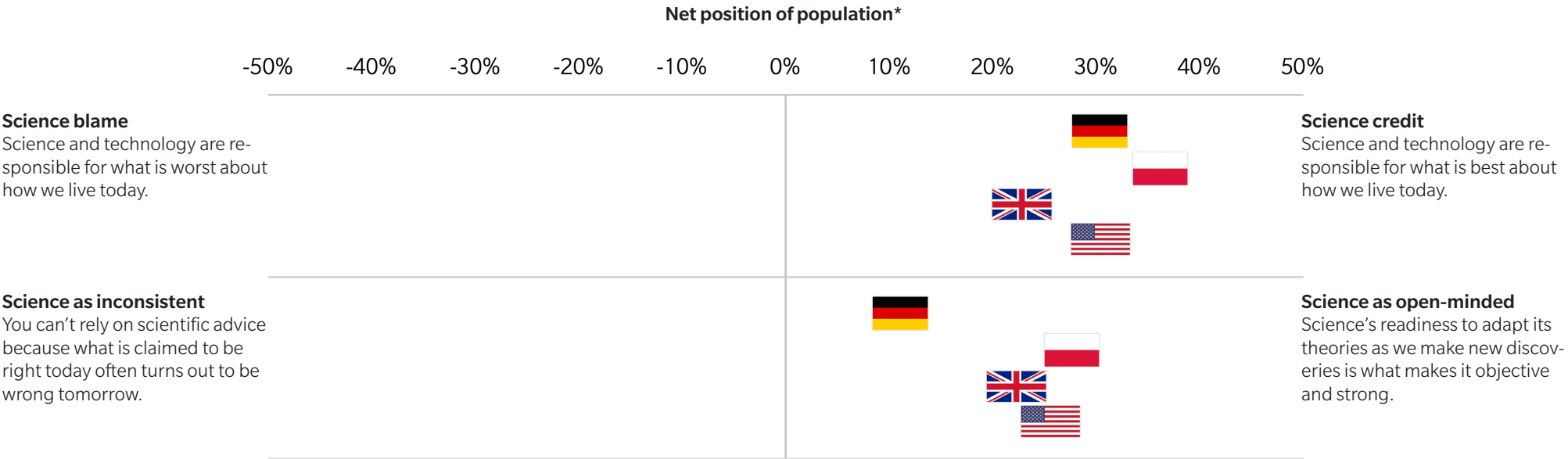
To understand people’s attitude to science, we asked people where they stand on two different pairs of contrasting statements. On the first: do they **blame** science and technology for the worst about how we live today, or **credit** it for the best?

And on the second, how do they respond to science changing its mind: do they see it as being **inconsistent** (‘You can’t rely on scientific advice because what is claimed to be right today often turns out to be wrong tomorrow’) or **open-minded** (‘Science’s readiness to adapt its theories as we make new discoveries is what makes it objective and strong’)?

Figure 2 shows the net position of people in each country on these two dimensions (those more closely identifying with the right-hand statement minus those more closely identifying with the left-hand statement). In all countries tested, the population skews strongly to the pro-science end of the spectrum. Overall, more than twice as many people (2.3x) credit science than blame it.

The view of science as responsible for what is best rather than worst is consistent across the political spectrum and for different levels of worry about climate change. The view of science being open-minded is strongest among those on the left (+52%, vs. +22% average for the four countries together) and those very worried about climate (+41%).

Figure 2. People have trust in science



* Percent of people scoring 4 or 5 minus percent of people scoring 1 or 2 on a 5-point scale where 1=strong alignment with the left statement and 5=strong alignment with the right statement.
Germany N=2,027, Poland N=2,103, UK N=2,079, USA N=2,508

Nearly 3x as many people want to innovate to grow our economy within planetary limits than want to reduce it.

People want green growth that doesn't compromise prosperity

With further pairs of contrasting statements, we tested more directly where people stand on green growth. Do they agree more with a statement about:

- **Reducing** ('The best way to stay within the environmental limits of our planet is to reduce the size of our economy') or **innovating** ('With technology and innovation, we can continue to develop and grow our economy and still stay within the limits of our planet')?
- Going **back to nature** ('We need to leave behind the environmental destruction of modern industry and commerce, and get back to nature') or going **forward with technology** ('The only way for eight billion people to live well on this planet is to move forward with new, clean technologies for energy, food, transport etc.')?
- **Post-growth** ('We can't keep on growing our economy in a world of limited resources. We need to shift our values to look beyond economic growth.') or **decoupling** ('With the right technologies we can grow the economy without the environmental damage of the past, allowing sustainable development and continuing growth')?
- The need for **disruptive** change ('To solve climate change, we need to make big, disruptive changes to our society') or **incremental** change ('To solve climate change, we need to make gradual, step-by-step changes to our society')?

Figure 3 shows the net position of people in each country on these four dimensions. In all countries tested, the population skews strongly to the green-growth end of the spectrum.

The skew is particularly strong on innovating rather than reducing (+40% for the four countries together, or nearly three times as many people (2.8x) wanting to 'innovate' than to 'reduce').

The strong skew is consistent across the political spectrum and for different levels of worry about climate change. The desire to move forward with technology does not come primarily from people indifferent to climate change. It comes from the majority who worry about climate change and see technology innovation as the attractive and realistic solution.

The only one of these spectrums showing significant ambiguity is the skew towards incremental rather than disruptive change. For the four countries together, the 44% of people who are somewhat worried about climate change skew +27% (towards incremental change)—but the 34% who are very worried skew -11% (towards radical change). This radical skew among the most climate-worried is driven primarily by Germany and Poland. In those countries it roughly counterbalances the skew of those somewhat worried; it does not amount to a popular will for disruptive societal change.

Figure 3. People want green growth that doesn't compromise prosperity



* Percent of people scoring 4 or 5 minus percent of people scoring 1 or 2 on a 5-point scale where 1=strong alignment with the left statement and 5=strong alignment with the right statement.
Germany N=2,027, Poland N=2,103, UK N=2,079, USA N=2,508

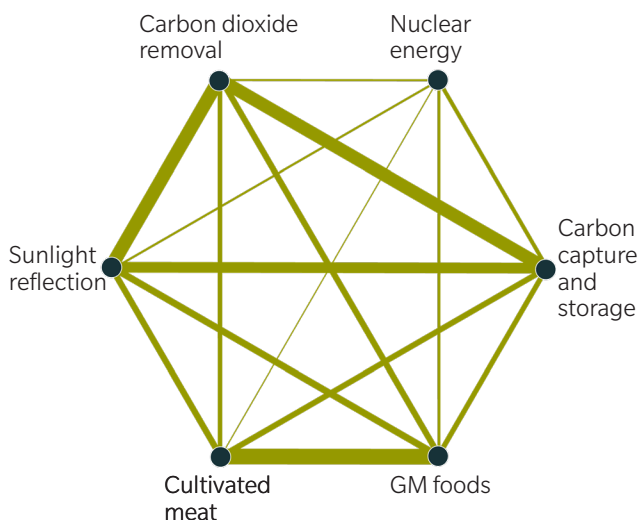
A photograph of a modern building with a glass facade, partially obscured by the bare branches of trees in the foreground. The building has a grid-like pattern of windows and a flat roof. The trees are without leaves, suggesting a cold season.

2.

Most people support tech today—
though not food biotech

2.

Figure 4. People see climate technologies in three groups



Line widths represent the correlation of support between each pair of technologies:

Highest correlation is within the food biotech group: 0.46 between cultivated meat and GM foods.

High correlation within the climate engineering group (CCS, CDR and sunlight reflection): 0.43, 0.42, and 0.38.

Low correlation between nuclear energy and other technologies (lowest with cultivated meat, at 0.13).

N=10,815.

Most people support tech today—though not food biotech

We explored the public's support for six technologies related to climate change, which we described to respondents as follows (see research methodology in Appendix Two):

Nuclear energy: a reliable source of abundant clean power, not dependent on the sun or wind.

Carbon capture and storage: capturing emissions of carbon dioxide at source and storing them permanently deep underground.

Genetically Modified foods: creating resilient plants to produce more food from available land, and to reduce the use of chemical pesticides, water, and fertilizers made from fossil fuels.

Cultivated meat: growing meat from animal cells, to keep the option of meat as a source of protein in our diets without raising and slaughtering animals.

Sunlight reflection: using technology to manage how much excess sunlight gets into the Earth's atmosphere, to counterbalance the way that carbon dioxide emissions are causing climate change.

Carbon dioxide removal: capturing and removing carbon dioxide from the air to help get carbon pollution down to a level that is not overheating the planet.

We found, in summary, that people see these technologies in three groups: nuclear energy and climate

engineering, each of which has broad but distinct support; and food biotech, which faces significant resistance.

People see climate technologies in three groups

Figure 4 shows how people's support for each of the six technologies are correlated. The thick lines in the figure, representing stronger correlations, are between GM foods and cultivated meat, and among carbon capture and storage, carbon dioxide removal, and sunlight reflection. Support for nuclear energy is not strongly correlated with any other technology.

These correlations reflect the way that people see the six technologies in three groups, which we will use for the analysis that follows:

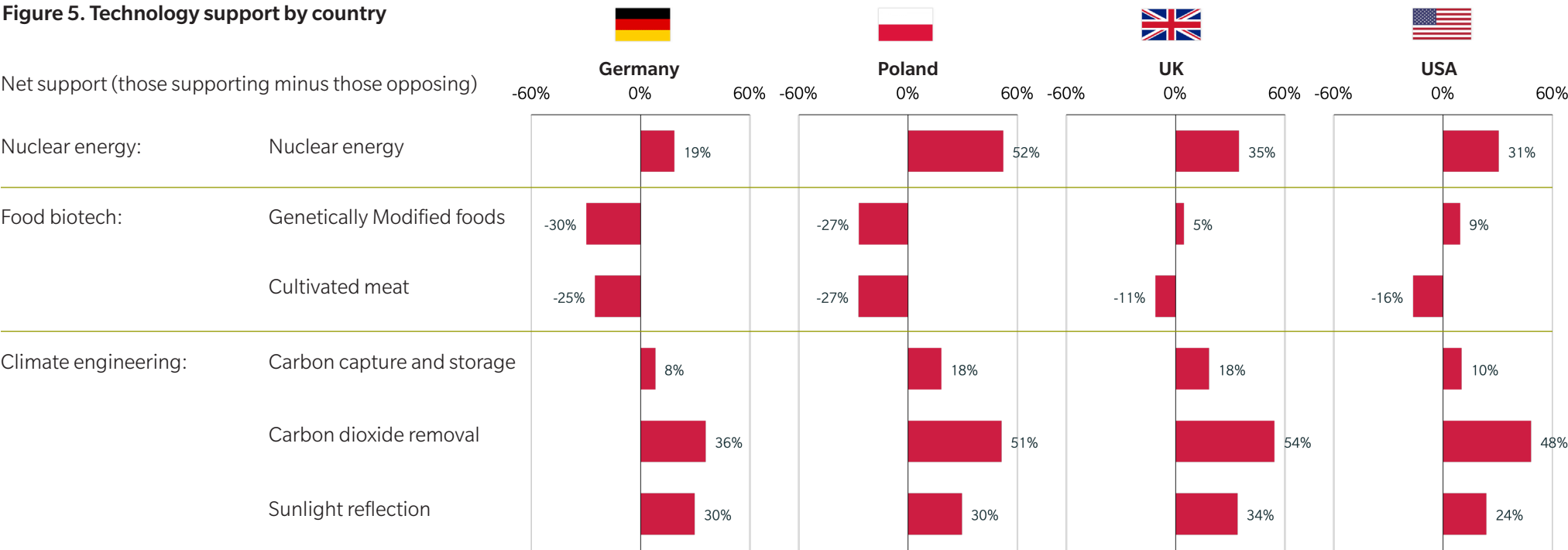
Nuclear energy, on its own;

Food biotech, comprising GM foods and cultivated meat; and

Climate engineering, comprising carbon capture and storage, carbon dioxide removal, and sunlight reflection.

Figure 5 shows the net support (those supporting minus those opposing) for each of the six technologies, grouped and ordered as above, in Germany, Poland, the UK and USA. Table 1 shows the same data expressed as the ratio of supporters to opponents.

Figure 5. Technology support by country



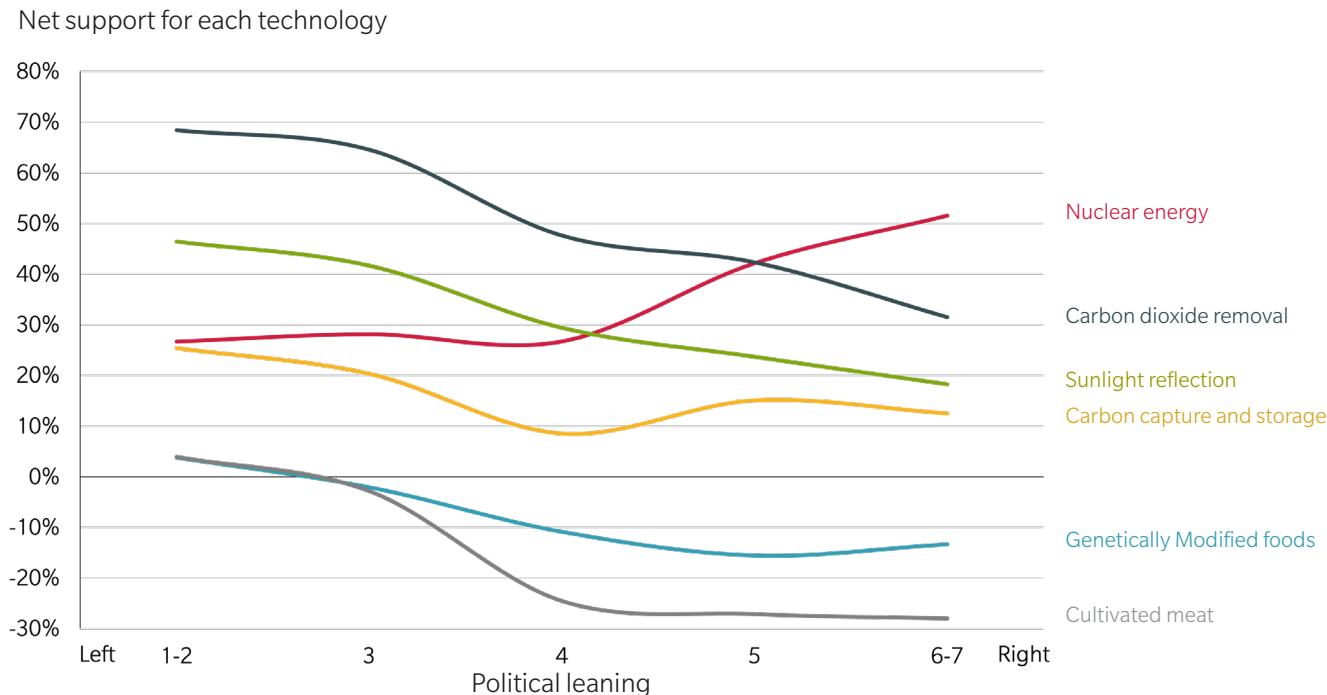
Based on what you may have previously heard, to what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?
Germany N=2,027, Poland N=2,103, UK N=2,079, USA N=2,508

Table 1. Technology support/opposition ratio

	Germany	Poland	UK	USA
Nuclear energy	1.7 x	5.3 x	3.0 x	2.6 x
Genetically Modified foods	0.4 x	0.5 x	1.1 x	1.3 x
Cultivated meat	0.5 x	0.4 x	0.7 x	0.6 x
Carbon capture and storage	1.4 x	1.9 x	1.9 x	1.4 x
Carbon dioxide removal	3.8 x	5.6 x	7.3 x	5.2 x
Sunlight reflection	3.2 x	2.8 x	3.7 x	2.3 x

Nuclear has unique right-leaning support
Nuclear energy has net positive support in every country tested, with the highest in Poland (+52 %pts) and the lowest in Germany (+19 %pts).
As we have seen, support for nuclear is not strongly correlated with support for other technologies. While support for all other technologies tested is greatest on the political left, support for nuclear is strongest on the right (Figure 6).
The contrast is strongest in Germany. AfD voters are the most supportive of nuclear (net support +54%),

CDU voters also supportive (+39%), SPD voters neutral on average, and Green voters strongly opposing, at -51% (Figure 7). In other countries tested, support is net positive among voters for all the major parties, but with stronger support among votes for right-leaning parties in the UK and USA. Support in Poland is strong across the political spectrum.
While support for all other technologies tested is higher among those more worried about climate change, nuclear again works the other way around. Support for nuclear energy is greatest among those least worried about climate change (Figure 8).

Figure 6. Technology support by political leaning

Based on what you may have previously heard, to what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?

On a left-right scale from 1 to 7, with 1 indicating extreme left and 7 indicating extreme right, where would you place yourself?

Germany, Poland, UK, USA combined. N=8,717

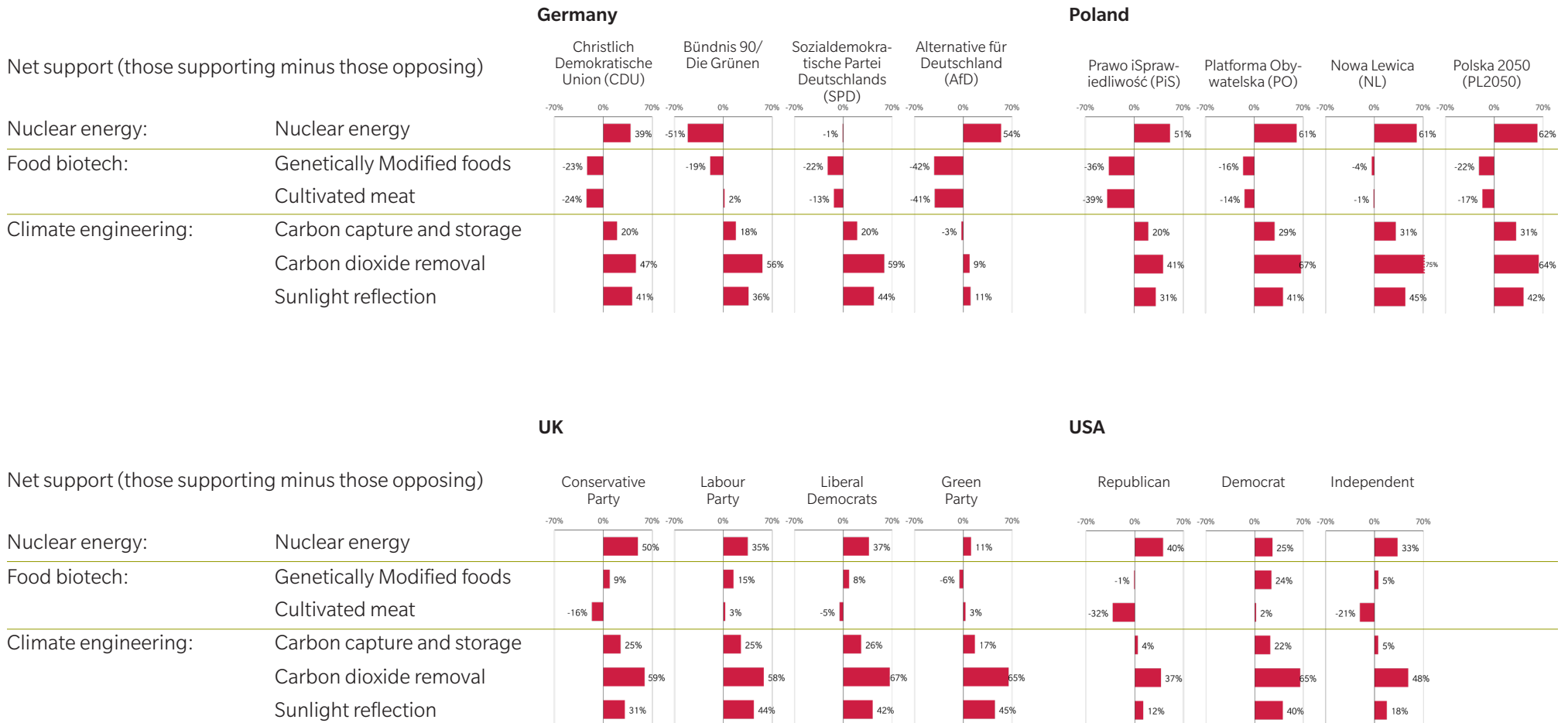
Support for nuclear leans nationalist. Of 12 moral statements we asked respondents to agree or disagree with, the statement with the strongest correlation with support for nuclear energy is, 'I am proud of my country's history.' No other technology showed significant correlation with this statement. Looking at these data together, it is clear that the breadth and strength of support for nuclear energy depends on the combination of quite different constituencies: the climate-worried centre—and left, outside Germany—and the conservative (including, but not only, nationalist) right.

Food biotech has low support across the board

Support for the two food biotech technologies we tested is relatively strong on the political left, meaning that net support is roughly neutral on the left, compared with negative on the right. Opposition on the right is particularly strong for cultivated meat, and more moderate for GM foods (Figure 6).

Although the food biotech technologies are not focused exclusively on climate change, support for them is strongly linked to how much people worry about climate change. Net support for GM foods is slightly positive for those very worried about climate change, with strong opposition from those not worried (Figure 8). Cultivated meat shows a similar profile, though never reaches positive territory.

Since climate worry relates to politics (Figure 1), the left leaning of the support for these technologies in part reflects the greater climate worry on the political left. But only in part. If we control for that effect, and look only at people who are very or somewhat worried about climate change, we see a relative boost in support for both technologies from those on the

Figure 7. Technology support by political party

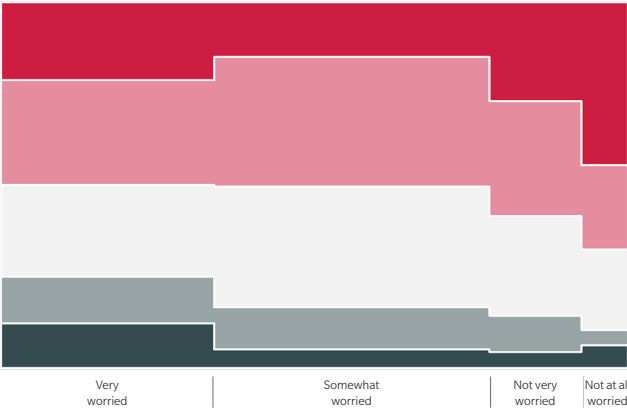
Based on what you may have previously heard, to what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?

Generally speaking, do you think of yourself as aligned with?

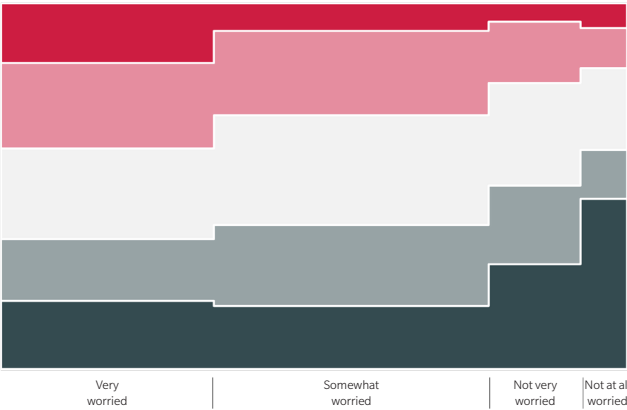
Germany N=2,027, Poland N=2,103, UK N=2,079, USA N=2,508

Figure 8. Technology support by climate worry

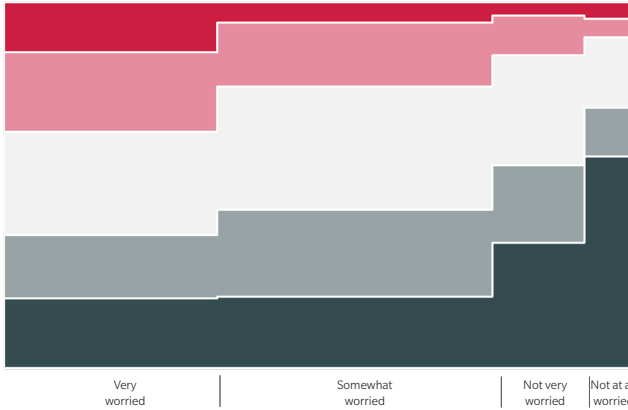
Nuclear energy



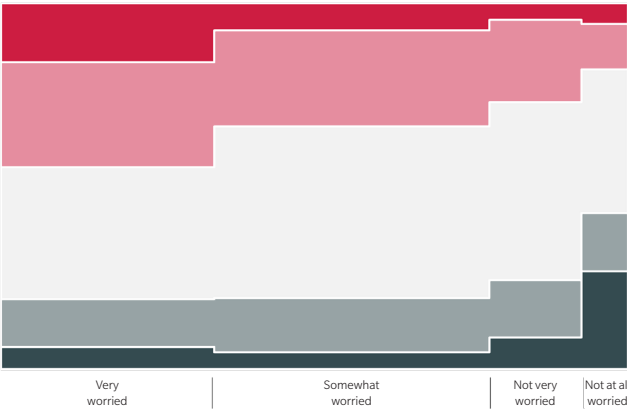
Genetically Modified foods



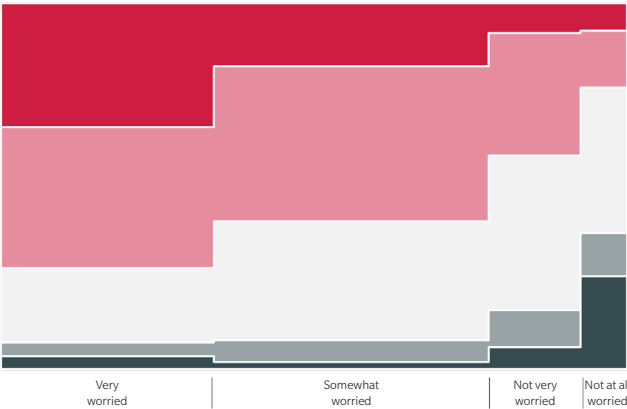
Cultivated meat



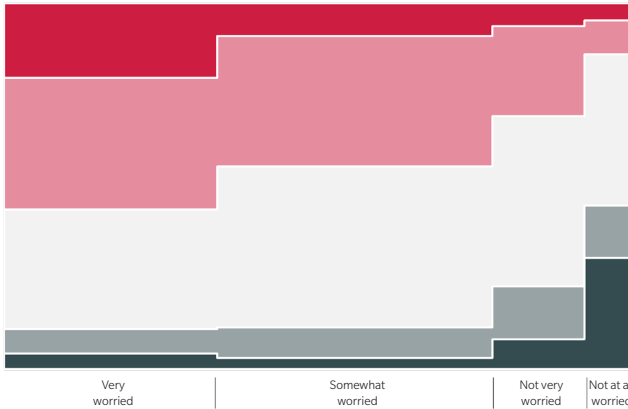
Carbon capture and storage



Carbon dioxide removal



Sunlight reflection



To what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?

How worried are you about climate change?

Germany, Poland, UK, USA combined. N=8,717



Strongly support



Somewhat support



Neutral

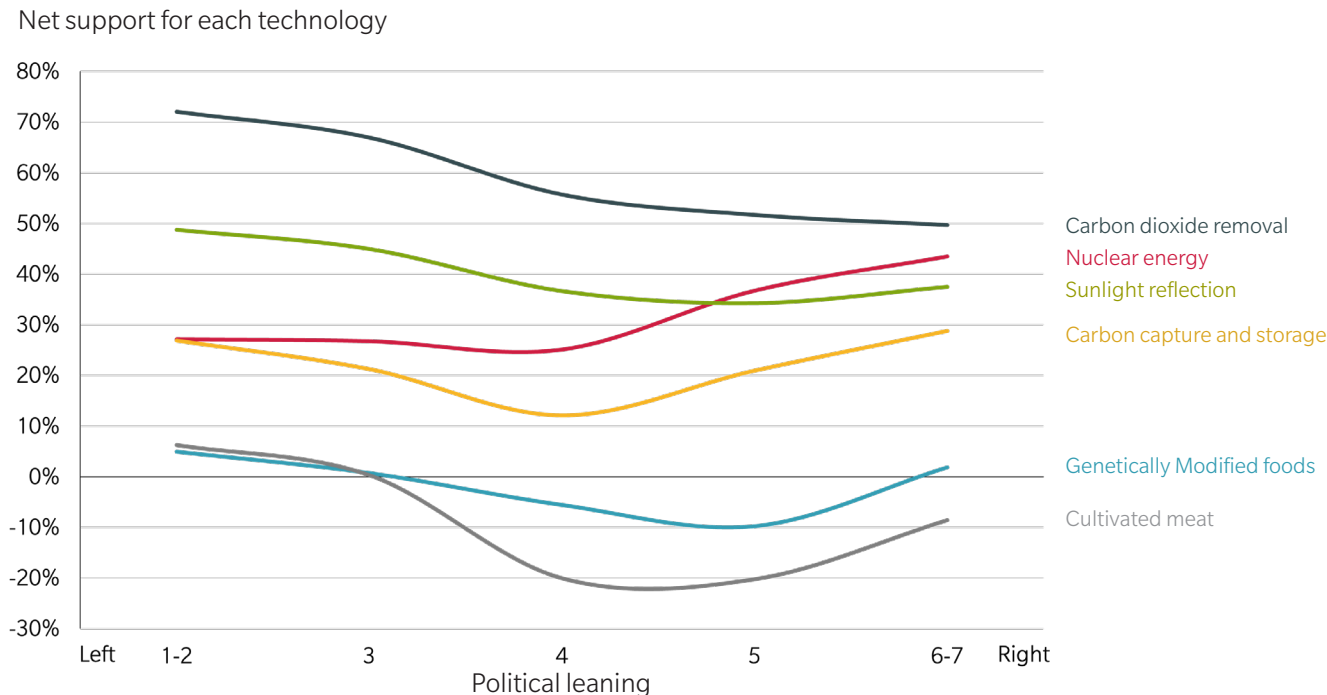


Somewhat oppose



Strongly oppose

Figure 9. Technology support by political leaning among those worried about climate change



Based on what you may have previously heard, to what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?

On a left-right scale from 1 to 7, with 1 indicating extreme left and 7 indicating extreme right, where would you place yourself?

How worried are you about climate change? Base is those answering very worried or somewhat worried.

Germany, Poland, UK, USA combined. N=8,717

*Sunlight reflection is the term we used in the questionnaire for solar radiation management (SRM), in order to avoid using unfamiliar jargon.

far right (Figure 9). This is significant, because as we saw earlier, there are as many climate-worried on the far right as on the far left.

Support for Genetically Modified foods shows particular variety across countries, ranging from -30% net support in Germany and -27% in Poland to +5% in the UK and +8% in the USA (Figure 5). Cultivated meat is more uniformly opposed.

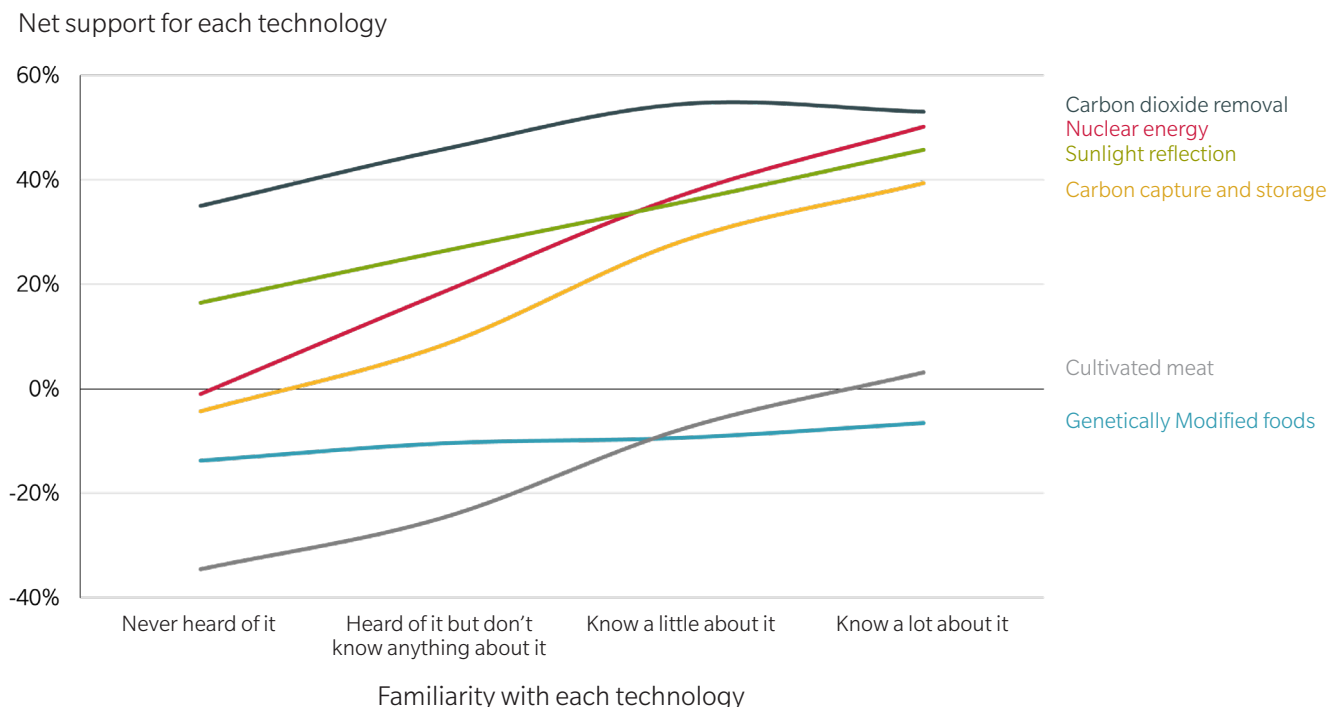
Climate engineering has broad left-leaning support

The three climate engineering technologies enjoy strong and broad support: carbon dioxide removal most of all (and the most supported of all the technologies we tested), then sunlight reflection (solar radiation management)*, and then, more moderately, carbon capture and storage.

Though similarly strong, the profile of this support is quite different from nuclear energy.

Support for climate engineering technologies leans left politically (Figure 6). Unsurprisingly in this case, opposition is strongest among those not worried about climate change (Figure 8): why support a technology whose sole purpose is to fix something you are not worried about?

Again, the left leaning of the support for climate engineering technologies only partly reflects the greater climate worry on the political left. In this case, if we control for that effect, and look only at people who are very or somewhat worried about climate change, we see carbon dioxide removal and sunlight reflection still lean left (Figure 9), though supported across the board. Carbon capture and storage is

Figure 10. Technology support by familiarity

Based on what you may have previously heard, to what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?

How familiar are you with each of the following technologies which could be used as part of our efforts to stop climate change and preserve the local and global environment?

Germany, Poland, UK, USA combined. N=8,717

strongly supported by the climate-worried on the far right as well as the far left.

Among the majority who are worried about climate change, there is very little opposition to climate engineering technologies. In particular, fewer than 8% of those very or somewhat worried about climate change either strongly or somewhat oppose carbon dioxide removal.

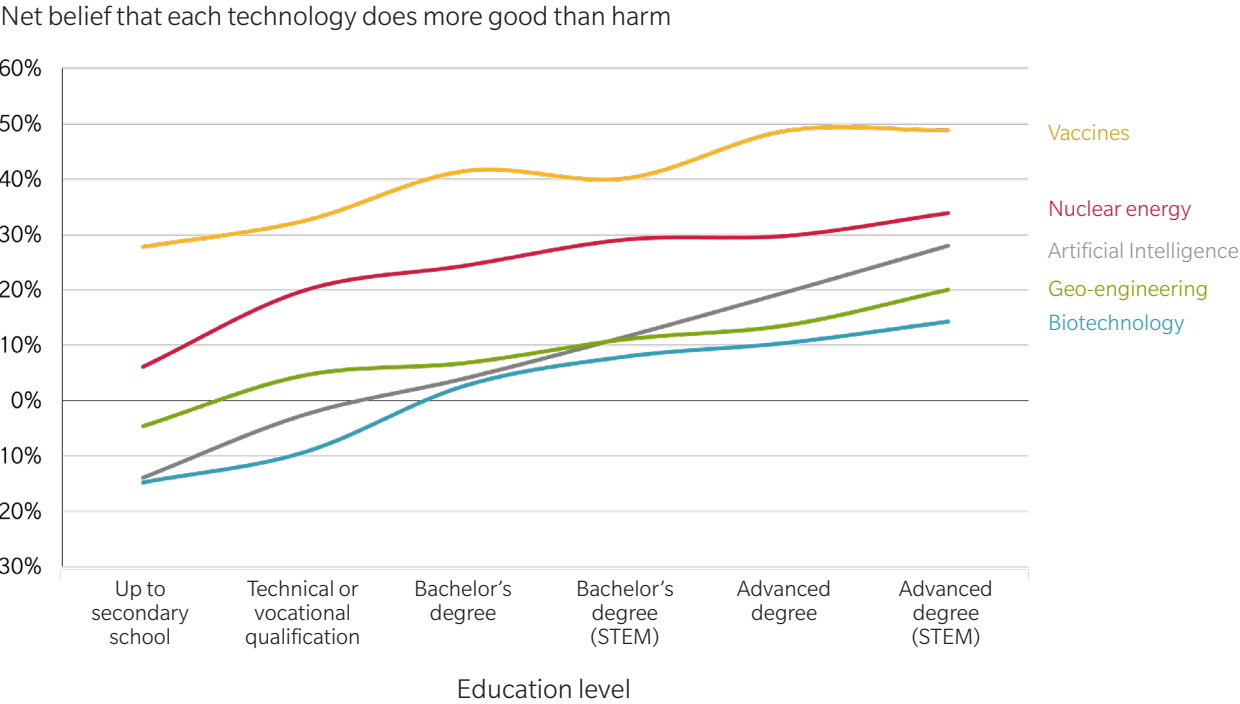
Everything still to play for

Many people are neutral about the climate technologies we tested: typically around 30%, and 40% for sunlight reflection and carbon capture and storage. This partly reflects low familiarity: for each of the three climate engineering technologies, only a minority of people say they know either a little or a lot about it. With familiarity low and many people neither for nor against, there is everything to play for. But the relatively high level of support for these technologies does not depend on ignorance: Figure 10 shows how support grows with familiarity.

In a broader context, looking beyond the issue of climate change, positive attitudes to technology are associated with higher levels of education. Across a diverse selection of technologies, people with more education are more likely than others with less education to think of technology as doing more good than harm (Figure 11).

With familiarity low and many people neither for nor against, there is everything to play for.

Figure 11. Technology belief by level of education



On balance, do you expect each of the following technologies to do more good or more harm to people in the future? Percent of people answering 'much more good than harm' or 'somewhat more good than harm' minus percent answering 'much more harm than good' or 'somewhat more harm than good'. 'About the same/don't know' not shown.

What is the highest level of education you have completed? Would you describe your highest education qualification as related to any of science, technology, engineering or mathematics?

Germany, Poland, UK, USA combined. N=8,717



3. Support springs from aspiration, not resignation

3.

People support climate technologies because they believe in science and technological progress, not as a last resort.

Support springs from aspiration, not resignation

Why do people support the technologies they support?

We asked the people who support each technology, whether somewhat or strongly, why they do. Is it related to climate change, or something else? Does their support reflect a positive ambition for a brighter future, or a reluctant acceptance of a least worst option?

We offered people six possible reasons, and asked them which one best describes why they give each technology such a high level of personal support:

- It's one of the most effective ways to help stop climate change and the loss of wildlife.
- It has important benefits regardless of climate change and the impact on wildlife.
- I am generally in favour of scientific and technological progress.
- This is a way for us to keep society moving forward, not cutting back.
- We just need to do it, even if there are challenges to manage.
- It allows humans to have a high standard of living while also looking after the planet.

Figure 12 shows the distribution of answers for each technology. The chart shows Germany, Poland, the UK, and USA combined. On this question there is relatively little variation in the answers, whether by country or by politics.

Belief in scientific and technological progress

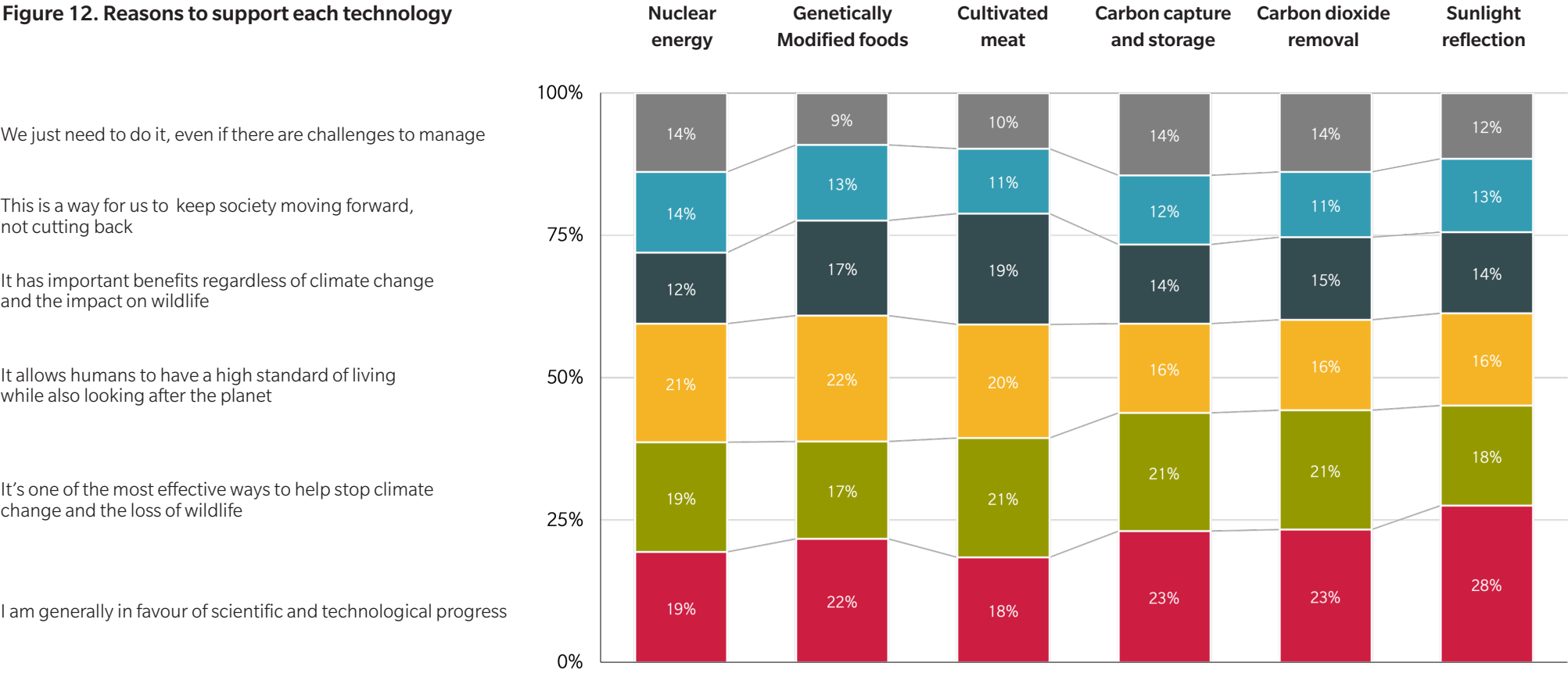
Overall, the most common answer was that 'I am generally in favour of scientific and technological progress.' This answer came first or equal first for all technologies, except second for cultivated meat. It is more about an attitude than a goal. The more tangible goal about 'stopping climate change and the loss of wildlife' came second, behind this more general positive feeling about science and technology.

Support is not given grudgingly

A hypothesis had been that many people might say that 'we just need to do it, even if there are challenges to manage.' Some of these technologies are sometimes positioned as a last resort. We might prefer renewables as a clean energy source, but accept the additional need for nuclear because renewables are intermittent. We might prefer to stop using fossil fuels, but accept the need for climate engineering technologies because society is failing to do that fast enough.

In reality, our statement of grudging acceptance was the least chosen reason for supporting these technologies. People don't see them as a last resort.

Figure 12. Reasons to support each technology



Which of the following reasons best describes why you gave this technology such a high level of personal support? Select one.
Base: people who somewhat or strongly support each technology. Germany, Poland, UK, USA combined. N=8,717

A win-win for people and planet
Do we support these technologies in the interests of the planet, or for ourselves—and the planet’s ability to support us? The answer is a fairly even balance of both. This is represented in Figure 12 by the substantial and similar size of the green segment (‘It’s one of the most effective ways to help stop climate change and the loss of wildlife’) and the yellow (‘It allows humans to have a high standard of living while also looking after the planet’).

Unsurprisingly the human agenda comes to the fore in the technologies that directly produce for human use and consumption (nuclear energy and food biotech), and the planet agenda comes to the fore for climate engineering. But these differences are minor; the bigger points are the significance of both and the balance between the two.

A photograph of a modern building facade. The upper portion features vertical green panels, while the lower portion has horizontal grey panels. A white rectangular box is overlaid on the lower-left side, containing red text. The building's design is characterized by clean lines and a mix of materials.

4.

Two concerns hold support back:
Going wrong, or doing wrong

4.

Worry about technologies going wrong is strongest for GM foods and nuclear, where environmental non-profits have campaigned for alternative solutions by alleging such dangers.

Two concerns hold support back: Going wrong, or doing wrong

When people *don't* support a technology, what is stopping them?

We asked the people who *oppose* each technology, whether somewhat or strongly, why they do. Is it a fear of the technology going wrong and getting out of control? Is it a sense of doing something wrong and unnatural? Is it less about the technology itself, and more about the power it might give to the corporations or governments that sit behind it? Are the answers the same or different for each technology?

We offered people seven possible reasons, and asked them which one best describes why they do not give each technology a higher level of personal support:

- I am concerned it may go wrong, get out of control or have unintended side effects.
- I don't want the corporations or governments behind it to have too much power over us.
- It is the wrong relationship to have with the natural world.
- I think we should be relying on more tried and tested approaches.
- It's a distraction from the real problem of ending fossil fuels.
- I don't think there is any need for us to do it.
- I don't know enough about it.

There is much more variety in the answers to this question, both between technologies and between countries, than there is in the reasons to support. Figure 13 shows the distribution of answers for each technology for Germany, Poland, the UK, and USA combined.

Concern 1: Going wrong

For almost every technology, the #1 reason for opposition is the fear that 'it may go wrong, get out of control or have unintended side effects.'

This concern is particularly prevalent for nuclear energy (49% of people who oppose it), carbon capture and storage (34%), and Genetically Modified foods (30%). These are three technologies where some environmental organizations favour alternative approaches: renewables instead of nuclear, just stopping oil instead of carbon capture and storage, and regenerative agriculture instead of GM. Some of these organizations have campaigned with allegations about the danger of technologies going wrong: escape of radioactivity from nuclear plants or nuclear waste; escape of sequestered carbon dioxide; biodiversity loss from the uncontrolled spread of mono-cultural Genetically Modified Organisms.

The concern is much less prevalent for sunlight reflection (19% of people who oppose it). This is significant, because sunlight reflection (solar radiation management) is the one technology we tested where the concern that 'it may go wrong, get out of control

Figure 13. Reasons to oppose each technology

It's a distraction from the real problem of ending fossil fuels

I don't want the corporations or governments behind it to have too much power over us

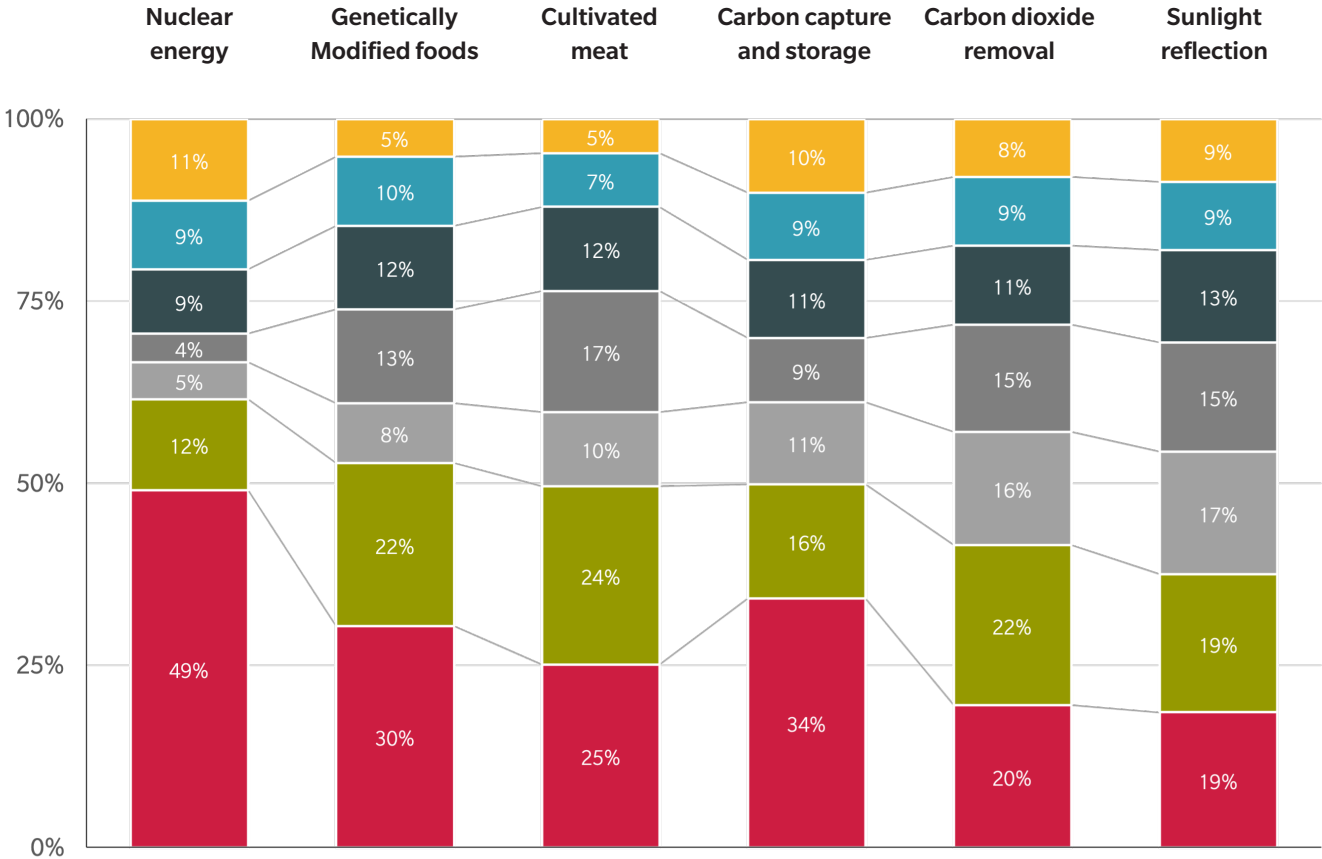
I think we should be relying on more tried and tested approaches

I don't think there is any need for us to do it

I don't know enough about it

It is the wrong relationship to have with the natural world

I am concerned it may go wrong, get out of control, or have unintended side effects



Which of the following reasons best describes why you did not give this technology a higher level of personal support? Select one.

Base: people who somewhat or strongly support each technology. Germany, Poland, UK, USA combined. N=8,717

or have unintended side effects' is a fair summary of the views of the Intergovernmental Panel on Climate Change. (Sunlight reflection is different from the other climate engineering approaches in that it does not tackle the root causes of Greenhouse Gases in the atmosphere, but instead attempts to counter-balance it elsewhere in the climate system by reducing the amount of sunlight for the greenhouse effect to act on.)

The contrast with nuclear energy and food biotech suggests the public may have a complacency about sunlight reflection that could change with exposure to campaigning, if the issue becomes contested.

Concern 2: Doing wrong

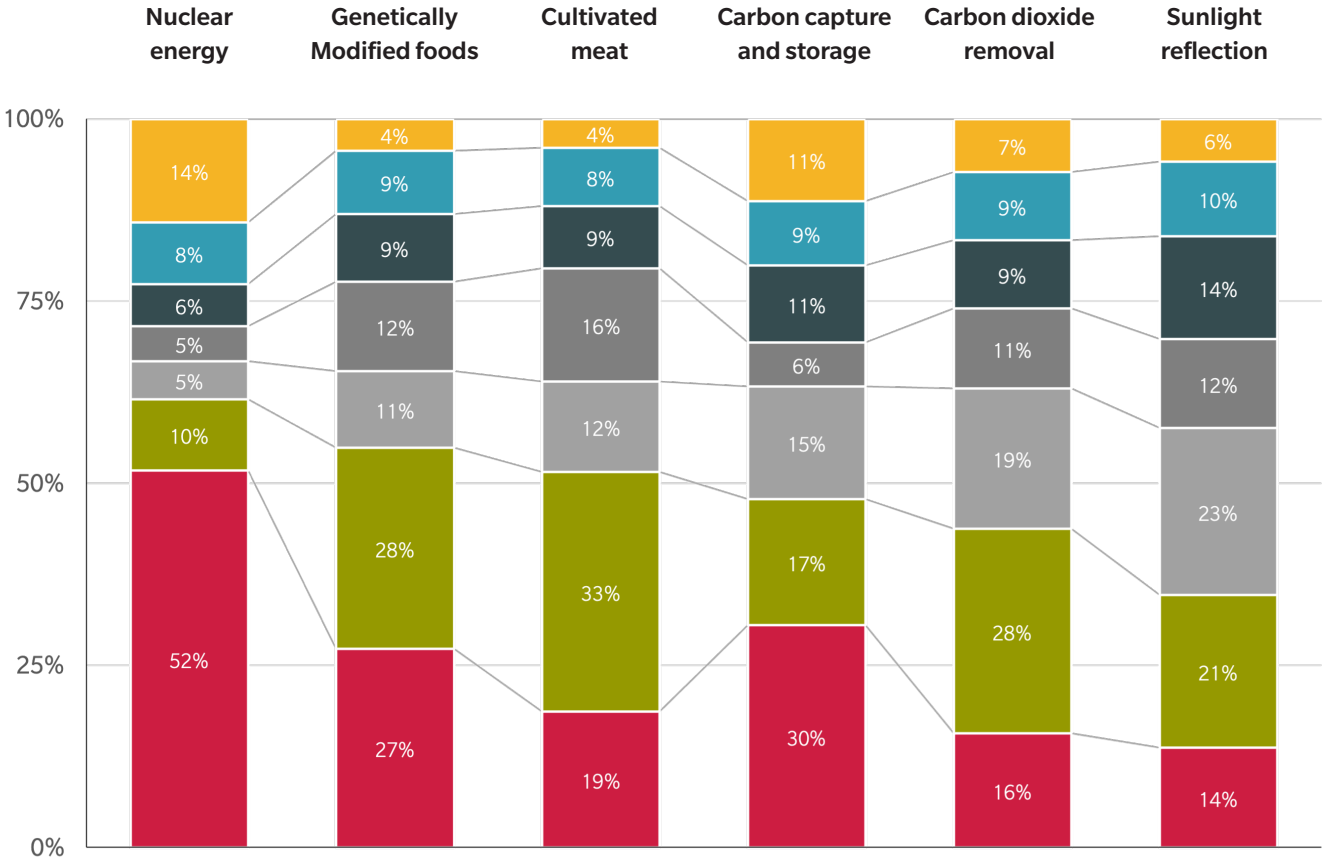
The #2 reason for opposing a technology is not about going wrong, but doing wrong: 'It is the wrong relationship to have with the natural world.'

**Figure 14. Reasons to oppose each technology
Germany**



- It's a distraction from the real problem of ending fossil fuels
- I don't want the corporations or governments behind it to have too much power over us
- I think we should be relying on more tried and tested approaches
- I don't think there is any need for us to do it
- I don't know enough about it
- It is the wrong relationship to have with the natural world
- I am concerned it may go wrong, get out of control, or have unintended side effects

Which of the following reasons best describes why you did not give this technology a higher level of personal support? Select one.
Base: people who somewhat or strongly support each technology.
Germany. N=2,027



Being seen as unnatural matters. The feeling is strongest for cultivated meat. When we asked people what words they associated with different technologies, words frequently used regarding cultivated meat included unnatural, disgusting, and wrong—words rarely used regarding climate engineering.

In Germany, where technology support overall is relatively weak (Figure 1), the concern about doing wrong is particularly prevalent, accounting for one

third of all the opposition to cultivated meat (Figure 14).

It's not about power

One of the striking features of the reasons to oppose shown in Figure 13 is the number of short bars: the possible reasons that turned out to be only minor considerations for people. This is a contrast to the more even distribution of reasons to support, in Figure 12.

People see climate technologies as a core part of the solution, not as a distraction from it.

We had hypothesized significant fear about the corporate or government power behind some of these technologies. Much of the criticism of Genetically Modified foods, for example, comes from a concern about the economic power of corporations owning patents for the world's crops. But very few people chose as the reason for their opposition 'I don't want the corporations or governments behind it to have too much power over us'. And those that did skewed right politically, suggesting that the concern we do see has more to do with government power than corporate power.

Fears of 'moral hazard' are not significant

Leaders of some NGOs worry that focusing on these climate technologies will take our eye off the real

goal of ending fossil fuels. But the public don't see it that way. As Figure 8 shows, this is the least common reason not to pursue technology solutions. For carbon dioxide removal and sunlight reflection, which are particularly open to this argument, this reason is selected by only 6 and 7% respectively of people opposing each technology. It is clear from the trade-offs in Chapter 1 that people see technology innovation as central to how we will stop climate change. They see climate technologies as a core part of that solution, not as a distraction from it.

And perhaps surprisingly, given the perceived polarization of the climate issue, few people said they oppose these technologies because they 'don't think there is any need for us to do it.'

5.
Moral values guide how to
engage people on tech support

5.

Moral values guide how to engage people on tech support

In Chapter 2 we explored how support for climate-related technologies varies by country, by politics, by worry about climate change, and by education. And in Chapters 3 and 4 we explored the direct, practical motivations for support and opposition. But how can we understand supporters and opponents at a more human level?

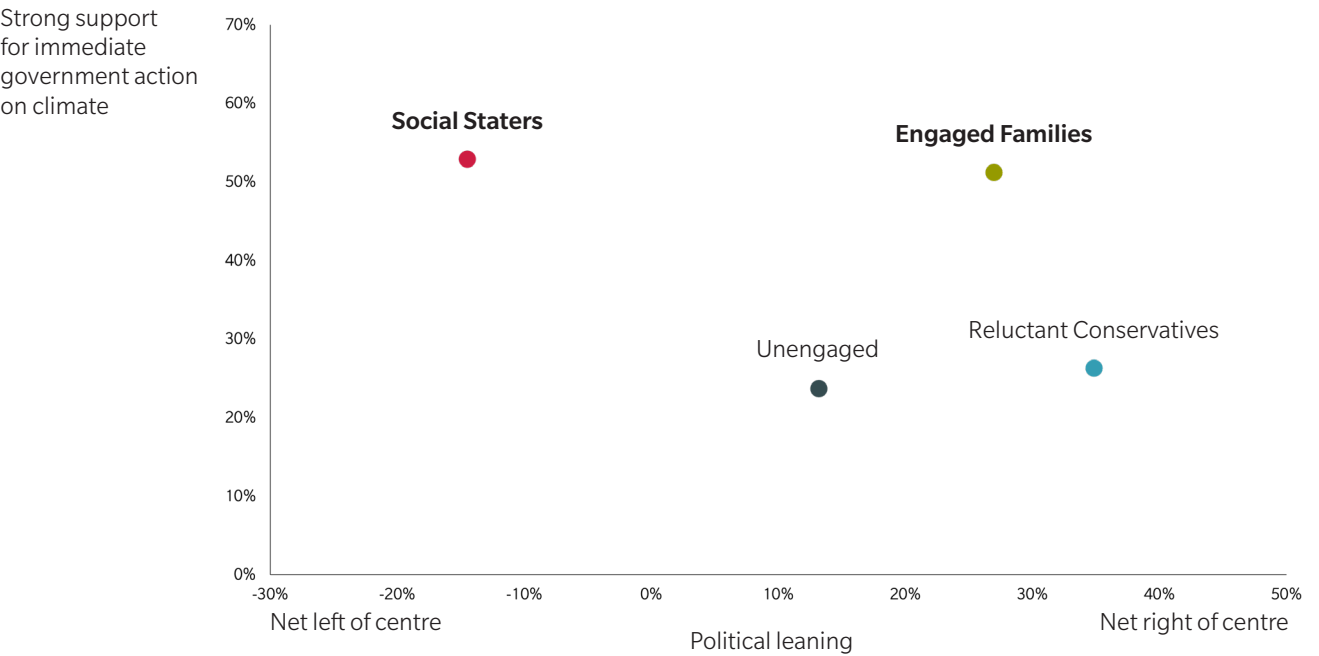
In a previous survey, covering 23 countries, we identified four contrasting segments of the population defined by their moral values.¹ The interest in this segmentation is that two of these segments proved

to be strongly committed to climate action, but with quite distinct outlooks (Figure 15).

When we reproduce that segmentation in this new research, we find that those same two segments are also the strongest support-based for climate-related technologies. Looking through this moral lens provides a little help in targeting, and much more help in tailoring. It highlights how to connect with two groups of people with quite different motivations and interests.

Figure 15. Political leaning and support for climate action of four moral segments of the population

¹‘Strong support’ is the proportion of the group answering 5 on a 5-point scale of agreement with the statement, ‘I support immediate action by the government to address climate change.’
²‘Political leaning’ is the net proportion of the group identifying themselves either left of centre (1-3) or right of centre (5-7) on a 7-point spectrum from 1=‘extreme left’ to 7=‘extreme right’.
N = 53,753. <https://doi.org/10.70272/lzhq>



The support base for climate-related tech

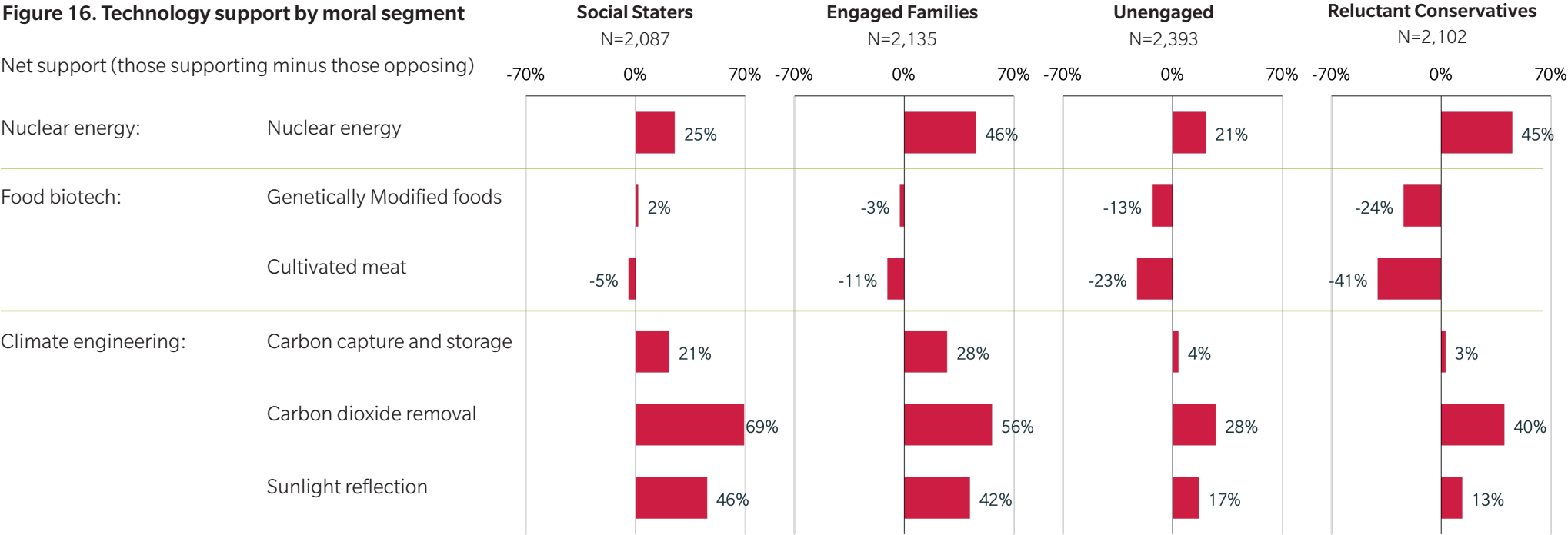
Social Staters and Engaged Families, two segments defined by their distinct moral values, make up the core support base for climate-related technologies.

On the question of whether technologies will do more good or more harm to people in the future, only Social Staters and Engaged Families have a net shared belief that geo-engineering will do more good than harm; the other two segments have a net shared belief that it will do more harm. The same is true for biotechnology and gene editing, though the net shared belief is only just on the side of good.

Figure 16 shows the net support of each segment for each of our six technologies, for Germany, Poland, the UK and USA combined. Social Staters and Engaged Families provide the strongest support for both climate engineering and food biotech. For nuclear energy they are split: Engaged Families provide the strongest support, along with the Reluctant Conservatives; Social Staters are less supportive, with 25% of them anti-nuclear.

Together, Social Staters and Engaged Families make up 48% of the population and deliver 64% of the strong technology support (69% excluding nuclear).

Figure 16. Technology support by moral segment



Connecting with Social Staters and Engaged Families

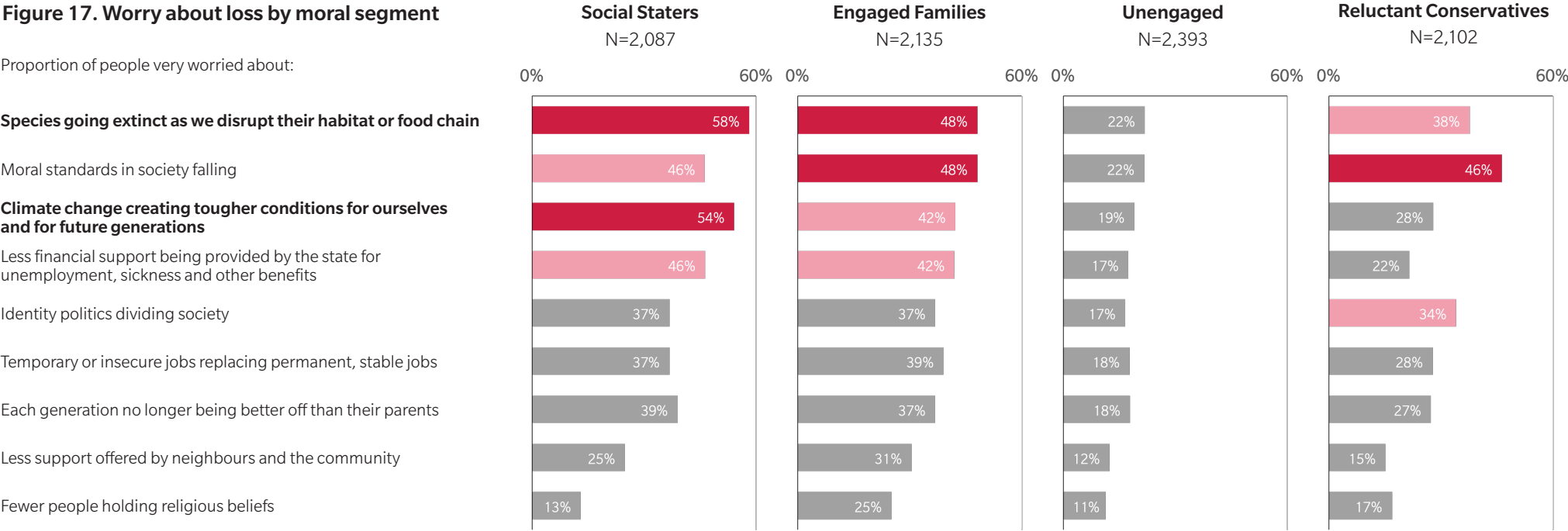
So who are the Social Staters and Engaged Families, and why do they matter?

Social Staters are well recognized climate supporters. Politically left-leaning, they tend to trust in their national government and believe in an egalitarian role for government in meeting basic needs for food, housing, healthcare and education, with society run for the sake of people at large. The sense of loss they feel most strongly in society is about the dual issue of climate change and species extinction (Figure 17).

Engaged Families are less recognized. Politically somewhat right-leaning, they are sceptical about their government’s role in their everyday lives, generally believing we would be better off with less government involvement. They too have strong egalitarian morals, but they look for equality more in shared opportunity than in government intervention in the outcome. They are optimistic, confident about the future, and believe that the world will be a better place for their children than it was for them. Relative to the other segments they skew younger, more urban, actively religious, and socially integrated, through their families and communities.

Figure 17. Worry about loss by moral segment

Proportion of people very worried about:



Please tell us how much you personally are worried about each of the following shifts. Percent answering very worried. Germany, Poland, UK, USA. N=8,717

The sense of loss they feel most strongly is about species extinction and the fall in moral standards in society. Climate change worries them too, but it doesn't stand out from the other issues like it does for the Social Staters.

An important distinction in these morally-defined segments is in how they view responsibility. Social Staters, more supportive of intervention, are more ready to see responsibility as an imposed obligation ('I have been given responsibility through the position I have been put in'). Engaged Families see responsibility more as a moral choice ('I am a responsible person').

This may not always affect which technologies they support, but it does affect the programs, framing and leaders that they will be most prepared to follow. The effect is most visible regarding vaccines, which Engaged Families give a 'do more good than harm' net score of +32%—below the +36% population average—while Social Staters give a score of +60%.

In general, where Social Staters put their trust regarding technology overwhelmingly in academic scientists, Engaged Families turn to a broader set of influences (Figure 18). They dislike government as an interventionist force that deprives them of agency, but they trust it as a source.

Figure 18. Trusted sources on technology safety



I would not trust any of these

Your preferred technology leader (e.g. Bill Gates or Elon Musk)

The United Nations

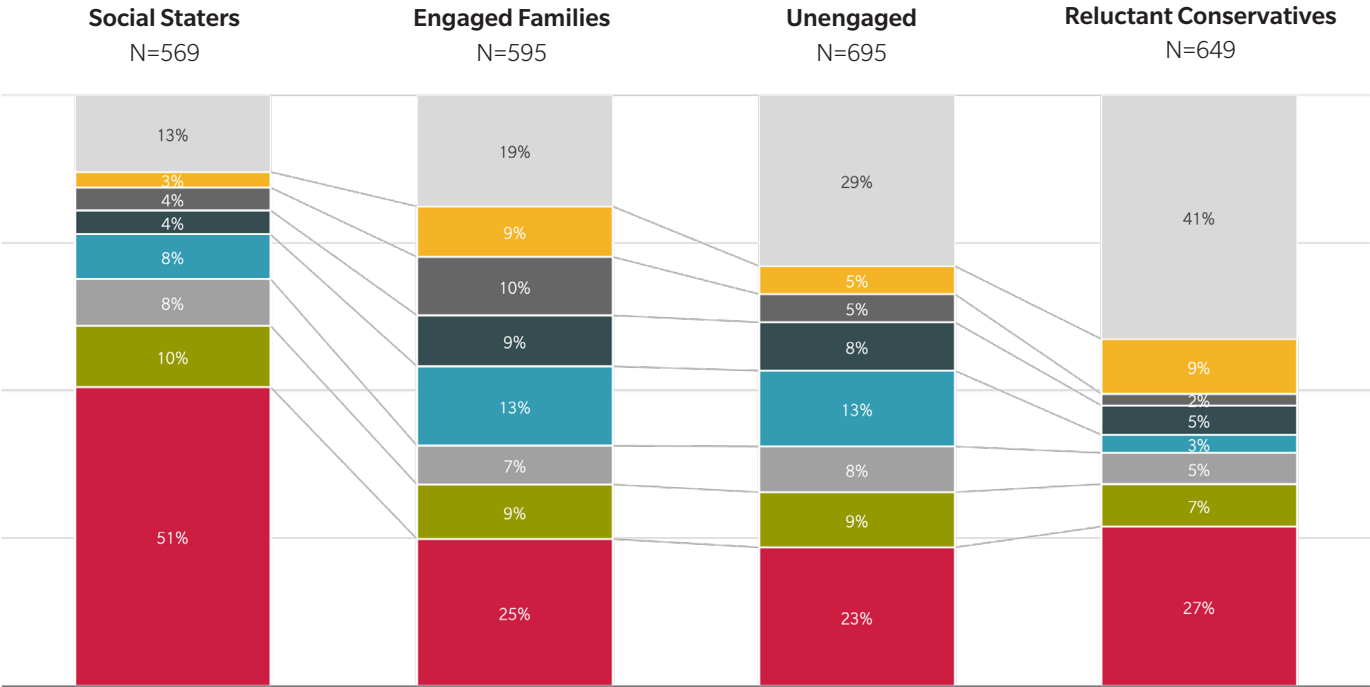
The U.S. military

The U.S. government

Agencies like NASA

Humanitarian organizations like the Red Cross

Scientists at major research universities



Which of the following would you be most likely to trust if they said that a particular technology is safe and ready for use? Select one. USA. N=2,508

The Engaged Families' way of seeing the world may be more naturally aligned with a transition mindset.

A transformation vs conservation mindset

The distinction between the Engaged Families and Social Staters relates to a mindset shift that is directly relevant to the uptake of climate technologies: a shift from a conservation to a transformation mindset.²

For traditional environmentalists, a conservation mindset is deeply rooted; it's where the movement came from. When chemicals pollute our rivers we need to clean them up. When a hole forms in the ozone layer we need to repair it. In general we need to restore and conserve the status quo, back to the way it was before it was disturbed.

Climate change, however, is not a conservation problem. We are not trying to conserve the status quo, because the status quo is what is unsustainable. We are not even trying to return to an earlier status quo, which would be incompatible with a population of 8 billion people. Climate change is a transition problem.

In this context, the Engaged Families' way of seeing the world may be more naturally aligned with a transition mindset. Engaged Families are optimistic about the future. They tend to think (2.5x as many agree than disagree) that 'the world will be a better place for our children than it was for me.' Social Staters tend to think the opposite (3.6x as many disagree than agree).

Engaged Families are the least conservative segment of the four. Among Social Staters, 1.6x as many agree than disagree that 'change is always good and a sign of progress, even if it's not what I was hoping for.' Almost all Engaged Families agree with this statement (12x as many agree than disagree).

The forward-looking, optimistic, change-embracing spirit of Engaged Families is an appealing fit for an agenda of technology innovation—provided the technology solutions are seen to go beyond problem-solving climate change and speak to the broader interests and ambitions that Engaged Families have.



6.

Anti-tech NGOs don't reflect
their supporters' positive views

6.

Anti-tech NGOs don't reflect their supporters' positive views

The Intergovernmental Panel on Climate Change argues for the need and the potential for the technologies we explore here—as an addition to, not a substitute for, reducing greenhouse gas emissions. The exception is sunlight reflection (also known as Solar Radiation Modification). Here the IPCC concludes that ‘the combined uncertainties surrounding the various SRM approaches, including technological maturity, physical understanding, potential impacts, and challenges of governance, constrain the ability to implement SRM in the near future.’³

Some (though not all) of the most influential environmental organizations have opposed several of these technologies, favouring a more fundamental societal transition. Their members and supporters, though, generally favour a technology-led transition, and support these technologies individually more strongly than the population at large.

Some organizations and researchers argue that we should avoid exploring a tech-based Plan B, because it might reduce our commitment to the reductions-based Plan A. But with the public and even their own supporters not signed up to that Plan A, this can be a path to having no plan at all.

Influential NGOs oppose climate technologies

Some prominent and influential environmental organizations have campaigned against several of the climate technologies described in this report.

One type of criticism they have made is about the technologies themselves, challenging their proven efficacy or safety. We should avoid nuclear energy and genetic modification because they are claimed to be inherently dangerous to people and nature^{4,5} (claims that others strongly contest^{6,7}).

The other type of criticism is relative, expressing a preference for alternative approaches to climate change mitigation. Nuclear energy is rejected in favour of renewables and reducing energy demand. Food biotech is rejected in favour of agricultural reform and plant-based diets. Climate engineering is rejected in favour of just stopping the use of fossil fuels, and is particularly disliked for being seen as a lifeline for the fossil fuel industry. The technologies are seen as a temptation that may divert both money and motivation from the real effort needed.

NGO supporters want a tech-led transition

The position of these environmental organizations, however, does not always match the position of the people who are their members and supporters.

Figure 19 shows where the supporters of environmental organizations stand on the same contrasting statements we saw in Chapter 1 (Figure 3). Supporters of the principal environmental organizations are clearly on the *innovate, tech forward, decoupling*, and *incremental* side of the chart, more than the side of *reduce, back to nature, post-growth*, and *disruptive*. This skew is not always as strong as for the popu-

Figure 19. Environmental organizations’ members and supporters favour tech-led green growth



* Percent of people scoring 4 or 5 minus percent of people scoring 1 or 2 on a 5-point scale where 1=strong alignment with the left statement and 5=strong alignment with the right statement.

Environmental organizations' supporters tend to be more positive about climate technologies than the general population.

lation average, but is unequivocal. The only exceptions are the more extreme environmental organizations, which have narrow popular support.

For simplicity this figure shows only the UK. The equivalent charts for Germany, Poland and the USA are in Appendix One. They tell a similar story, except that supporters of environmental organizations in Germany and Poland stand on the disruptive side, in contrast to their respective populations.

NGO supporters are more supportive of climate technologies

When it comes to support for specific climate technologies, environmental organizations' supporters

tend to be *more* positive than the general population (Figure 20).

This statement is generally true across technologies, countries and environmental organizations (Figure 20 shows the UK picture; see Appendix One for Germany, Poland and the USA). The technology exception is nuclear energy, where environmental organizations' supporters are universally net positive, but less strongly than the population in some cases.

In the UK and USA, the stronger support means that members and supporters of environmental organizations are even net positive on cultivated meat, where the general population is net negative.

Figure 20. Environmental organizations’ members and supporters are more supportive of climate technologies than the population



A photograph of a modern building facade with large glass panels and metal cladding. The building is multi-storied and has a clean, geometric design. The sky is overcast and grey. Bare tree branches are visible on the right side of the frame.

7.

Conclusion: Follow the science—
and the social science

7.

To deliver climate action by consent, we must be radical because the challenge demands it, and realistic because we depend on political will.

Conclusion: Follow the science—and the social science

It is clear from this research that trust in science is strong and widely spread, and that there is broad support for a technology-led approach to climate action. People want us to solve the problems of climate change and species extinction, and they want us to do so by innovating our way forward. They worry about the societal loss that these shifts threaten for future generations, and they don't want to substitute that threat with a loss of prosperity. Their support for technologies that can help stop climate change is a natural and rational response.

It is also clear that this support is not universal or well directed.

Support varies by technology, with correlation within technology groups but not between them. Support for food biotech is low, and for other technologies is high. Support for nuclear energy leans politically left, and for other technologies leans right.

The fear of technology *going wrong* is significant, especially in technologies where that fear has been stoked. The fear of *doing wrong* is visceral, making it hard to overcome. The visceral rejection of food biotech, especially of cultivated meat, is pervasive.

Though the net support for most technologies is

strongly positive, and increases with familiarity, it may shift in response to future claims and counter-claims. For example, solar radiation management is objectively riskier than carbon dioxide removal, yet people today see little distinction. And beneath the net support figures in our charts, many people have not (yet) come out either for or against. Everything is still to play for.

This complex picture demands radical realism in order to deliver climate action by consent. We must be radical because the challenge demands it, and realistic because we depend on political will.

If we simply 'follow the science' and go all out for food biotech, we risk alienating many rejectors, particularly on the political right, where support is vital.

If instead we 'follow the *social science*', by going for what people are prepared to support, we may miss out on technologies that can feed the world while restoring nature, and expose ourselves to the avoidable risks of solar radiation management.

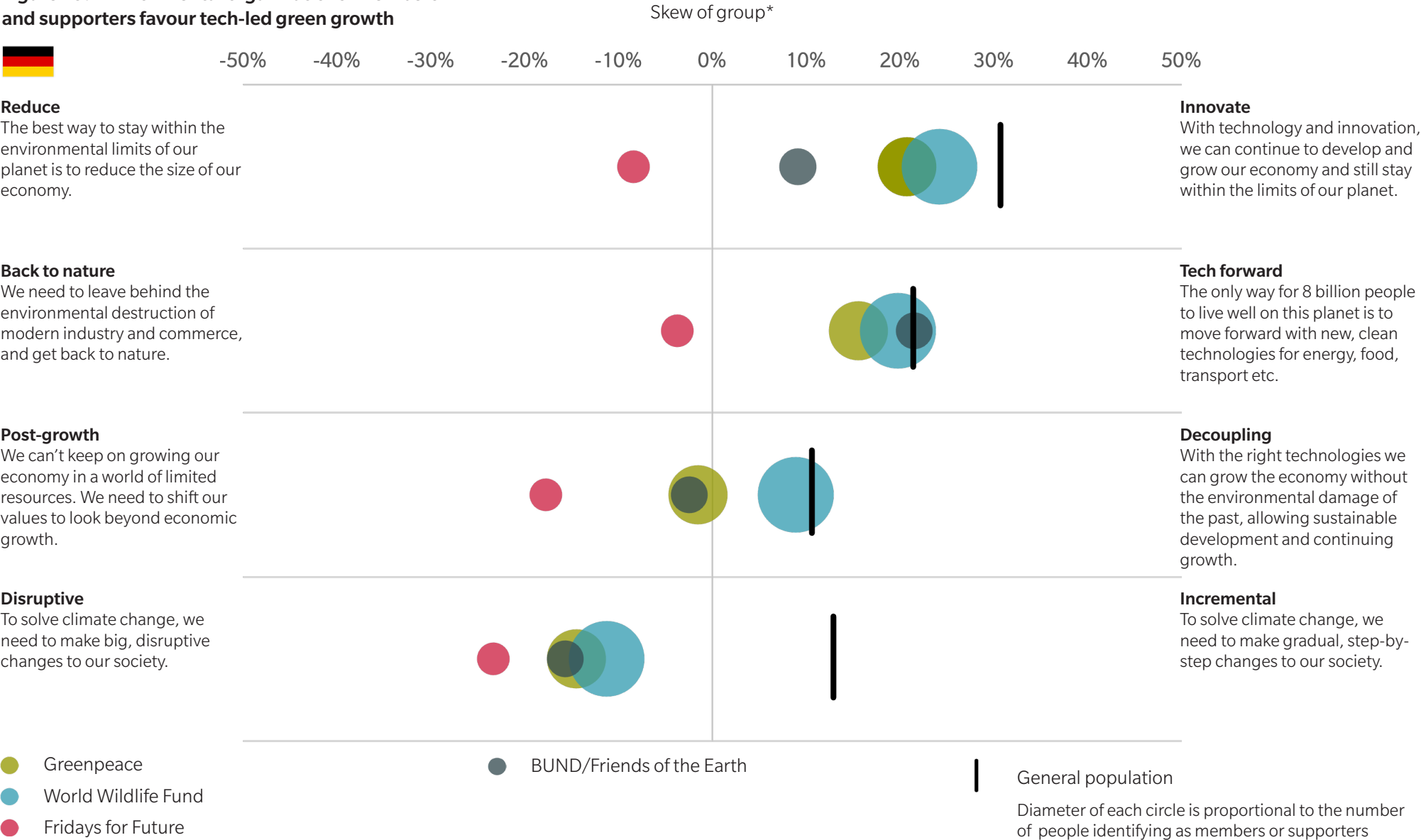
We need to take a pluralist approach to climate technologies, learning as we go, and find where the science and social science can come together.

Appendix One

NGO supporters' views

Versions of Figures 19 and 20 for Germany, Poland, and the USA

Figure 19. Environmental organizations’ members and supporters favour tech-led green growth



* Percent of people scoring 4 or 5 minus percent of people scoring 1 or 2 on a 5-point scale where 1=strong alignment with the left statement and 5=strong alignment with the right statement.

Figure 20. Environmental organizations’ members and supporters are *more supportive* of climate technologies than the population

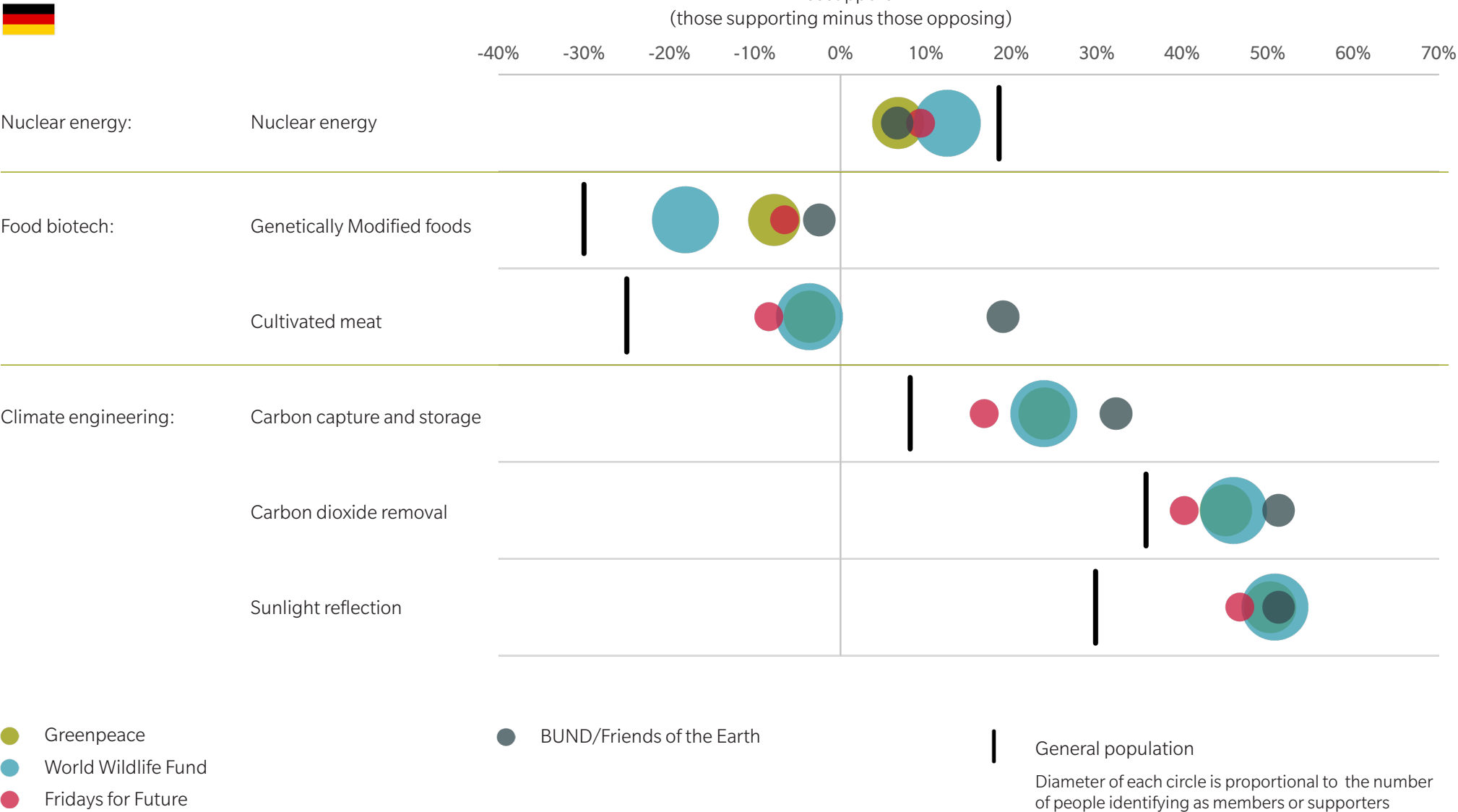
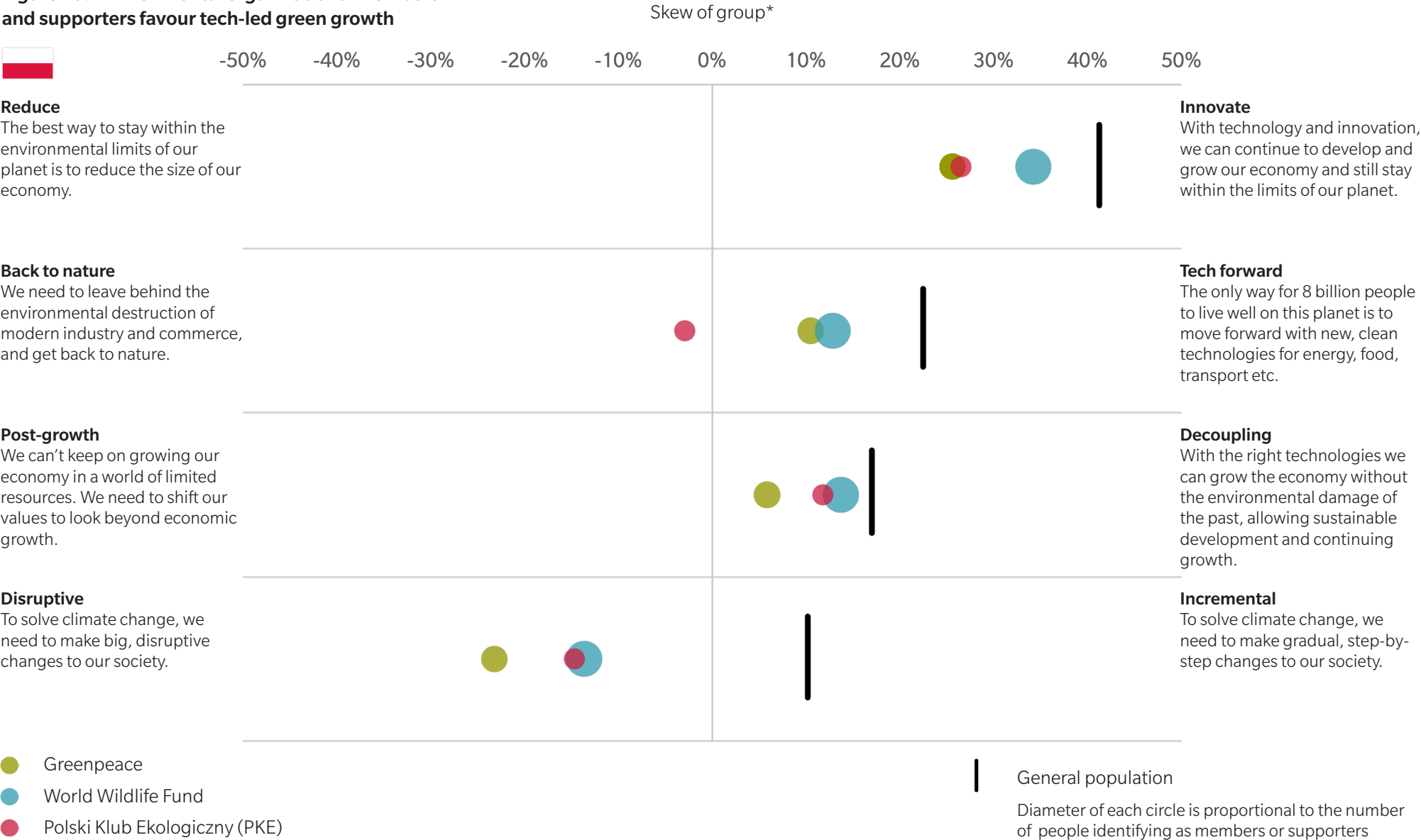


Figure 19. Environmental organizations’ members and supporters favour tech-led green growth



* Percent of people scoring 4 or 5 minus percent of people scoring 1 or 2 on a 5-point scale where 1=strong alignment with the left statement and 5=strong alignment with the right statement.

Figure 20. Environmental organizations’ members and supporters are *more supportive* of climate technologies than the population

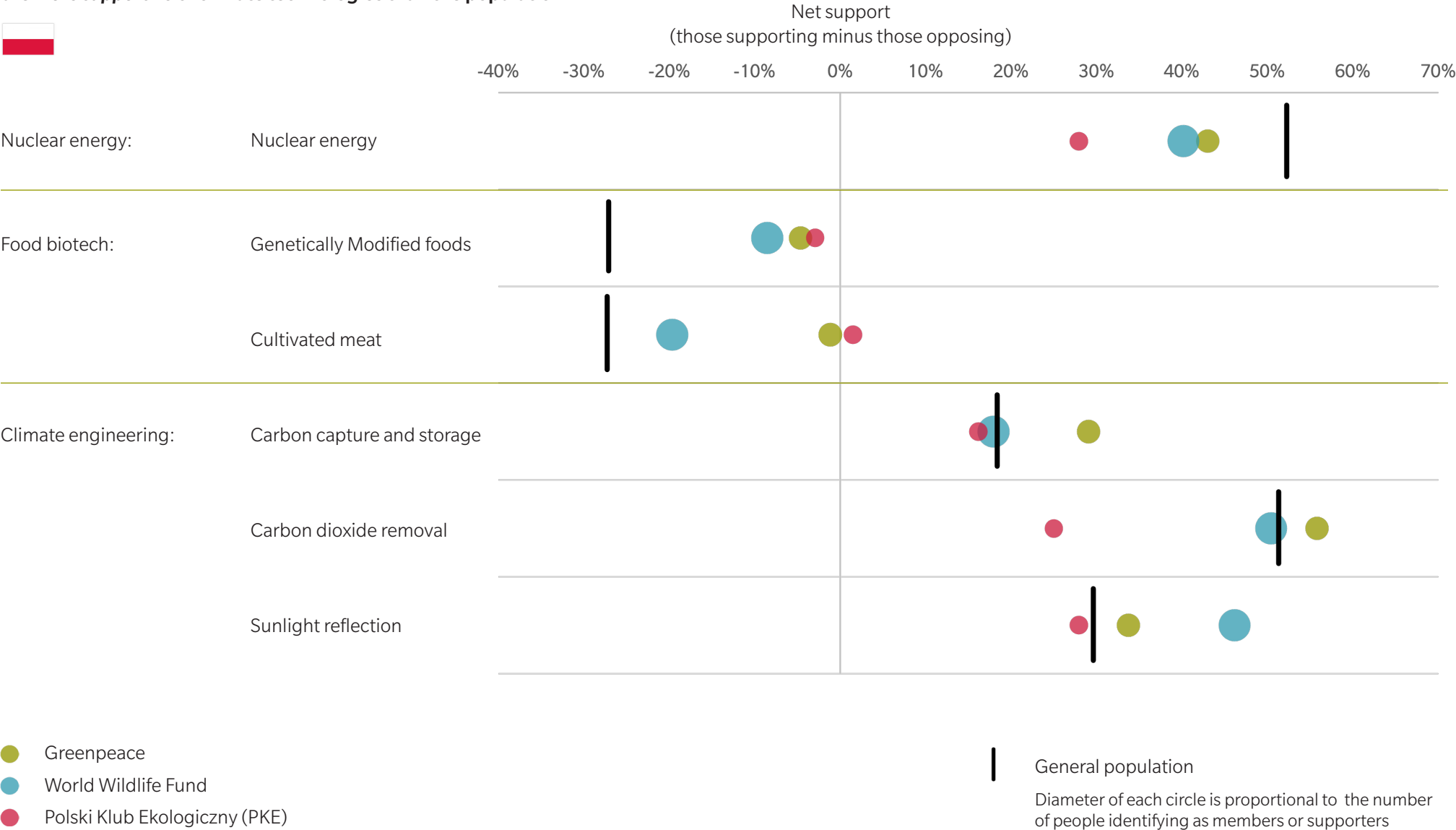
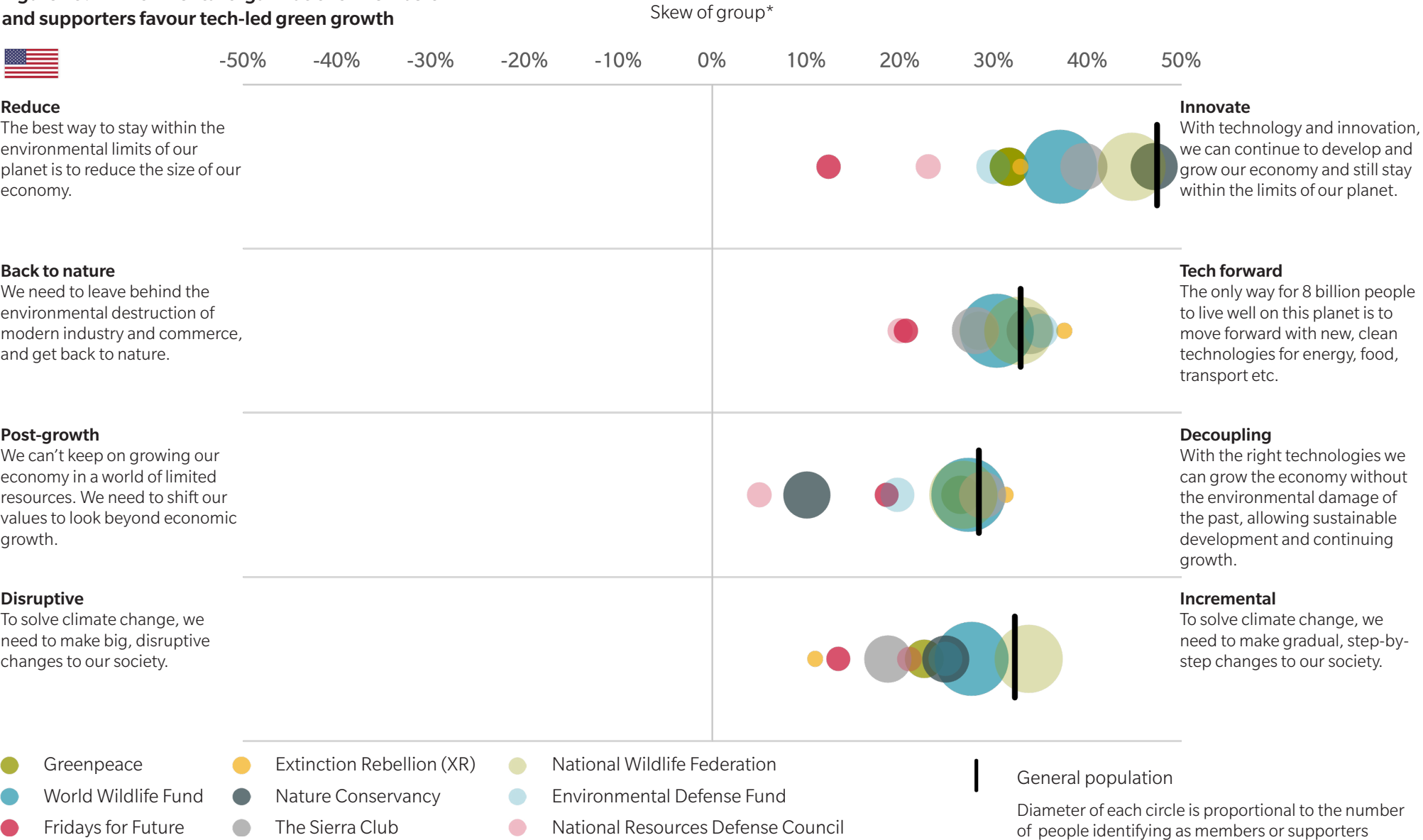
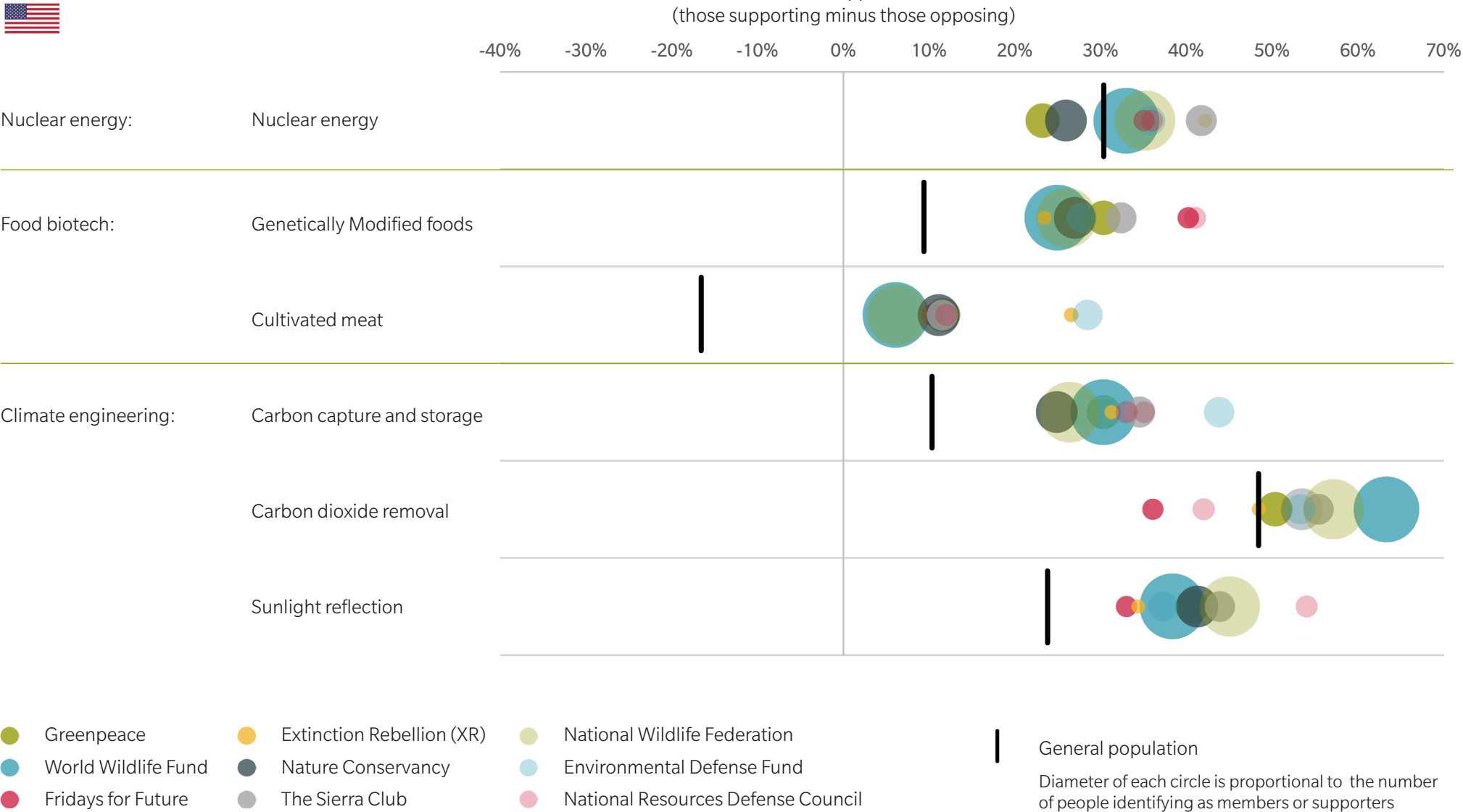


Figure 19. Environmental organizations’ members and supporters favour tech-led green growth



* Percent of people scoring 4 or 5 minus percent of people scoring 1 or 2 on a 5-point scale where 1=strong alignment with the left statement and 5=strong alignment with the right statement.

Figure 20. Environmental organizations’ members and supporters are more supportive of climate technologies than the population



Appendix Two

Research methodology

Appendix 2

Research methodology

The results presented here are derived from an unbranded Internet-based quantitative survey fielded by independent panel-provider Savanta between 11 and 28 November, 2024. (That is after the re-election of President Trump in the US, and before his inauguration.) Respondents opt in to a standing panel in which they complete online surveys for monetary compensation or other rewards.

Countries, sample sizes and representation

We surveyed the populations of five countries: Germany, Nigeria, Poland, the United Kingdom, and the United States.

In total we surveyed 10,815 respondents across the five countries. Sample sizes and languages in each country are as follows:

Country	Sample size	Language
Germany	2,027	German
Nigeria	2,098	English (UK)
Poland	2,103	Polish
United Kingdom	2,079	English (UK)
United States	2,508	English (US)
Total	10,815	

To make the country samples as nationally representative as possible, we used quotas for age and gender when fielding the survey, to ensure close to national representation on these two dimensions. Our samples matched national profiles +/-1% for age

bands and gender individually, and +/-2% for the two in combination. We also profiled the self-stated region, education and household income distribution of our sample with available third-party estimates for each country.

This approach gave us a good national representation in Germany, Poland, the UK and US, and inevitably less so in Nigeria, given the more limited representation of the population in online general-public panels. Our Nigeria sample skews educated, high-income, and Lagos-weighted relative to the national population. We have excluded Nigeria from this research report in order to facilitate like-for-like comparisons of nationally representative results, but have matching data available for Nigeria (with the caveat on representation above).

Many of the results presented here are country-specific. In some cases where country results are similar, for simplicity and to maximize sample size we present results for Germany, Poland, the UK and US as one combined population, with a sample size of 8,717. See notes under each chart.

Questionnaire length

The average length of the survey for each respondent was 15 minutes. To ensure we kept respondents' attention we included attention measures and checks throughout the survey, and disqualified respondents who failed more than one of these checks.

Country-specific variations

Surveys were translated into the primary language spoken in each country. Household income and education bands were tailored to each country's terminology and levels. Lists of political parties and environmental NGOs that respondents may support were also unique to each country.

Measuring support for climate technologies

Many of the findings in this report derive from one core question that tests a respondent's support for a given climate technology. For each technology, respondents were asked:

Based on what you may have previously heard, to what extent do you support or oppose the use of the following technologies as part of our efforts to stop climate change, preserve our health, and protect wildlife and the environment?

We used this wording to give a common context for the technologies, to avoid asking about support in a vacuum. The choice of a broad context, not limited to climate change, reflects findings from previous research (and repeated here) that other outcomes regarding health and biodiversity can be at least as motivating as climate change itself.

Respondents rated their support for or opposition to each technology on a five-point scale: 1. *Strongly oppose*; 2. *Somewhat oppose*; 3. *Neutral*; 4. *Somewhat support*; 5. *Strongly support*.

For each technology we included a short description to ensure essential understanding, without 'selling' each solution, and only after testing for familiarity based on the name alone.

The six technologies we tested, with their descriptions, are:

Nuclear energy: a reliable source of abundant clean power, not dependent on the sun or wind.

Carbon capture and storage: capturing emissions of carbon dioxide at source and storing them permanently deep underground.

Genetically Modified foods: creating resilient plants to produce more food from available land, and to reduce the use of chemical pesticides, water, and fertilizers made from fossil fuels.

Cultivated meat: growing meat from animal cells, to keep the option of meat as a source of protein in our diets without raising and slaughtering animals.

Sunlight reflection: Using technology to manage how much excess sunlight gets into the Earth's atmosphere, to counterbalance the way that carbon dioxide emissions are causing climate change.

Carbon dioxide removal: Capturing and removing carbon dioxide from the air to help get carbon pollution down to a level that is not overheating the planet.

Reasons people support or oppose

Respondents who said they supported each technology (either ‘somewhat’ (4) or ‘strongly’ (5)) were asked a follow-up question with multiple-choice answers about why they provided that support. All other respondents were asked a follow-up question with multiple-choice answers about why they did *not* give the technology a greater level of personal support.

Broader stances related to climate technologies

Before exploring these specific technologies, we asked respondents a series of attitudinal trade-offs, to understand what they value and where they stand on issues that define the roles for climate technologies to play. In the trade-offs below, respondents saw only the text in columns 1 and 5; the labels in the ‘trade-off’ column are our shorthand for the trade-off that each pair of statements seeks to test.

For each of the following pairs of statements, which statement better aligns with your own views?

Respondents answered on a 1-5 scale.
The order in which the trade-offs were presented was varied randomly for each respondent; the order of the answer pairs was varied randomly for each trade-off and each respondent.

Trade-off	I strongly align with this statement				I strongly align with this statement
[This column not seen]	1	2	3	4	5
Science blame vs credit	Science and technology are responsible for what is worst about how we live today.				Science and technology are responsible for what is best about how we live today.
Science inconsistent vs open-minded	You can't rely on scientific advice because what is claimed to be right today often turns out to be wrong tomorrow.				Science's readiness to adapt its theories as we make new discoveries is what makes it objective and strong.
Reduce vs innovate	The best way to stay within the environmental limits of our planet is to reduce the size of our economy.				With technology and innovation, we can continue to develop and grow our economy and still stay within the limits of our planet.
Back to nature vs tech forward	We need to leave behind the environmental destruction of modern industry and commerce, and get back to nature.				The only way for 8 billion people to live well on this planet is to move forward with new, clean technologies for energy, food, transport etc.
Post growth vs decoupling	We can't keep on growing our economy in a world of limited resources. We need to shift our values to look beyond economic growth.				With the right technologies we can grow the economy without the environmental damage of the past, allowing sustainable development and continuing growth.
Disruptive vs incremental	To solve climate change, we need to make big, disruptive changes to our society.				To solve climate change, we need to make gradual, step-by-step changes to our society.
Foundational eco belief	Humans are a force for good. It is incredible what our societies and civilizations have achieved. To secure our future, we need to build on this story of progress, advancing responsibly, with a love and respect for nature.				Humans are a destructive force. We have deforested the land, driven many species to extinction, and polluted the seas and atmosphere. Our continuing economic growth is going beyond the limits of our planet. To secure our future, we need to change our way of living so the planet can regenerate.

Note: Only trade-offs used in this report are shown here.

Profiling

Most of the remainder of the questionnaire comprised psychographic and demographic questions used to profile different segments and other groups of respondents. The principal profiling dimensions used in this report are:

Engagement with climate change

We asked respondents four questions about their climate change beliefs, derived and standardized by the Yale Program on Climate Change Communication.

Our analysis in this report uses the straightforward question, *How worried are you about climate change?* with available answers *Very worried, Somewhat worried, Not very worried, Not at all worried*. (For consistency with the rest of the questionnaire and current international practice, we use the term ‘climate change’ in place of the YPCCC’s ‘global warming’.)

Political affiliation

To assess political party affiliation, we asked respondents in each country, *Generally speaking, do you think of yourself as aligned with...?* and provided a list of political parties specific to their country. Our lists of parties range from three in the US (Democrat/Republican/independent) to ten in Nigeria and Poland, together with the options of *Other* and *Prefer not to say*. Only parties with sample sizes greater than 100 are shown in this report.

(In the UK our party list unfortunately excludes Reform UK. While Reform is a significant political party today, it was not so when the list of parties was written for an earlier research project, and we failed to spot the omission when we re-used the list.)

In addition to party affiliation, we asked respondents to place themselves on a simple left-right scale of political leaning:

Some people talk about politics in terms of left, centre, and right. On a left-right scale from 1 to 7, with 1 indicating extreme left and 7 indicating extreme right, where would you place yourself? Select one.

Language used in this report relates to the 1-7 scale in this question as follows:

1	Far left	Left
2		
3		
4	Centre	
5	Centre right	Right
6	Far right	
7		

The left-right scale allows us to compare political profiles across countries, despite the different parties. It also provides a direct read of where people see themselves on this scale that can be hard to derive from party affiliation in some cases, either because the party categories are broad (as in the US),

or because other party characteristics influence the affiliation (as in the UK, which recently elected Labour in place of the Conservatives while simultaneously shifting collectively towards the right).

Moral values

We developed the moral segments in Chapter 5 using the following segmentation method.

We asked respondents to what extent they agreed with 14 statements that express various moral values and beliefs. We then performed an Exploratory Factor Analysis of their answers. The factor analysis groups together in one ‘factor’ statements that are correlated, meaning that people tend to see each of them in much the same way (if they agree with one, they are likely to agree with another in the same set).

We then used k-means clustering to group respondents based on their similarity across these moral factors. We identified four distinct segments, which usefully distinguish different responses regarding climate action. The decision to specify four segments (clusters) in the k-means algorithm was made through an analysis of silhouette scores and within-cluster sum of squares.

Some of the moral statements are derived from the moral foundations proposed by Jonathan Haidt in his book *The righteous mind*⁸ and the associated

Moral Foundations Questionnaire.⁹ We added other moral statements about how society should be organized. The moral statements and method successfully reproduced a segmentation already used and profiled in a previous survey (see endnote 1).

Environmental group support

We asked respondents: *Are you a member or supporter of any of the following environmental organizations (select all that apply)?* and provided a list of environmental NGOs specific to their countries.

Worry about loss

To put people’s concerns about climate change and biodiversity loss in a broader social context, we asked respondents: *We want to hear your opinion on some shifts in society that can contribute to a feeling of loss. Please tell us how much you personally are worried about each of the following shifts.* Our analysis focuses on the proportion of people in different groups who said they were *Very worried* by each shift.

Demographics

We asked a wide range of demographic profiling questions including age, gender, education, household income, region, urban vs rural living, marital and employment status, and religion.

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Authors

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The authors would particularly like to thank John Marshall, Sergio Velasquez-Rose and Sarah O’Neill from Potential Energy Coalition, and Mark Lynas and Rob De Schutter from WePlanet, for their contributions to the research design and analysis.

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About Zero Ideas

Zero Ideas is a research and education charity established to challenge leadership thinking on climate action. We conduct primary and secondary research and publish articles and research reports to inform business and other leaders on climate issues and to drive a more ambitious leadership mindset regarding climate action.

Recent research projects and collaborations have explored the use of theories of change to assess and guide corporate climate action; what moves and motivates people to support climate action across the G20 and beyond; why sustainable finance supply needs industrial strategy demand; understanding and responding to public demand for nuclear energy; and keeping politics out of companies' climate action.

www.zeroideas.org

About Potential Energy Coalition

Potential Energy is a non-profit marketing firm driving public demand for climate solutions.

Leveraging deep analytics and creative storytelling, Potential Energy connects with people on a human level to tip the balance on the policies that will dramatically accelerate the energy transition. Our campaigns are backed by extensive audience research, yielding data-driven insights that shift the climate narrative to win the fights that matter.

Founded in 2018, Potential Energy has a track record of transformative campaigns that capture audiences and mobilize support for climate action.

www.potentialenergycoalition.org

About WePlanet

WePlanet is a network of grassroots citizens' organizations united by a belief in science-based solutions to the climate crisis, biodiversity collapse and the need to eliminate poverty.

WePlanet has mobilized tens of thousands of citizens around the world in defence of science and technology and now has 16 growing chapters on four continents, with powerful organizations from Uganda to Finland.

WePlanet is unique within the environmental movement for being pro-nuclear, pro-GMO and pro-cultivated meat, and unique for keeping our positions under constant review so that we always follow the data.

Our mission is to rewild vast swathes of the planet and restore our climate, all while using the best of modern technology to elevate humanity out of poverty.

www.weplanet.org