Report by Vattenfall

The Conversation on Climate Change

And its impact on human behaviour



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The need for a more balanced Climate Conversation

Climate change has passed a major tipping point in society. It is now, without any doubt, understood to be the biggest issue that mankind faces. Climate change confronts us in media every day. It is a frequent conversation point with those we talk to and is increasingly shaping the way we behave and what we consume in our daily lives.

The negative impact on our planet stemming from human activity and the increasing effects are of grave concern. It is a concern shared across all social groups, generations and borders.

Governments and businesses alike are challenged to play their part, individually and joining forces, to reduce the impact of climate change. Vattenfall is no different: as a company that produces and supplies energy, our ability to make an impact is considerable. The way our business affects the environment has been a central factor in making our strategic decisions both short and long term. Our response has been comprehensive. Today we go beyond energy production, outlining our plan to work together with our partners to phase out CO2 emissions from households, transport and industries. We are not there yet, but we are fully committed, throughout our entire 20,000-person business, to power climate-smarter living in order to make fossil free living possible within one generation.

"We are not there yet, but we are fully committed, throughout our entire 20,000-person business, to power climate-smarter living in order to make fossil free living possible within one generation."

We are proud of this initiative, and want to inspire and enable our peers to join us on this journey. In order to do so, we need to understand how people feel about the conversation on climate change and how this impacts their motivation and behaviour. That is why we have undertaken a comprehensive study investigating how people really think and feel about climate change, given the high volume of information they are confronted with every day. Although many previous studies into climate change have been conducted, they have not looked at this area. Our research, which has been carried out in the seven markets where Vattenfall operates, covers people's attitudes towards climate change, the way it is being reported on in the media, people's perception of the media coverage, how climate change is being talked about and, most importantly, how all this impacts their willingness to act.

Our study is revealing. Above all, it shows that demonstrating how positive action will make a difference has become a paramount issue – and amidst the concern and widespread anxiety, the positive progress that is being made is difficult to find among all the reporting on the climate crisis.

"The findings point to a clear need to inspire people, industries and governments with the positive progress that is being made, and engagingly showcase how change in the right direction is happening on a macro level."

The findings point to a clear need to inspire people, industries and governments with the positive progress that is being made, and engagingly showcase how change in the right direction is happening on a macro level. Of course, climate change is the biggest issue we will likely ever face, but the study shows that the positive work being done to counter this challenge is often not given the opportunity to inspire us and encourage better action among the people and organisations that can have the greatest impact.

The study confirms that we are far more likely to take action on climate change when we see others doing so. And while negative media stories may provoke the greatest traction and engagement, more optimistic and proactive stories can do more to move us to act.

We believe that through more balanced conversation on climate change, covering both the urgency of the problem and the positive progress being made, together we can continue to inspire change and enable us our belief that the problem ahead is still solvable.

Executive summary



Attitudes

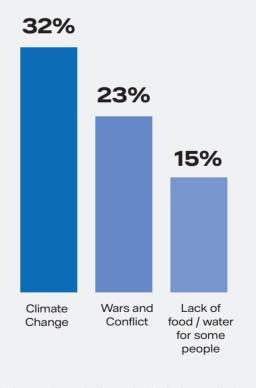
The climate is becoming people's greatest concern

Climate change is seen not only as being a highly pressing issue: it is seen by the largest proportion of respondents in our study as **being the main challenge** of our age, ahead of any other global issue.

Reflecting this, a majority of citizens say they worry about climate change – and for many this feeling of worry extends into 'eco-anxiety'.



Most pressing global issues



% of respondents who have selected the item as the "most pressing problem" (All Respondents, All Countries)



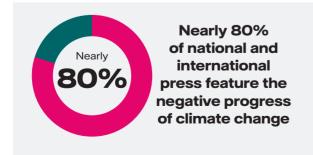
In popular media most climate reporting is despondent

A large share of media reports on the topic of climate change though factual, focus on the severity of the issue and are negative in tone, containing news and data about climate change and its adverse consequences more broadly.

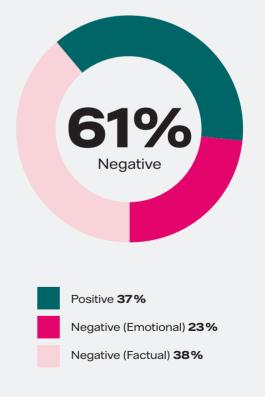
A second tier of coverage is particularly negative in nature and highlights in particularly emotive terms the already visible catastrophic consequences of climate change.

We also see a substantial amount of positive news in reports on corporate initiatives to slow down climate change or political developments that strengthen the framework that governs the climate.

When looking at the sentiment split across different types of publications, we see that negative sentiment of both emotional and factual nature is most prominent in national and international media outlets. In contrast positive stories can be mostly found in trade, research and local publications. This imbalance is highly important, given the wider readership of national and international publications, and their role in setting the media agenda.



Sentiment of articles on Climate Change



Sentiment of online news articles on climate change between 15 December 2018 and 15 dec 2019 in all countries surveyed.



Perception and emotion

Negative perceptions are taking hold

Our findings show that people recall a larger volume of negative or pessimistic reporting on climate change than is actually present in the media landscape as a whole.

Several factors are possibly at play to explain this disparity between the actual news landscape and the perception of it, such as the fact that positive news can be found mostly in media less commonly accessed by the general public (e.g. trade and research news outlets) and humans' natural tendency to retain negative information outlets) and humans' natural tendency to retain negative information.



This low recall of positive stories can be harmful when it leads to people feeling and behaving differently than they would do if they had more meaningful examples of progress being made to tackle climate change.

Only 12% of all respondents recall seeing positive climate news in the media

12%



share of positive



Social media supplements the cycle of negative stories

Social media, by design, amplifies the content that we find most engaging and thus the cycle of negative media reporting – both through the way alarming coverage is shared widely through social media networks, and the way in which the topic is further discussed online.



With negative media coverage being more likely to be remembered than positive coverage, we would expect to see it being shared at a much greater rate online.



Negative discussions on social media outweigh positive ones with a ratio of almost 3:1

(31% vs 12%)



Coverage and conversation affect our willingness to act

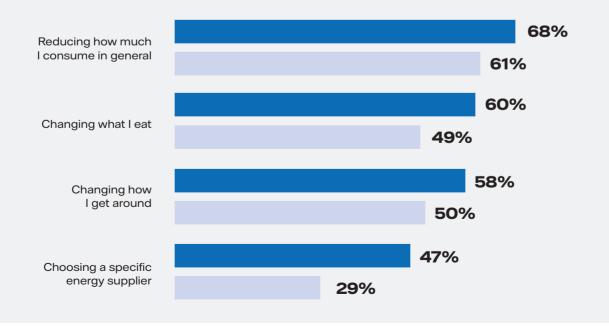
Business and governments are rightly expected to lead on climate change as they are seen as most able to slow it down – but individuals also have an important role to play. This lies not only in the cumulative impact of their action on the climate, but in how consumer choices signal to businesses that more is expected of them.

Many consumers are already making modifications to their daily lives, and the purchasing decisions they make, specifically with the aim of improving their climate footprint. However, there remains a large untapped segment of the population who say they are not yet doing so but would like to.



"Our findings show that those who see news coverage and social media content that are mostly positive in tone are significantly more likely to engage in a range of climate-friendly behaviours."





List of personal actions respondents undertake to reduce impact on climate split by the perception of the conversation on climate change in media. Respondents base: n=2084 (negative perception); n=772 (positive perception)



The barriers for action can be practical - the availability and cost of climate-friendly options - but can also stem from the media and social media environment they are exposed to. In particular, negative reporting induces a feeling of individual powerlessness to stop the problem. This is a significant inhibitor of action and of the belief that positive progress is actually possible.

However, when coverage highlights examples of leadership on climate change - from businesses, governments and individuals - this often has the opposite effect: to encourage action.

The emotive impact of predominantly positive coverage is especially high, specifically in the way it leads to individuals feeling inspired to act by the examples they see from others. It is important to remember that more negative and emotive reporting can also stimulate action on climate – especially when it leads to a feeling of anger at what we are collectively doing to the planet.

Balanced reporting is essential – particularly given the way we tend to respond to media coverage. It is important to highlight the seriousness of climate change, but also to ensure that people can see that efforts are being made to address it – often with success.



Key takeaways

What do the findings of this report mean for the different groups involved in the fight against climate change?

Businesses

Businesses who are responding to societal expectations of leadership on climate change and have taken decisive action to adapt their operations and plan long-term when it comes to the possibly dramatic consequences of climate change should spend time and resources communicating the changes they are making, and not being afraid to promote this through the media: this will help people to see what is being done and inspire them to take action.

Politicians

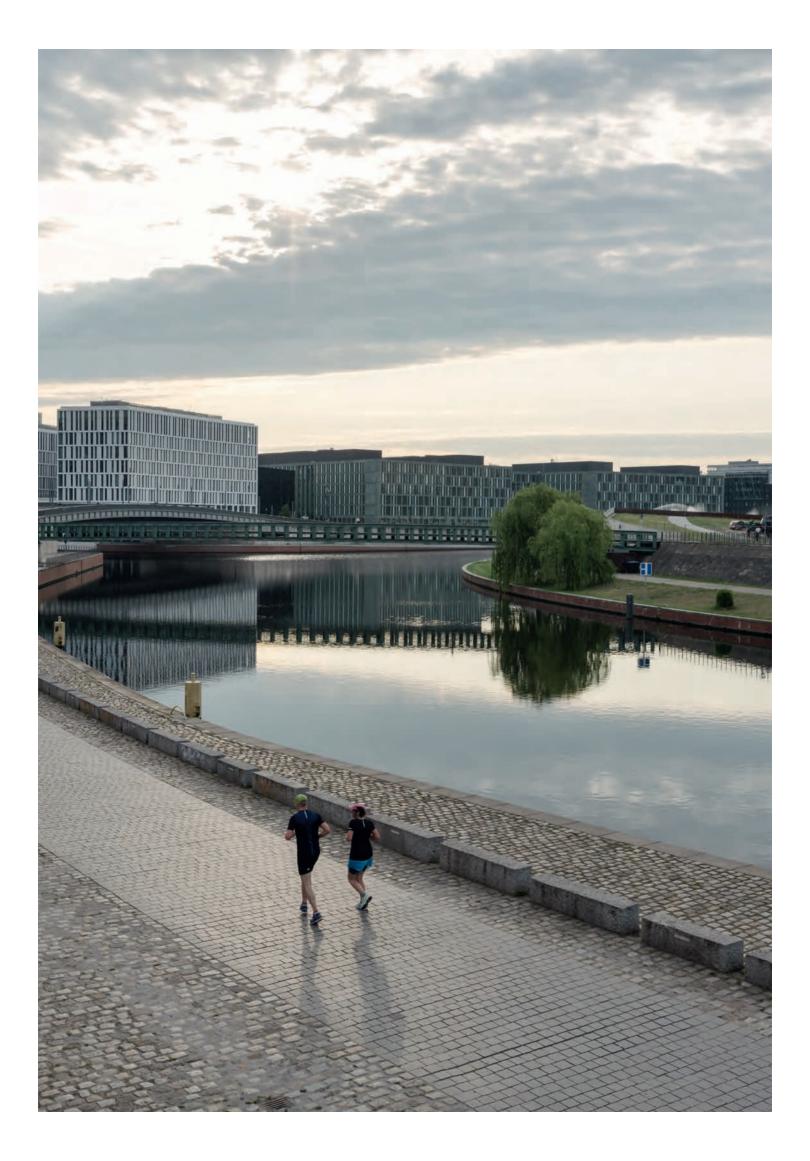
Countries who have been able to develop and implement successful climate-friendly policies, should not be reluctant to trumpet their actions on the wider international stage and in the media, as this can help demonstrate that a genuine determination to act can have an impact on slowing down climate change.

Media

Climate change is the problem of our age, and as such it is crucial that media reports on it in a way that conveys the full scale of its impact. Our findings suggest that, when shaping their reporting, it would be helpful for media to consider two key dimensions. Firstly, there is a risk that some reports can present climate change as an intractable problem that is now so far advanced it cannot be solved. Secondly, and linked to this, reporting of the progress that is being made matters – it is indeed critical that the scale of the problem and the need for action is appropriately emphasised, and we know that this action is most likely to happen when people have examples of leadership to look to.

Individuals

When it comes to the role of individuals, we believe climate change is a problem for all of us, but it is incumbent in particular on business and government to create the conditions in which citizens are able to take the choices that express the value they place on the climate. However, our findings suggest that more reporting of the way consumer preference is changing will bring this to the attention of businesses, and prompt them to respond by changing what they offer.



Attitudes:

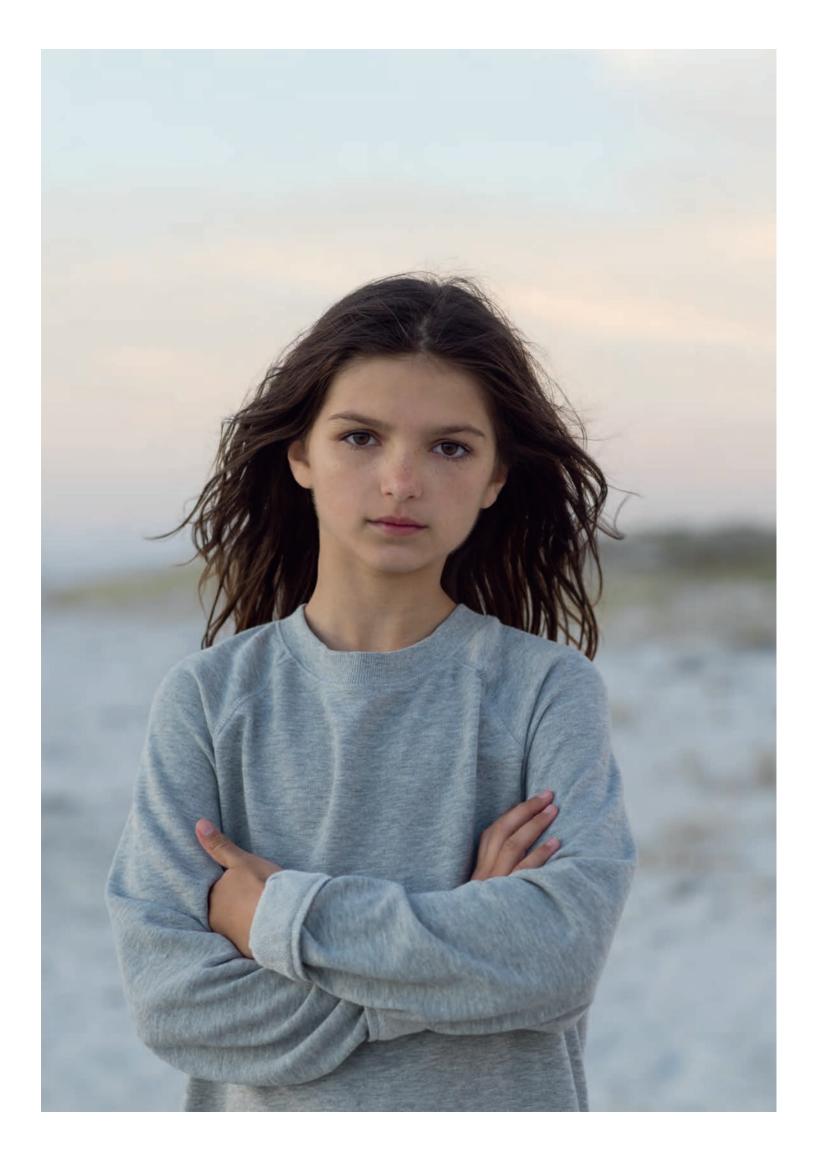
The climate is becoming people's greatest concern



Introduction

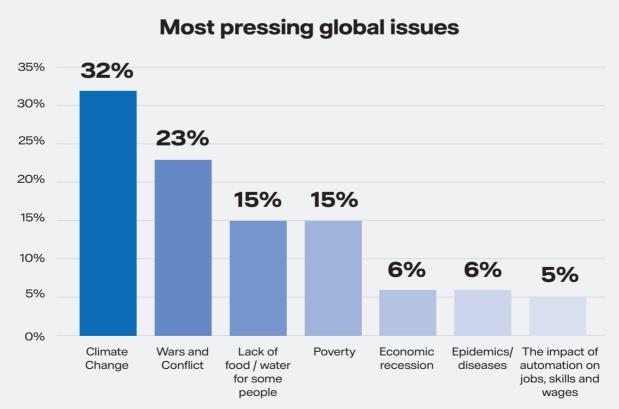
In this initial section, our goal was to examine to what extent citizens feel climate change is a pressing problem and the extent to which it worries them. This is an important step as it enables us to have an accurate picture of the way the issue is perceived and link the results to the analysis of the way climate change is reported on and talked about in media and social media.

Our findings confirm that climate change is seen by the public as a global problem of the highest order. It is also a topic where big business and governments in particular are expected to lead since they are perceived as the actors most capable of taking effective actions to slow down climate change. The importance placed on slowing climate change is further confirmed by the widespread accompanying feeling of worry felt by citizens across the seven countries examined. This links directly to the debate on the increasingly important phenomenon of 'eco-anxiety', which has been widely reported to be on the rise across the Western world.

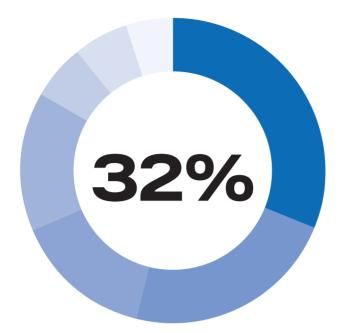


Climate change as the pressing problem for mankind

You do not need a survey to tell you that climate change has increasingly emerged as a major global issue in people's minds. Increasing scientific understanding and consensus on its devastating long-term consequences have been reflected in greater levels of media attention and public advocacy. To place climate change in a wider context, our survey examined attitudes, emotions and perceptions that impact our human response to this issue among the general public. We looked at the seriousness with which climate change is perceived, when compared with other major global problems, across the seven European countries. When looking at the results across all countries, it becomes evident that climate change is viewed as paramount: it is selected by the largest proportion of respondents as the most pressing problem of our age across the spectrum of pressing global problems.



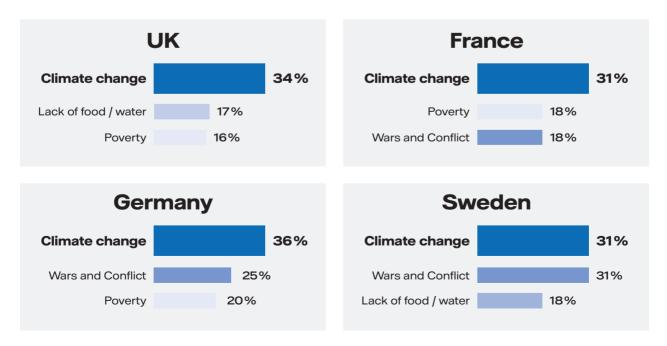
% of respondents who have selected the item as the "most pressing problem" (All Respondents, All Countries).



"Across all countries, an average of 32% of respondents have indicated they consider climate change as the most pressing problem of our age".

Country-level results

When looking at country-level results, we observe the same level of concern. In nearly all countries surveyed, climate change is ranked as the most pressing issue, with the exception of the Netherlands – where it places second to 'Wars and Conflict' – and Sweden, where it is put on equal footing with 'Wars and Conflict'. In all countries examined, the proportion of citizens selecting climate change as the most pressing problem ranges from 23% in the Netherlands, to 37% in Denmark.



Most pressing global problems per country

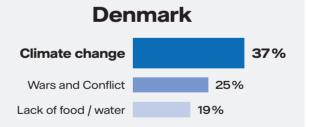
Graph 2. % of respondents who have selected the item as the "most pressing problem" per country. N=1018 - 1055 per country (All Respondents).





The Netherlands



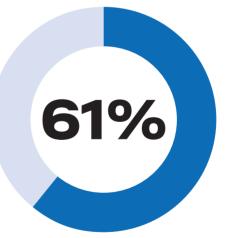


Citizens look to business and government to lead the way

Given the broad consensus among citizens interviewed regarding the seriousness of the problem, we also explored views on the actors most able to implement effective measures to address climate change. Respondents, largely see climate change as an issue that large businesses, governments and the energy sector have the strongest ability to impact.

When asked which actors are most able to slow down climate change, around 6 in 10 (61%) identified large businesses implementing changes across their operations. A further 42% also see a strong role for government through establishing a climate-friendly policy framework, with energy companies seen as the third most influential actor – 32% see them as having the strongest ability to slow climate change, through making more fossil-free energy available.

By way of contrast, only a quarter (26%) see individual changes as most able to slow climate change, through incremental small changes, and only 11% mention small businesses.



see climate change as an issue that large businesses, governments and the energy sector have the strongest ability to impact.

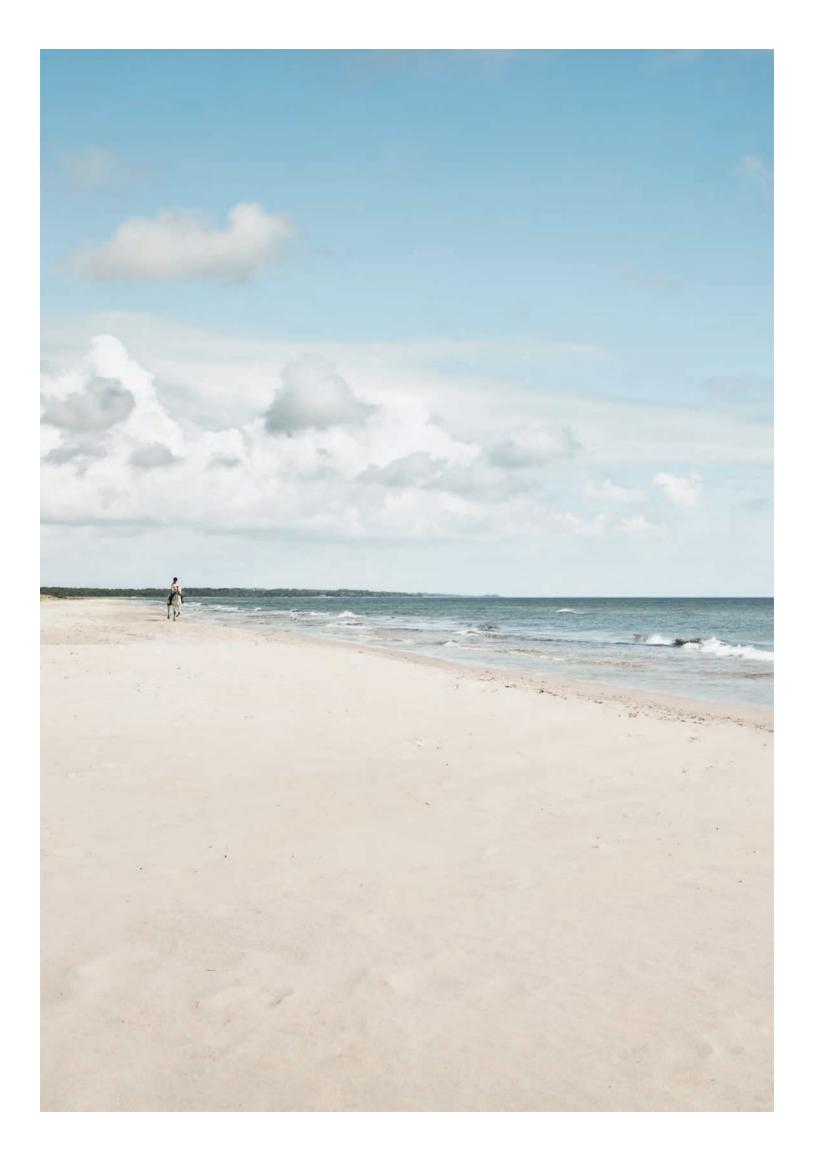


Actors most able to slow down climate change per country

	Total	UK	France	Germany	Sweden	Finland	Denmark	The Netherlands
Large businesses	61%	55%	57%	54%	70%	70%	61%	63%
The Government	42%	50%	41%	45%	39%	32%	48%	38%
Energy companies	32%	40%	29%	29%	33%	35%	29%	29%
Scientists	31%	29%	24%	32%	31%	33%	38%	27%
Individuals	26%	32%	40%	25%	25%	20%	21%	20%
Small businesses	11%	10%	11%	9%	13%	11%	12%	11%

Table 3. % of respondents who rate the respective actor most to slow down climate change per country. N=1018 - 1055 per country (All Respondents).

These patterns vary somewhat by country, for example with Swedish and Finnish citizens even more likely to see big businesses as having the greatest ability to slow climate change. However, belief in the relatively limited ability of individuals remains fairly constant - only in France do more than a third (40%) point to individuals as having a strong ability to slow climate change. These findings indicate that highlighting changes and positive progress made by large business and governments will be particularly important in helping individuals feel there is an effective societal push – one that can ultimately succeed in tackling climate change.



Widespread feeling of worry and eco-anxiety

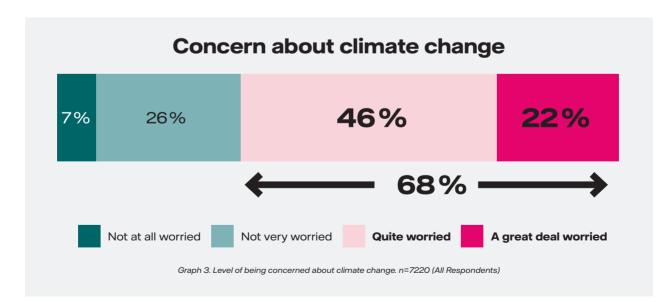
Another dimension explored in this context is the extent to which consensus over the seriousness of climate change translates in a feeling of widespread worry about the problem, and how it will affect both the planet as whole and our immediate environment.

Recent reports and debate over the rising phenomenon of 'eco-anxiety', first defined by The American Psychological Association in 2017 as "a chronic fear of environmental doom"¹ further demonstrate the importance of this issue. Several recent academic papers and reports show that as the destabilisation of our planet from climate change becomes clear, eco-anxiety has exploded across the Western world².

Considering the relatively short period of time that eco-anxiety has been investigated, a consensus over its exact definition and behavioural consequences has not yet emerged. Some experts, such as Sarah Niblock of the UK Council for Psychotherapy (UKCP) highlight that "eco-anxiety is a term that's used a lot, but it's misguided if it's not used in the right way - this is not an illness or disorder, it's a perfectly normal and healthy reaction".³ Such a perspective highlights that eco-anxiety is linked to the natural fact that uncertainty is often intolerable for human beings because we feel out of control. As climate change psychologist Renee Lertzman puts it:

"Psychoanalysts would argue that extreme anxiety can lead us unconsciously to deny or pretend the problem is not there, or that it is the responsibility of someone else. This is a well-known phenomenon known as a 'defence mechanism', where we 'defend' against painful or threatening emotions or thoughts with mechanisms such as denial, projection, paranoia, grandiosity or an acute sense of inferiority."⁴

Actions such as changing one's lifestyle to reduce emissions, seeing others making progress at a larger scale or getting involved in activism can reduce this feeling of worry.

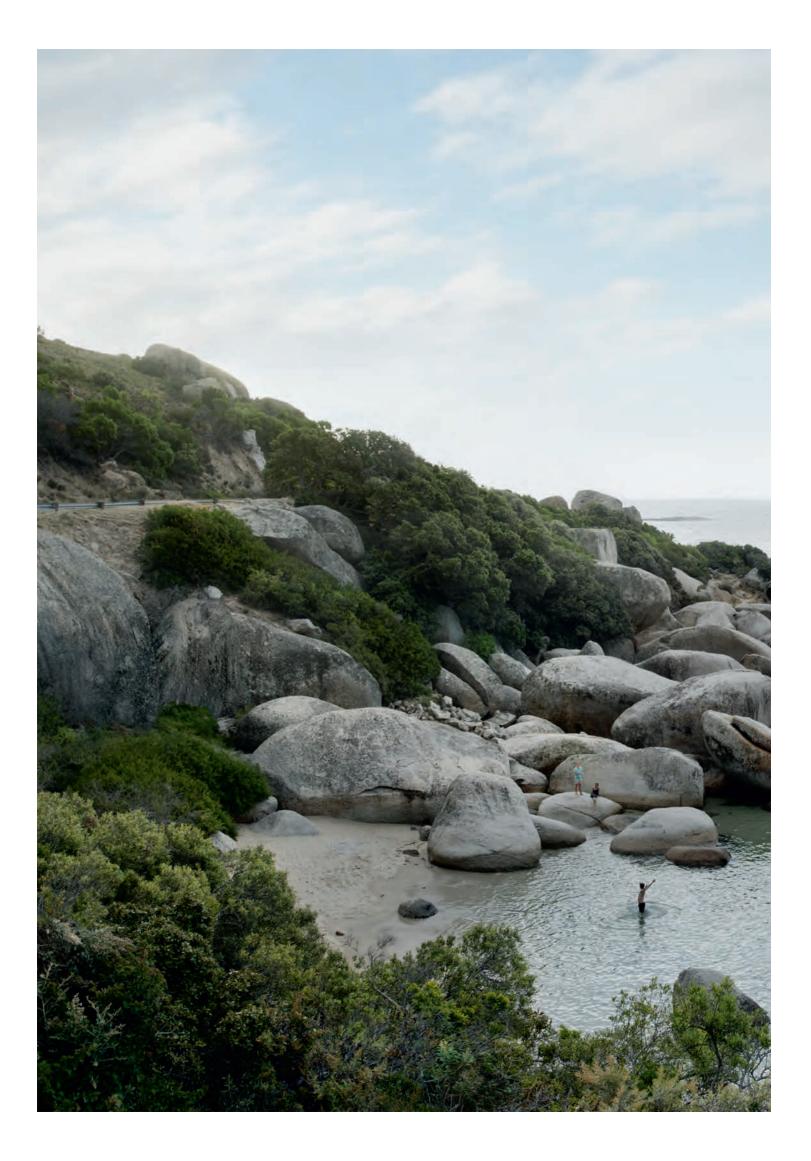


¹ Full details available at: https://www.medicalnewstoday.com/articles/327354.php

² Clayton, Susan; Manning, Christie; Krygsman, Kirra; Speiser, Meighen (March 2017), Mental Health and Our Changing Climate: Impacts, Implications, and Guidance (PDF), American Psychological Association; Ro, Christine (20 June 2018), How to cure the eco-anxious, Wellcome Collection

³ Full details available at:

https://www.newscientist.com/article/2220561-stressed-about-climate-change-eight-tips-for-managing-eco-anxiety/ ⁴ https://reneelertzman.com/the-myth-of-apathy/



Our research investigated the level of worry across the seven countries in question, and observed that a resounding 68% of people describe themselves as worried "quite" or "a great deal" about climate change, indicating that not only do they consider climate change a pressing global issue, but that this has a direct effect on the way they feel about the future. Interestingly, this level of concern is largely consistent across generations, with 64% of 55-64-year-olds saying they are worried by the threat of climate change, compared to 74% of the youngest age band (16-24).

Once again, this shows that - although slightly more pronounced among the youngest age group - climate change is far from being an issue that solely concerns young people. Climate change is a shared problem and concern for every generation.

While 'worry' is a good indicator of individuals' emotional response to climate change and the insufficient attempts to address it, subsequent chapters of our analysis examine in depth the emotional impact of climate change. We analyse a more detailed question which asked respondents to select which of a range of feelings they experience about climate change. We link this to an in-depth analysis of how climate change is covered in the media and discussed on social media. This allows us to understand the emotional response to the way climate change is reported on and discussed more fully, as we believe the effect this has on people goes well beyond eco-anxiety. Much more can be said about the complex emotions that ultimately influence people's behaviour and their likelihood to believe in the ability of positive actions to address climate change.

Level of concern is consistent across generations







In popular media most climate reporting is despondent



Introduction

In this section, our objective is to examine the way climate change is currently covered in the media, and in particular, in online news. To do this, we examine articles on climate change to establish the volume, sentiment and key themes covered in relation to the topic.

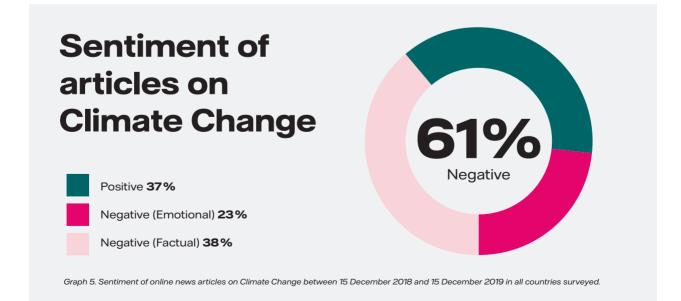
We see that a large share of the media's reporting on climate change is negative (factual) in tone and contains news and data about climate change and its broader adverse consequences. There is also a tier of coverage that is particularly negative in nature which highlights the catastrophic consequences of climate change in an emotive manner. Together these two tiers of reports dominate the majority of the articles. However, we also see a substantial amount of optimistic coverage, consisting in reports on corporate initiatives to reduce their impact on climate change or political developments that strengthen the framework that governs climate. In subsequent sections of the report we compare our findings from this section with survey findings on how people recall the tone of the media reports they have seen. The results suggest a significant discrepancy between the actual tone of the coverage and the perceived tone that is ultimately retained by individuals. We discuss the possible reasons for this discrepancy in the subsequent section.

Climate change in the media

Having examined public perceptions when it comes to the urgency of tackling climate change, and the widespread worry associated with it, we turn now to look at the way climate change is covered in the media; in particular in online news. Using Quid, an Al-powered data platform that analyses the online news landscape, we can build a picture of the volume, sentiment and key themes covered in relation to climate change. This analysis examines the coverage over the last year in the seven countries included in the survey (Sweden, Germany, the UK, Denmark, France, Finland and the Netherlands). The platform reads the body of online news available on a specific topic and compares content from each article using natural language processing and data visualisation techniques. The result is a comprehensive overview of the way a certain topic is discussed in online news (see "Methodology" section for further details). Our analysis allows us to compare the media landscape with survey results on respondents' recall of the volume and tone of media reports they have seen on the topic. In particular, we are concerned with the sentiment of media coverage, as this is crucial in impacting how individuals feel about climate change, and subsequently act.

The chart below summarises how articles identified as investigating climate change between 15 December 2018 and 15 December 2019 across the seven countries where our survey was conducted, are classified according to their overall sentiment.

Here we see that the majority of coverage on climate change is negative (61%) and that this coverage is split in two different sub-segments. The first set of negative coverage is mostly factual in nature (38%), while the second set is more emotional and contains specific calls for action (23%). There is also a significant share of media content classified as positive (37%) which contains specific examples of the progress and commitments being made by a wide variety of actors.



Top 15 themes covered in online news on climate change

Corporations Reducing Carbon Emissions	22% <mark>4%</mark>	74%	
Climate Change Action	47%	37%	17%
Meteorological Effects of Climate Change	46%	44%	9%
Policymakers Mitigating Climate Change	34%	<mark>11%</mark> 55%	
Climate Change Mitigation and Adaptation	34%	33%	33%
Food Production and Consumption	40%	19%	41%
National GHG Emissions Reduction	53%	27%	
Climate Change Student Activism	45%	45%	10%
Climate Change and Investors' Risks	49%	24%	28%
Net Greenhouse Gas Emissions	30% 5%	65%	
President Trump and Climate Change	39%	46%	15%
UN Climate Change Conference	49%	20%	31%
Oil Companies' Carbon Emissions	34%	12% 549	6
GHG and Pollution Litigation	44%	21%	35%
Aviation and Carbon Emissions	30% 10	<mark>%</mark> 61%	
	Negative (Factual)	Negative (Emotional)	Positive

Graph 6. Topic analysis of online news articles around climate change in all countries surveyed, ranked based on the number of articles within each topic in descending order. Sentiment split shown for each topic.

In addition to analysing the sentiment, our research also examined the focus of the coverage, investing the top themes which emerged in the media coverage.

Coverage that is negative but more factual in tone largely focuses on the effects of climate change on different areas of human life and on the planet.

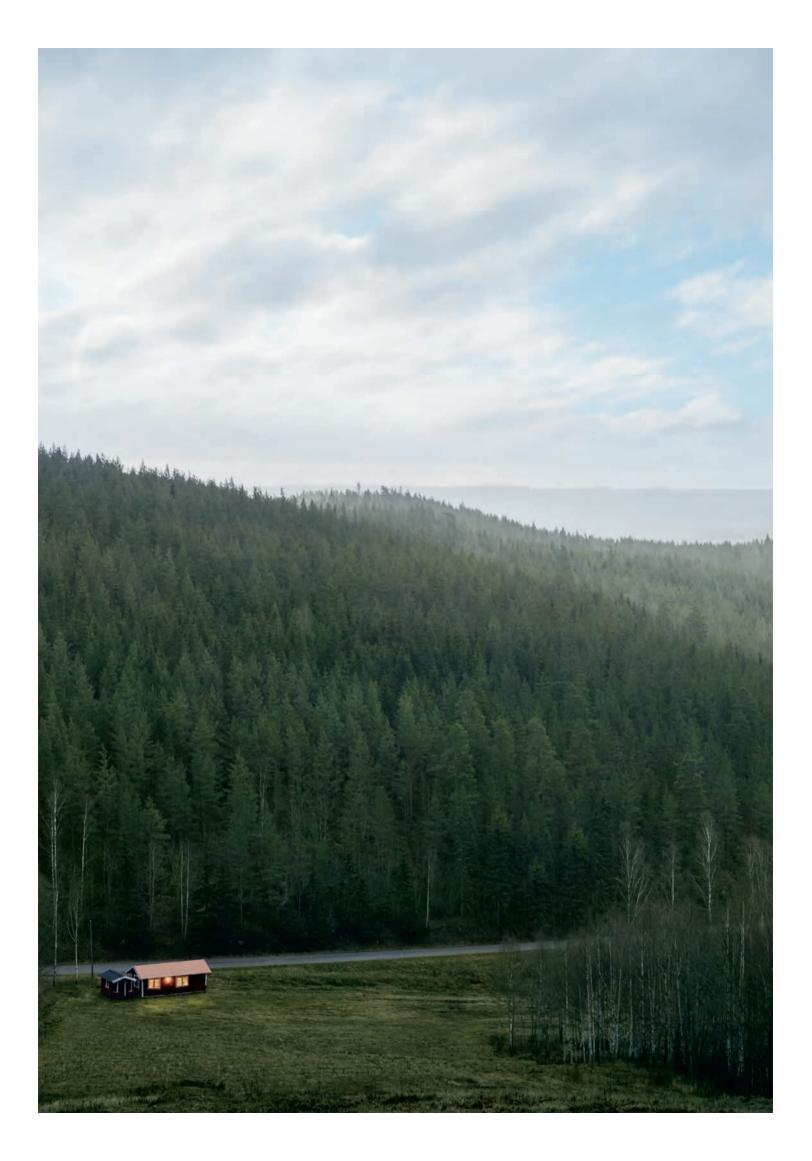
Even if the articles classified in this segment do not strike a particularly emotional tone, they consistently report on the steady advance of climate change. These articles tend to be less emotive, because they focus less on the immediacy of the situation, and more on how we are having to adapt to climate change – and on potential, future consequences if it is not slowed. A good example of this category of coverage is reporting related to the meteorological effects of climate change and articles on the impact of climate change on food production and consumption. This content is more analytical in nature, looking at how the agricultural system is having to adapt – both now and in the future. A second category of reporting is coverage that is negative, and contains a more emotive tone. Articles classified in this segment differ in that there is a much higher sense of immediacy and urgency in this type of reporting.

These articles highlight through an emotional lens some of the catastrophic consequences of climate change that we can already observe. One prominent area of this coverage focuses on the damaging human impact of climate change, for example with stories highlighting the way it is fuelling a refugee crisis in certain parts of the world. Another theme driving negative coverage, which also includes a strong call for action, focuses primarily on President Donald Trump – presented very much as the figurehead of climate scepticism. In particular, the U.S. withdrawal from the Paris agreement is seen as having dire consequences.

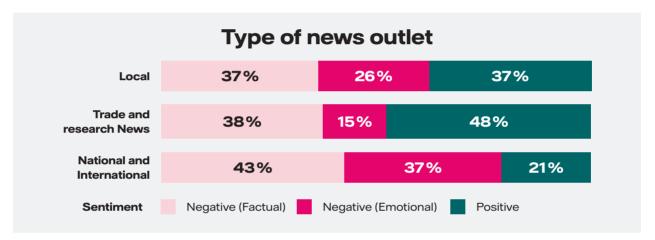
Our analysis also shows a substantial amount of coverage that is positive in tone. One of the largest areas of coverage within this category examines efforts from large businesses to reduce their carbon emissions – whether in the form of reductions actually achieved over the last few years, or future targets that have been announced.

Examples of news stories include actions taken by leading fashion brands to ensure more sustainable supply chains, and innovative projects in the transport sector. Another large area of positive coverage reports policy initiatives announced to mitigate climate change – such as the launch of climate change task forces as part of local councils around the UK. Linking coverage of both political and corporate efforts, we see a large number of reports on the progress in terms of reduction of greenhouse gas emissions at both national and regional levels – for example, some recent reports that the EU has managed to significantly decrease its reported emissions in the last year.





To build a further understanding of the nature of media sentiment, we also explored the impact the type of media source had on the overall sentiment of articles published on the topic of climate change







of national and international press feature the negative progress of climate change Our analysis shows that negative sentiment of both emotional and factual nature is prominent in national and international media: together, these two clusters of negative coverage account for 80% of all articles.

The preponderance of negative coverage is highly significant, given the wide readership of these publications and their role in setting the media agenda.

Trade and research and - to a lesser extent - local general media are more likely than national and international media to offer a more positive angle (Trade and research - 48% positive, Local - 37%; compared to just 21% in national and international outlets). It is logical that trade media would cover positive examples of what companies in their sectors are doing – and this is important for helping spread best practice amongst the business community: However as we will see later in this report, the fact that these examples are less likely to make their way into the national and international press has important implications for the beliefs (and actions) of the wider public.

Perception and Emotion:

Negative perceptions are taking hold



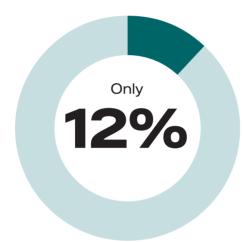
Introduction

This section compares the actual media landscape examined earlier and the way people recall media reports on the topic. The findings show that there is a very low recall of positive media coverage on the topic of climate change. There are several possible explanations for this observation: one is that it reflects the predominantly negative nature of media coverage shown by the analysis presented in the previous section. However, this could also be linked to the fact that positive stories are more prominently featured in publications the general public has less exposure to (e.g. trade and research media). A third factor that can have an impact on this is the 'negativity bias' phenomenon: the notion that information of a more negative nature has a greater effect on one's psychological state and processes than neutral or positive information.

This low recall of positive stories can be harmful when it leads to people feeling and behaving differently than they would do if they had more meaningful examples of progress being made to tackle climate change. In some cases, this can contribute to feelings of powerlessness and anxiety, which as we will see can dissuade people from taking climate-friendly actions.



What is recalled from media coverage?



recall seeing positive climate news in the media

It has long been understood that the way the media reports on a topic often differs from how people recall it. This phenomenon happens for several reasons, the most obvious being that it is impossible for any single individual to absorb the vast volume of coverage available. Our own values and beliefs are also a factor at work, playing a crucial role influencing which newspapers to read, which TV news to watch and so on. We tend to select media that reinforce, rather than challenge our beliefs. Another possible factor, evidenced in the closing analysis of the previous section, is that positive stories are more prominently covered in trade and research publications, which by design are less commonly accessed by the general public, consequently their exposure to such stories is significantly lower. Lastly, it is also important to consider how the human mind has evolved to react to different forms of information. Humans have an inbuilt negativity bias - a tendency to react to (and recall) negative events and indeed media reports with greater intensity than positive equivalents. This is a result of evolutionary development, where individuals with a strong ability to recognise and respond to threats had enhanced ability for survival. While the nature of modern-day threats has evolved, this bias remains and in all likelihood, emerges with strength when it comes to a phenomenon such as climate change which is, indeed, a threat to physical survival⁵.

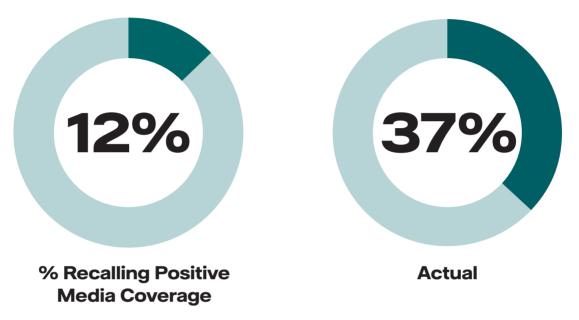
Considering all these factors at play, we would expect what people remember from coverage on climate change to be even more negative than the coverage itself. This is precisely what we observed in our survey.

An overwhelming majority of our sample (92%) recall seeing media coverage on climate change. When were asked a follow up question on whether they remember this being mainly positive, negative or neutral in tone. It should be pointed out that these categories do not correspond exactly to those we have used above to analyse media coverage. However, the 'positive' category does correspond, and here we see that while over a third (37%) of actual coverage is positive in nature, barely 1 in 10 respondents (12%) actually recalled such coverage. This is likely attributable to the factors outlined above.

⁵ See – for example – Soroka, Stuart & McAdams, Stephen (2015), News, Politics and Negativity, Journal of Political Communication, Vol.32 Issue 1;

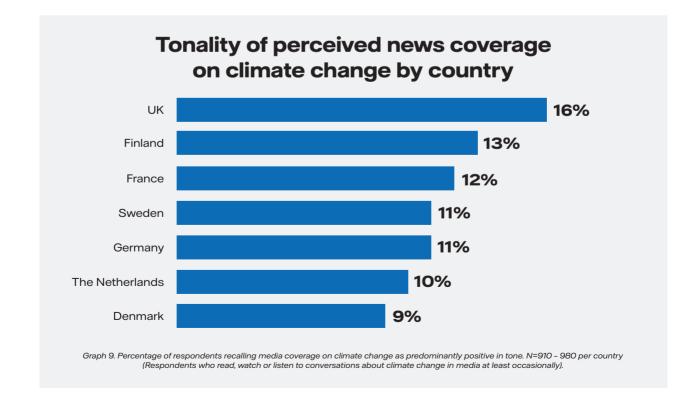
Rosin, Paul & Royzman, Edward (2001), Negativity Bias, Negativity Dominance, and Contagion, Personality and Social Psychology Review, Vol. 5, No. 4.

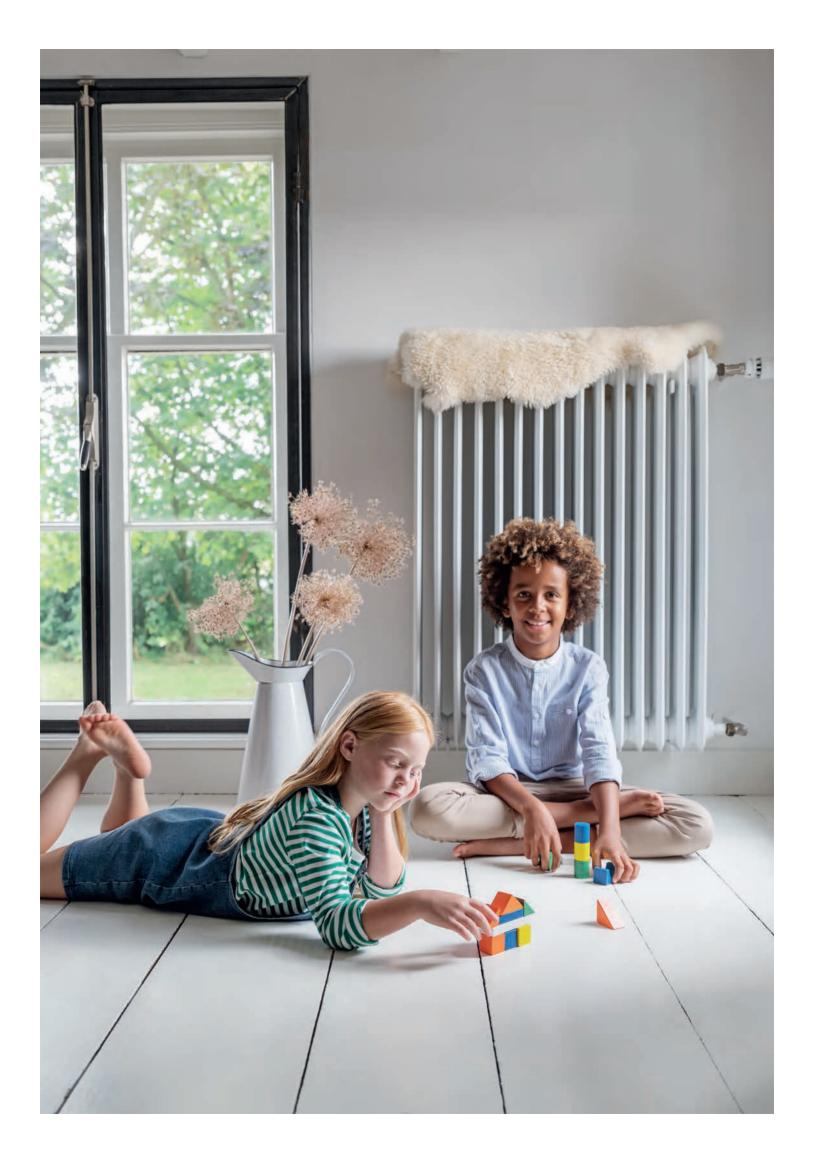
Positive news coverage on climate change - perceived vs actual



Graph 8. Comparison of measured proportion of online news articles about climate change that are positive in tone and measured perceived sentiment of coverage. Perceived coverage: n=6675 (Respondents who read, watch or listen to conversations about climate change in media at least occasionally).

As shown in the table below, this low level of recall of positive news coverage on climate change is consistent across countries, ranging from 9% in Denmark to 16% in the UK.



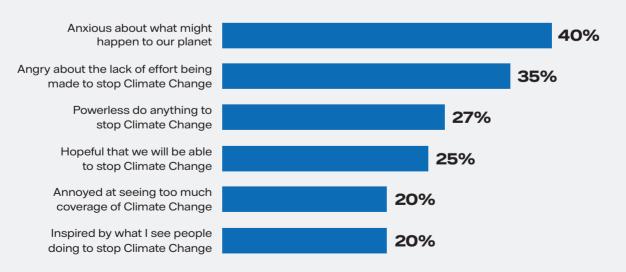




Media and Emotions felt about Climate Change

We noted in the initial section of this report how our survey confirms a widespread worry about climate change and how this is linked to the recently reported phenomenon of eco-anxiety.

Looking now in more depth at the question of emotions associated with climate change, we see that 40% of respondents say that climate change makes them feel 'anxious about what might happen to our planet' – the most commonly described emotion. However, this observation sits alongside a wider spectrum of emotions including anger 'about the lack of effort being made to stop climate change' (35%) and feeling 'powerless to do anything to stop climate change' (27%). More positively, 25% report feeling 'hopeful that we will be able to stop climate change', and 20% 'inspired by what I see people doing to stop climate change'.



Emotions around climate change debate

Graph 10. % of respondents who feel a certain emotion around climate change. n=7220 (All Respondents).

Comparison of sentiment between those with negative / positive news perception

Negative news perception

Powerless do anything to stop Climate Change

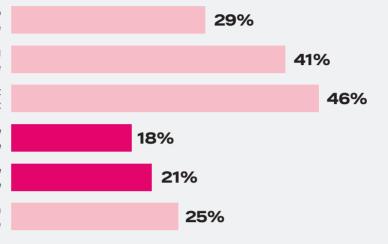
Angry about the lack of effort being made to stop Climate Change

Anxious about what might happen to our planet

Inspired by what I see people doing to stop Climate Change

Hopeful that we will be able to stop Climate Change

Annoyed at seeing too much coverage of Climate Change



Positive news perception

Powerless do anything to stop Climate Change

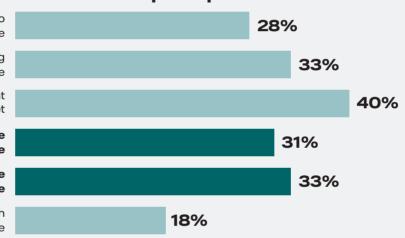
Angry about the lack of effort being made to stop Climate Change

Anxious about what might happen to our planet

Inspired by what I see people doing to stop Climate Change

Hopeful that we will be able to stop Climate Change

Annoyed at seeing too much coverage of Climate Change



Graph 11. % of respondents who feel a certain emotion around climate change. Comparison between respondents with a negative perception of the discussion on climate change in the media (n=2084) and a positive perception of the discussion (n=772).

The fact that the three most commonly-felt emotions in reaction to media coverage on climate change are anxiety, anger and powerlessness is highly revealing - and again confirms both the prevalence of negative coverage, and the likelihood of this to remain in the memory of those consuming this coverage.

But how does the perceived highly negative nature of media coverage impact these emotions? We answer this question comparing those who recall mainly negative media reports, and those who recall mainly positive ones. In most cases, exposure to predominantly positive or negative media reports impacts emotions in the way we would expect: those recalling mainly negative news are more likely to feel anxious or angry (though, not more powerless);whereas those recalling mainly positive news are more likely to report feeling inspired or hopeful. However, it is telling that the impact of positive media exposure on emotional reactions is much higher than the impact of negative media exposure.

For example, those with mainly positive media exposure are 13 points more likely to feel inspired, and 12 points more likely to feel hopeful. Conversely, those with mainly negative media exposure are just six points more likely to report feeling anxious, and eight points more likely to say they feel angry. This strongly highlights the importance of balanced coverage in ensuring that inspiration and hope exists.



Selection of comments from respondents that explain the emotion they feel in relation to the topic

Angry

"Little Denmark cannot save the whole world. It is frustrating that so many countries especially outside the EU (and especially the US) neglect the problem and do absolutely nothing"

Denmark

"I'm angry that the issue it is being ignored by big businesses and people in power who are in a position to make a significant difference"

UK

"Well, I feel angry for several reasons. The industries that need a lot of energy or emit CO2 are not forced to rethink and there are no incentives for them to do so. Politics is failing to act and lost in endless discussions. **Climate change** projects are often a joke that sabotages the expansion of renewable energies while promoting dirty industries and electricity generation. Specific ideas and opportunities that have already been implemented abroad (e.g. CO2 tax) are not carried out, or only in an absurd and useless form."

Germany

Annoyed

"It's about to become even more important of a problem, and the "young" people who complain the most are actually the ones who consume the most"

Denmark

"After all, we can do nothing until the great climate sinners join actively the movement."

Denmark

"Too much chatter about the topic, not enough action"

Netherlands

Anxious

"It does not matter that I even sort waste when you see how the developing countries pour one truck full into the sea after another. But you have to start somewhere - I do what I can in the least and if just everyone helps it until they can, then it must be better."

Denmark

"Well, because really I feel powerless to do anything about it"

UK

"There are still not enough measures taken regarding climate change, a large part of the population does not seem to me yet inclined to act and certain state governments simply refuse the new standards to reduce our ecological impact"

France

Powerless

"Well, the truth is that there is not much you can do as a private individual. The biggest burden lies on companies and governments."

France

"Because it is the powerful (governments, big companies, etc.) who should start by taking the necessary measures to stop global warming in a visible and useful way"

France

"One person's own actions are like a mosquito in the Baltic Sea, so void. Individual people are very worried and anxious. Companies that, however, produce most of the emissions that cause global warming are silent as large giants"

Finland

Inspired

"I'm inspired by those who are fighting to slow down climate change. It creates hope."

Finland

"When enough people make small choices, big changes can be achieved."

Denmark

"Greta Thunberg"

Denmark, France, Finland, UK, Germany, Sweden, Netherlands

Hopeful

"I think that with the progress of societies and the change of mentalities in course, everything will get better and better."

France

"On Instagram, for example, there a lot of accounts on the topic of environmental change, it's nice to see you're not the only one who thinks that way, it brings hope."

Finland

"If everyone contributes just a little, it's a step in the right direction."

Denmark

Discussion:

Social media supplements the cycle of negative stories

B

Introduction

In this section, we look at the impact of social media in the broader conversation and reporting on climate change. Our analysis finds that negative media reports are further amplified and shared at a much greater rate than positive reports and result in higher degree of traction and attention from social media users. Additionally, as we saw earlier, 'bad' news is more likely to draw attention than 'good' news. We can see this in the way climate change is discussed on social media where conversations are predominantly negative. This heightens the importance of the nature of negative news reports and the way that these are further amplified and absorbed by individuals.

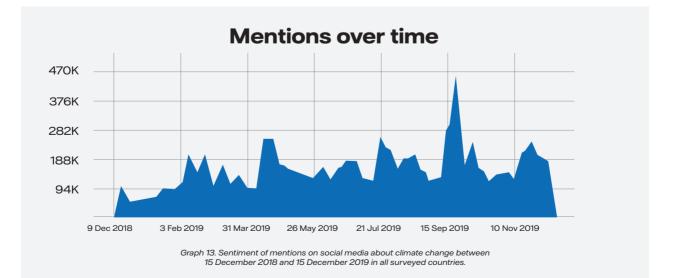


The echo-chamber: discussion of climate change on social media

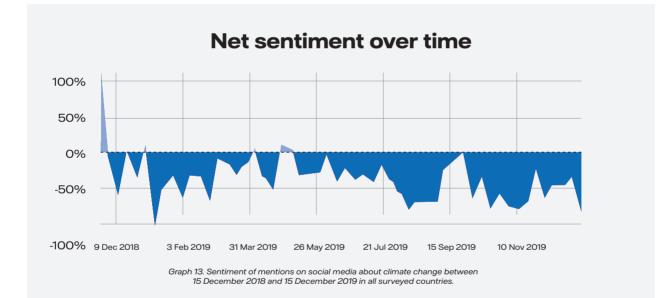
It is impossible to talk about the nature of media coverage and its impact on individual emotion and behaviour without also considering the role of social media. Our survey shows that discussion on social media plays an important role in supplementing the cycle of negative media coverage outlined above: we see a similar tendency for social media discussion to be more pessimistic in nature, and for this to be more likely to be retained by users than positive content and discussion.

Using Talkwalker, a social media analytical platform, we have examined mentions related to climate change in the seven countries (Sweden, Germany, the UK, Denmark, France, Finland and the Netherlands) on the following social media platforms: Facebook, Twitter and Instagram. The graph presented below shows the number of mentions of the topic of climate change from 15 December 2018 to 15 December 2019, showing that the topic was very present with the most pronounced spark of conversations in September 2019 to cover the climate strikes, also known as the Global Week for Future, a series of international strikes and protests to demand action be taken to address climate change, which took place from 20-27 September.

As expected, this represents a very large volume of online conversations, for example reaching a spike of 470,000 mentions a week.



As with our earlier analysis of media coverage, we have used a semantic algorithm to categorise the social media posts according to their sentiment (positive or negative). Looking across the entire year, we see that social media discussions are even more negative in tone than the traditional media coverage, with negative conversations outweighing more positive discussions by a ratio of almost 3:1 (31% vs 12%). As the chart below shows, this balance would be even more pessimistic, were it not for the period at the end of 2018, where more optimistic content was being shared around COP24 in Katowice. This strong tendency towards a negative tone underscores what was noted in the previous chapter – that negative reporting is more likely to 'stick'.



As with our earlier analysis of media coverage, we examined not only the nature of social media discussions, but also how these are remembered by individuals. Here, a majority of 72% recalled climate change as being a topic they have seen discussed on social media. As with recall of the tone of media coverage, a very low proportion (13%) recall online content as predominantly positive in tone.

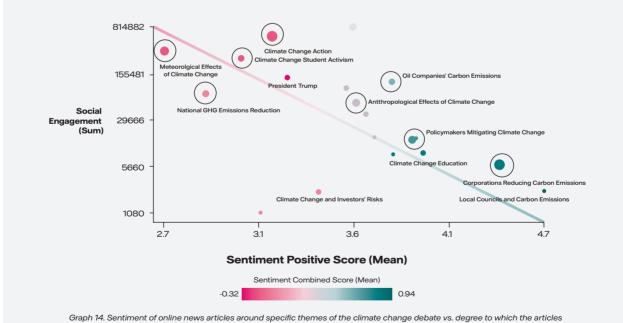
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Negative social media discussions is outweighing positive discussions with a ratio of almost 3:1.

Sharing news on social media

Social media acts as an 'amplifier' of the way media reports on any topic, with individuals spreading the reports they pay most attention to throughout their networks. With negative media coverage being more likely to be remembered than positive coverage, we would expect to see it being shared at a much greater rate online.

This is confirmed by our analysis. In the chart below, each circle represents a distinct area of coverage identified in our analysis of the media landscape. The size of each circle signifies the relative volume of coverage in each topic area, and the colour the extent to which that coverage is more positive or negative in tone. For each area, we have calculated a Social Engagement Score – a figure representing the extent to which articles in each area of coverage are shared. With negative media coverage being more likely to be remembered than positive coverage, we would expect to see it being shared at a much greater rate online.



Graph 14. Sentiment of online news articles around specific themes of the climate change debate vs. degree to which the articles within each theme were shared and engaged with on social media. The size of each circle represents the relative volume of coverage in each area, and the colour the extent to which that coverage is more positive or negative in tone.

This graph clearly demonstrates that the more negative areas of media reporting to the left of the chart are shared much more frequently than the more positive areas to the right. For example, as we noted in our media analysis above, there is a large cluster of 'good news' stories on what companies are doing to reduce their emissions: Here we see this topic area has one of the lowest Social Engagement Scores.

¹ This analysis takes account of the relative volume of coverage in each area: i.e. it looks at the average sharing rate across articles in each area, rather than the total sharing rate across all articles.



The conversation affects our willingness to act

8

Introduction

In this final section, our objective is to explore the impact of the conversation on climate change we have described on emotions and actual behaviour. Businesses and governments are expected to lead on climate. Nonetheless, individuals have an important role to play. This is not only because their choices can have a positive impact on climate change, but also because these choices in turn drive change from those who are expected to lead. Our data shows that a large proportion of individuals are already making these choices. When we add into the mix those who say they would consider making these choices, we can see that there is a vast transformative energy that could be further tapped.

The barriers to unleashing this energy are often still practical (e.g. lack of availability, cost). However, our research shows the emotional response to the way climate change is reported on and discussed also represents a significant barrier. In particular, this occurs when people feel a sense of powerlessness. However, others report responding to negative coverage by feeling anger at what is being done to the planet. This anger is both justified and useful in that it is clearly linked to increased levels of climatefriendly behaviour. Even more importantly the fact that people are not seeing sufficient (or sufficiently engaging) news of the positive progress that is being made, also leads to decreased levels of action. When people report feeling 'inspired' at what they seeing others doing, they are also significantly more likely to take action themselves and believe in the ability of different actors to take positive action to tackle climate change.

Individual behaviour on climate change

Businesses and governments are expected to lead on climate change – this has been clearly demonstrated in our survey. Nonetheless, individuals have an important role to play.

This is not only because their choices can have a positive impact on climate change – particularly when many others make similar decisions: but also because these choices in turn drive change from those who are expected to lead. The rise of 'ethical consumerism' is a major trend of the last few decades, with people demanding to know more about the origins and impact of products and services accordingly. This individual behaviour and belief in the impact of positive actions is vital in the fight against climate change – at least as much for its role in signalling where others must lead as for the impact of that accumulated behaviours on the climate itself.

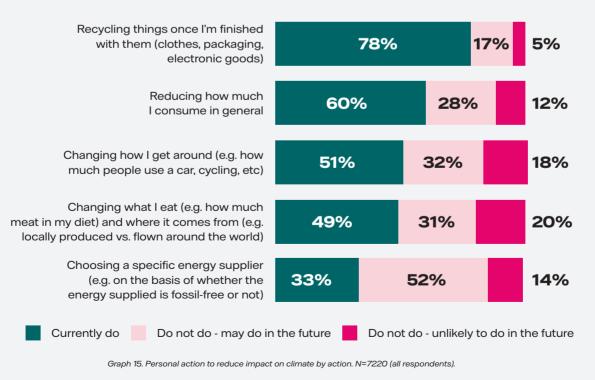
Our survey confirms that a high proportion of individuals are already engaged in climate-positive actions, however there is still potential to expand this movement further.

When presented a list of possible actions to reduce the impact of climate change, respondents indicate that they take each action between 33% (factoring in climate into choice of energy supplier) and 78% (recycling).

"...the belief that impact on climate change would be negligible. Not seeing the positive progress on a macro level becomes a demotivating factor to change."

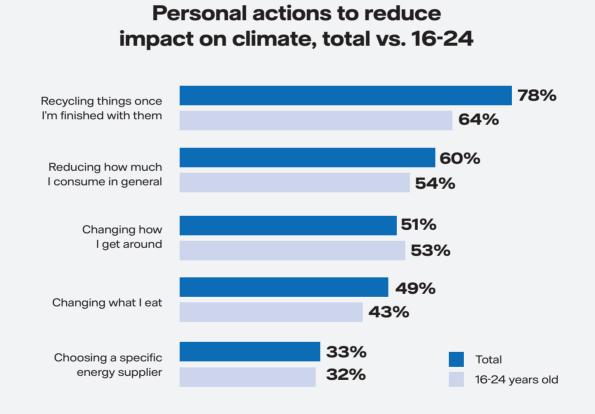


Personal actions to reduce impact on climate, overall





When examining the action levels across generations, it is also often assumed that the youngest in society are amongst the most environmentally active – our research challenges this assumption with the 16-24 age group generally being less likely than average to take a range of actions – for example being 14 points less likely than average to recycle.



Graph 16. Personal action to reduce impact on climate by action and age group. N=7220 (total), n=1215 (16 - 24 years old). (All respondents).

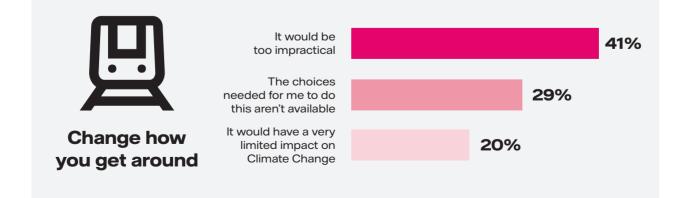
While these findings are encouraging, there is also considerable room to increase the levels of engagement.

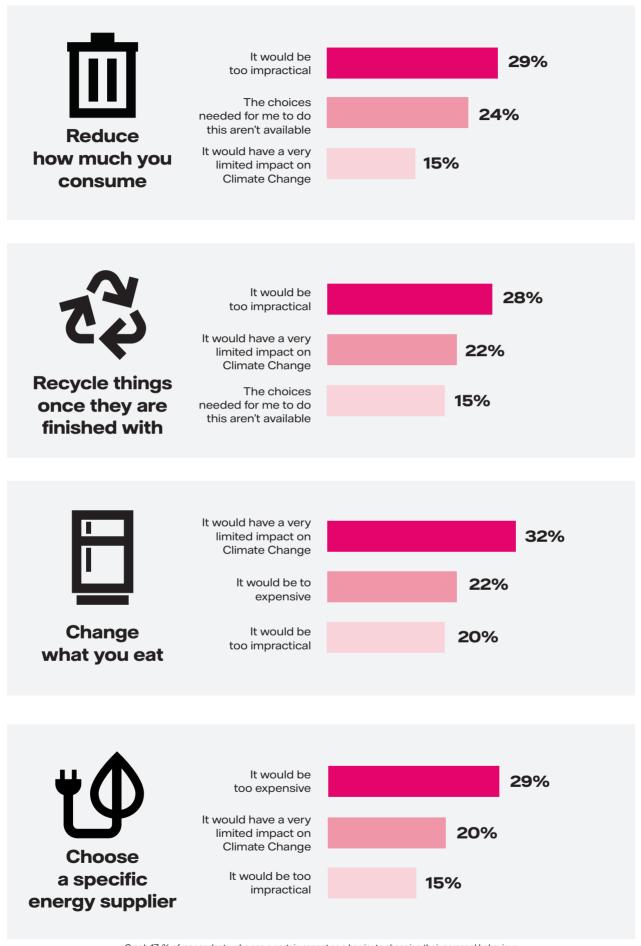
For those actions where fewer respondents indicate action – for example, choosing a specific energy supplier – a large proportion say that they would consider adopting these behaviours in future. The task is therefore to remove the barriers that prevent action to elevate adoption.

Barriers to Making Changes

For each of the climate-friendly actions asked about in the survey, a follow-up question was asked of respondents who indicated they do not take this action and are unlikely to do so in future, seeking to understand the barriers preventing action. Results are shown below, with the most commonly selected barriers per action.

Typically, the task of removing barriers to climate-friendly consumer behaviour has focused on 'practical' factors – such as increasing the range of options available or bringing down the cost of preferable options. We can see that for some actions these remain strong barriers – for example, the main barrier to change in transportation behaviours remains the impracticality of alternative options for some. In the case of energy supply, there is still a strong belief that choosing greener energy is a more expensive choice – placing the onus on companies like ours to both communicate more clearly how the relative cost of clean energy is coming down, and to seek to reduce it yet further. Even more importantly, we also observe that a consistent theme across all types of behaviour is the belief that impact on climate change would be negligible – this is inherent in individual changes and is another argument for why more positive news in the media would be beneficial. Demonstrating the positive impact that some specific initiatives can have becomes in this context an important tool – one can contrast the widespread frustration that any action (whether at individual or systemic level) is too small per se to make an impact.

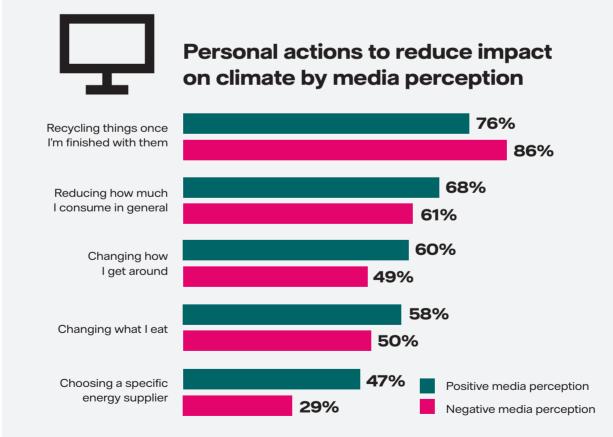




Graph 17. % of respondents who see a certain aspect as a barrier to changing their personal behaviour. n=395 - 1417 per statement (Respondents who are doing a certain action and are unlikely to do so in the future)

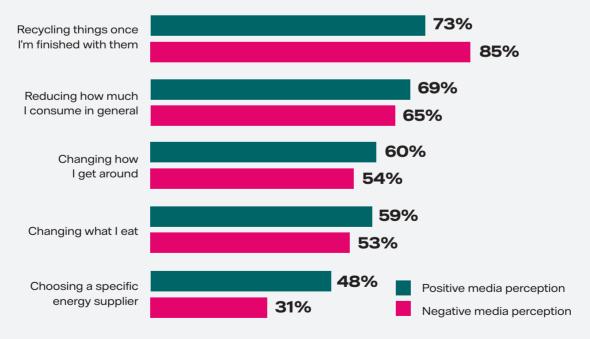
Media and social media as a barrier

Although the analysis identified many practical barriers to unlocking the 'positive circle' of climate-friendly consumerism, and the signal this provides to businesses and politicians, our research also indicated that the way in which (and where) climate change is presented in the media and the amplifying effect of social media create important psychological barriers to climate action. The two charts below show the proportion of respondents undertaking personal actions to reduce climate impact, according to whether they recall predominantly positive or predominantly negative media and social media content.



Graph 18. Personal action to reduce impact on climate by action and positive/media perception of the discussion of climate change in media. n=2084 (negative perception); n=772 (positive perception)

Personal actions to reduce impact on climate by social media perception



Graph 19. Personal action to reduce impact on climate by action and positive/media perception of the discussion of climate change in social media. n=1353 (negative perception); n=691 (positive perception)

Emotional reactions to coverage: the vital barrier

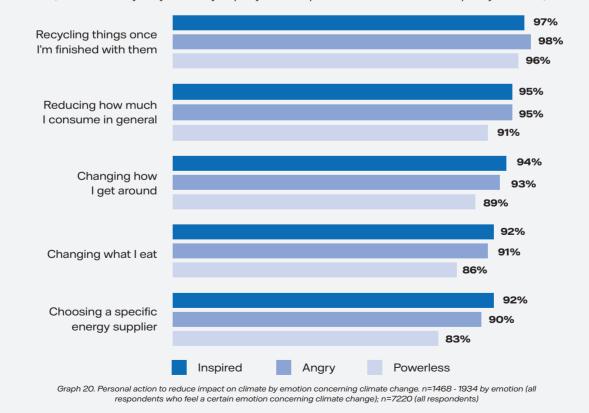
From the results of our study, we believe the explanation for the impact of the media and social media on individual behaviour lies in the emotional responses the media coverage provokes. Although our findings are compelling, this remains a relatively unexplored area, due to a particular emphasis on 'climate anxiety' over the last year or so. As we have shown, the range of emotional responses to climate reporting goes well beyond this singular emotion.

The key to understanding the impact of media and social media on behaviour lies in understanding that certain emotions are particularly linked to an increased or decreased likelihood of individuals acting.

The complex role of emotions can be seen more clearly in the table below, showing the percentage undertaking each action, according to whether they feel anger, inspiration from others or powerlessness at a perceived inability to impact the problem.

As these results show, a feeling of inspiration at what others are doing to tackle climate change is linked to higher rates of pro-climate behaviour.

Personal actions to reduce impact on climate by emotion



(Those that say they currently do/may do the specific action in the future split by emotion)

We have also seen above how these feelings are strongly enhanced by seeing more positive coverage on climate change. Seeing others – whether examples of leadership from businesses and governments, or from individuals – leading by example inspires further action on a wider basis.

The flip-side is that coverage which inspires feelings of powerlessness are linked to lower levels of action.

It is essential that coverage continues to highlight the scale and importance of climate change – however, there is a danger that if this coverage becomes unbalanced and entirely negative, it paints a picture of the problem as an intractable one that is impossible to solve. This risk is possibly further exacerbated by two factors we examined earlier: the fact that positive news often features more prominently in outlets that are less commonly read by the public (e.g. trade and research publications) and individuals' tendency to retain information that presents a threat to wellbeing, health and life.

However, it is not the case that a negative tone to coverage is unhelpful in itself – it is necessary to be able to report on the seriousness of the problem, but can also provoke an emotional response that is linked to action. This is the case when people react to coverage with a sense of anger at what is being done to the planet. As seen in the chart above, those reporting feeling anger at what they see, hear or read are almost as likely to act as those who say they feel inspired. Although these two emotions are very different, they are strongly linked and both require a recognition that something can be done to effectively slow down climate change. The feeling of 'anger at what is being done' involves understanding that corporate behaviour and government policies can be hugely damaging – but also that on the flip-side, these companies and governments are neglecting significantly better choices that are available to them. Furthermore, the contrast between the worst 'offenders' and those who are taking inspiring action only serves to heighten the sense of anger.

Our key finding, then, is that while further work is required to increase the availability – and reduce the cost of – climate-friendly options for the consumer, the fact that people are not seeing sufficient (or sufficiently engaging) news of the positive progress that is being made also leads to decreased levels of action.

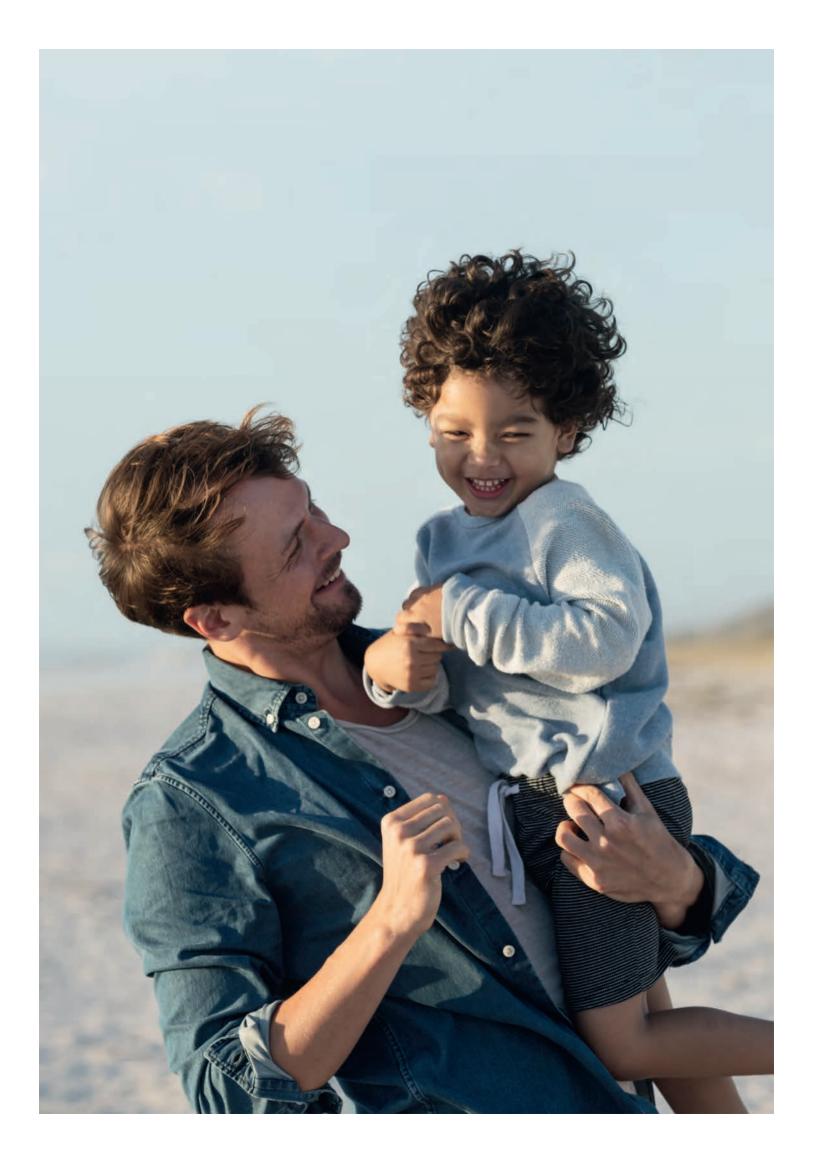
When people report feeling 'inspired' at what they see others doing, or angry at what they see others not doing, they are also more likely to take action themselves.

Key takeaways

Our research has confirmed the widespread recognition of the climate emergency we face, with the issue being seen as the most important problem for humanity to address. Media coverage rightly reflects this concern - and indeed, to not have a 'negative' tone to the reporting would be to refuse to acknowledge how serious the issue has become. However, with wider acceptance of the truth of climate change, progress is being made to address the challenge in some areas - and the media is reporting on this too. This positive news often fails to cut through due to the nature of the reports, where positive coverage can be found (i.e. predominantly in more specialised trade and research publications), and the human tendency to pay more attention to news that highlights threats to us. Social media serves to amplify this further, both in the way individuals discuss climate change online, but also in the way they are more likely to share stories that are pessimistic in nature. This complex interplay between media, individuals and social networks matters because it impacts how people behave through the emotional reactions it provokes.

When negative coverage becomes overwhelming, it can lead not only to eco-anxiety, but also to feelings of individual powerlessness and a reduced tendency to take action. More balanced coverage, on the other hand, can inspire action through demonstrating leadership: particularly when business and governments, those who are expected show this leadership, are highlighted.

However, coverage should also not err too far the other way – painting an overly optimistic picture not only distorts reality, but avoids stimulating a feeling of justified anger at what we are doing to our planet. This feeling too is linked to an increased tendency to act.



We suggest that these findings have different implications for all involved in the fight against climate change

Businesses

Many big and small businesses are responding to societal expectations of leadership on climate change and have taken decisive actions to adapt their operations and plan long-term when it comes to the possibly dramatic consequences of climate change. It is encouraging that, when such actions are being taken, this is being picked up and reported on in the media. However, this is not yet reported on fully and in a compelling manner – it is harder to get 'good news' to stick with people: but this needs to happen.

This is not about making sure businesses gets reputational credit - rather, our findings suggest that if people and politicians see businesses leading, they are more prepared to follow. In a sense, the impact of responsible corporate behaviour lies in more than simply the effect it has on the climate: it is also in the signal it sends to society and the effect this can have on people's behaviour. We therefore believe it is important for businesses to spend more time and resources on communicating the changes they are making, and not being shy to promote these actions through the media. This approach will help people to see what is being done and inspire them to act themselves.



The impact of responsible corporate behaviour lies in more than simply the effect it has on the climate: it is also in the signal it sends to society and the effect this can have on people's behaviour.

Politicians

Much coverage over the last few years has focused on presenting what is seen as a failing of politicians on climate change. In particular, the withdrawal of the U.S. from the Paris Agreement has served to undermine a landmark global agreement. At the same time, progress has been made in many of the countries included in our survey.

European countries are setting ambitious targets on the share of renewable energy, and making strong progress towards these. In particular, countries that are smaller in size (such as Sweden) are the ones showing what is possible in terms of progressive policy-making.

We believe that the progress that is being made at political level is often drowned out in the media by a focus on those countries that are slower to act. As with the more climate-friendly businesses, we recommend that these countries should not be reluctant to trumpet their actions on the wider international stage and in the media. This is not about 'shaming' those that are not yet following suit – it is about showing what is being done, and what is possible.



As with the more climate-friendly businesses, we recommend that these countries should not be reluctant to trumpet their actions on the wider international stage and in the media.

Media

We recognise that the media face a unique challenge when it comes to communicating about climate change and its impact. Climate change is the problem of our age, and as such it is crucial that media reports on this issue in a way that conveys the scale of its impact.

Our findings suggest that, when developing its reporting, it would be helpful for media to consider two key dimensions. Firstly, there is a risk that some reports can present climate change as an intractable problem that is now so far advanced it cannot be solved. We do have it within our ability to slow down climate change, and this needs to be conveyed more. Doing so can provoke anger - justifiable anger - that we are not doing enough to solve the problem of our age. This anger translates into action, and necessary pressure on those who should be doing more - including those such as ourselves in the energy sector. Secondly, and linked to this, reporting of the progress that is being made is vital. It is critical that the scale of the problem and the need for action is appropriately emphasised. Our findings suggest that such action is most likely to happen when people see concrete examples of meaningful initiatives aimed to address the challenges arising from climate change.

There is a risk that some reports can present climate change as an intractable problem that is now so far advanced it cannot be solved...



...action is most likely to happen when people see concrete examples of meaningful initiatives aimed to address the challenges arising from climate change.



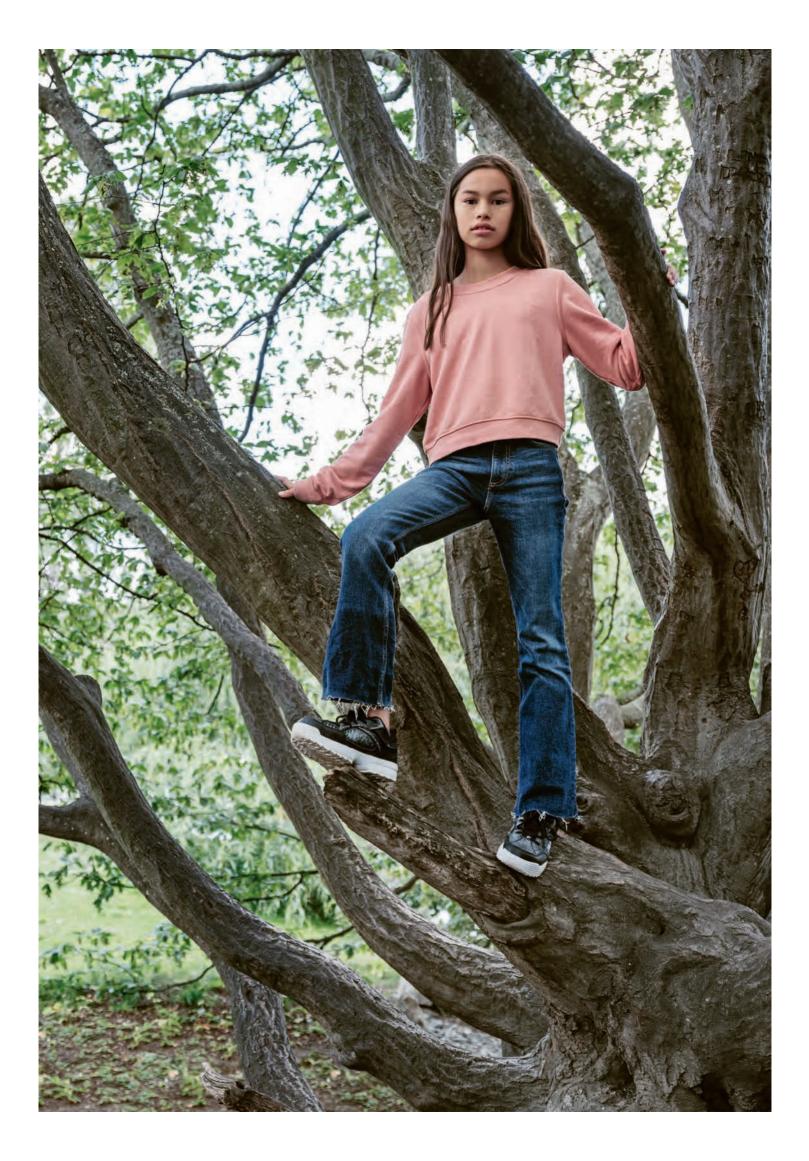
Individuals

All too often, individuals have been treated in a patronising way when it comes to climate change. There are countless examples of public information campaigns that encourage people to turn out their lights, shower rather than bathe, boil only enough water for one cup, and so on. These actions are all helpful, of course, but the nature of these campaigns risks creating a blame culture.

Climate change is a problem for all of us, but it is incumbent in particular on business and government to create the conditions in which consumers are able to take the choices that express the value they place on the climate. In part, this requires efforts to provide the choices (and reduce the cost of these choices) that allow individuals to modify their diet, change how they travel, switch their energy provider and so on. However, more reporting of the way consumer preference is changing will bring this to the attention of businesses, and prompt them to respond by changing what they offer.



Climate change is a problem for all of us, but it is incumbent in particular on business and government to create the conditions in which consumers are able to take the choices that express the value they place on the climate.



Vattenfall: Our commitment and the way forward

As a leading European energy company, we recognise that we have a big part to play in combating climate change: that's why we are committed to power climate-smarter living and make fossil free living possible within one generation. We are striving to facilitate this for individuals and businesses by targeting the complete phasing out of fossil fuels.

In Vattenfall, we have shifted our portfolio to move towards a fossil free energy production and we have a clear road map for phasing out remaining fossil power plants. In-line with this road-map, all investments in new production capacity is in renewables. But we also recognize that we have the opportunity to contribute to lowering carbon dioxide emissions also in other sectors besides energy, like the transport and industry sector.

We can do this by contributing to the transport sector with electric vehicle charging solutions and infrastructure. We are partnering with big industry companies to let electrification replace fossil fuels in manufacturing processes. Together with SSAB and LKAB we are on our way to produce fossil free steel. With Cementa we are realizing a process to produce fossil free cement. The fuel-producer Preem, is another partner, and here we are looking at possibilities to use hydrogen in a process and thereby replace raw oil with rest products from the forest.

We also recognise that we are just one player amongst many – in our sector and in the economy as a whole. Our aim in conducting this research was to understand the wider system in which we operate. The complicated interactions of media, government, business and individuals form the context in which we aim to make the change.

We are sharing the research more widely with a spirit of humility, recognising that there are others more qualified to consider its implications than us - we welcome thoughts, considerations and comments of any nature. We openly invite you to join us on our journey towards fossil free living and hope that you share your positive progress on the way. Together we believe we can make this happen.



Dr. Renee Lertzman is an expert on climate change psychology and has acted as an external advisor for the purpose of this report. For added perspective on the subject, we have asked Dr. Lertzman to provide her point of view on our findings. A commentary note presenting her interpretation of the findings of the report is available separately and can be found on the report webpage on Vattenfall.com

Dr. Renée Lertzman is an internationally recognized psychological researcher and thought-leader, working to make an impact on climate change with tools that organizations can use to engage, mobilize and connect with diverse populations. By blending scientific approaches into strategies that will be impactful on the environmental challenges, Renée shows that combining the disciplines of psychology with environmental science can aid in the path of big changes.

A native of Northern California, Renée has had more than 20 years of experience as a pioneer bridging psychological research and sustainability. She integrates behavioural, social and innovative design sciences to create a dynamic approach to social change. She holds a Master's degree in Environmental Communications from the University of North Carolina and a PhD from the Cardiff School of Social Sciences at Cardiff University, UK.

Her distinguished reputation has led her to regularly teach, present and produce research for numerous institutions including World Wildlife Fund, the White House Social and Behavioural Sciences Team (SBST), National Center for Atmospheric Research, NOAA, and universities such as Columbia University, Portland State University, Royal Roads University, Lanzhou University, Oxford University's UK Energy Research Centre, the University College London's Climate Sciences Communications Policy Commission and Radboud University.

Renée is also an author and published journalist, writing about how the intersections of psychology, environment and culture illustrate the culture of change. Her pieces have been featured in publications including The Sun Magazine, Sierra, Pacific Standard, Orion Magazine, The Ecologist, Climate Access, DeSmog Blog, Sustainable Brands, and Sightline. She has been featured in The Guardian, The New York Times, Bloomberg CityLab, The Washington Post, the Hollywood Reporter, Vice, Huffington Post, The Correspondent (NL), Cambridge TV (UK), Climate One at the Commonwealth Club, Oregon Public Radio, National Public Radio, the TED Radio Hour and the BBC. Her book, Environmental Melancholia, (Routledge) was published in 2015.

Renée produces and teaches university courses for a range of institutions. She developed and taught the course 'Psychology of Environmental Education and Communications' for a Master's program at Royal Roads University (2011-2016) and taught and supervised graduate students during this. Since 2001, she has been engaged with university courses as she designed and taught courses on the psychology of climate change and the environment. She is dedicated to helping her clients apply innovative insights to encourage more participation and engagement with the ecological challenges society is faced with. She applies an understanding of the audience, communities and stakeholders that will, in return, leverage social influences. By doing so, the process will address how to educate, inform and raise awareness efficiently and skilfully and support communities to integrate information and awareness about human impacts on the ecosystem. She resides north of San Francisco.

"We know that being unresponsive to our ecological situation is lethal and disastrous. Perhaps it is now time to turn our attention more fully to insights generated from decades of clinical psychoanalytic and therapeutic practice. Rather than act like a disciplinarian therapist who shouts at a patient for being too slow, neurotic or unable to face the truth, we can learn lessons from how good psychoanalytic practice works: by finding the right ways both to inform and inspire, and stimulating action rather than paralysis.

This goes beyond 'feel-good' campaigns that focus solely on solutions and consumer choices – it means creating communication strategies that can acknowledge the truly terrifying and overwhelming nature of the myriad ecological threats we faced while at the same time steering us towards practical actions.

People heal and make change when they feel supported, understood and challenged. A good place to start may be with doing away with the concept of 'public apathy' altogether."

Renee Lertzman

reneelertzman.com/the-myth-of-apathy

Methodology and sources

The following sources have been used for compiling this report:

A survey carried out by TNS Kantar among a nationally representative sample of adults in Denmark, Sweden, France, Germany, the UK, Finland and the Netherlands. A total of n=7220 adults were interviewed in the period 18th November to 2nd December 2019 equally split across the countries listed. Please note that survey results have been rounded for ease of analysis and reading.

A media landscape analysis of online articles on climate change in tier 1 media outlets in Denmark, Sweden, France, Germany, the UK, Finland and the Netherlands carried out via the analytical platform Quid. Quid is a contextual AI platform that searches, analyses and visualises large amount of new coverage to provide strategic overview of the existing landscape on specific topic. The analysis covers online articles published in the period from 12 December 2018 to 12 December 2019.

An analysis of social media conversations that include mentions of climate change in Denmark, Sweden, France, Germany, the UK, Finland and the Netherlands carried out via the social listening tool Talkwalker. Talkwalker is an online and social data analytics software platform specialised in listening, analytics and reporting. The analysis covers online articles published in the period from 12 December 2018 to 12 December 2019.

External academic references: details available in the respective footnotes.

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