MBTI® type, attitudes to the environment, and sustainable organizations

A research report from The Myers-Briggs Company

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Purpose and scope

In 2023, the Intergovernmental Panel on Climate Change (IPCC) stated that:

"Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020."

Collective action, and changes in individual attitudes and behavior, will be needed if we are to avert the worst effects of climate change. Individual differences in personality may be an important factor in achieving this.

This research study was designed to investigate how a widely used personality framework, the Myers-Briggs Type Indicator® (MBTI®) model, relates to pro-environmental attitudes and behaviors, and to climate change skepticism and denial. A second objective was to establish how people viewed the pro-environmental credentials of their organizations, and how this related both to personality type and to factors such as job satisfaction and intention to leave. As a practical output, the study set out to produce both general and personality-specific recommendations for individuals and organizations.

The study used an online survey, which was sent out to anyone who had completed the MBTI assessment in the previous six months and had said they may be interested in taking part in future research. The survey was also publicized via LinkedIn, on Facebook, and in online forums. In total, 1,090 individuals completed the survey and were included in the analysis.

Results

Headline results

- Most people saw climate change as real, as caused by human activity, as having real-world effects, and as needing action to be taken to alleviate the effects. However, a quarter of survey respondents showed some degree of climate skepticism. 10% demonstrated climate change denial.

- People with a more pro-environmental attitude also tended to show more pro-environmental behavior. However, in general, people's behavior tended to lag behind their attitudes, and there was a more mixed picture when it came to different types of pro-environmental behavior.

- On average, women and people with an Intuition or Feeling MBTI personality preference showed higher levels of pro-environmental attitudes compared with men and those with a Sensing or a Thinking preference. They were less likely to be climate skeptics.

- Women and people with an Extraversion, Intuition, or Feeling preference tended to show higher levels of pro-environmental behavior compared with men and those with an Introversion, Sensing, or Thinking preference.

- Most people felt that, overall, the organization that they worked for behaved in a sustainable and environmentally friendly way. There was, however, a wide variation in how people saw different aspects of organizational sustainability.

- People with higher levels of pro-environmental attitude and especially behavior tended to work for more environmentally friendly organizations.

- People working for more environmentally friendly organizations had higher levels of job satisfaction and were less likely to be thinking of leaving their job.

- People with an Extraversion preference tended to see their organization as more environmentally friendly than did those with an Introversion preference. They were also more likely to agree that they enjoyed their job and that they loved working for their organization.

- People with a higher level of pro-environmental attitudes and behaviors, and those with a Feeling personality preference, were more likely to say that they would quit if they discovered that their organization was significantly contributing to climate change.

Detailed summary of results

- Most people saw climate change as real, as caused by human activity, as having real-world effects, and as needing action to be taken to alleviate the effects. However, a quarter of survey respondents showed some degree of climate skepticism. 10% demonstrated climate change denial.

- While most people held pro-environmental attitudes, their willingness to take pro-environmental action tended to be a little lower. Though most tended to recycle and to conserve energy, there was a mixed picture in terms of ethical buying and consumption, and on average people were less likely to actively support or participate in environmental causes and organizations.

- Almost all respondents owned or had access to a car and over half never used public transportation or car-shared on their journey to work. Just under a third walked instead of driving when going to a local store, restaurant, or other facility. Just under one third said that their vacations or holidays usually or always involved air travel. On average, respondents had taken just under five flights (for any purpose) in the last year. Less driving and less flying would help the environment.

- Over half of survey respondents ate meat 3 or more times a week, and 82% were meat eaters to at least some extent. Two-thirds consumed dairy 3 or more times a week. Reducing these amounts would reduce the environmental impact of food production.

- Cell phones (mobiles) have an environmental impact. However, very few respondents changed or upgraded their phone more frequently than every 2 or 3 years.

- People with more pro-environmental attitudes were more likely to show pro-environmental behaviors, both overall and for all specific types of behavior except travel. Pro-environmental attitude did relate to choosing walking, cycling, or public transport over car travel, and to the type of car driven, but there was very little relationship with air travel. Climate skeptics were less likely to show pro-environmental behaviors.

- When asked "What is the single most important thing that can be done to prevent further climate change," the most common answers involved themes of eliminating or phasing out fossil fuels, enforcing change on big business or the rich, and developing or making use of alternative energy sources.

- When asked "What one action could you take personally that would have the biggest impact on reducing climate change," driving less often and/or changing to a more sustainable vehicle were the most common answers. Three percent said that they didn't know, suggesting that there may be scope for education or more information in this area.

- Most respondents felt that, overall, the organization that they worked for behaved in a sustainable and environmentally friendly way. There was, however, a wide variation in how people saw different aspects of organizational sustainability.

- Respondents who saw themselves as passionate about the environment, or as activists, tended to work for more sustainable organizations. Individuals whose behavior involved more ethical and sustainable consumption, or greater environmental activism, also tended to work for more sustainable organizations. To a lesser extent, so did those who recycled more and those who paid more attention to conserving energy.

- People working for more environmentally friendly organizations had higher levels of job satisfaction and were less likely to be thinking of leaving their job. Those who scored their organization lower on organizational support, people support, and overall sustainability were more likely to be thinking of leaving their job, and less likely to say that they enjoyed their job or loved working for their organization.

- People with a higher level of pro-environmental attitudes and behaviors were more likely to say that they would quit if they discovered that their organization was significantly contributing to climate change.

- When asked the open-ended question "What one action could your organization take that would most help the environment," the most common responses concerned improving recycling, followed by allowing or increasing the amount of remote working, buying sustainable or recycled supplies, and providing education or more information for employees.

- In response to the same open-ended question, respondents who were thinking of leaving their job were less likely than others to say that their organization was doing well, and more likely to mention the themes of remote working and greater commitment from leaders. Allowing remote working and demonstrating commitment from leaders could mean that fewer people consider leaving their jobs.

- On average, women showed a higher level of pro-environmental attitudes than men. Men were on average more skeptical than women. Women also expressed more pro-environmental behavior than men.

- Men were more likely than women to say that they were thinking of leaving their job. Women were more likely than men to say that if they discovered that their organization was significantly contributing to climate change, they would quit their job.

- Older respondents tended to see their organizations as more sustainable and environmentally friendly.

- In general, those living in urban and to a slightly lesser extent suburban areas tended to have more pro-environmental attitudes and pro-environmental behaviors than those living in rural areas. However, those living in urban areas were more likely than others to use air travel for their vacations, and on average took the greatest total number of flights. Those in rural and remote areas took the least.

- Remote and hybrid workers on average showed a higher degree of pro-environmental attitudes and behaviors, and saw their organization as more sustainable, compared with those who never or rarely worked at home.

- Individuals with an Intuition or Feeling preference on average showed higher levels of pro-environmental attitudes compared with those with a Sensing or a Thinking preference. They scored significantly higher on all scales. Similarly, those with Sensing and Thinking preferences were more likely to be skeptical than those with Intuition and Feeling preferences.

- People with Extraversion, Intuition, or Feeling preferences on average showed a higher level of pro-environmental behavior than those with Introversion, Sensing or Thinking preferences.
- People with a Feeling preference tended to travel more sustainably that those with a Thinking preference.
- People with an Extraversion preference tended to see their organization as more environmentally friendly than did those with an Introversion preference. They were also more likely to agree that they enjoyed their job and that they loved working for their organization.
- Those with a Feeling preference were more likely than those with a Thinking preference to say that they would quit their job if they discovered that their organization was significantly contributing to climate change.

Recommendations

- Many people's views about the environment are stronger than their actions. They can agree that climate change is real, is serious, and that something needs to be done about it, but things get more difficult when it comes to taking personal action. The comprehensive recommendations section at the end of this report details a range of specific actions that individuals could consider.
- Individuals with Introversion, Sensing, and/or Thinking personality preferences tend to show fewer pro-environmental behaviors than those with Extraversion, Intuition, and Feeling preferences, but there are things that people of any MBTI type can do. Specific actions for each type preference can be found in Appendix C to this report.
- People who work for greener, more environmentally friendly organizations tend to have greater job satisfaction and are less likely to be thinking of leaving. It is therefore important for the well-being of organizations, as well as the well-being of the planet, for organizations to behave in an environmentally friendly and sustainable way. Based on the responses to our survey, the actions organizations can take might include:
    o Giving employees concrete information that will help them to behave in a more environmentally friendly way.
    o Rewarding sustainable behaviors.
    o Encouraging employees to make suggestions about environmentally friendly practices at work and taking these on board.
    o Changing processes, suppliers, or other aspects of the business to be more environmentally sustainable, for example by buying sustainable or recycled supplies, using less paper, or switching to sustainable energy.
    o Managers and leaders demonstrating that they take sustainability seriously, modifying their behavior—for example, by reducing the number of flights they take.
    o Improving recycling facilities.
    o Allowing, or increasing the availability of, remote working.
- Appendix B to this report contains a checklist that can be used to calculate how environmentally friendly individuals consider their organization to be.
- Other research shows that greener organizations have a recruitment advantage—job applicants are attracted to more sustainable companies. However, it is important, in

recruitment literature and processes, to present a realistic picture of how environmentally friendly an organization is. Some people will leave their jobs if they discover that their organization is contributing to climate change.

- It can be easy to forget that climate change skepticism, while a minority view, is a sizeable minority. This should be considered in any environmental actions.

- Those with personality preferences for Sensing and Thinking were the most likely to be climate skeptics and might be the most difficult people to reach. Other work with MBTI type suggests that to engage and be persuasive with this group, it will be important to outline pros and cons, providing facts and evidence, and communicating in a clear and direct way. Approaches that are too personal or emotional, logically inconsistent, or which appear to lack confidence may backfire.

- When asked "What one action could you take personally that would have the biggest impact on reducing climate change," three percent said that they didn't know. This suggests there may be scope for education or more information in this area.

Introduction and methodology

Introduction

Introduction

Climate change is a hot topic. Though some public figures have denied that climate change is real, or that it is caused by human beings (see Muzaffar, 2023, for an example), the Intergovernmental Panel on Climate Change (IPCC) is clear:

"*Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020.*" (IPCC, 2023).

Most people broadly agree with this view. For example, recent figures show that 72% of Americans agree that global warming is happening and that 58% understand that this is mostly caused by humans (Leiserowitz, Maibach, Rosenthal, & Kotcher, 2023).

There are of course individual differences in people's attitudes and opinions regarding the environment, and in the extent to which they are willing to take action to mitigate the effects of climate change.

One factor underlying these differences is likely to be personality. There has been previous research using the Five Factor Model and the HEXACO framework, but there has been very little using the psychological type approach, as exemplified by the Myers-Briggs Type Indicator® (MBTI®) assessment (Myers, McCaulley, Quenk, & Hammer, 2018). As the MBTI model is widely used by individuals and organizations (Furnham, 2017), then understanding how MBTI type relates to pro-environmental attitudes and behaviors, and to climate change skepticism and denial, will be extremely useful.

Many organizations now talk about their environmental impact and their green values (Winston, 2022), and some prioritize sustainability above other strategic or corporate goals (The Futurum Group/Honeywell, 2023). While some companies have been accused of 'greenwashing,' especially in their marketing literature (Vangeli, Małecka, Mitręga, & Pfajfar, 2023), many may be genuinely pursuing pro-environmental policies.

A second objective of this study was to establish how individuals viewed the pro-environmental credentials of their organizations, and how this related both to personality type and to factors such as job satisfaction and intention to leave.

Purpose of this study

This study was designed to answer several questions:

- What pro-environmental attitudes do people hold, and how do these relate to personality type and to demographic factors?
- What factors relate to climate change skepticism and denial?
- What pro-environmental behaviors do people carry out, and how do these relate to personality type and to demographic factors?
- To what extent do pro-environmental attitudes predict pro-environmental behaviors, and how is this relationship influenced by personality type and demographic factors?
- Do people see their organizations as behaving in a pro-environmental way, and to what extent does this relate to personality type and to demographic factors?

- What factors predict job satisfaction and intention to leave? These may provide further reasons for organizations to behave in a pro-environmental way.

The results will be used to produce personality-based guidelines for pro-environmental behavior.

The Myers-Briggs Type Indicator® (MBTI®) assessment

The MBTI approach looks at four areas of personality:

- Is an individual energized by, and do they prefer to focus their attention on, the outside world of people and things (Extraversion) or their inner world of thoughts and feelings (Introversion)?

- Do they trust and prefer to use information that is practical and based on the evidence of their senses (Sensing) or do they pay more attention to connections, the big picture, and future possibilities (Intuition)?

- Do they prefer to make decisions based on objective logic (Thinking) or based on their values and on how people will be affected by the decision (Feeling)?

- Do they prefer to live their lives in an ordered, structured, planned way (Judging) or in an open, spontaneous, emergent way (Perceiving)?

Any one individual will therefore have preferences for either Extraversion (E) or Introversion (I), for Sensing (S) or for Intuition (N), for Thinking (T) or for Feeling (F), and for Judging (J) or for Perceiving (P). The four preferences combine dynamically to give one of 16 different personality types. More detail about the MBTI framework is given in Appendix A.

Methodology

To carry out the study, we created an online survey. This was sent out to anyone who had completed the MBTI assessment in the previous six months and who had said they may be interested in taking part in future research. The survey was also publicized via LinkedIn, on Facebook, and in online forums.

The survey included:

- 30 multiple-choice questions relating to pro-environmental attitudes.

- 31 multiple-choice questions relating to pro-environmental behaviors, and questions relating specifically to food choices, travel, and other factors.

- 13 questions relating to pro-environmental actions at work.

- 5 questions relating to job satisfaction and intention to leave.

- 3 open-ended questions: "What is the single most important thing that can be done to prevent further climate change?", "What one action could you take personally that would have the biggest impact on reducing climate change?" and "What one action could your organization take that would most help the environment?"

- Questions relating to personality type and to demographic factors including gender, age, location, and degree of remote working.

In total, 1,090 individuals completed the survey and were included in the analysis.

Results

Who took part? Description of the sample

Group demographics

64.4% of the group were female, and 33.0% male, with 1.5% choosing "prefer to self-describe" and 1.0% "prefer not to say." Age ranged from 17 to 87 years, with an average (mean) of 46.

Age
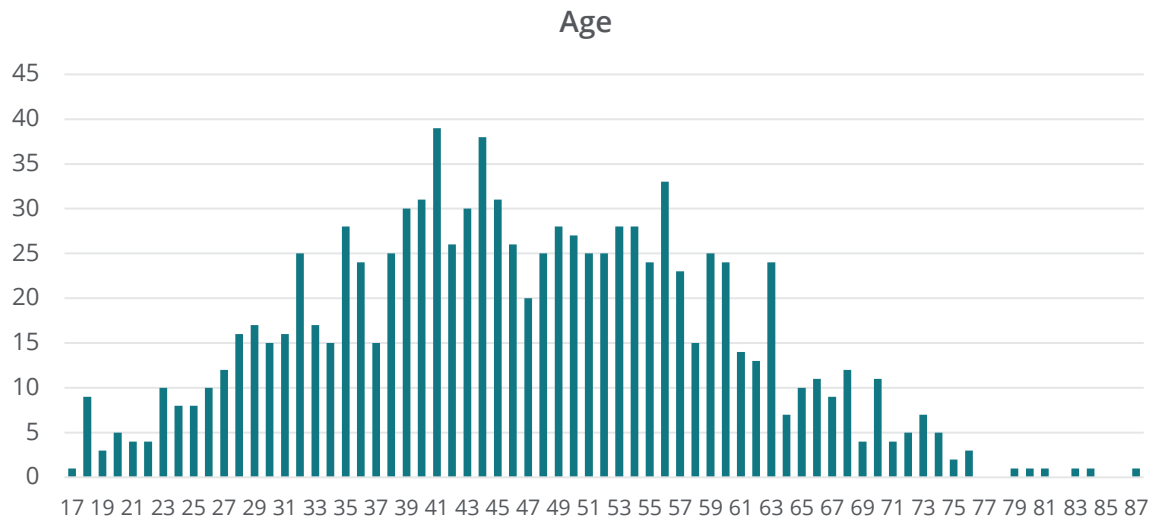
Most respondents (82%) were employed full-time or part-time in an organization. 70% of respondents lived and worked in the USA.

Employment status
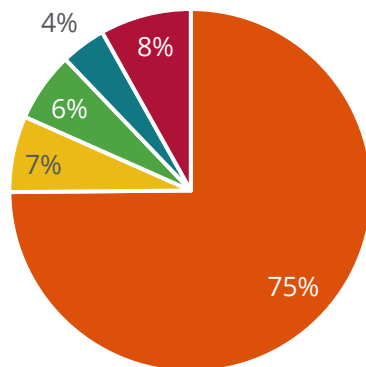
- Full-time ■ Part-time ■ Retired
- Student ■ Other

Country of residence
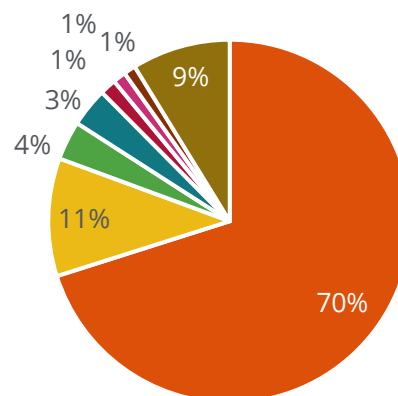
- USA ■ UK ■ Australia
- Canada ■ India ■ Germany
- New Zealand ■ Other

The area where a person lives may reflect their access to recycling facilities and other services.

Which best describes the area where you live?

Area	Percentage
Urban	27%
Suburban	44%
Rural but not remote	21%
Rural and remote	8%
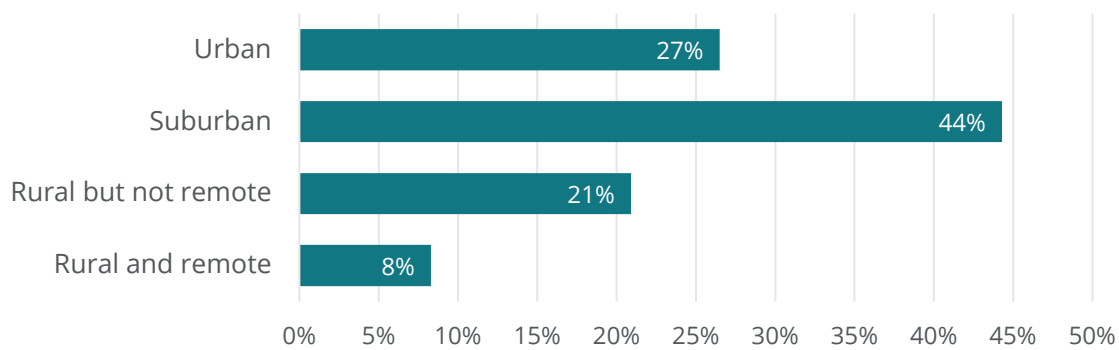
Among those who were employed, a range of remote, hybrid, and non-remote working patterns were shown.

Remote, hybrid, or workplace?

| Response	Percentage
I never or almost never work from home	29%
I rarely work from home	15%
I split my time between home and an office or other workplace	28%
I work from home and rarely need to travel to an office or other workplace	16%
I work from home and never or almost never need to travel to an office or other workplace	13%
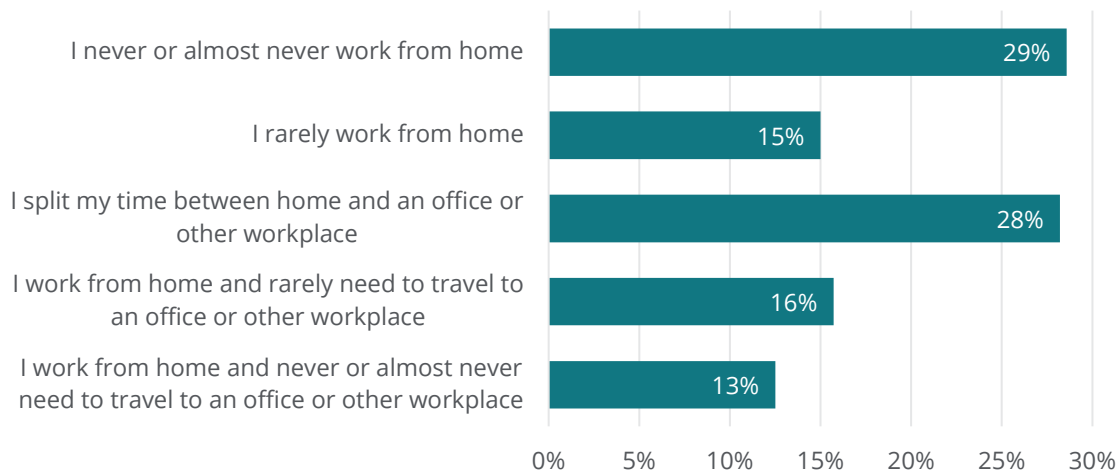
Relationship between demographic variables

There were several significant differences[1] with age:

- Those who chose to self-describe their gender were on average significantly younger than other groups.
- Those living in urban areas were on average somewhat younger than those living in rural areas.
- Those working from home most or all the time were on average older than those who never or almost never worked from home.

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[1] Based on one-way analysis of variance.

MBTI® Step I™ and Step II™ results

MBTI type distribution

Type data was available for 878 individuals. A type table for this group is shown below:

ISTJ	ISFJ	INFJ	INTJ
N=86	N=57	N=108	N=119
9.8%	6.5%	12.3%	13.6%
SSR=0.62	SSR=0.77	SSR=5.35	SSR=5.21
ISTP	**ISFP**	**INFP**	**INTP**
N=44	N=23	N=78	N=69
5.0%	2.6%	8.9%	7.9%
SSR=0.51	SSR=0.40	SSR=1.41	SSR=1.64
ESTP	**ESFP**	**ENFP**	**ENTP**
N=14	N=12	N=65	N=45
1.6%	1.4%	7.4%	5.1%
SSR=0.26	SSR=0.23	SSR=0.90	SSR=1.19
ESTJ	**ESFJ**	**ENFJ**	**ENTJ**
N=40	N=27	N=43	N=48
4.6%	3.1%	4.9%	5.5%
SSR=0.51	SSR=0.54	SSR=2.23	SSR=3.04

Type	N	%
E	294	33.5%
I	584	66.5%
S	303	34.5%
N	575	65.5%
T	465	53.0%
F	413	47.0%
J	528	60.1%
P	350	39.9%

The SSR (Self-Selection Ratio) compares the sample to the general population. Types with an SSR greater than 1 are over-represented in this group compared with the general population.[2] Several Intuition types are therefore over-represented, and several Sensing types are under-represented. This is not uncommon in a group of people interested in personality type. However, there are enough people of each type preference in the sample to carry out meaningful analyses at the preference pair level and for a number of type combinations or lenses.

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[2] The MBTI Global sample (Myers, McCaulley, Quenk, & Hammer, 2018) was used as a reference group.

Relationships between MBTI type and demographic data

There were two significant differences[3] related to MBTI type:

- 52% of women had a Feeling preference; 65% of men had a Thinking preference. Women were more likely than men to have a Feeling preference, men more likely than women to have a Thinking preference. This has been seen in previous studies (Hackston, 2017; Myers, McCaulley, Quenk, & Hammer, 2018).

- Individuals with an Extraversion preference were on average slightly older than those with an Introversion preference. Those with an Intuition preference were on average slightly older than those with a Sensing preference.

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[3] Based on chi-square analyses or independent-samples t-tests, depending on the nature of the data.

Pro-environmental attitudes

Overall results

Survey respondents completed 30 questions about their attitudes to environmental issues, covering factors such as belief in climate change, individual rights, and government policies. They answered these questions on a one to five scale, from strongly agree to strongly disagree. The table below shows the average (mean) score for each question, the standard deviation (a measure of how variable their answers were) and the percentage of respondents who agreed or strongly agreed.

Question	Mean	SD	% agree or strongly agree
Life in the sea is being destroyed by plastics and microplastics	4.39	0.775	92%
Human activity is contributing to climate change	4.38	0.989	86%
In general, people consume too many resources	4.32	0.782	89%
Most people waste food and other resources	4.32	0.729	91%
The government should give more support to the development of alternative energy sources, such as solar energy	4.19	1.016	82%
The way we live now is not sustainable for the planet	4.19	0.957	82%
Producing and using plastics contributes to climate change	4.06	0.978	76%
Reducing our use of fossil fuels like coal and gas would be a positive move	4.04	1.094	77%
I would be happy to wear second-hand or recycled clothes	3.98	1.050	75%
I am very worried about the environment	3.96	1.035	76%
People in areas like North America, Europe, and Australia need to consume a great deal less	3.95	1.000	73%
The human race has caused the climate crisis	3.92	1.162	73%
People don't care enough about the environment	3.91	0.952	74%
I am passionate about the environment	3.88	0.857	72%
My government is not doing enough to protect the environment	3.87	1.157	68%
The natural environment should be preserved, not be altered by human activity	3.79	0.946	67%
Businesses should be made to use recycled materials even when this costs more than making the same products from new raw materials	3.43	1.110	56%

(Continued on next page)

Question	Mean	SD	% agree or strongly agree
I buy more things than I need; I should buy less	3.29	1.111	54%
We should stop using fossil fuels today, not tomorrow	3.28	1.235	48%
Intensive agriculture and the use of fertilizers should be scaled back, even if this means food becomes more expensive	3.26	1.108	48%
Even if public transportation was more efficient than it is, I would prefer to drive my car	2.98	1.316	41%
More people should take to the streets and protest about the climate emergency	2.93	1.164	32%
I could only work for an environmentally friendly organization	2.83	0.990	24%
I see myself as an environmental activist	2.43	1.000	15%
We have the right to remake the environment to satisfy human goals and objectives	2.42	1.084	18%
Jobs are more important than the environment	2.39	0.905	11%
Environmental legislation has gone too far and is restricting our freedom	2.13	1.204	17%
Scientists have exaggerated the extent of climate change and global warming	2.07	1.252	16%
I'm not convinced that climate change is real	1.76	1.198	13%
There is no 'climate emergency', it's all a big con	1.72	1.093	10%

Most respondents saw climate change as real, as caused by human activity, and as having real-world effects. However, 16% felt that the effects had been exaggerated, 13% were not convinced that climate change was real, and 10% described it as a 'big con.' These are arguably aspects of climate change skepticism or denial and will be examined in detail in a later section of this report.

Although most people tended to agree with more abstract questions (for example, 'Life in the sea is being destroyed by plastics and microplastics' or 'Human activity is contributing to climate change') or about people as a whole (for example, 'In general, people consume too many resources' or 'Most people waste food and other resources'), they were somewhat less likely to agree with questions that would have a more direct impact on their own behavior (for example, 'Even if public transportation was more efficient than it is, I would prefer to drive my car' or 'I could only work for an environmentally friendly organization').

It may be easier for people to agree with the principle of taking action than it is for them to take action themselves.

Facets of pro-environmental attitudes

Previous researchers have developed several scales to measure pro-environmental attitudes. Some, for example the *New Ecological Paradigm* (Dunlap, Van Kiere, Mertig, & Jones, 2000), are unidimensional, giving one overall score to indicate how pro- or anti-environment an individual is. Others, such as the *Environmental Attitudes Inventory* (Milfont & Duckitt, 2010), give scores on several different facets or aspects of attitudes to the environment.

Four scales were produced from the items in this survey. All had good internal consistency reliabilities.

Scale	Example items	Mean	SD	Alpha	No. items
Climate change belief *Climate change is real, is serious, and caused by humans*	Human activity is contributing to climate change The way we live now is not sustainable for the planet There is no 'climate emergency,' it's all a big con*	4.12	0.888	0.927	8
Climate change action *More should be done to protect the environment*	Reducing our use of fossil fuels like coal and gas would be a positive move My government is not doing enough to protect the environment Environmental legislation has gone too far and is restricting our freedom*	3.71	0.790	0.915	11
Environmental identity *Identifies as passionate about the environment*	I am passionate about the environment I could only work for an environmentally friendly organization I see myself as an environmental activist	3.05	0.787	0.763	3
Preservation of nature *The natural environment should be preserved, not degraded*	Life in the sea is being destroyed by plastics and microplastics The natural environment should be preserved, not be altered by human activity We have the right to remake the environment to satisfy human goals and objectives*	3.94	0.661	0.730	5

*Scored negatively

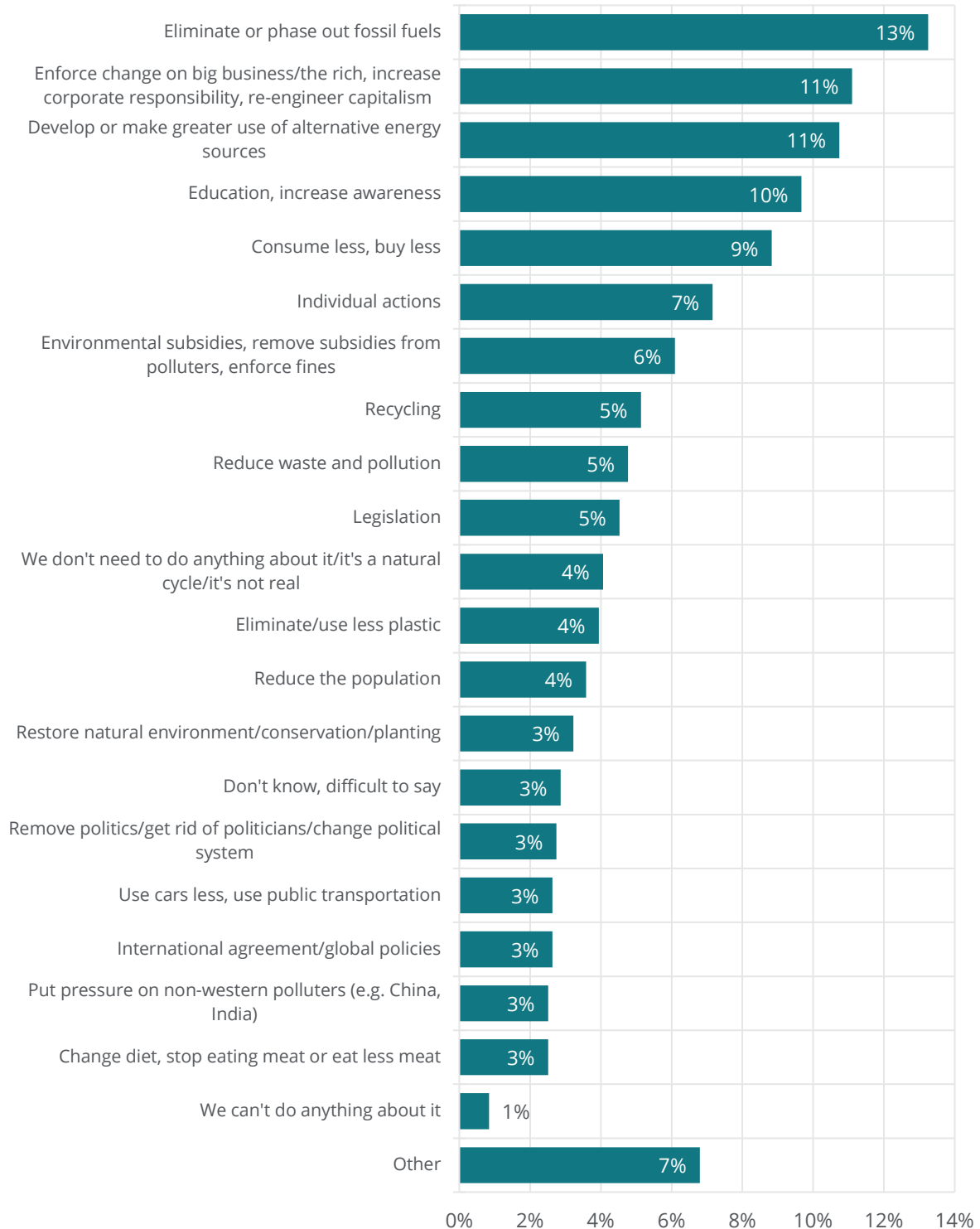84% of the group had a higher score on *Climate change belief* than on *Climate change action*, indicating that there was more agreement that climate change was real and serious than on what should be done about this.

A total pro-environmental attitude score was produced for each respondent, by calculating the average (mean) of the four scales. Across the group, this had a mean of 3.70 and a standard deviation of 0.687.
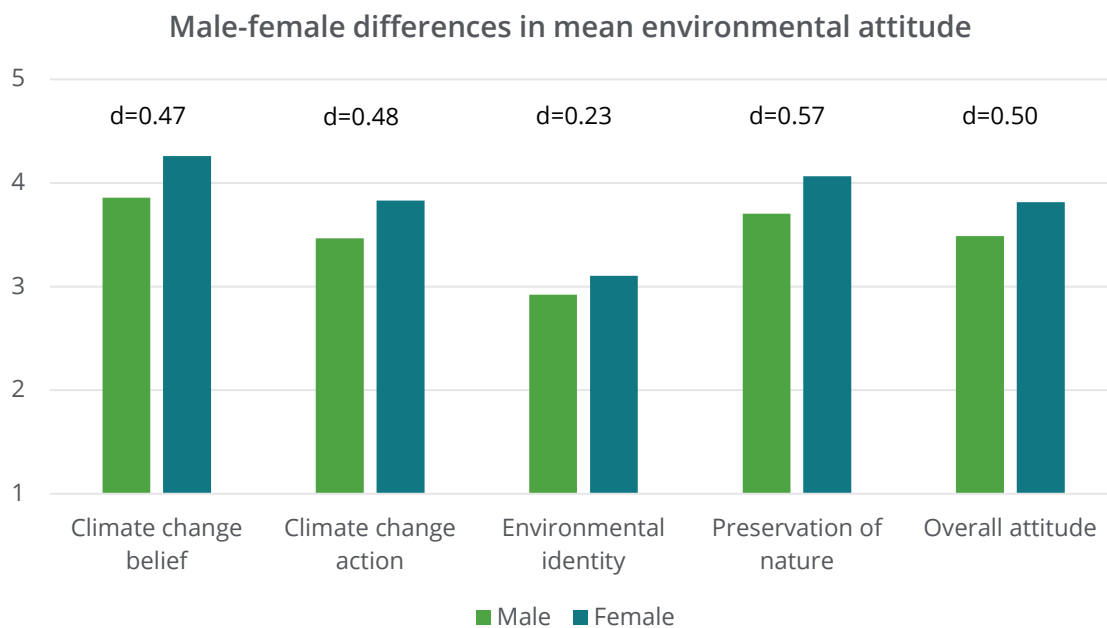
Actions to prevent further climate change

In an open-ended question, respondents were asked "What is the single most important thing that can be done to prevent further climate change." 838 people responded. Using thematic analysis, their answers were grouped into several categories or themes. The chart below shows the percentage in each category. Eliminating or phasing out fossil fuels, enforcing change on big business or the rich, and developing or making use of alternative energy sources were the most common responses.

Category	Percentage
Eliminate or phase out fossil fuels	13%
Enforce change on big business/the rich, increase corporate responsibility, re-engineer capitalism	11%
Develop or make greater use of alternative energy sources	11%
Education, increase awareness	10%
Consume less, buy less	9%
Individual actions	7%
Environmental subsidies, remove subsidies from polluters, enforce fines	6%
Recycling	5%
Reduce waste and pollution	5%
Legislation	5%
We don't need to do anything about it/it's a natural cycle/it's not real	4%
Eliminate/use less plastic	4%
Reduce the population	4%
Restore natural environment/conservation/planting	3%
Don't know, difficult to say	3%
Remove politics/get rid of politicians/change political system	3%
Use cars less, use public transportation	3%
International agreement/global policies	3%
Put pressure on non-western polluters (e.g. China, India)	3%
Change diet, stop eating meat or eat less meat	3%
We can't do anything about it	1%
Other	7%

Demographic data and pro-environmental attitudes

Women scored significantly higher[4] than men on all four scales and on total pro-environmental attitude, with mostly medium effect sizes[5].

Male-female differences in mean environmental attitude

Similar differences have been found in previous research, with women reporting stronger environmental attitudes and behaviors than men (Zelezny, Chua, & Aldrich, 2000).

Gender also related to how people answered "What is the single most important thing that can be done to prevent further climate change." The following table shows significant differences[6]:

| Category	Percent mentioning theme	
	Men	Women
Enforce change on big business etc.	4%	13%
Develop/make greater use of alternative energy	15%	9%
Consume less, buy less	5%	11%
Individual actions	4%	9%
Recycling	2%	6%
Eliminate or use less plastic	2%	5%
We don't need to do anything about it	8%	2%

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[4] Based on an independent-samples t-test

[5] Cohen's d is a measure of effect size, the size of the difference between two means. With a large sample, a difference might be statistically significant, but not mean a great deal in practical terms. A d of 0.5 means that two groups differ by half a standard deviation, a d of 1 that they differ by 1 standard deviation, a d of 2 that they differ by 2 standard deviations, and so on. A d of 0.2 is thought of as a small effect size, 0.5 as medium, and 0.8 as large. If d is less than 0.2, then the difference is negligible and not of practical importance, even if it is statistically significant.

[6] Based on a chi-square analysis.

Women were more likely than men to mention actions around: enforcing changes on big business or the rich; buying and consuming less; taking personal responsibility and individual action; recycling; eliminating plastic or using less. Men were more likely than women to mention using new or alternative sources of energy, and more likely to say that nothing needed to be done, that climate change did not exist or was part of a natural cycle.

The more urban and less remote a respondent's home, the higher their score on *Climate change belief*, *Climate change action*, *Preservation of nature*, and *Overall attitude*. There was no significant difference in terms of *Environmental identity*[7].

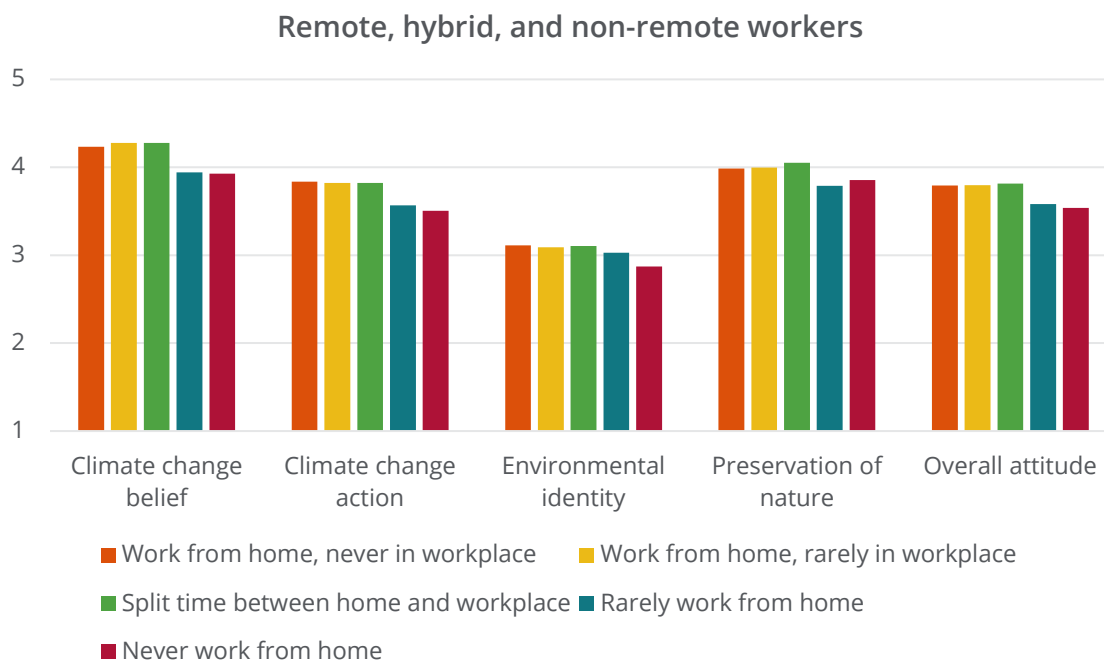### Location differences in environmental attitude
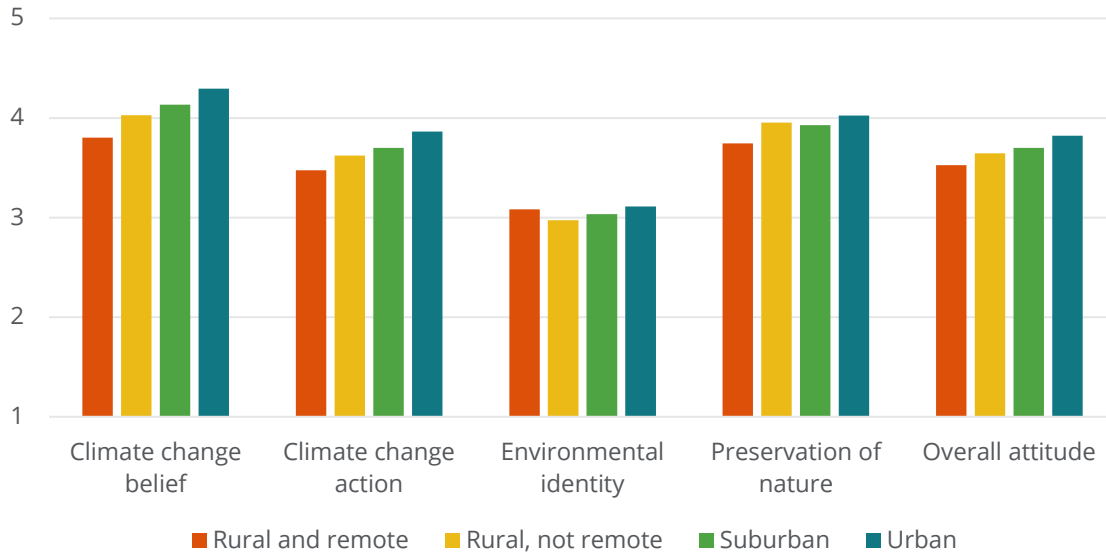
In answering the open-ended question "What is the single most important thing that can be done to prevent further climate change?" then the more urban and less remote a respondent's home, the more likely they were to mention themes of enforcing change on big business or themes around legislation. They were less likely to say that climate change was a natural cycle, not real, or otherwise something that people don't need to do anything about[8].

Category	Percent mentioning theme			
	Rural and remote	Rural not remote	Suburban	Urban
Enforce change on big business etc.	6%	7%	10%	15%
Natural cycle/not real/no need to worry	8%	7%	3%	1%

[7] Based on one-way analysis of variance.
[8] Based on chi-square analysis.

Remote and hybrid workers scored significantly higher on all scales compared with workers based principally or entirely in the office or other workplace[9].

Remote, hybrid, and non-remote workers

There were no significant relationships between remote working status and answers to the open-ended question.

There were no meaningful relationships between age and the pro-environmental attitude scales. However, there were some significant differences[10] in how people answered the open-ended question, "What is the single most important thing that can be done to prevent further climate change?"

| Category/theme	Mean age of those mentioning theme	Mean age of those not mentioning theme
Eliminate or phase out fossil fuels	51	46
Enforce change on big business etc.	38	48
Legislation	39	47
Use cars less, use public transportation	53	47

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[9] Based on one-way analysis of variance.
[10] Based on independent-samples t-tests.
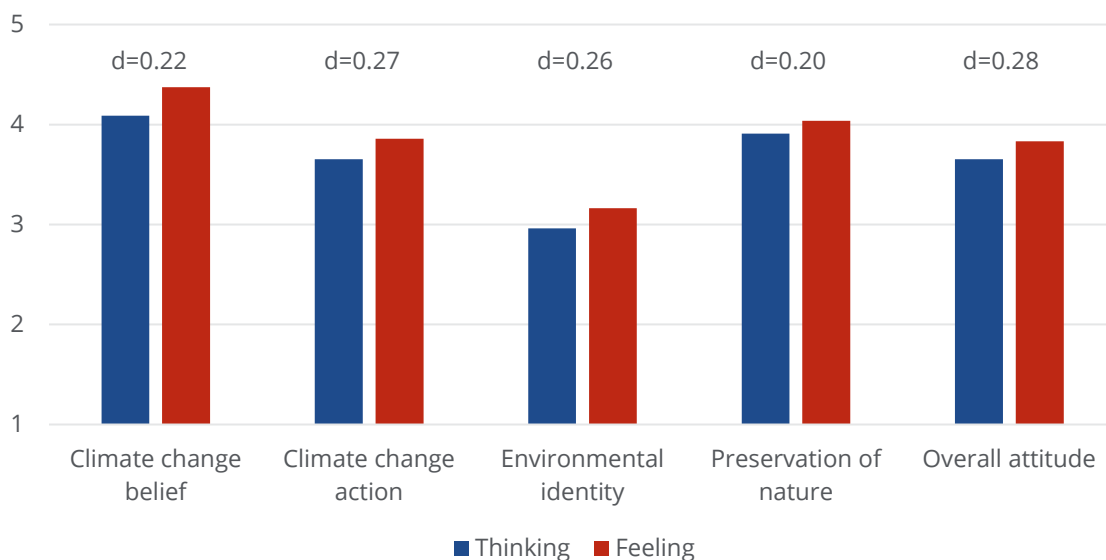
Personality and pro-environmental attitudes

Anecdotally, people with MBTI preferences for Intuition and Feeling (NF) have been seen as more interested than others in environmental issues, and as being more likely to have pro-environmental views. This is supported by previous research. Jessani & Harris (2018) showed that low tolerance of ambiguity correlated with climate change denial. Several previous studies (for example, Gibbon & Douglas, 2021; Hirsh & Dolderman, 2007; Soutter & Mõttus, 2021) have shown that the Five-Factor Model scales of Openness and Agreeableness correlate with pro-environmental attitudes. Openness correlates with Intuition and Agreeableness with Feeling in the MBTI model (Arneson & Landowski, 2015). One type-based study (Village, 2020) shows a relationship between pro-environmental attitudes and Intuition.

These results were replicated here. Based on an independent-samples t-test, those with an Intuition or Feeling preference on average scored significantly higher on all scales compared to those with a Sensing or a Thinking preference, with mostly small effect sizes.

Sensing–Intuition differences in mean environmental attitude
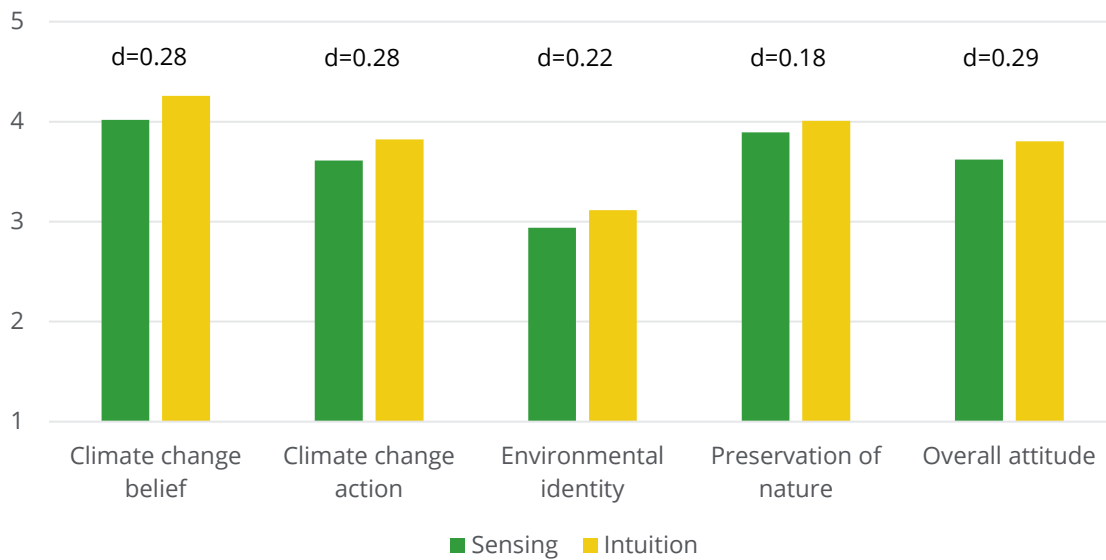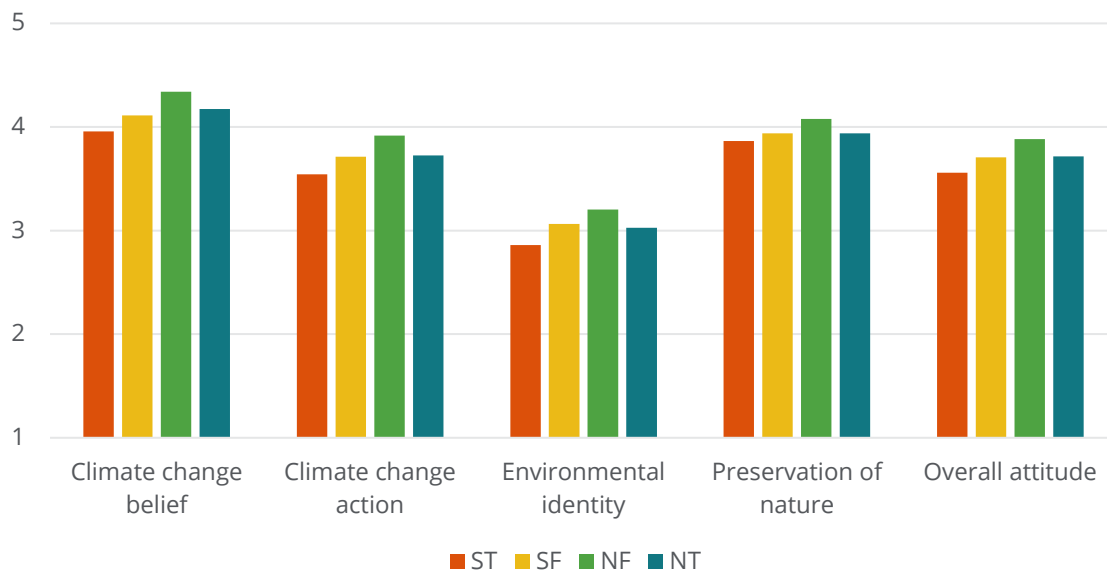

Thinking–Feeling differences in mean environmental attitude

As predicted, individuals with NF preferences showed the highest level of pro-environmental attitude, and those with ST preferences the lowest, across all scales.

Functional pair differences in pro-environmental attitude

There was one other personality-related finding. Respondents with an Extraversion preference scored significantly higher than those with an Introversion preference on *Environmental identity*.

In terms of whole type, then, on average those with ENFP, INFP, or INFJ preferences had the highest level of overall pro-environmental attitude, those with ISTP or ESTP the lowest.

MBTI type and overall pro-environmental attitude
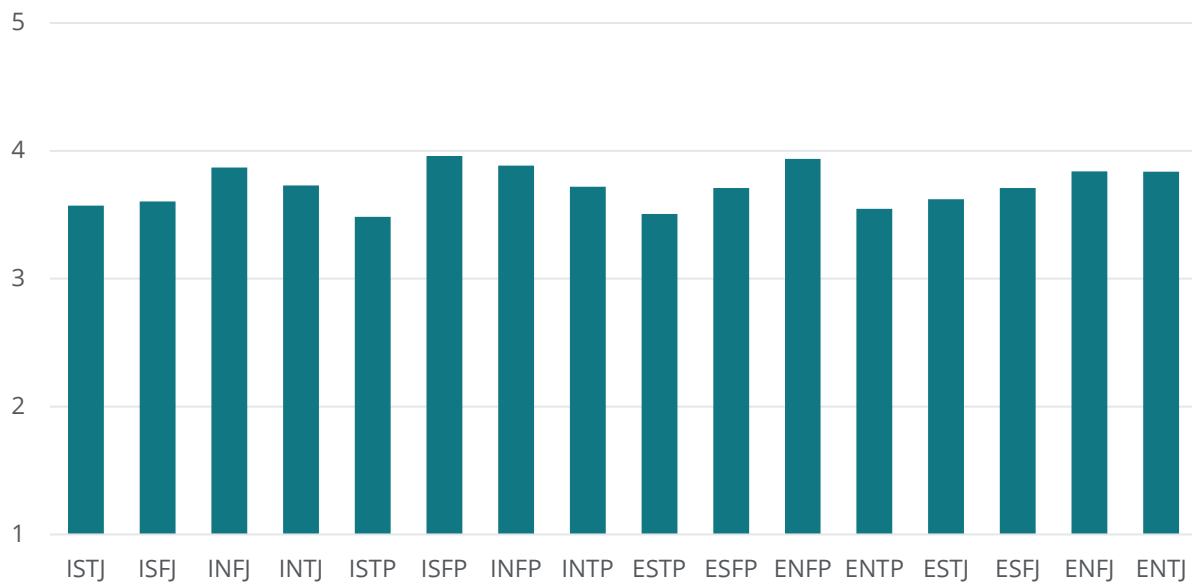
There were some significant[11] relationships between the Thinking–Feeling and Judging–Perceiving preferences and answers to the open-ended question.

Category/theme	Percent mentioning theme	
	Thinking	**Feeling**
Enforce change on big business etc.	8%	13%
Reduce the population	6%	2%
Restore the natural environment, conservation	2	5%
International agreement/global policies	4%	1%
Category/theme	**Judging**	**Perceiving**
Eliminate or phase out fossil fuels	1%	16%
Recycling	6%	1%

Pro-environmental attitudes: summary

Most respondents saw climate change as real, as caused by human activity, as having real-world effects, and as needing action to be taken to alleviate the effects. However, 16% felt that the effects had been exaggerated, 13% were not convinced that climate change was real, and 10% described it as a 'big con'.

Respondents' attitudes to climate change, environmental issues, and sustainability could be grouped into four dimensions or scales:

- *Climate change belief*: Climate change is real, is serious, and caused by humans.
- *Climate change action*: More should be done to protect the environment.
- *Environmental identity*: Identifies as passionate about the environment.
- *Preservation of nature*: The natural environment should be preserved, not degraded.

Respondents were more likely to agree to more general statements (such as, 'Human activity is contributing to climate change') or statements about other people (such as, 'In general, people consume too many resources') than to statements relating to their own actions (such as, 'Even if public transportation was more efficient than it is, I would prefer to drive my car'). 84% of the group had a higher score on *Climate change belief* than on *Climate change action*. This indicates there was more agreement that climate change was real and serious than on what should be done about it.

When asked "What is the single most important thing that can be done to prevent further climate change," the most common answers involved themes of eliminating or phasing out fossil fuels, enforcing change on big business or the rich, and developing or making use of alternative energy sources.

Women scored significantly higher than men on all four scales and on total pro-environmental attitude. They were more likely than men to mention actions around: enforcing changes on big business or the rich; buying and consuming less; taking personal responsibility and individual action; recycling; eliminating plastic; or using less.

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[11] Based on chi-square analysis

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Men were more likely than women to mention using new or alternative sources of energy, and more likely to say that nothing needed to be done, that climate change did not exist or was part of a natural cycle.

The more urban and less remote a respondent's home, the higher their score on *Climate change belief*, *Climate change action*, *Preservation of nature*, and *Overall attitude*. There was no significant difference in terms of *Environmental identity*. The more urban and less remote a respondent's home, the more likely they were to mention themes of enforcing change on big business or themes around legislation, and the less likely they were to say that climate change was a natural cycle, not real, or otherwise something that people don't need to do anything about.

Remote and hybrid workers scored significantly higher on all scales compared with workers based principally or entirely in the office or other workplace.

Individuals with an Intuition or Feeling preference on average scored significantly higher on all scales compared to those with a Sensing or a Thinking preference. Those with NF preferences showed the highest level of pro-environmental attitude, and those with ST preferences the lowest, across all scales.

Respondents with an Extraversion preference scored significantly higher than those with an Introversion preference on *Environmental identity*.

In terms of whole type, then on average those with ENFP, INFP, or INFJ preferences had the highest level of overall pro-environmental attitude. Those with ISTP or ESTP had the lowest.

Climate change skepticism and denial

Overview

Some individuals, including over a quarter of Americans, believe that climate change is caused mostly or entirely by natural changes in the environment, with 15% of Americans thinking that climate change is not real (Leiserowitz, Maibach, Rosenthal, & Kotcher, 2023). Some of the open-ended comments given in response to the current survey reflect these views. For example, "Climate change is a natural phenomenon. The earth has been here before humans and will likely be here after us," or "What is now called climate change is what happens in nature and that I wish people would look into who is making money by pushing this falsehood," or "This has naturally occurred within the world's life cycle. It's political BS. Al Gore started this crap."

Climate skepticism, and a distrust of science, can be an obstacle to promoting sustainability. In a global survey of more than 10,000 people presented at the 2020 World Economic Forum, less than half (45%) of US respondents chose the options "a great deal" or "a lot" in response to the question, "How much do you trust what scientists say about the environment?" This puts the United States fourth from last among the 30 countries surveyed.

Our research contained five questions relating broadly to climate change skepticism and denial. These were included in the *Climate change belief* scale but are analyzed individually here to give a deeper insight into climate change denial.

Item	Strongly disagree	Disagree	Neither	Agree	Strongly agree
Human activity is contributing to climate change	3%	4%	7%	24%	62%
The human race has caused the climate crisis	6%	6%	15%	34%	39%
Scientists have exaggerated the extent of climate change and global warming	45%	26%	13%	9%	7%
I'm not convinced that climate change is real	63%	17%	8%	7%	6%
There is no 'climate emergency,' it's all a big con	61%	20%	11%	6%	4%

A proportion of survey respondents appear to be climate skeptics to at least some extent. 7% disagreed or strongly disagreed that human activity is contributing to climate change, and 12% disagreed or strongly disagreed that the human race has caused the climate crisis.

16% agreed or strongly agreed that scientists have exaggerated the extent of climate change and global warming, 13% that they are not convinced that climate change is real, and 10% that it is all a big con. To quantify just how skeptical respondents were, a skepticism score was calculated. Each respondent started with a score of zero and then:

- If they chose "Disagree" to "Human activity is contributing to climate change," one point was added to their score. If they chose "Strongly disagree," two points were added.
- If they chose "Disagree" to "The human race has caused the climate crisis," one point was added to their score. If they chose "Strongly disagree," two points were added.

- If they chose "Agree" to "Scientists have exaggerated the extent of climate change and global warming," one point was added to their score. If they chose "Strongly agree," two points were added.
- If they chose "Agree" to "I'm not convinced that climate change is real," one point was added to their score. If they chose "Strongly agree," two points were added.
- If they chose "Agree" to "There is no 'climate emergency,' it's all a big con," one point was added to their score. If they chose "Strongly agree," two points were added.

Three-quarters of respondents had a score of zero—they were not climate skeptics. A quarter were skeptical to at least some extent.

Skepticism score	Percent
0	75.1%
1	6.0%
2	7.4%
3	3.9%

Skepticism score	Percent
4	2.0%
5	1.6%
6	0.7%
7	0.7%

Skepticism score	Percent
8	0.9%
9	0.6%
10	1.0%

Views on actions to prevent climate change

When asked "What is the single most important thing that can be done to prevent further climate change," those with a high skepticism score were less likely to mention putting in place subsidies, legislation, eliminating fossil fuels, or enforcing change on big business and the rich. They were more likely to say that pressure should be put on non-western polluters, that we can't do anything about it, or that climate change is natural, not real, or otherwise nothing that we need to do anything about.
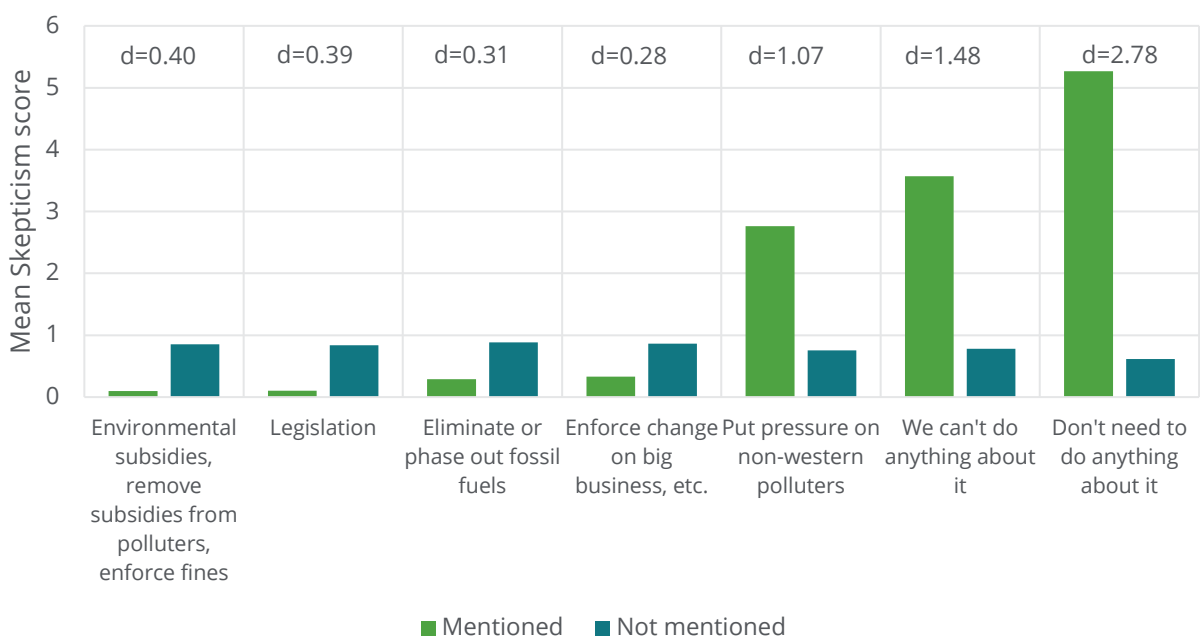
Demographic and personality differences

In line with other research (for example, Sarathchandra & Haltinner, 2021), men were on average more skeptical than women. Those living in more rural and remote areas, and those with Sensing and Thinking preferences, were also more likely to be skeptical.
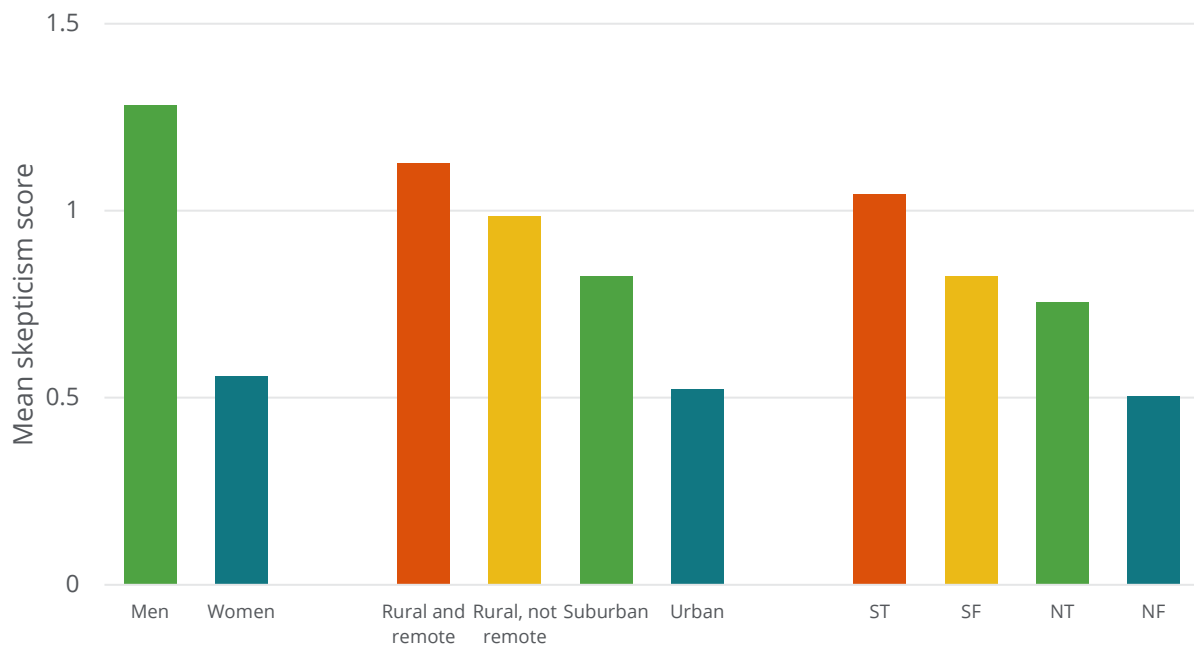
The table below shows the percentage of each group who were skeptical to some extent (a score of 1 or more) or very skeptical (a score of 5 or more).

Variable	Category	Skeptical	Very skeptical
Gender	Male	34%	8%
	Female	20%	2%
Location	Rural and remote	34%	5%
	Rural, not remote	28%	6%
	Suburban	25%	4%
	Urban	18%	1%
Type	ST	29%	5%
	SF	24%	4%
	NT	22%	5%
	NF	16%	2%

Given the proportion of those with a Sensing and/or Thinking preference amongst the skeptical group, adopting an influencing style appropriate for these groups should be useful when developing messaging around climate change and sustainability. Previous research (Killen & Thompson, 2018) has presented type-based guidelines for influential communication.

Though previous research had found that older people were more likely to be skeptical about climate change (Sarathchandra & Haltinner, 2021), no meaningful correlation was found in the current study.

Climate change skepticism and denial: summary

25% of survey respondents showed some degree of climate skepticism and this figure is broadly in line with other research. 10% demonstrated climate change denial, agreeing or strongly agreeing that, "There is no 'climate emergency,' it's all a big con."

When asked "What is the single most important thing that can be done to prevent further climate change," those with a high skepticism score were less likely to mention putting in place subsidies, legislation, eliminating fossil fuels or enforcing change on big business and the rich. They were more likely to say that pressure should be put on non-western polluters, that we can't do anything about it, or that climate change is natural, not real, or otherwise nothing that we need to do anything about. The difference in terms of non-western polluters may reflect a view that "it's someone else's fault, not ours."

Men were on average more skeptical than women.

Those living in more rural and remote areas were more likely to be skeptical.

Those with Sensing or Thinking preferences were more likely to be skeptical than those with Intuition or Feeling preferences.

Pro-environmental behaviors

Overview

Survey respondents completed 31 questions about their pro-environmental behaviors. They answered these questions on a one to four scale, with the following options: never, sometimes, usually, always. The table below shows, for each question, the average (mean) score, the standard deviation, and the percentage of respondents who answered 'usually' or 'always.'

Question	Mean	SD	% usually or always
When I'm the last to leave a room, I switch out the light	3.54	0.645	93%
I recycle bottles and cans	3.48	0.819	86%
I recycle cardboard, cartons, paper, and packaging	3.48	0.829	86%
I donate or recycle old clothes, furniture, books, and unwanted household items rather than putting them in the trash	3.47	0.683	91%
I wait till I have a full load before using the washing machine or dishwasher	3.44	0.690	91%
I recycle plastic items	3.38	0.860	83%
I turn off the water while I brush my teeth, shave, and so on	3.14	0.960	75%
I avoid wasting food	3.12	0.717	81%
I take or send old electronic devices (TV, computer, phone etc.) to a location where they can be recycled	3.04	0.995	71%
I carry my groceries home in reusable bags rather than using new plastic bags from the supermarket	3.03	1.005	69%
I switch off the TV, computer, and other equipment rather than leaving them on standby	2.97	0.962	71%
Before I buy a new electrical appliance, I check its energy-saving rating	2.75	1.041	60%
I look for locally grown or produced food and buy it when I can	2.59	0.809	51%
I take short showers to conserve water	2.54	0.973	54%
I choose to buy products packaged in sustainable materials (e.g. recycled cardboard) rather than in plastic	2.42	0.795	45%
If I buy food or drink when I'm out, I recycle the packaging, even if this means bringing it home	2.39	0.973	45%
I try to buy Fairtrade, organic and/or responsibly sourced food	2.37	0.890	42%

Question	Mean	SD	% usually or always
My vacations or holidays involve air travel	2.23	0.752	32%
I walk instead of driving when I go to a local store, restaurant, park, etc	2.22	1.044	37%
I avoid buying clothing made from synthetic materials (e.g. polyester, nylon, rayon)	2.15	0.946	36%
When I'm out of the house, I'll buy water or other drinks in a disposable plastic bottle	2.07	0.742	23%
I will throw away food that has reached its 'best before' or 'best if used by' date	2.03	0.829	23%
I buy food or other products in bulk or from zero-waste shops in order to cut down on plastic and other packaging	2.02	0.818	26%
I buy my clothes from second-hand stores or charity shops	1.97	0.809	21%
I make donations to environmental organizations or charities	1.94	0.902	23%
I unplug electronic devices before leaving the house	1.86	0.962	23%
I'm one of the first people to turn on the air conditioning when it gets hot	1.79	0.900	21%
I turn on the heating rather than putting on a sweater	1.76	0.702	13%
I eat food that I have grown myself	1.75	0.793	14%
I use public transport or I car-share on journeys to work	1.73	1.009	20%
I take part in protests or demonstrations on environmental issues	1.23	0.527	4%

While many pro-environment behaviors were usually or always carried out by most respondents (switching out lights, most forms of recycling, avoiding wasting food), some were less common.

Only 20% typically used public transport or car-shared on journeys to work, and only 14% ate food they had grown themselves. 81% said they never took part in protests or demonstrations on environmental issues.

The most common non-environmentally friendly behaviors, usually or always carried out by more than 20% of respondents, were: using air travel for vacations, buying drinks in a disposable plastic bottle, and being one of the first to turn on the air conditioning.

Facets of pro-environmental behavior

Four scales were produced from the items in this survey. All had good internal consistency reliabilities.

| Scale	Example items	Mean	SD	Alpha	No. items
Recycling	I recycle cardboard, cartons, paper, and packaging I take or send old electronic devices (TV, computer, phone etc.) to a location where they can be recycled If I buy food or drink when I'm out, I recycle the packaging, even if this means bringing it home	3.21	0.634	0.828	6
Conserving energy	Before I buy a new electrical appliance, I check its energy-saving rating I take short showers to conserve water When I'm the last to leave a room, I switch out the light	2.96	0.445	0.724	11
Ethical consumption	I avoid buying clothing made from synthetic materials (e.g. polyester, nylon, rayon) I choose to buy products packaged in sustainable materials (e.g. recycled cardboard) rather than in plastic I try to buy Fairtrade, organic and/or responsibly sourced food	2.49	0.564	0.816	9
Environmental activism	I make donations to environmental organizations or charities I take part in protests or demonstrations on environmental issues	1.99	0.579	0.705	4

Relationship of behavior scales to demographic factors and MBTI type

Women scored significantly higher[12] than men on all four scales, though the effect sizes were smaller than with pro-environmental attitudes.

Male-female differences in pro-environmental facets
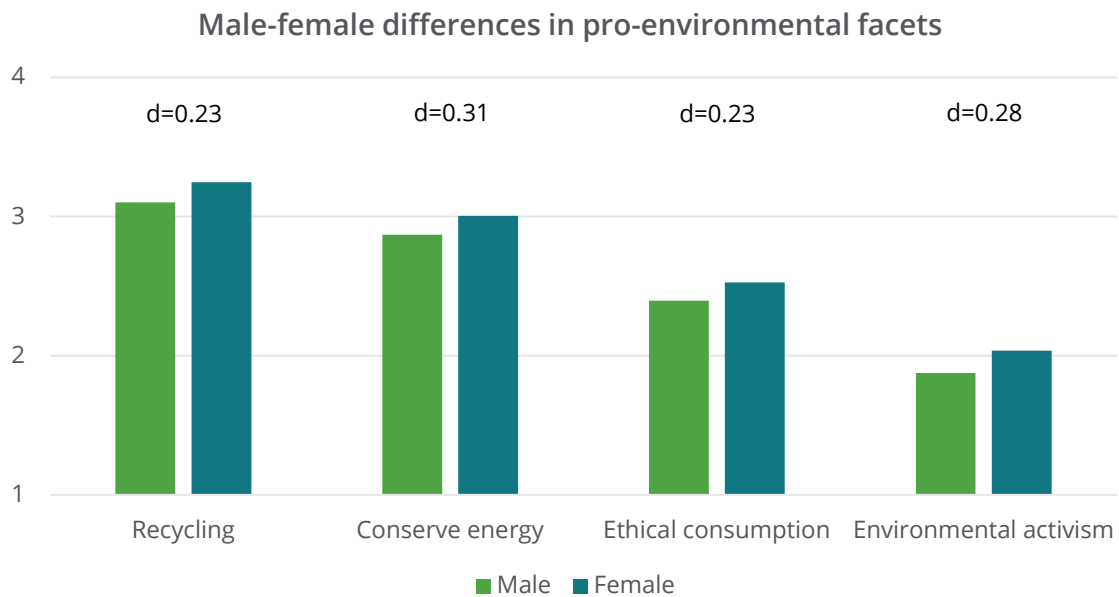
Older respondents tended to score higher on *Ethical consumption* and *Environmental activism*.
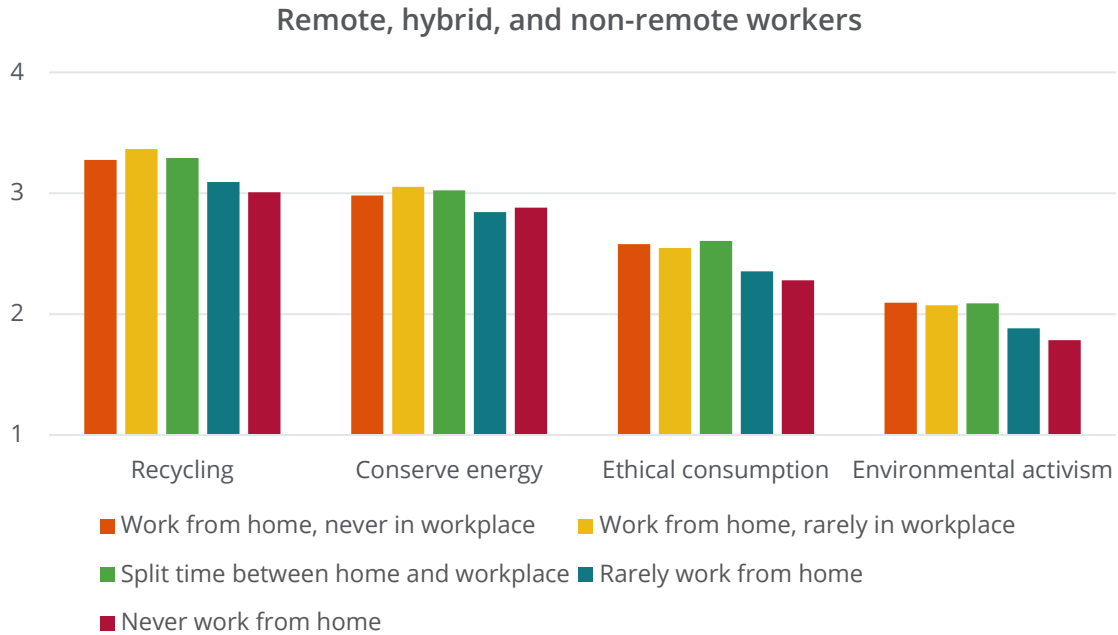
Suburban and urban dwellers scored significantly higher on *Recycling*, urban dwellers on *Ethical consumption* and *Environmental activism*. There was no significant difference on *Conserving energy*.

Location differences in pro-environmental facets

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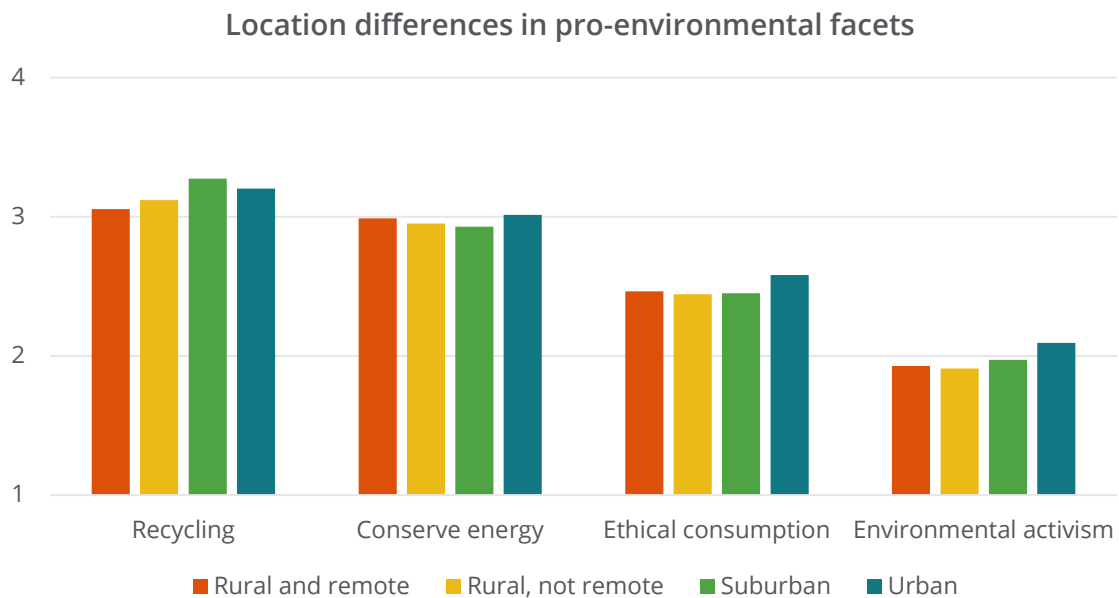
12 Based on an independent-samples t-test

Remote and hybrid workers scored significantly higher[13] on all four scales compared with workers based principally or entirely in the office or other workplace.

Remote, hybrid, and non-remote workers

- Work from home, never in workplace
- Work from home, rarely in workplace
- Split time between home and workplace
- Rarely work from home
- Never work from home

Respondents with Intuition or Feeling preferences on average scored significantly[14] higher on *Recycling*, those with Feeling preferences on *Conserve energy*, those with Extraversion, Intuition, or Feeling preferences on *Ethical consumption*, and those with Extraversion, Intuition, or Feeling preferences on *Environmental activism*. Effect sizes were relatively small.

Preference pair differences
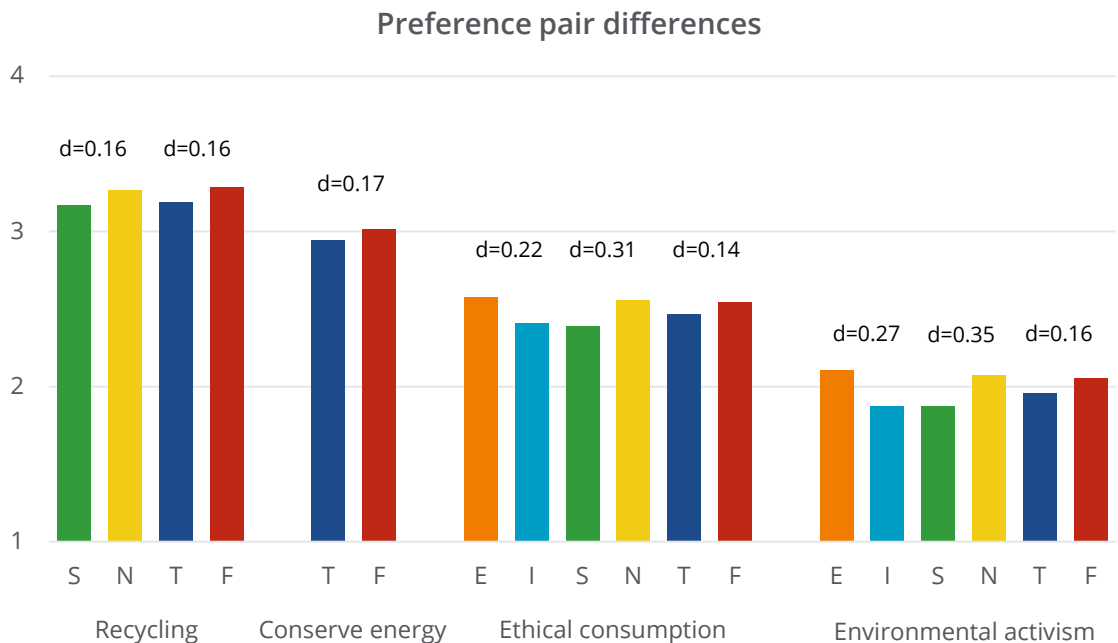
Previous research using the HEXACO personality inventory had found a relationship between one aspect of pro-environmental behavior—reducing greenhouse gas emissions—and the

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[13] Based on a one-way analysis of variance
[14] Based on independent-samples t-tests

dimensions of Openness, Conscientiousness, and Extraversion (Brick & Lewis, 2016). The current findings for Extraversion and Intuition (analogous to Openness) replicate this, but no significant relationship was found with Judging (analogous to Conscientiousness). Another study (Kesenheimer & Greitemeyer, 2021) found a correlation between Openness and pro-environmental donations, but no relationship with Extraversion or Conscientiousness.

There was also a statistically significant[15] effect of whole type. ENTJ, ENFP, and ENFJ were on average the highest scorers on *Ethical consumption*, and ISTJ the lowest.

MBTI type and *Ethical consumption*
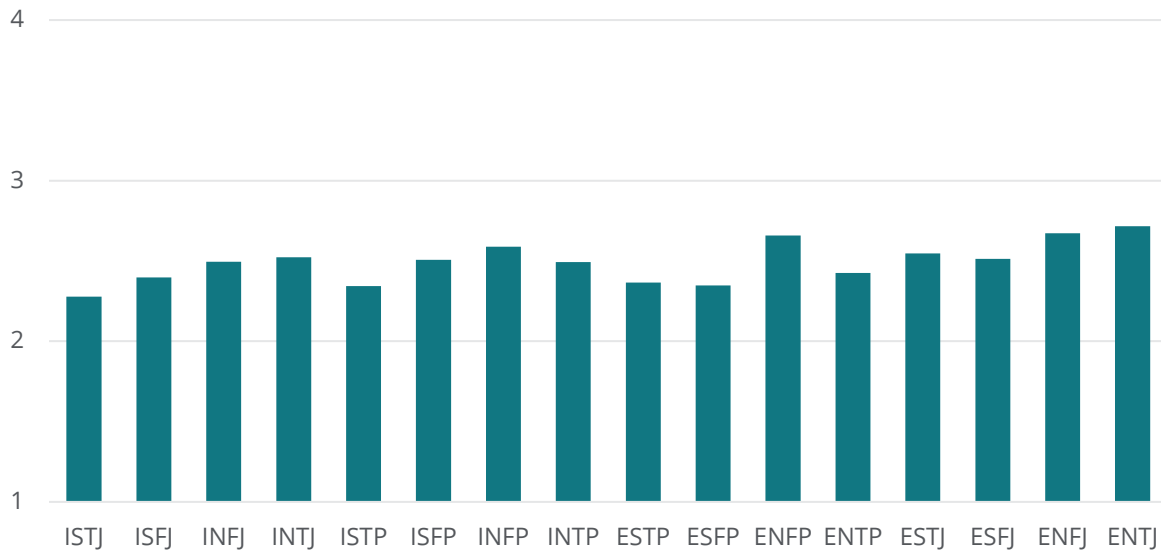
ENFJ, ENTJ, and ENFP scored the highest on *Environmental activism*, ISTJ, ISFJ, and ISTP the lowest.

MBTI type and *Environmental activism*

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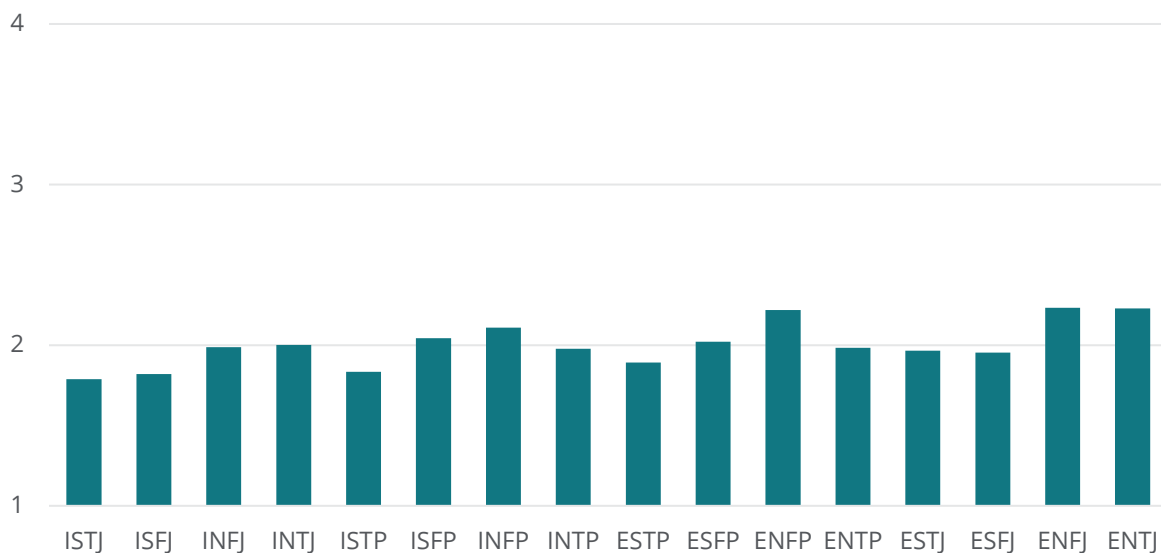
[15] Based on one-way analyses of variance

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Food choices

Food production is responsible for approximately 26% of greenhouse gas emissions (Ritchie, 2019). Within this total, cattle are the major contributor (Ripple, et al., 2014). We asked respondents how often they ate different types of food.

Frequency	Meat	Dairy	Fish	Fruit	Vegetables	Takeaway meals
Never	9%	3%	16%	1%	Under 1%	7%
Less than once/week	11%	10%	37%	9%	2%	50%
1–2 times a week	28%	18%	38%	19%	10%	31%
3+ times a week	37%	31%	9%	31%	30%	11%
Every day	15%	37%	Under 1%	40%	58%	1%

Most respondents report consuming meat and dairy fairly frequently. Reducing this would reduce the environmental impact of food production. There were some demographic and personality differences:

- Men tended to eat meat and to eat fish more often than women.
- Older respondents tended to eat more fish and fewer takeaway meals.
- Those living in urban areas ate meat less often than others.
- The more a respondent worked from home, the less often they ate meat.
- Extraverts ate fish more often than Introverts.
- Those with a Sensing preference ate meat more often than those with an Intuition preference.

The data was used to calculate the dietary preferences of each respondent. For example, respondents who chose "Never" for meat, dairy, and fish were assumed to have a vegan preference.

Type of diet	Percentage
Vegan (no meat, fish, or dairy)	2%
Vegetarian (no meat or fish)	14%
Pescatarian (fish but no meat)	3%
Meat eater	82%

- Women were more likely to choose a vegetarian diet than men; men were more likely to be meat-eaters than women.
- On average, vegans and vegetarians were younger than pescatarians or meat-eaters.
- People with NF preferences were over-represented amongst vegetarians and vegans. This is in line with previous research (Kendall, 1998).

Travel

Carbon emissions from transportation have been identified as a major contributor to climate change. Private cars and vans were responsible for more than 25% of global oil use and around 10% of global energy-related CO2 emissions in 2022 (International Energy Agency, 2023). Several questions relating to travel and transport were included in the survey.

Two of the general questions on pro-environmental behavior related to the use of a car.

Frequency	I use public transport or I car-share on journeys to work	I walk instead of driving when I go to a local store, restaurant, park, etc.
Never	58%	31%
Sometimes	22%	32%
Usually	10%	22%
Always	10%	15%

Younger people were more likely[16] than others to use public transport or car-share on journeys to work.

As would be expected, the more rural and remote an individual's location, the less likely it was that they would use public transportation or car-share on journeys to work or walk instead of driving when going to a local store or other facility.

Location differences in driving

Rural and remote ▪ _Rural, not remote_ ▪ _Suburban_ ▪ _Urban_

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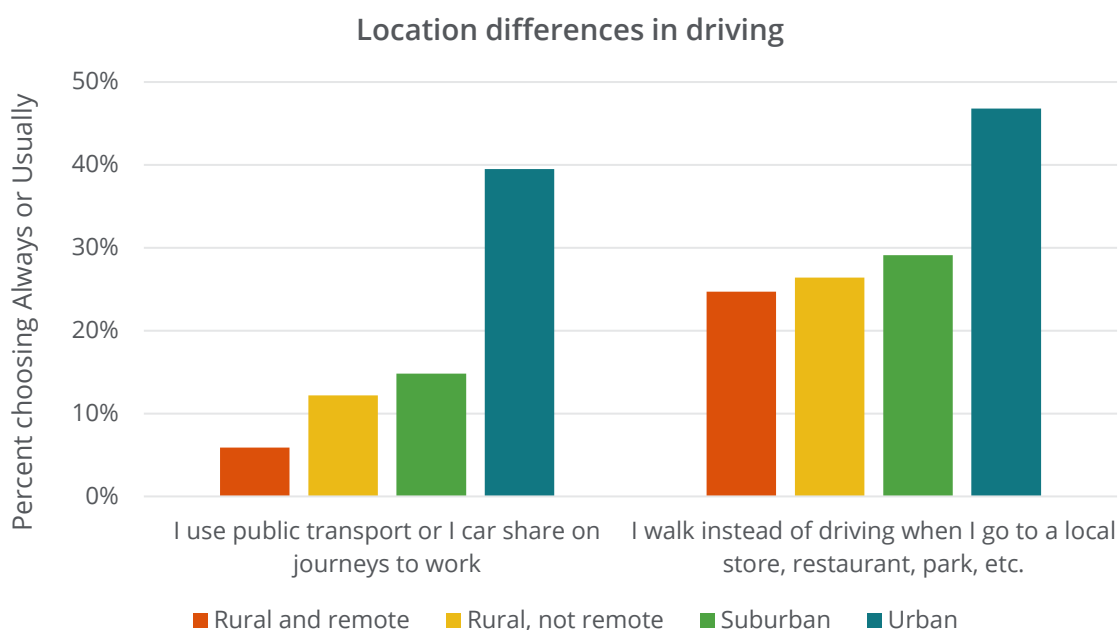
[16] Statistical analyses on this page are based on chi-squared analyses.

Respondents with Intuition, Feeling, and Judging preferences were more likely than others[17] to walk instead of driving when going to a local store, restaurant, park, etc.

Personality preference differences in driving

I walk instead of driving when I go to a local store, restaurant, park, etc.

■ Sensing ■ Intuition ■ Thinking ■ Feeling ■ Judging ■ Perceiving
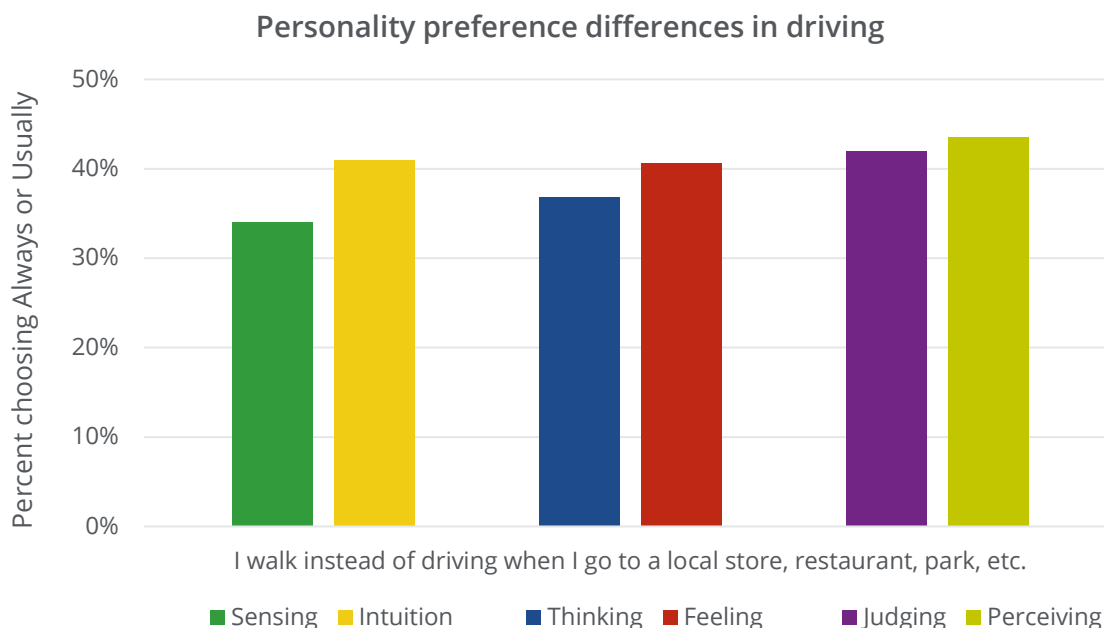
Respondents were asked to think about all the journeys that they have made in the last month, including both work and personal journeys, and both short and long trips, and to state what percentage of these were taken using different modes of transportation.

Mode of transport	Percent never using this mode	Percent using for 1-50% of journeys	Percent using for 51-99% of journeys	Percent using for 100% of journeys
Car	4%	21%	50%	24%
Walking or cycling	32%	60%	14%	Under 1%
Bus, train, etc.	67%	30%	3%	Under 1%
Plane	74%	26%	Under 1%	Under 1%

On average, men and those with an Extraversion personality preference had travelled by plane more often than women and those with an Introversion preference.

Overall, cars were the most frequently used form of transport in the last month. In line with this finding, 93% of respondents owned or otherwise had access to a car.

_____

[17] Statistical analyses on this page are based on chi-squared analyses.

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Type of vehicle	Percentage
A gas (petrol) or diesel SUV or other large 'gas guzzler'	28%
A smaller gas (petrol) or diesel car	49%
A hybrid	11%
An electric vehicle	5%
I don't have or use a car	7%

Men were more likely than women to drive a gas (petrol) or diesel SUV or other large car. Women were more likely than men to drive a smaller gas or diesel car, a hybrid, or an electric vehicle.

Younger respondents were more likely than others to say that they did not have or use a car.

Those living in rural and especially rural and remote areas were the most likely to drive a gas or diesel SUV or other large car, while those living in urban areas were the most likely to say that they did not have or use a car.

Location and vehicle type
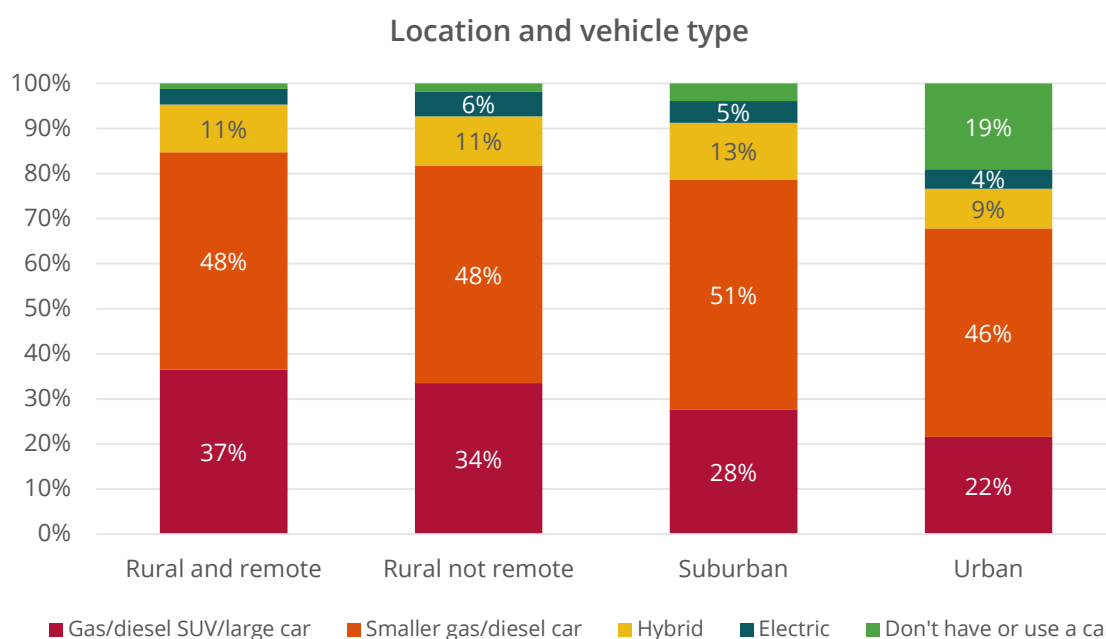
Flying is a source of carbon emissions. Almost a third of respondents said that their vacations or holidays usually or always involved air travel.

| My vacations or holidays usually or always involve air travel	Never	Sometimes	Usually	Always
Percentage	14%	55%	26%	6%

Those living in rural areas were less likely than others to use air travel for their vacations. Extraverts were more likely than Introverts to use air travel as part of a vacation.

Respondents were asked how many flights of different durations they had taken in the last year.

Type of flight	Mean	Standard deviation	Range
Short haul (less than 2 hours)	1.77	3.90	0 to 40
Medium haul (2-6 hours)	1.96	3.38	0 to 40
Long haul (more than 6 hours)	0.72	1.76	0 to 20
Total flights	4.45	6.78	0 to 70

Long-haul flights have a greater environmental impact than medium-haul flights, which in turn have a greater impact than short-haul flights. For analysis purposes, a weighted total was produced as (1X short haul + 2X medium haul + 3X long haul).

On average, men had taken significantly[18] more short-haul, medium-haul, and long-haul flights than women.

Male-female differences in average (mean) number of flights
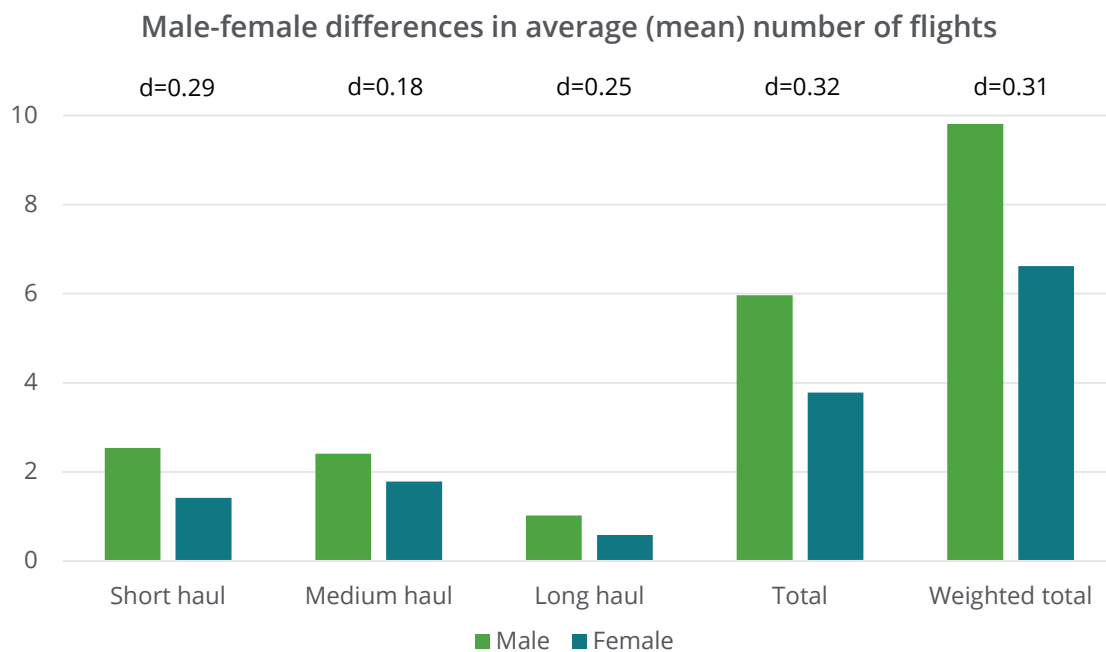
Respondents living in urban areas on average took the greatest total number of flights[19]. Those in rural and remote areas on average took the least.

Location	Rural and remote	Rural but not remote	Suburban	Urban
Average total number of flights	2.61	3.88	4.51	5.44

[18] Based on an independent-samples t-test
[19] Significant effect, based on a one-way analysis of variance.

Those with a Thinking preference on average had taken a significantly greater number of short haul, medium haul, and therefore total, flights than those with a Feeling preference. There was no significant difference in terms of long-haul flights.

Thinking–Feeling differences in mean number of flights
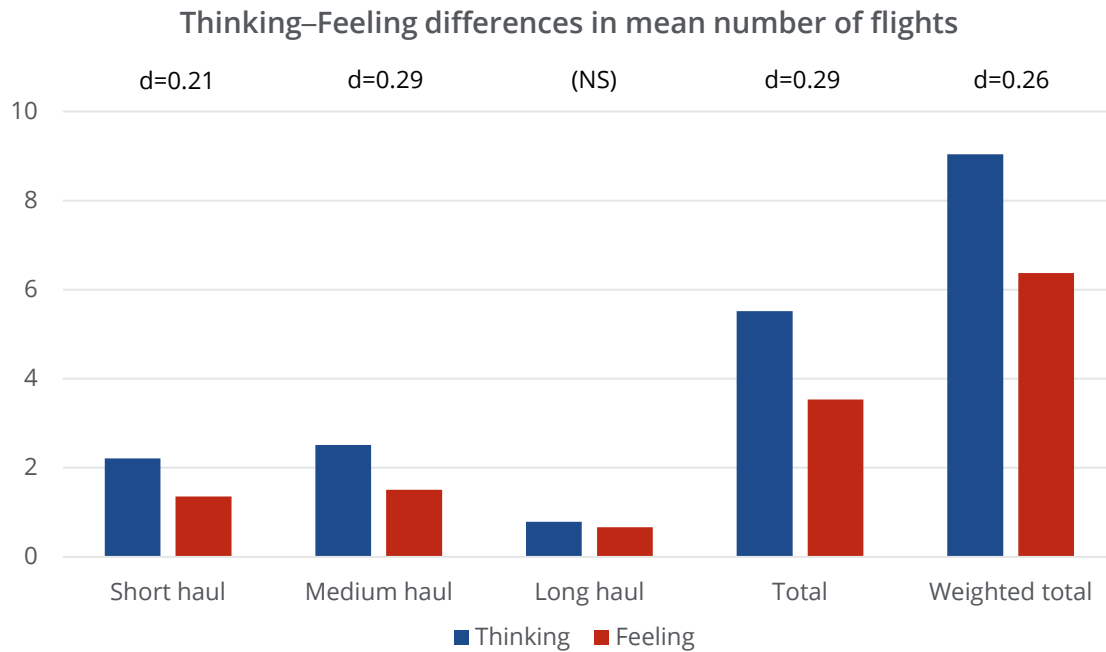
Looking at whole type then, on average, those with ISTP and ESTP preferences took the largest number of flights in the previous year and those with ESFJ preferences the smallest. However, once the total is adjusted to put more weight on longer flights, those with ESTP and ENTJ preferences have the highest score.

MBTI type and number of flights
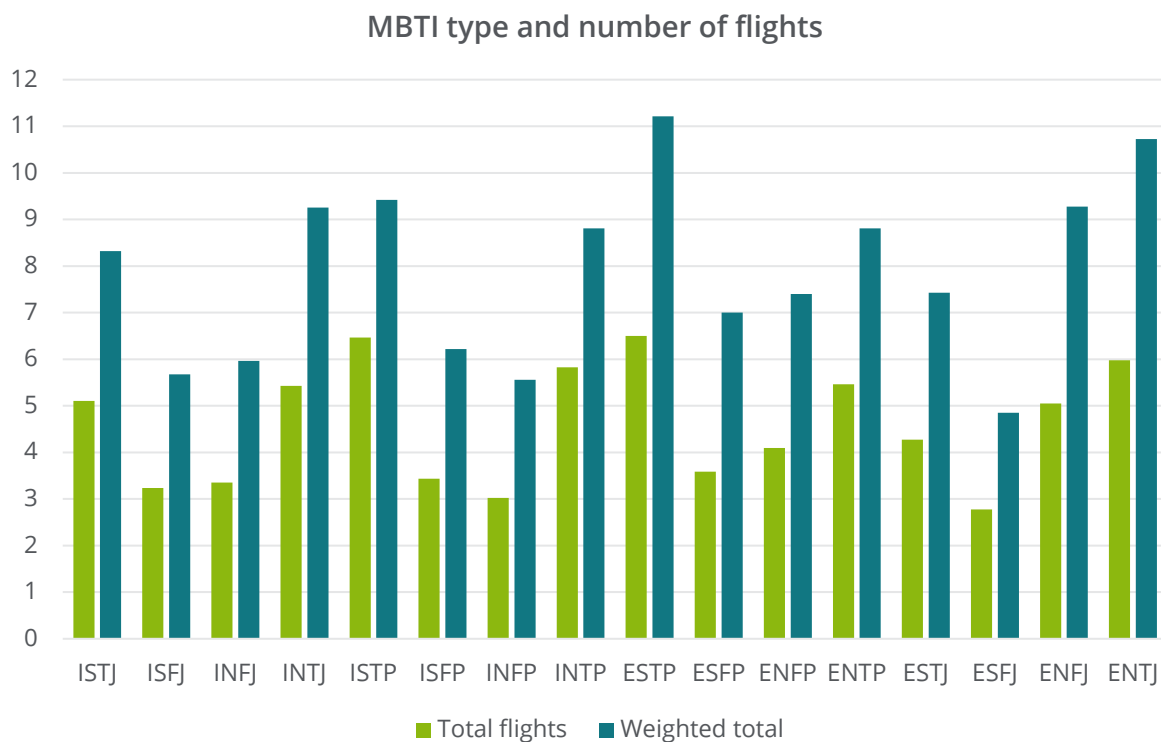
All the travel-related questions were combined to give a total 'green travel' score. This was calculated in the following way:

- Calculate a weighted score for travel type in the last month as (3 x walking or cycling) + (1 x bus, train, or public transport) – (1 x car) – (3 x plane) and standardizing this to a z-score (a standard score with a mean of 0 and standard deviation of 1).

- Calculate a weighted score for flights as (1 x short haul) + (2 x medium haul) + (3 x long haul) and standardizing this to a z-score.

- Calculate a z-score for type of car (where a low score = a large gas or diesel SUV, a high score = an electric vehicle, and the highest score = not owning or using a car).

- Add together the scores for three further travel questions ('I use public transport or I car-share on journeys to work' + 'I walk instead of driving when I go to a local store, restaurant, park, etc' – 'My vacations or holidays involve air travel') and standardize this total to a z-score.

- Add together these four z-scores and convert to a t-score (a standard score with a mean of 50 and standard deviation of 10).

On average, women had a higher green travel score than men, and those with a Feeling preference a higher score than those with a Thinking preference[20]. However, effect sizes were small.

Significant differences in total travel score
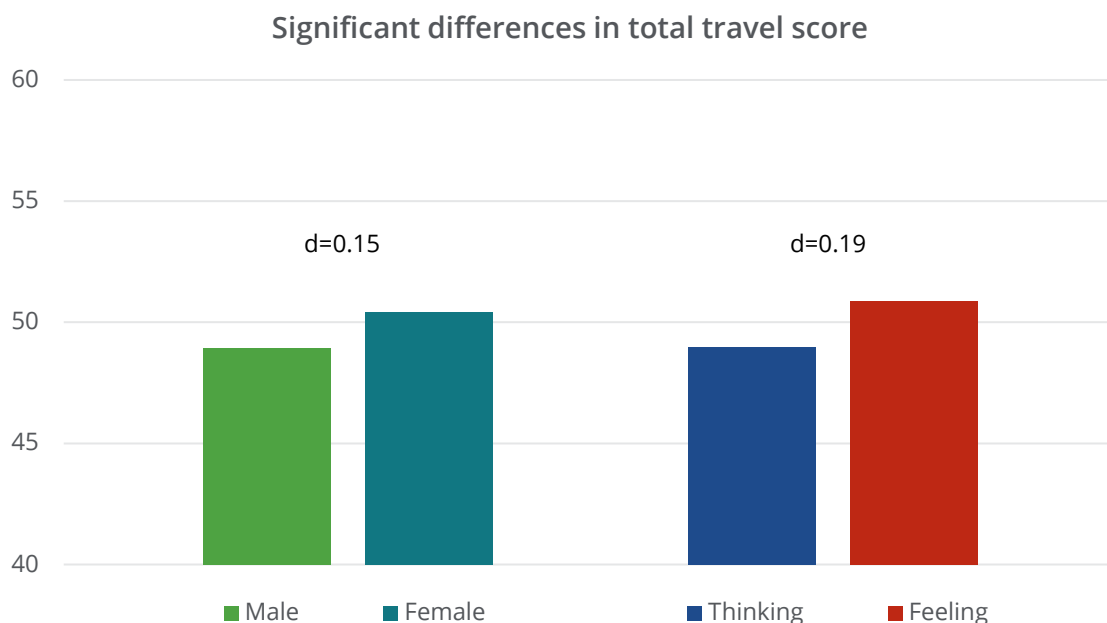
Cell phones

Cell phones (mobiles) have an environmental impact. The mining of minerals for cell phone production can lead to habitat destruction, deforestation, and environmental pollution. Manufacturing creates greenhouse gas emissions and can be polluting. Improper disposal of phones contributes to electronic waste (e-waste). To help the environment, therefore, people should not change or upgrade their phone too frequently.

We asked survey respondents, "How often do you typically change or upgrade your cell phone (mobile phone)?"

Frequency of change or upgrade	Percentage
More than once a year	Under 1%
Every year	1%
Every 2 or 3 years	33%
Every 4 years or more	23%
Only when it breaks or becomes unusable	43%
I don't have a cell phone	Under 1%

Very few respondents changed or upgraded their phone more frequently than every 2 or 3 years.

There were no demographic differences, but one personality difference. Respondents with a Sensing preference were more likely[21] than those with an Intuition preference to change their phone every 2 or 3 years, and less likely to wait till it breaks or becomes unusable.

Frequency of change or upgrade	Sensing	Intuition
More than once a year	Under 1%	Under 1%
Every year	5%	8%
Every 2 or 3 years	42%	29%
Every 4 years or more	22%	24%
Only when it breaks or becomes unusable	35%	46%

[21] Based on a chi-square analysis.

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Overall pro-environmental behavior score

An overall pro-environmental behaviour score was created by adding together standard scores on the four facets (recycling, conserving energy, ethical consumption, and environmental activism) plus the overall travel score, and converting this to a standard T-score.

Women and those with Extraversion, Intuition, or Feeling preferences scored significantly higher[22] than men and those with Introversion, Sensing, or Thinking preferences. The Sensing–Intuition and Thinking–Feeling differences were also seen for overall pro-environmental attitude, but the Extraversion–Introversion difference was not. This may be related to the Extraversion attribute of getting into action compared with the Introversion characteristic of prefering to think things through first.

Differences in overall pro-environmental behavior
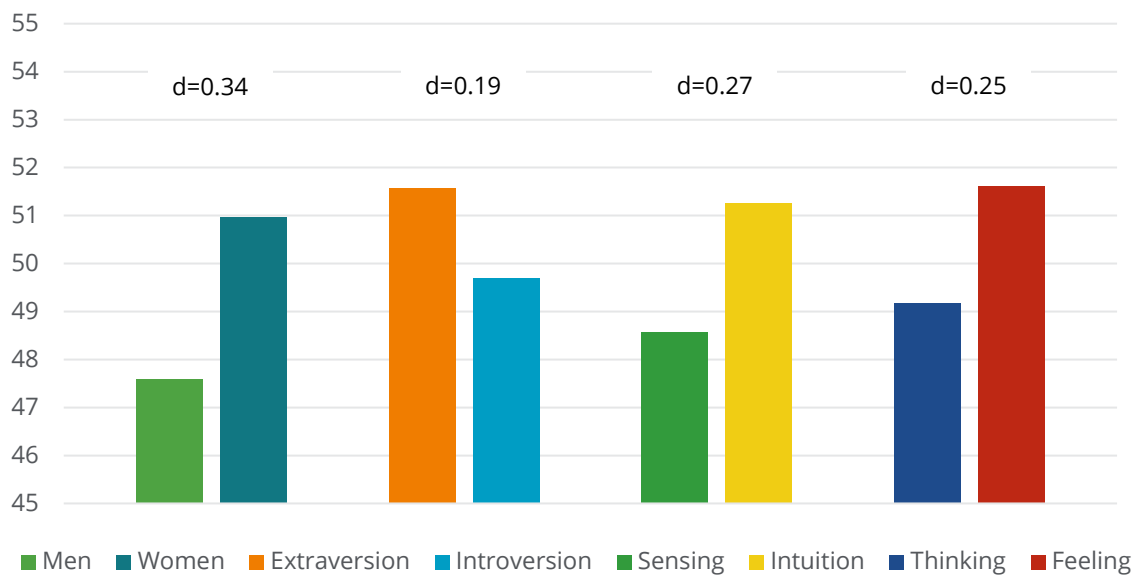
Remote and hybrid workers on average showed a higher level of pro-environmental behavior than those who never or rarely worked from home. This difference was not solely due to commuting or other travel.

Remote, hybrid, and non-remote workers
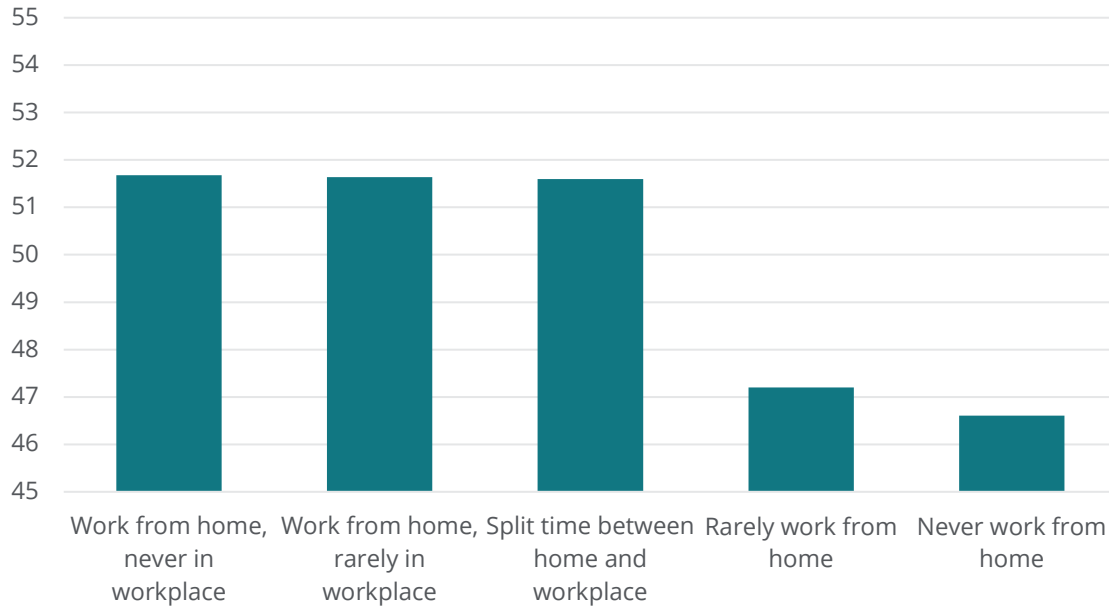
On average, those with ENFJ preferences showed the highest level of overall pro-environmental behavior. Those with ISTJ and ISTP preferences showed the lowest.

MBTI type and overall pro-environmental behavior
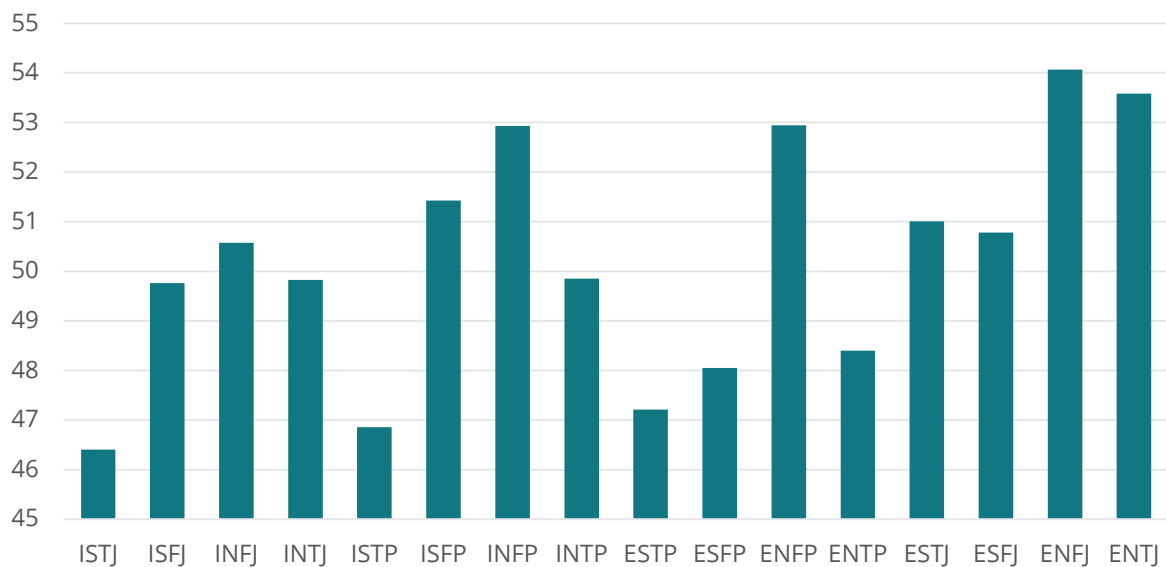
Personal actions that could reduce the impact of climate change

In an open-ended question, respondents were asked "What one action could you take personally that would have the biggest impact on reducing climate change." 815 people responded. Using thematic analysis, their answers were grouped into several categories or themes. The chart below shows the percentage whose answer matched each category. Driving less often and/or changing to a more sustainable vehicle were the most common answers. Three percent said that they didn't know, suggesting that there may be scope for education or information in this area.

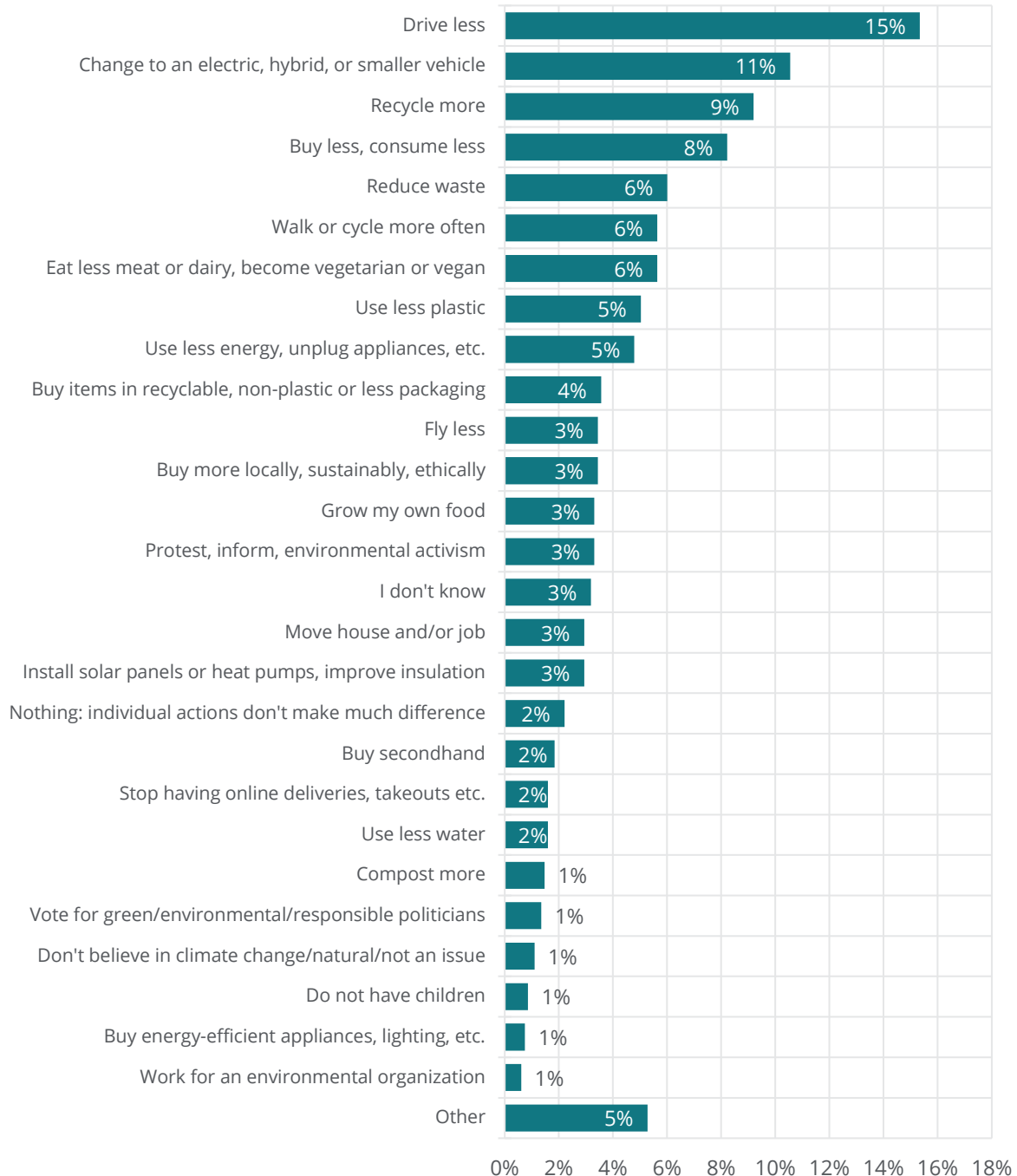| Category	Percentage
Drive less	15%
Change to an electric, hybrid, or smaller vehicle	11%
Recycle more	9%
Buy less, consume less	8%
Reduce waste	6%
Walk or cycle more often	6%
Eat less meat or dairy, become vegetarian or vegan	6%
Use less plastic	5%
Use less energy, unplug appliances, etc.	5%
Buy items in recyclable, non-plastic or less packaging	4%
Fly less	3%
Buy more locally, sustainably, ethically	3%
Grow my own food	3%
Protest, inform, environmental activism	3%
I don't know	3%
Move house and/or job	3%
Install solar panels or heat pumps, improve insulation	3%
Nothing: individual actions don't make much difference	2%
Buy secondhand	2%
Stop having online deliveries, takeouts etc.	2%
Use less water	2%
Compost more	1%
Vote for green/environmental/responsible politicians	1%
Don't believe in climate change/natural/not an issue	1%
Do not have children	1%
Buy energy-efficient appliances, lighting, etc.	1%
Work for an environmental organization	1%
Other	5%

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There were some significant[23] gender differences.

Category	Percent mentioning theme	
	Men	Women
Change to an electric, hybrid, or smaller vehicle	16%	8%
Buy less, consume less	5%	10%
Walk or cycle more often	3%	7%
Buy second-hand	0.4%	3%
Nothing: individual actions don't make much difference	3%	1%
I don't believe in climate change/it's natural/it's not an issue	3%	0.4%

There were also some age differences[24]. The average age of those mentioning changing to an electric, hybrid or smaller/more sustainable vehicle was higher than those who did not. The average age of those mentioning protesting, activism, or working to inform and educate others, and of those who mentioned using less water, was lower than those who did not mention these themes.

Category/theme	Mean age of those mentioning theme	Mean age of those not mentioning theme
Change to an electric, etc. vehicle	50	46
Protest, inform, environmental activism	40	47
Use less water	39	47

Remote workers were more likely to mention flying less than hybrid or non-remote workers. Non-remote workers were more likely to say that individual actions don't make a difference.

There were some personality type differences.

Category	Percent mentioning theme	
	E	I
Use less plastic	8%	4%
Grow my own food	1%	4%
Category	T	F
Protest, inform, environmental activism	5%	2%
Buy second-hand	1%	3%

[23] Other than for age, results on this page are based on chi-square analysis.
[24] Based on independent-samples t-tests.

Category	J	P
Buy and consume less	7%	11%
Buy items in recyclable, non-plastic, or less packaging	5%	1%
Vote for green/environmental/responsible politicians	0.5%	3%
I don't know	2%	4%

Pro-environmental behaviors: summary

Overall findings

Many pro-environment behaviors were frequently carried out by respondents to this survey. For example, 93% said they usually or always switched out the lights when they were the last to leave the room, 91% donated unwanted items rather than putting them in the trash, 91% waited till they had a full load before using the washing machine or dishwasher, 86% recycled bottles and cans, and 81% avoided wasting food.

Other behaviors were less common. Only 20% typically used public transport or car-sharing on journeys to work, and only 14% ate food they had grown themselves. 81% said they never took part in protests or demonstrations on environmental issues.

The most common behaviors, usually or always carried out by more than 20% of respondents, which were not environmentally friendly were: using air travel for vacations, buying drinks in a disposable plastic bottle, and being one of the first to turn on the air conditioning. These, and the behaviors mentioned above, may be actions to consider for those wishing to act in a more sustainable way.

Respondents' behaviors in response to climate change, environmental issues, and sustainability could be grouped into four dimensions or scales:

- Recycling
- Conserving energy
- Ethical consumption
- Environmental activism

In addition, a separate score for sustainable travel was computed. Looking at travel in more detail, 58% of respondents never car-shared or used public transport on their journey to work, and only 10% always did so. 31% never walked instead of driving when going to a local store, restaurant, park, etc. and only 15% always did so. Overall, automobiles were the most frequently used form of transport in the last month. In line with this finding, 93% of respondents owned or otherwise had access to a car. 28% of respondents owned a large gas or diesel vehicle, 49% a smaller gas or diesel vehicle, 11% a hybrid, 5% an electric vehicle, and 7% did not have or use a car. Just under one third of respondents said that their vacations or holidays usually or always involved air travel. On average, respondents had taken just under five flights (for any purpose) in the last year.

Over half of survey respondents ate meat 3 or more times a week, and 82% were meat eaters to at least some extent. Two-thirds consumed dairy 3 or more times a week. Reducing these amounts would reduce the environmental impact of food production.

Very few respondents changed or upgraded their phone more frequently than every 2 or 3 years.

When asked "What one action could you take personally that would have the biggest impact on reducing climate change," driving less often and/or changing to a more sustainable vehicle were the most common answers. Three percent said that they didn't know, suggesting that there may be scope for education or more information in this area.

Demographic differences

Women scored significantly higher than men on the overall measure of pro-environmental behavior and on all four scales. They were more likely to have a vegetarian diet than men. On average, they tended to travel in a more sustainable way. Specifically, they were more likely than men to drive a smaller gas or diesel car, or a hybrid, or an electric vehicle. Women had travelled by plane less often in the last month and had taken fewer short-haul, medium-haul, and long-haul flights in the last year.

In their answers to an open-ended question about what they could personally do to have an impact on climate change, women were more likely than men to mention buying and consuming less, walking or cycling more often, and buying second-hand. Men were more likely than women to mention changing to an electric, hybrid, or smaller vehicle; to say that their individual actions would not make much difference; or that they did not believe in climate change and saw it as part of a natural cycle; or did not consider it to be an issue.

Older people tended to have a higher score than younger people on *Ethical consumption* and *Environmental activism*. They tended to eat more fish and fewer takeaway meals, though on average, vegans and vegetarians were younger than meat-eaters. Younger people were more likely than others to use public transport or car-share on journeys to work and were more likely to say that they did not have or use a car. In answers to the open-ended question, those who mentioned changing to an electric, hybrid or smaller/more sustainable vehicle were on average older those who did not. Those mentioning protesting, activism, or working to inform and educate others, and those mentioning using less water, were on average younger.

Suburban and urban dwellers scored significantly higher on *Recycling*, urban dwellers on *Ethical consumption* and *Environmental activism*. There was no significant difference on *Conserving energy* or on overall pro-environmental behavior. The more rural and remote an individual's location, the less likely it was that they would use public transportation or car-share on journeys to work, or walk instead of driving when going to a local store or other facility. Those living in rural and especially rural and remote areas were more likely to drive a gas or diesel SUV or other large car, while those living in urban areas were the most likely to say that they did not have or use a car.

Those living in rural areas were less likely than others to use air travel for their vacations. Respondents living in urban areas on average took the greatest total number of flights, those in rural and remote areas the least. Those living in urban areas tended to eat meat less often than those living in other areas.

Remote and hybrid workers on average showed a higher level of pro-environmental behavior than those who never or rarely worked from home and scored significantly higher on all four scales. The more a respondent worked from home, the less often they were likely to eat meat.

Personality differences

Those with Extraversion, Intuition, or Feeling preferences scored significantly higher on overall pro-environmental behavior than those with Introversion, Sensing, or Thinking preferences. Respondents with Extraversion, Intuition, and Feeling preferences on average all scored significantly higher on *Ethical consumption* and *Environmental activism.* Those with Intuition or Feeling preferences scored higher on *Recycling*, and those with Feeling preferences scored higher on *Conserve energy*.

Those with a Feeling preference tended to travel more sustainably that those with a Thinking preference. Specifically, they had on average taken fewer short-haul and medium-haul flights and were more likely to walk instead on driving when going to a local store, restaurant, park, etc. Respondents with an Intuition or Judging preference were also more likely to walk when going to a local destination. Those with an Extraversion personality preference had travelled by plane more often in the last month and were more likely than Introverts to use air travel as part of a vacation.

There were some personality type differences in response to the open-ended question. Extraverts were more likely to than Introverts to mention using less plastic, while Introverts were more likely than Extraverts to mention growing their own food.

Those with a Thinking preference were more likely to mention protesting, informing, and environmental activism, while those with a Feeling preference were more likely to mention buying second-hand. Respondents with a Judging preference were more likely to mention buying items in more sustainable packaging, while those with a Perceiving preference were more likely to mention buying or consuming less, voting for green, environmental, or responsible politicians, or to say that they did not know.

Relationship of pro-environmental attitudes to pro-environmental behaviors

Overview

It would seem reasonable to assume that individuals with pro-environmental attitudes are more likely to show pro-environmental behaviors, and this has been shown in previous research (for example, Corrado, Fazio, & Pelloni, 2022; Kesenheimer & Greitemeyer, 2021; Miller, Rice, Gustafson, & Goldberg, 2022; Tamar, Wirawan, Arfah, & Putri, 2021). This was also the case in the current study. The table below shows the correlations between pro-environmental attitudes and pro-environmental behaviors.

	Recycling	Conserving energy	Ethical consump-tion	Environ-mental activism	Greener travel	Overall behavior
Climate change belief	.317**	.314**	.392**	.427**	.034	.431**
Climate change action	.340**	.354**	.473**	.528**	.032	.499**
Environmental identity	.339**	.423**	.564**	.610**	.046	.568**
Preservation of nature	.307**	.328**	.400**	.412**	.037	.431**
Overall attitude	.382**	.415**	.535**	.580**	.043	.563**
Climate skepticism	-.162**	-.175**	-.234**	-.262**	-.069	-.261**

** Correlation is significant at the 0.01 level (2-tailed).

Looking at these results:

- Overall, people with pro-environmental attitudes were more likely to show pro-environmental behaviors, with a correlation of 0.563.

- Environmental identity was the best single predictor of each aspect of pro-environmental behavior (except travel) and of overall behavior.

- Climate skeptics are less likely to show pro-environmental behaviors. Climate skepticism was most strongly associated with less ethical consumption, less environmental activism, and lower overall levels of pro-behavior.

- No aspect of environmental attitude predicted whether an individual would travel in a more environmentally friendly way.

As the results for greener travel were atypical of other pro-environmental behaviors, we carried out a more granular analysis of the different travel variables. We found that pro-environmental attitude did relate to choosing walking, cycling, or public transport over car travel, and to the type of car driven, but there was very little relationship with air travel.
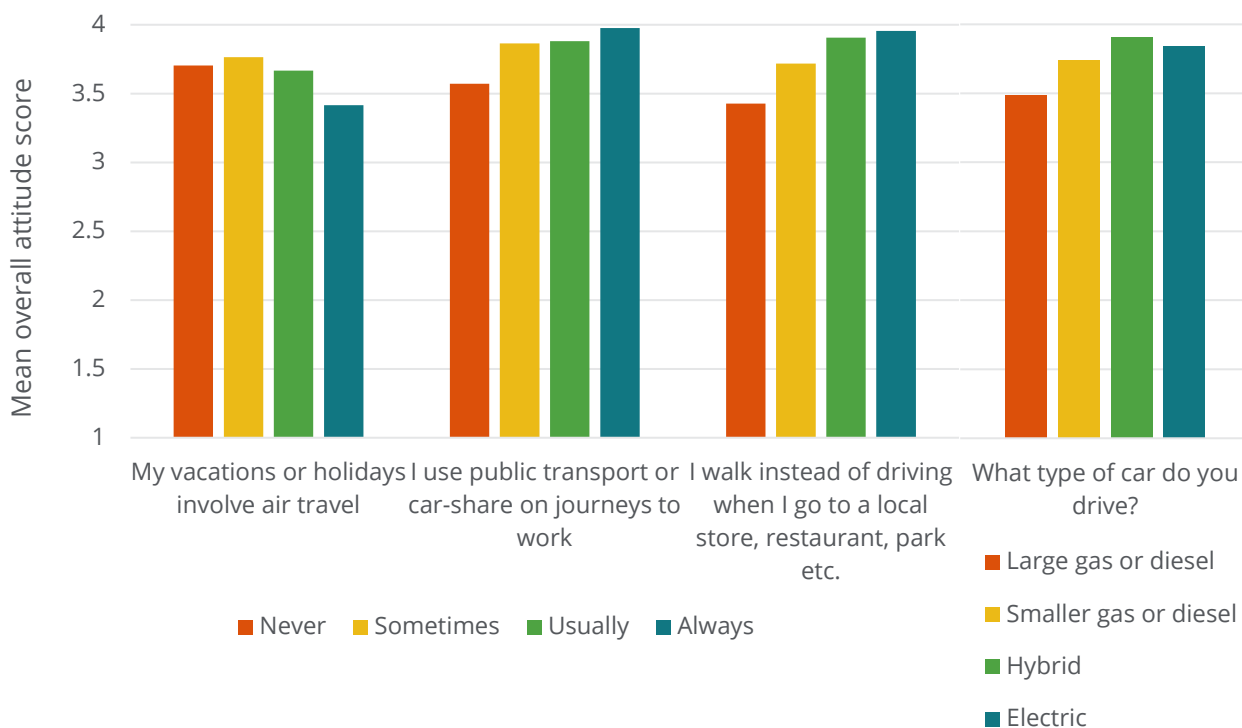
Aspect of travel	Correlation with overall attitude
Proportion of journeys in last month walking or cycling	.208**
Proportion of journeys in last month using bus, train, public transport	.098**
Proportion of journeys in last month using car	-.198**
Proportion of journeys in last month by plane	-.078**
Number of short-haul flights	-.094**
Number of medium-haul flights	.008
Number of long-haul flights	-.007
Total number of flights	-.052

** Correlation is significant at the 0.01 level (2-tailed).
Note that correlations below 0.1, though statistically significant, are of negligible effect.

Those individuals whose vacations always (but not usually or sometimes) involved air travel had a lower level of pro-environment attitude, but otherwise air travel did not show any significant relationships.

This replicates the findings of other research studies. Alcock, et al. (2017) found that "*there was no association between individuals' environmental attitudes, concern over climate change, or their routine pro-environmental household behaviours, and either their propensity to take non-work related flights, or the distances flown by those who do so*". Lassen (2010) reported similar results.

Organizational sustainability

Overview: why might organizations behave in a sustainable way?

Many organizations now espouse green values (Winston, 2022). This has been driven by factors including pressure from consumers and other interest groups, greater regulation, the advantages of a 'green' brand image, and some cost savings associated with sustainable and environmentally friendly practices.

In this research, we asked respondents 18 questions related to their workplace, on a 1 to 5 scale from strongly disagree to strongly agree.

Question	Mean	SD	% agree/ strongly agree
At work, we are encouraged to behave in an environmentally friendly way	3.62	1.045	61%
My organization takes climate change seriously	3.42	1.003	48%
We have good recycling facilities at work	3.32	1.176	52%
My co-workers take environmental issues seriously	3.28	0.897	39%
I know that my manager takes environmental issues seriously	3.24	1.006	37%
We are encouraged to make suggestions about environmentally friendly practices at work	3.20	1.098	43%
My organization supports environmental organizations or charities	3.16	1.071	38%
We have changed our processes, suppliers, or other aspects of our work to be a more environmentally sustainable business	3.16	1.086	39%
We are given information on how to act in a more environmentally friendly way	3.12	1.142	43%
My organization rewards environmentally friendly behaviors	2.87	1.071	28%
Our senior management do not behave in a very environmentally friendly way	2.61	0.989	15%
People in my organization take unnecessary work-related flights, and this contributes to climate change	2.39	1.108	16%
I don't think my organization cares much about the environment	2.38	1.075	17%
My organization pays too much attention to environmental issues	1.96	0.848	4%

Although 61% agreed or strongly agreed that they were encouraged to behave in an environmentally friendly way, less than 40% agreed or strongly agreed that their co-workers or manager took environmental issues seriously, or that processes had been changed, and only 28% that their organization rewards environmentally friendly behaviors.

Aspects of organizational behavior

Two scales were produced from the items in this survey. Both had good internal consistency reliabilities.

Scale	Example items	Mean	SD	Alpha	No. items
Organizational support *Organization promotes, supports, and rewards green behaviors*	My organization takes climate change seriously We are given information on how to act in a more environmentally friendly way I don't think my organization cares much about the environment*	3.28	0.853	0.922	9
People support *People in the organization are supportive of green behaviors*	I know that my manager takes environmental issues seriously My co-workers take environmental issues seriously Our senior management do not behave in a very environmentally friendly way*	3.38	0.748	0.735	4

*Scored negatively

For analysis purposes, an overall organizational sustainability score was also computed, utilizing all the items. This had a mean of 3.31 and a standard deviation of 0.759.

For those who would like to measure how environmentally friendly they see their own organization as, a checklist is included as Appendix B to this report.

Relationship with pro-environmental attitudes and behaviors

There were statistically significant correlations between some aspects of pro-environmental attitude and behaviour and organizational sustainability.

Attitude or behavior	Organizational support	People support	Overall sustainability
Environmental identity	0.267**	0.151**	0.255**
Overall attitude	0.137**	NS	0.125**
Recycling	0.165**	0.156**	0.176**
Conserving energy	0.170**	0.127**	0.171**
Ethical consumption	0.263**	0.145**	0.250**
Environmental activism	0.243**	0.144**	0.234**
Overall behavior	0.245**	0.166**	0.241**

** correlation is significant at the 0.01 level. NS = not significant.

Most aspects of pro-environmental attitudes (climate change belief, climate change action, preservation of nature, climate skepticism) did not show any relationship with organizational sustainability, but environmental identity did. Respondents who saw themselves as passionate about the environment, or as activists, tended to work for more sustainable organizations.

Individuals whose behavior involved more ethical and sustainable consumption, or environmental activism, also tended to work for more sustainable organizations. To a lesser extent, so did those who recycled more or who paid more attention to conserving energy.
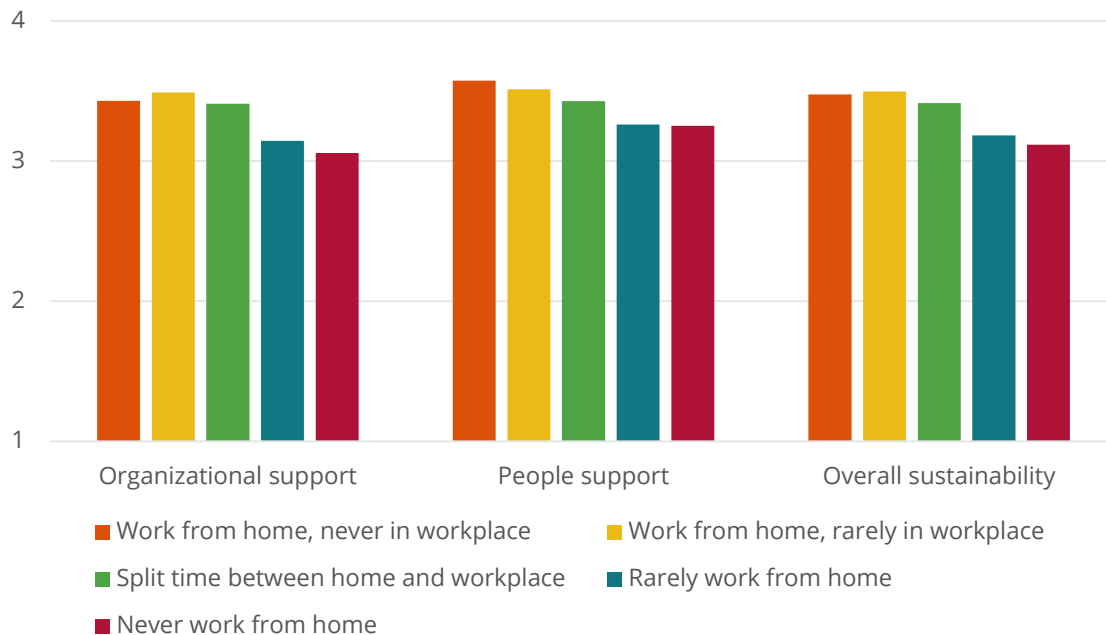
These results may mean that people who identify as passionate about the environment, and who behave in a pro-environmental way, tend to gravitate toward more sustainable organizations. Equally, it could mean that when people find themselves working for a more sustainable organization, they become more passionate about the environment and modify their behavior accordingly.

### Relationship with demographic factors and personality

There was no relationship with gender, but there was a small but statistically significant correlation (at the 0.01 level) with age. Older respondents rated their organization somewhat higher on *organizational support* (r=0.166), *people support* (r=0.170), and *overall sustainability* (r=0.183).

Those who rarely or never worked from home rated their organizations as less sustainable compared with hybrid or remote workers.

Organizational sustainability: remote, hybrid, and non-remote

Legend:
- Work from home, never in workplace
- Work from home, rarely in workplace
- Split time between home and workplace
- Rarely work from home
- Never work from home

On average, respondents with an Extraversion preference tended to score their organization more highly than did those with an Introversion preference.

## E–I differences in organizational sustainability
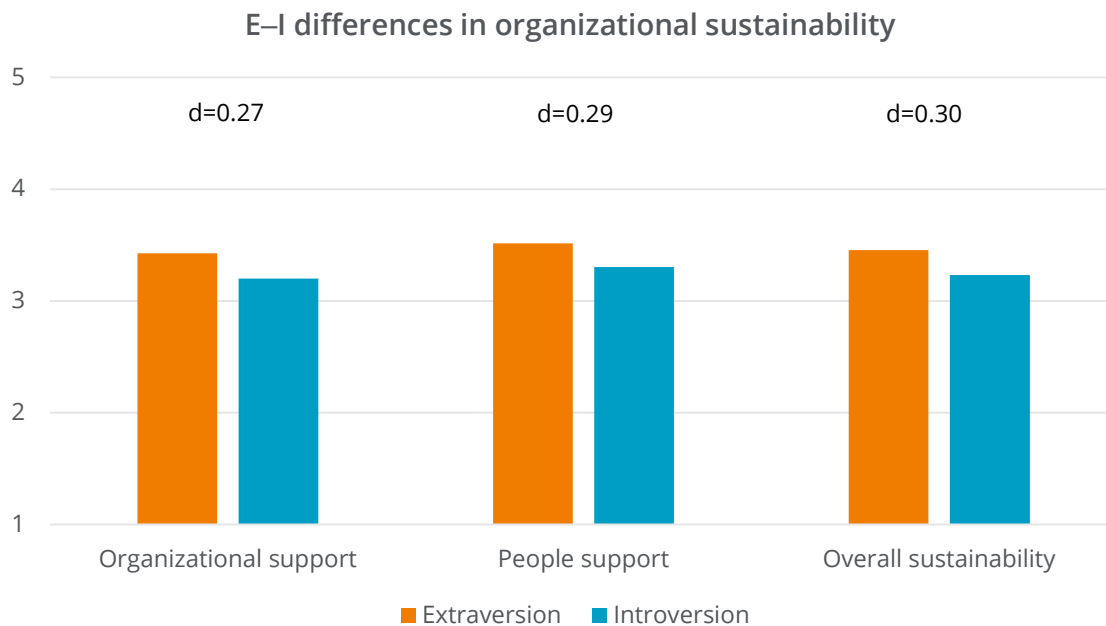
Do people enjoy working for greener organizations?

Research has shown that a green organizational culture increases job satisfaction and organizational commitment amongst employees (Shahriari, Riahi, Azizan, & Rasti-Barzoki, 2023), that adopting green human resource management practices reduces employee turnover (Islam, Jantan, Yusoff, Chong, & Hossain, 2020) and increases green organizational citizenship behaviors (Hooi, Liu, & Lin, 2022), and that sustainable practices as a whole reduce turnover intention (Florek-Paszkowska & Hoyos-Vallejo, 2023).

Four questions relating to job satisfaction and intention to leave were included in this study:

Question	Mean	SD	% agree/ strongly agree
I enjoy my job	4.01	0.969	78%
I love working for this organization	3.74	1.027	64%
If I discovered that my organization was significantly contributing to climate change, I would quit my job	2.61	1.066	18%
I am thinking of leaving my job	2.33	1.312	22%

Those who scored their organization lower on *Organizational support*, *People support*, and *Overall sustainability* were more likely to be thinking of leaving their job, and less likely to say that they enjoyed their job or loved working for their organization. The following charts show the average (mean) score on each scale for those who answered strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree for each of these three questions, as well as the linear correlation (r).

I am thinking of leaving my job

Strongly disagree **Disagree** **Neither** **Agree** **Strongly agree**

I enjoy my job

Strongly disagree **Disagree** **Neither** **Agree** **Strongly agree**

I love working for this organization

**Strongly disagree** **Disagree** **Neither** **Agree** **Strongly agree**
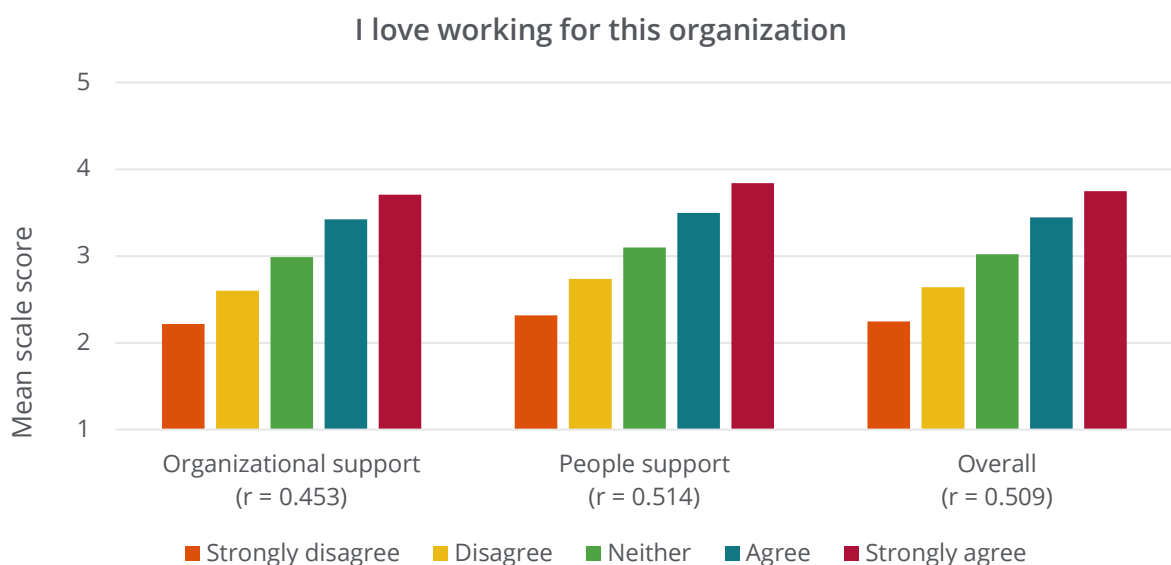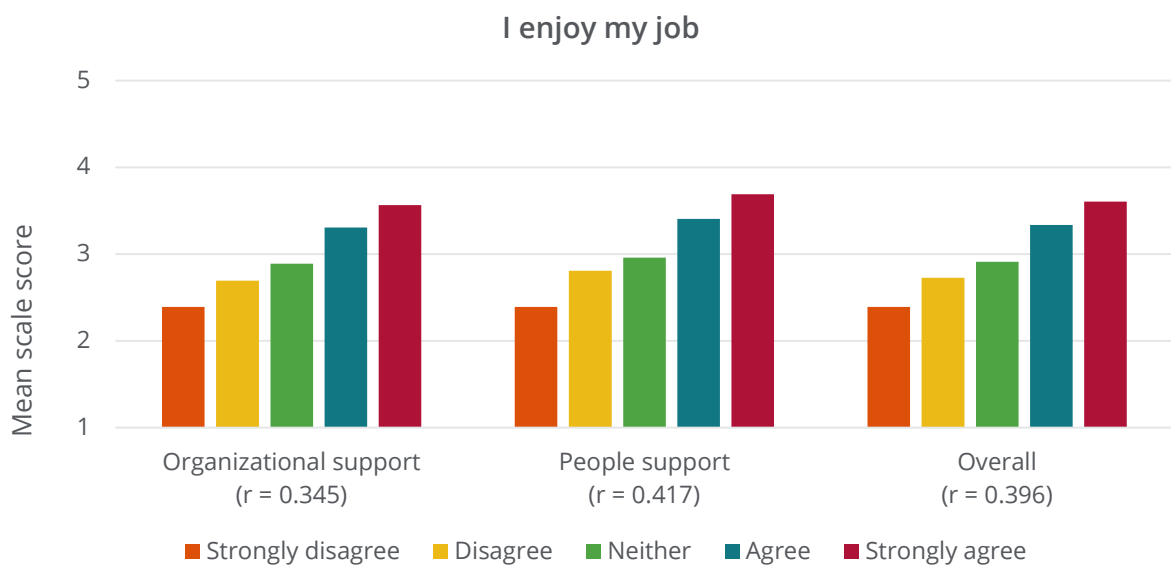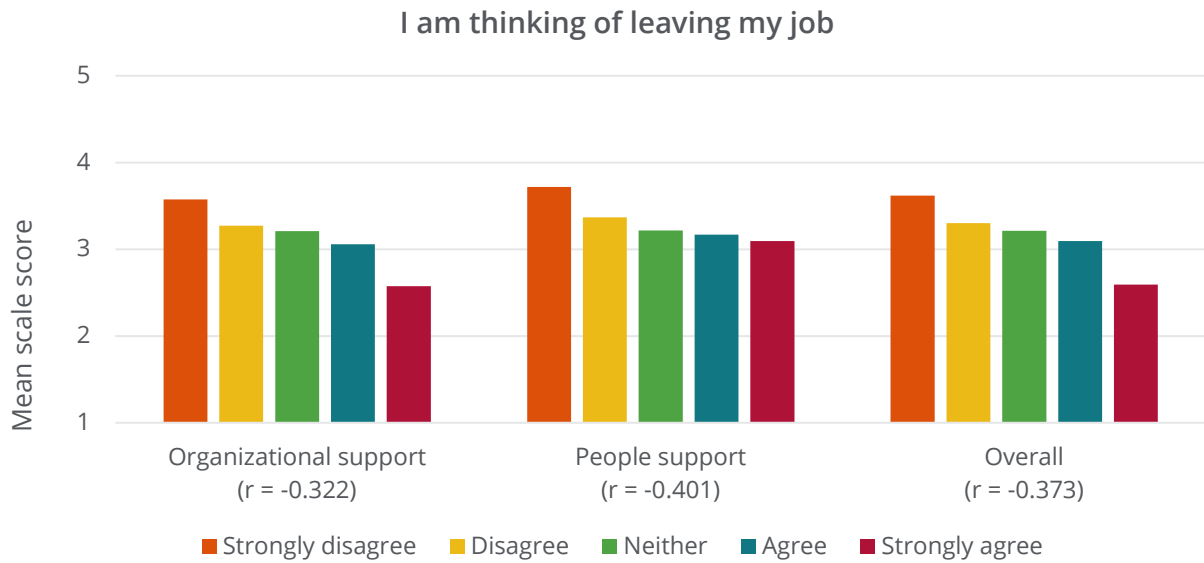
Relationship of job satisfaction and quitting with demographics and personality

There was a small but statistically significant (at the 0.01 level) correlation between age and job satisfaction. Older respondents were more likely to agree that they enjoyed their job (r=0.126) and that they loved their job (r=0.125).

Men were more likely than women to say that they were thinking of leaving their job. Women were more likely than men to say that if they discovered that their organization was significantly contributing to climate change, they would quit their job[25]. However, effect sizes were small.

Gender and leaving job/quitting less green organizations
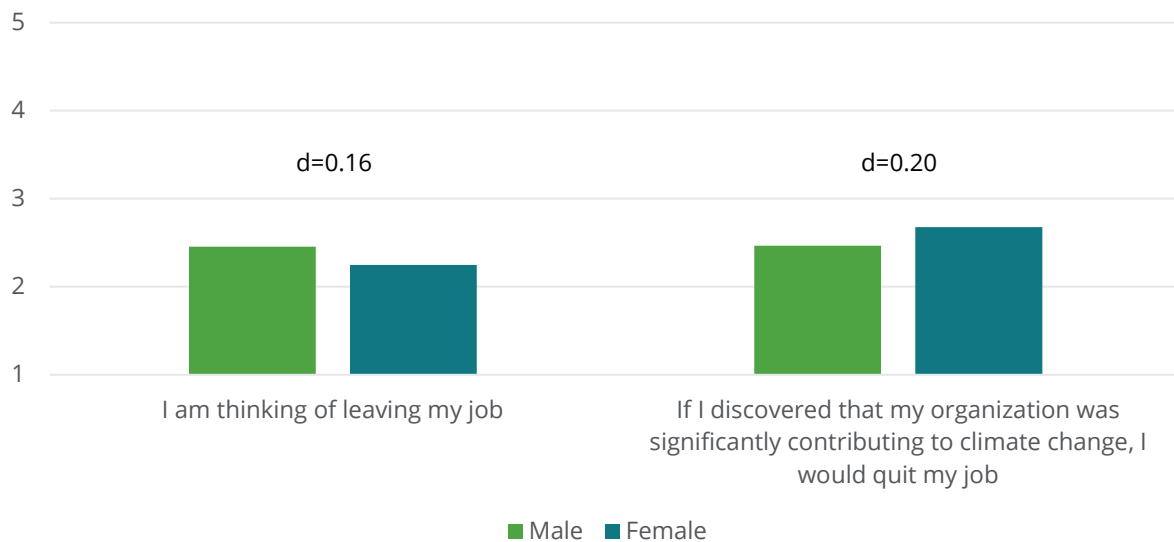
Those who rarely or never worked from home were more likely to quit their job if they discovered that their organization was significantly contributing to climate change[26].
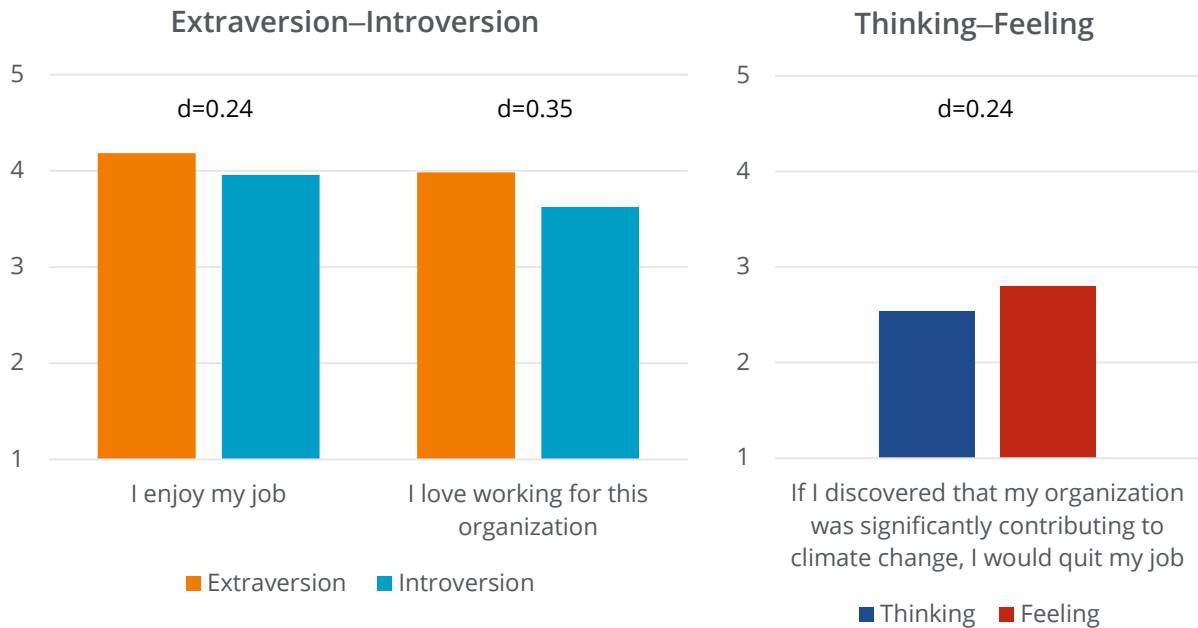
If I discovered that my organization was significantly contributing to climate change, I would quit my job


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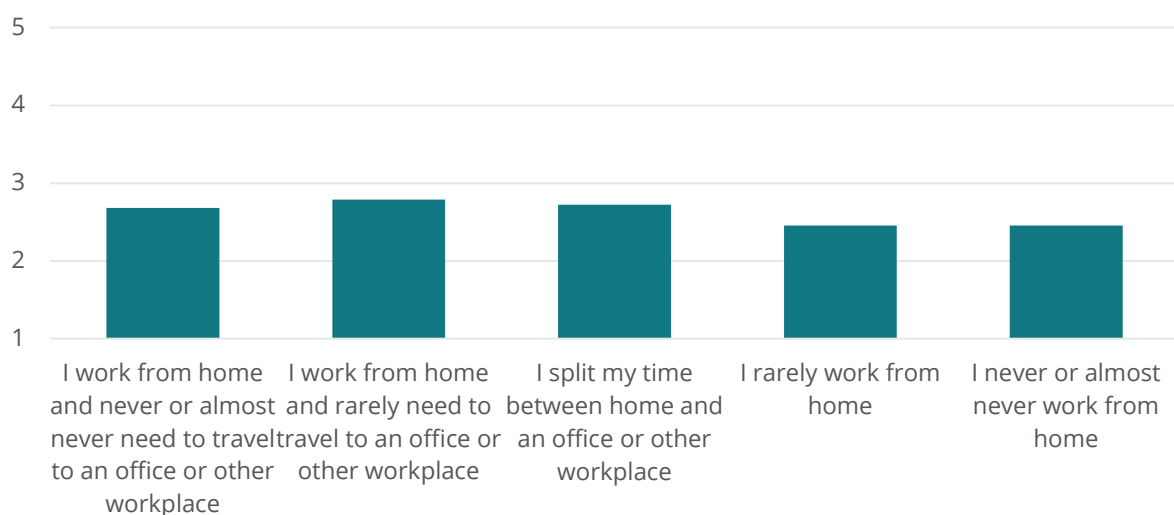
[25] Both based on independent-samples t-tests.
[26] Based on a one-way analysis of variance.

Two aspects of personality type related to these variables. Respondents with an Extraversion preference were more likely to agree that they enjoyed their job and that they loved working for their organization than those with an Introversion preference[27]. This is in line with other research showing that Extraverts often show a greater degree of job satisfaction than do Introverts (Myers, McCaulley, Quenk, & Hammer, 2018). Those with a Feeling preference were more likely[28] than those with a Thinking preference to say that they would quit their job if they discovered that their organization was significantly contributing to climate change. This was predicted, given that those with a Feeling preference are more likely than those with a Thinking preference to make decisions based on their values.

Two of these questions also showed a significant difference[29] across whole type.

MBTI type and "I love working for this organization"

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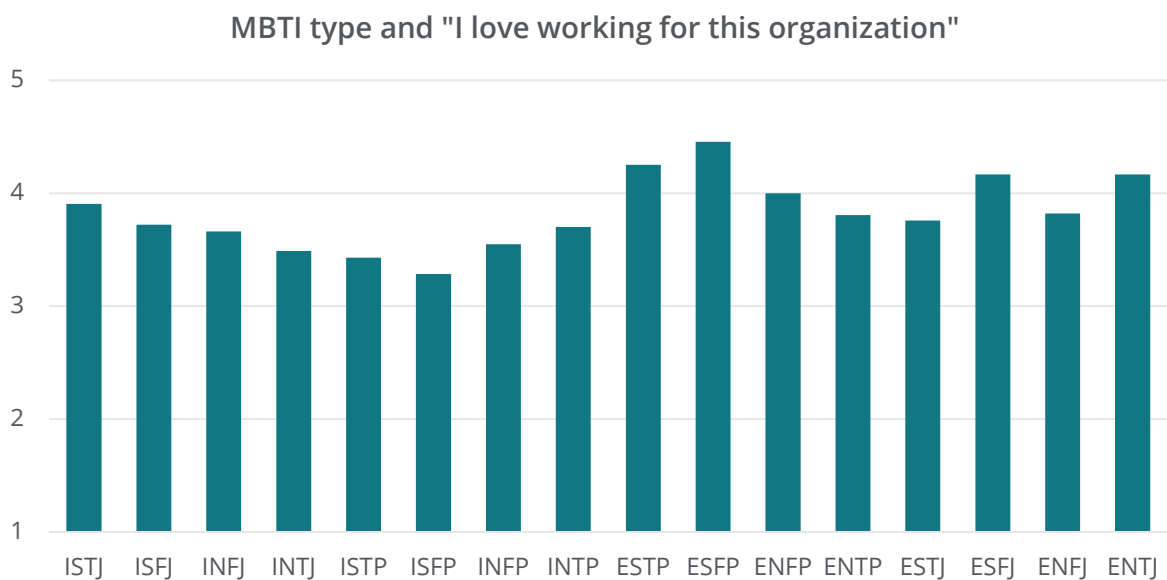
[27] Based on an independent-samples t-test
[28] Based on an independent-samples t-test
[29] Based on a one-way analysis of variance

Those with ESFP preference were the most likely to say they loved working for their organization, those with ISFP preferences the least. Apart from ISTJ, all Introverted types on average scored lower than all Extraverted types.

MBTI type and quitting "If I discovered that my organization was significantly contributing to climate change"
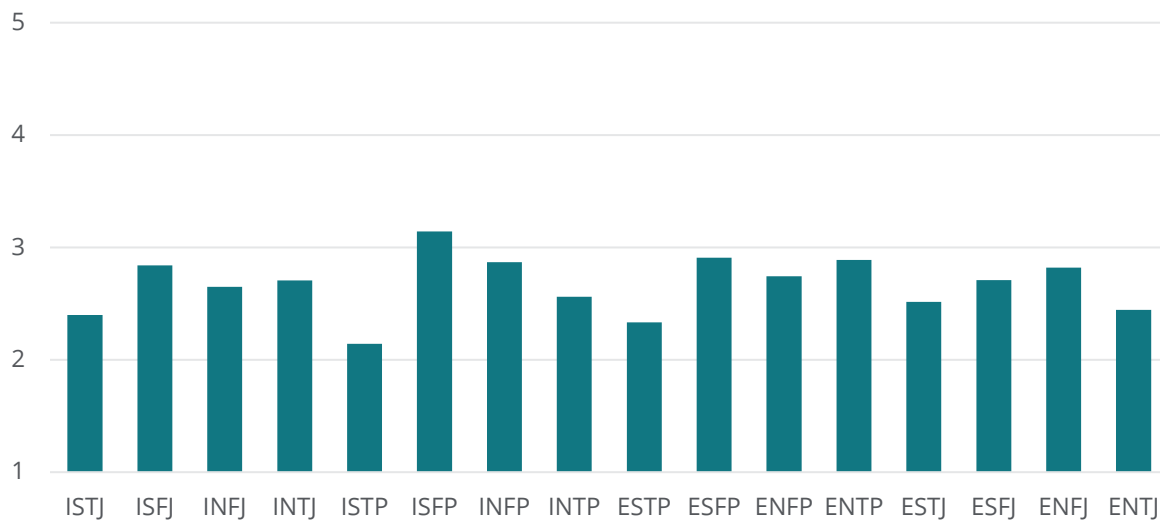
Those with ISFP preferences were the most likely to quit if they discovered that their organization was significantly contributing to climate change, those with ISTP preferences the least likely.

Effect of pro-environmental attitudes and behaviors on job satisfaction and quitting

There was very little relationship between pro-environmental attitudes or behaviors and "I enjoy my job," "I love working for this organization," or "I am thinking of leaving my job." However, those with a higher level of pro-environmental attitude and behavior were more likely to say that they would quit if they discovered that their organization was significantly contributing to climate change.

Correlation with "If I discovered that my organization was significantly contributing to climate change, I would quit my job"			
Climate change belief	0.395**	**Recycling**	0.255*
Climate change action	0.432**	**Conserving energy**	0.254**
Environmental identity	0.404**	**Ethical consumption**	0.362**
Preservation of nature	0.350**	**Environmental activism**	0.395**
Overall attitude	0.466**	**Greener travel**	0.124**
Climate skepticism	-0.302**	**Overall behavior**	0.393**

What actions could organizations take to help the environment?

In an open-ended question, respondents were asked "What one action could your organization take that would most help the environment." 528 people responded. Using thematic analysis, their answers could be grouped into several categories or themes. The chart below shows the percentage in each category. Improving recycling was the most frequently mentioned theme, followed by allowing or increasing the amount of remote working.

Category	Percentage
Improve recycling	19%
Allow or increase remote working	10%
Buy sustainable or recycled supplies	8%
Provide education or more information for employees	7%
Don't know/unsure	6%
Less travel in general	6%
Use less paper	6%
Switch to sustainable energy	5%
Reduce energy usage	5%
Make this a priority/part of company strategy	5%
Change to electric or hybrid vehicles	5%
Advocate with clients or suppliers	4%
Already doing a lot/continue with what we're doing	4%
Take fewer flights	4%
Better waste management	3%
Use less plastic	3%
Provide incentives to employees	2%
More commitment from leaders	2%
Other	8%

There were some significant[30] gender differences.

Category	Percent mentioning theme	
	Men	Women
Provide education or more information for employees	4%	9%
Reduce energy usage	9%	3%
Use less paper	3%	8%
Change to electric or hybrid vehicles	9%	2%

Those living in urban areas were less likely than other groups to mention improving recycling.

The more often respondents worked from home, the more likely they were to say that their organization was already doing well, and the less likely they were to mention improving recycling.

There were also some personality differences.

Category	Percent mentioning theme	
	E	I
Switch to sustainable energy	9%	3%
Category	**S**	**N**
Reduce energy usage	9%	4%
More commitment from leaders	0%	3%
Category	**J**	**P**
Allow or increase remote working	13%	7%
More commitment from leaders	1%	3%

Respondents who were thinking of leaving their job were less likely than others to say that their organization was doing well, and more likely to mention the themes of remote working and of greater commitment from leaders. These may be areas for organizations to address; other research has shown the importance of leaders in influencing pro-environmental behaviors (Robertson & Barling, 2013).

Category	I am thinking of leaving: percent mentioning theme				
	Strongly disagree	Disagree	Neither	Agree	Strongly agree
Allow or increase remote working	7%	10%	10%	11%	16%
More commitment from leaders	0.5%	0%	5%	3%	4%
Already doing well/continue	8%	4%	3%	3%	0%

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[30] Results on this page are based on chi-square analysis.

Organizational sustainability: summary

Overall results

Different aspects of organizational sustainability were endorsed at very different levels by survey respondents. Although 61% agreed or strongly agreed that they were encouraged to behave in an environmentally friendly way, less than 40% agreed or strongly agreed that their co-workers or manager took environmental issues seriously, or that processes had been changed, and only 28% that their organization rewards environmentally friendly behaviors.

Respondents' views on their organization could be grouped into 2 scales:

- Organizational support: the organization promotes, supports, and rewards green behaviors.
- People support: people in the organization are supportive of green behaviors.

An overall organizational sustainability score was also computed. The data from these questions has been used to produce a checklist that organizations can use to work out how sustainable they are. This is attached in Appendix B to this report.

Climate skepticism did not show any relationship with organizational sustainability. Neither did most aspects of pro-environmental attitudes (*Climate change belief, Climate change action, Preservation of nature*). However, *Environmental identity* did. Respondents who saw themselves as passionate about the environment, or as activists, tended to work for more sustainable organizations.

Individuals whose behavior involved more ethical and sustainable consumption, or environmental activism, also tended to work for more sustainable organizations. To a lesser extent, so did those who recycled more or who paid more attention to conserving energy.

When asked the open-ended question "What one action could your organization take that would most help the environment?" the most common responses concerned improving recycling, followed by allowing or increasing the amount of remote working, buying sustainable or recycled supplies, and providing education or more information for employees.

Greener organizations benefit from having employees with higher levels of job satisfaction and who are less likely to be thinking of quitting. Those who scored their organization lower on organizational support, people support, and overall sustainability were more likely to be thinking of leaving their job, and less likely to say that they enjoyed their job or loved working for their organization.

There was very little relationship between pro-environmental attitudes or behaviors and "I enjoy my job", "I love working for this organization", or "I am thinking of leaving my job". An individual's level of pro-environmental attitudes or behaviors does not predispose them to have higher or lower levels or job satisfaction or to be more or less likely to want to leave their job. However, those with a higher level of pro-environmental attitudes and behaviors were more likely to say that they would quit if they discovered that their organization was significantly contributing to climate change.

Respondents who were thinking of leaving their job were less likely than others to say that their organization was doing well, and less likely to mention the themes of remote working and of greater commitment from leaders.

Demographic differences

Men were more likely than women to say that they were thinking of leaving their job. Women were more likely than men to say that if they discovered that their organization was significantly contributing to climate change, they would quit their job. In answering the open-ended question, men were more likely than women to mention reducing energy usage or changing to electric or hybrid vehicles. Women were more likely than men to mention providing education or more information for employees, or using less paper.

Older respondents tended to rate their organization somewhat higher on organizational support, people support, and overall sustainability.

Those living in urban areas were less likely than other groups to mention improving recycling in their answers to the open-ended question.

Those who rarely or never worked from home rated their organizations as less sustainable compared with hybrid or remote workers. They were also more likely to quit their job if they discovered that their organization was significantly contributing to climate change. The more often respondents worked from home, the more likely they were to say that their organization was already doing well, and the less likely they were to mention improving recycling.

Personality differences

On average, respondents with an Extraversion preference tended to rate their organization more highly than did those with an Introversion preference. They were also more likely to agree that they enjoyed their job and that they loved working for their organization. In terms of whole type, those with ESFP preferences were the most likely to love working for their organization, those with ISFP preferences the least. With the exception of ISTJ, all Introverted types on average scored lower than all Extraverted types.

Those with a Feeling preference were more likely than those with a Thinking preference to say that they would quit their job if they discovered that their organization was significantly contributing to climate change. Those with ISFP preferences were the most likely to quit if they discovered that their organization was significantly contributing to climate change, while those with ISTP preferences were the least likely.

Conclusions and recommendations

Summary of results

Pro-environmental attitudes and climate change skepticism

Most people see climate change as real, as caused by human activity, and as having real-world effects. On a scale from 1 to 5, then:

- Belief that climate change is real, is serious and is caused by humans averaged 4.12.
- Belief that the natural environment should be preserved, not degraded averaged 3.94.
- Belief that more should be done to protect the environment averaged 3.71.
- Self-identification as being passionate about the environment averaged 3.05.

All these averages were at or above the theoretical midpoint (3.0) of a 1 to 5 scale.

Set against this, a quarter of survey respondents showed some degree of climate skepticism and 10% demonstrated climate change denial, agreeing, or strongly agreeing with the statement "*There is no 'climate emergency', it's all a big con.*"

When asked "What is the single most important thing that can be done to prevent further climate change," the most common answers involved themes of eliminating or phasing out fossil fuels, enforcing change on big business or the rich, and developing or making use of alternative energy sources. 4% said that nothing needed to be done, as climate change was not real or was part of a natural cycle, and 1% said that nothing could be done.

Pro-environmental behaviors

There was a more mixed picture regarding the extent to which survey respondents behaved in a pro-environmental way. On a scale from 1 to 4, then:

- Questions relating to recycling averaged 3.21.
- Questions relating to conserving energy averaged 2.96.
- Questions relating to ethical and sustainable buying and consumption averaged 2.49.
- Questions relating to actively supporting or participating in environmental causes and organizations averaged 1.99.

As these 1 to 4 scales have a theoretical midpoint of 2.5, the results suggest that most people tend to recycle and to conserve energy, that there is more of a split in terms of ethical buying and consumption, and that on average people are less likely to actively support or participate in environmental causes and organizations.

There was a wide variation in the sustainabilty of people's travel. 93% of respondents owned or had access to a car. Over half, on their journey to work, never used public transportation or car-shared, and just under a third walked instead of driving when going to a local store, restaurant, or other facility. Just under one third said that their vacations or holidays usually or always involved air travel. On average, respondents had taken just under five flights (for any purpose) in the last year.

Over half of survey respondents ate meat 3 or more times a week, and 82% were meat eaters to at least some extent. Two-thirds consumed dairy 3 or more times a week. Reducing these amounts would reduce the environmental impact of food production.

Very few respondents changed or upgraded their phone more frequently than every 2 or 3 years.

When asked "What one action could you take personally that would have the biggest impact on reducing climate change," driving less often and/or changing to a more sustainable vehicle were the most common answers. Three percent said that they didn't know, suggesting that there may be scope for education or more information in this area.

Organizational sustainability

Most respondents felt that, overall, the organization that they worked for behaved in a sustainable and environmentally friendly way. On a scale from 1 to 5, then:

- Questions relating to their organization promoting, supporting, and rewarding green and sustainable behaviors averaged 3.28.

- Questions relating to other people in the organization being supportive of green and sustainable behaviors averaged 3.38.

- The overall score for organizational sustainability averaged 3.31.

All these averages are above the theoretical midpoint (3.0) of a 1 to 5 scale. There was, however, a wide variation in how people saw different aspects of organizational sustainability. Although 61% agreed or strongly agreed that they were encouraged to behave in an environmentally friendly way, less than 40% agreed or strongly agreed that their co-workers or manager took environmental issues seriously, or that processes had been changed to be more sustainable, and only 28% that their organization rewarded environmentally friendly behaviors.

The data from these questions has been used to produce a checklist that organizations can use to work out how sustainable they are. This is attached in Appendix B to this report.

When asked the open-ended question "What one action could your organization take that would most help the environment?" the most common responses concerned improving recycling, followed by allowing or increasing the amount of remote working, buying sustainable or recycled supplies, and providing education or more information for employees.

People working for more environmentally friendly organizations had higher levels of job satisfaction and were less likely to be thinking of leaving their job. Those who scored their organization lower on organizational support, people support, and overall sustainability were more likely to be thinking of leaving their job, and less likely to say that they enjoyed their job or loved working for their organization.

In response to the open-ended question, respondents who were thinking of leaving their job were less likely than others to say that their organization was doing well, and more likely to mention the themes of remote working and of greater commitment from leaders. Allowing remote working and demonstrating commitment from leaders could mean that fewer people consider leaving their jobs.

Relationship between pro-environmental attitudes, pro-environmental behaviors, and organizational sustainability

People with pro-environmental attitudes were more likely to show pro-environmental behaviors, both overall and for all specific types of behavior (*Recycling*, *Conserving energy*, *Ethical consumption*, *Environmental activism*) except for sustainable travel; no aspect of environmental attitude predicted whether an individual would travel in a more environmentally friendly way overall. Pro-environmental attitude did relate to choosing walking, cycling or public transport over car travel, and to the type of car driven, but there was very little relationship with air travel. Climate skeptics were less likely to show pro-environmental behaviors.

Environmental identity was the best single predictor of each aspect of pro-environmental behavior (except travel) and of overall behavior.

Climate skepticism did not show any relationship with organizational sustainability. Neither did most aspects of pro-environmental attitudes (*Climate change belief, Climate change action, Preservation of nature*). However, *Environmental identity* did. Respondents who saw themselves as passionate about the environment, or as activists, tended to work for more sustainable organizations.

Individuals whose behavior involved more ethical and sustainable consumption, or greater degree of environmental activism, also tended to work for more sustainable organizations. To a lesser extent, so did those who recycled more and those who paid more attention to conserving energy.

An individual's level of pro-environmental attitudes did not predict their job satisfaction or whether they were thinking of leaving their job. However, those with higher levels of pro-environmental attitudes and behaviors were more likely to say that they would quit if they discovered that their organization was significantly contributing to climate change. To keep these individuals in post, it is important that organizations do not paint an unrealistic picture in their recruitment processes or in their public statements.

Gender

On average, women showed a higher level of pro-environmental attitudes than men. They scored significantly higher than men on all four scales and on total pro-environmental attitude. Men were on average more skeptical than women.

Women also expressed more pro-environmental behavior than men, scoring significantly higher on the overall measure of pro-environmental behavior and on all four scales. In other aspects of behavior, women were more likely to have a vegetarian diet than men, and on average, they tended to travel in a more sustainable way. Specifically, they were more likely than men to drive a smaller gas or diesel car, or a hybrid, or an electric vehicle, had travelled by plane less often in the last month, and had taken fewer short-haul, medium-haul, and long-haul flights in the last year.

Men were more likely than women to say that they were thinking of leaving their job. Women were more likely than men to say that if they discovered that their organization was significantly contributing to climate change, they would quit their job.

Age

There were no meaningful relationships between age and pro-environmental attitudes, and a mixed picture in terms of pro-environmental behaviors. Older people tended to have a higher score on the *Ethical consumption* and *Environmental activism* scales. They tended to eat more fish and fewer takeaway meals, though vegans and vegetarians were younger on average than meat-eaters. Younger people were more likely than others to use public transport or car-share on journeys to work and were more likely to say that they did not have or use a car.

Older respondents tended to see their organizations as more sustainable and environmentally friendly, awarding somewhat higher scores on *Organizational support*, *People support*, and *Overall sustainability*.

Location

The more urban and less remote a respondent's location, the higher their score on *Climate change belief*, *Climate change action*, *Preservation of nature*, and *Overall attitude*, while those living in more rural and remote areas were more likely to be skeptical about climate change, or to deny it exists.

Overall, those living in urban and to a slightly less extent suburban areas tended to show somewhat higher levels of pro-environmental behavior. Urban and suburban dwellers scored significantly higher on the scales of *Recycling*, urban dwellers on *Ethical consumption* and *Environmental activism*. There was no significant difference on *Conserving energy* or on overall pro-environmental behavior. Those living in urban areas tended to eat meat less often than those living in other areas.

Looking at travel, the more rural and remote an individual's location, the less likely it was that they would use public transportation or car-share on journeys to work, or to walk instead of driving when going to a local store or other facility. Those living in rural and especially rural and remote areas were more likely to drive a gas or diesel SUV or other large car, while those living in urban areas were the most likely to say that they did not have or use a car. However, those living in urban areas were more likely than others to use air travel for their vacations, and on average took the greatest total number of flights. Those in rural and remote areas took the least.

Remote, hybrid, and non-remote work

Remote and hybrid workers on average showed a higher degree of pro-environmental attitudes than workers based principally or entirely in the office or other workplace, scoring significantly higher on all scales.

Remote and hybrid workers on average showed a higher level of pro-environmental behavior than those who never or rarely worked from home, scoring significantly higher on all four scales.

Those who rarely or never worked from home rated their organizations as less sustainable compared with hybrid or remote workers. They were also more likely to quit their job if they discovered that their organization was significantly contributing to climate change.

Personality type

Individuals with an Intuition or Feeling preference on average showed higher levels of pro-environmental attitudes compared with those with a Sensing or a Thinking preference, scoring significantly higher on all scales. Similarly, those with Sensing and Thinking preferences were more likely to be skeptical than those with Intuition and Feeling preferences. Those with NF preferences showed the highest level of pro-environmental attitude, and those with ST preferences the lowest, across all scales. Respondents with an Extraversion preference scored significantly higher than those with an Introversion preference on the scale of *Environmental identity*. On average those with ENFP, INFP, or INFJ preferences had the highest level of overall pro-environmental attitude, those with ISTP or ESTP the lowest.

Those with Extraversion, Intuition, or Feeling preferences on average showed a higher level of pro-environmental behavior than those with Introversion, Sensing, or Thinking preferences, scoring significantly higher on overall pro-environmental behavior. Those with Extraversion, Intuition, and Feeling preferences on average all scored significantly higher on *Ethical consumption* and on *Environmental activism*, those with Intuition or Feeling preferences on *Recycling,* and those with Feeling preferences on *Conserve energy*,

People with a Feeling preference tended to travel more sustainably that those with a Thinking preference. Specifically, they had on average taken fewer short-haul and medium-haul flights and were more likely to walk instead on driving when going to a local store, restaurant, park, etc. Respondents with an Intuition or Judging preference were also more likely to walk when going to a local destination. Those with an Extraversion personality preference had travelled by plane more often in the last month and were more likely than Introverts to use air travel as part of a vacation.

Appendix C to this report contains type-specific suggestions for more environmentally friendly behaviors.

On average, respondents with an Extraversion preference tended to see their organization as more environmentally friendly than did those with an Introversion preference, scoring higher on all three scales. They were also more likely to agree that they enjoyed their job and that they loved working for their organization compared with those with an Introversion preference. In terms of whole type, those with ESFP preference were the most likely to love working for their organization, those with ISFP preferences the least. Except for ISTJ, all Introverted types on average scored lower than all Extraverted types.

Those with a Feeling preference were more likely than those with a Thinking preference to say that they would quit their job if they discovered that their organization was significantly contributing to climate change. In terms of whole type, those with ISFP preferences were the most likely to quit if they discovered that their organization was significantly contributing to climate change, those with ISTP preferences the least likely.

Recommendations

Recommendations for individuals

Our research suggests that most people's views about the environment are generally stronger than their actions. For example, 92% of respondents agreed or strongly agreed that life in the sea is being destroyed by plastics and microplastics, but only 45% usually or always buy products packaged in sustainable materials rather than in plastic. People can agree that climate change is real, is serious, and that something needs to be done about it, but things get more difficult when it comes to taking personal action.

Here are some suggestions for everyday actions that you could take. Based on our data, these actions may be less common than you might think.

- Take water with you when you go out; don't buy drinks in a disposable bottle.
- If you do buy food or drink when you're out, recycle the packaging, even if this means bringing it home.
- Buy products packaged in sustainable materials, such as recycled and recyclable cardboard, rather than in plastic.
- Buy food or other products in bulk or from zero-waste shops.
- Try to buy fairtrade, organic and/or responsibly sourced food.
- If you can, grow some of your own food.
- If you eat meat, eat it less often—"eat food, not too much, mainly plants."
- Buy, and waste, less food.
- Buy and use less plastic.
- Where you can, buy second-hand or 'pre-loved' products. Avoid fast fashion.
- Don't upgrade your cell phone too often. Why not keep it until it breaks or becomes unusable?
- In general, buy less stuff.
- Recycle more.
- Unplug electronic devices before leaving the house.
- Don't be the first person to turn on the air conditioning when it gets hot.
- Put on a sweater before turning on the heating.
- If you are able to, consider working from home more often.
- Use public transport or car-share on journeys to work.
- Drive less, walk or cycle more often.
- Consider making your next car a hybrid or electric vehicle.
- Donate to environmental organizations or charities.
- Consider taking part in events such as litter picks, or in protests or demonstrations on environmental issues.

Some of these actions will be more difficult for some; for example, those living in rural areas may not find it easy to cut down on their driving. But doing whatever you can will help.

These actions can apply to anyone, but more specific actions for each MBTI type preference are included in Appendix C.

Recommendations for organizations

Our research, and several other studies, show that people who work for greener, more environmentally friendly organizations tend to have greater job satisfaction and are less likely to be thinking of leaving. When organizations behave in an environmentally sustainable way, this confers a human resources dividend as well as being good for the planet.

To achieve this dividend, organizations should demonstrate that they take sustainability seriously. This should go beyond just talking about environmental issues. Based on the responses to our survey, the actions organizations can take might include:

- Giving employees concrete information that will help them to behave in a more environmentally friendly way.

- Rewarding sustainable behaviors.

- Encouraging employees to make suggestions about environmentally friendly practices at work and taking these on board.

- Changing processes, suppliers, or other aspects of the business to more environmentally sustainable—for example, by buying sustainable or recycled supplies, using less paper, or switching to sustainable energy.

- Managers and leaders should demonstrate that they take sustainability seriously, modifying their behavior—for example, by reducing the number of flights they take.

- Improving recycling facilities.

- Allow, or increase the availability of, remote working.

- In recruitment literature and processes, present a realistic picture of how environmentally friendly an organization is. Some people will leave their jobs if they discover that their organization is contributing to climate change.

Appendix B to this report contains a checklist that can be used to calculate how environmentally friendly individuals consider their organization to be.

Recommendations for environmental organizations

Eliminating or phasing out fossil fuels, enforcing change on big business or the rich, and developing or making use of alternative energy sources were the most common responses to the question "What is the single most important thing that can be done to prevent further climate change." None of these are easy to achieve, but they do provide an idea as to what might make the most sense, and be the most acceptable, to people in general.

It can be easy to forget that climate change skepticism, while a minority view, is a sizeable minority. This should be considered in any environmental actions.

Those with personality preferences for Sensing and Thinking were the most likely to be climate skeptics and might be the most difficult people reach. Other work with MBTI type suggests that to engage and be persuasive with this group, it will be important to outline pros and cons of your case, providing facts and evidence, and communicating in a clear and direct way. Approaches that are too personal or emotional, logically inconsistent, or which appear to lack confidence may backfire.

When asked "What one action could you take personally that would have the biggest impact on reducing climate change," three percent said that they didn't know, suggesting that there may be scope for education or more information in this area.

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Appendices

Appendix A: Psychological type and the MBTI® assessment

The Myers-Briggs Type Indicator® (MBTI®) assessment is probably the most widely used personality questionnaire in the world. It does not measure our ability or skill, or how much of a particular personality trait we have. It looks at whether we have an in-built preference to do things in one way or in another way. It looks at four pairs of preferences:

Opposite ways to direct and receive energy	
Extraversion (E)	**Introversion (I)**
Gets energy from the outer world of people and experiences	Gets energy from the inner world of reflections and thoughts
Focuses energy and attention outwards in action	Focuses energy and attention inwards in reflection

Opposite ways to take in information	
Sensing (S)	**Intuition (N)**
Prefers real information coming from five senses	Prefers information coming from associations
Focuses on what is real	Focuses on possibilities and what might be

Opposite ways to decide and come to conclusions	
Thinking (T)	**Feeling (F)**
Steps out of situations to analyze them dispassionately	Steps into situations to weigh human values and motives
Prefers to make decisions on the basis of objective logic	Prefers to make decisions on the basis of values

Opposite ways to approach the outside world	
Judging (J)	**Perceiving (P)**
Prefers to live life in a planned and organized manner	Prefers to live life in a spontaneous and adaptable way
Enjoys coming to closure and making a decision	Enjoys keeping options open

For convenience, these pairs of preferences, or pairs of opposites, are often called type preference pairs. So, we might talk about the E–I preference pair, the S–N preference pair, the T–F preference pair, or the J–P preference pair.

In each pair, we will have a preference for one type. So, for example, we might prefer E rather than I, and spend much more of our time and energy doing things typical of Extraverts, and little of our time or attention on activities and ways of doing things typical of Introverts. Or we might prefer I rather than E. Whatever our preference, however, we will spend some time and carry out some activities associated with the other side. The same applies to S–N, T–F, and J–P. In each case we will have a preference, but we will visit the other side from time to time. We will use all eight modes at least some of the time.

The MBTI assessment is a method for helping individuals to work out what their type preferences are, so you may hear people say things like "I'm an ESTJ" or "I've got preferences for INFP" or "I'm definitely a Perceiving type". They can then use this knowledge to help them with their development as human beings. The four letters can be combined to give 16 different types, but this four-letter type formula should not be used to 'put people in a box'. The MBTI instrument is used to open up possibilities, not to limit individuals.

The 16 types are often illustrated using a *type table*, as shown here. Each of these 16 types has a particular characteristic taking the lead in directing their personality—what's often called their favorite process.

So, for ISTJ and ISFJ for example, Introverted Sensing (S^i) leads. Central to their personality is the importance of lived experience and drawing on their rich store of memories.

For ESTP and ESFP, it is Extraverted Sensing (S^e)— experiencing the moment and the here and now with all their senses—that leads, and so on for all 16 types. See the table below.
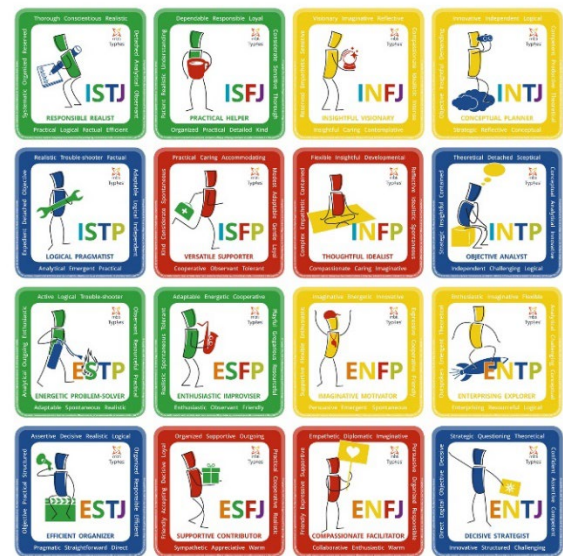
Types	Favorite process
ISTJ, ISFJ	Introverted Sensing (S^i)
ESTP, ESFP	Extraverted Sensing (S^e)
INFJ, INTJ	Introverted Intuition (N^i)
ENTP, ENFP	Extraverted Intuition (N^e)
ISTP, INTP	Introverted Thinking (T^i)
ESTJ, ENTJ	Extraverted Thinking (T^e)
ISFP, INFP	Introverted Feeling (F^i)
ESFJ, ENFJ	Extraverted Feeling (F^e)

Appendix B: How green is your organization?

How green is your organization? If you would like to find out, please answer the 10 questions below. Circle a number from 1 (strongly disagree) to 5 (strongly agree) depending on the extent to which you agree or disagree with each statement. You'll then be able to compare your answers with our database of survey respondents. Is your organization more or less environmentally friendly compared with others?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
At work, we are encouraged to behave in an environmentally friendly way.	1	2	3	4	5
I know that my manager takes environmental issues seriously.	1	2	3	4	5
My co-workers take environmental issues seriously.	1	2	3	4	5
My organization rewards environmentally friendly behaviors.	1	2	3	4	5
My organization supports environmental organizations or charities.	1	2	3	4	5
My organization takes climate change seriously.	1	2	3	4	5
We are encouraged to make suggestions about environmentally friendly practices at work.	1	2	3	4	5
We are given information on how to act in a more environmentally friendly way.	1	2	3	4	5
We have changed our processes, suppliers, or other aspects of our work to be a more environmentally sustainable business.	1	2	3	4	5
We have good recycling facilities at work.	1	2	3	4	5

For each statement, you should have circled a number. Add these up to give your total score and enter this in the box opposite. The number should be between 10 and 50.

Now look up the score in the table below to see how green your organization is.

Your score	10–16	17–20	21–24	25–28	29–32	33–36	37–40	41–44	45–48	49–50
STEN	1	2	3	4	5	6	7	8	9	10
Meaning	Much less green than most		Less green than most		Typical for organizations		Greener than most		Much greener than most	

If you have a score of 5 or 6, then your view of your organization is typical of how most people see their organizations. The lower the score, the less green and less environmentally friendly your organization is. The higher the score, the greener and more sustainable it is.

If your score is not as high as you would like, look at how you answered the individual questions above. Where could your organization make changes?

Appendix C: Recommendations for each MBTI type

Overview

This report has outlined general actions that individuals could take to behave in a more environmentally friendly way. Here are specific suggestions for each type.

Introverted Sensing (the Conserver): ISTJ and ISFJ

Conservers are the least likely group to be environmental activists, and the most to be climate change skeptics. 31% are skeptical to some extent, and 14% think that "there is no climate emergency, it's all a big con." For those who do wish to be greener, here are some suggestions:

- Review your buying habits. Conservers are less likely than most to buy Fairtrade, organic and/or responsibly sourced food or locally grown or produced food, or to avoid buying clothing made from synthetic materials.
- Are there destinations you always drive to? Break the habit and walk or cycle if you can.
- Taking part in protests or demonstrations probably doesn't appeal, so look for other ways to get involved. What experience or knowledge can you bring?

Extraverted Sensing (the Activist): ESTP and ESFP

Activists live in the moment, and usually aren't keen on planning. That spontaneity can mean that they don't always do things in the most sustainable way.

- Activists are more likely than others to use air travel to get to their vacation destinations, and on average they take more flights than other people. Are there alternative ways to get to where you want to go? Make this an adventure!
- If it gets cold, don't put on the heating, put on a sweater. It'll only take a minute longer.
- Take a bag to the supermarket with you, rather than getting a new plastic bag every time. And when you're there, think carefully about what you buy so that you don't waste food. Don't just grab the first item that you see, choose sustainably packaged products.

Introverted Intuition (the Visionary): INTJ and INFJ

Overall, visionaries tend to live in a sustainable way. However, they could consider these actions.

- Visionaries are the least likely group to use public transport or car-share on journeys to work. Is this something that you could try?
- If the environment is important to you, consider making donations to environmental organizations or charities, or volunteering.
- Think about how you could save energy—and then act, even if you're still thinking. Unplug electronic devices before you leave the house and don't be the first to turn on air conditioning or fans when it gets hot.

Extraverted Intuition (the Explorer): ENTP and ENFP

Explorers are often ethical purchasers and can often see themselves as environmental activists, However, there are still some actions that they could try.

- Buy food or other products in bulk or from zero-waste shops to cut down on plastic and other packaging.
- You may already buy clothes made from sustainable materials but consider buying second-hand instead—and not just clothing.
- Consider growing some of your own food, maybe things you can't get in the shops.

Introverted Thinking (the Analyst): ISTP and INTP

Analysts are the group most relaxed about recycling—and who on average score lowest on the recycling scale.

- It's likely that you do recycle, but perhaps you don't recycle as much as others. How could you improve this? If you are a little cynical about whether materials are properly recycled once they leave your hands, make sure of your facts before giving up.
- If you eat meat, eat it less often.
- Analysts are the group most likely to wait till they have a full load before using the washing machine or dishwasher. Think of other ways you can apply your logical approach to saving energy around the house—and elsewhere.

Extraverted Thinking (the Director): ESTJ and ENTJ

Directors like to get things done and make things happen. That includes doing the recycling and being efficient in saving energy and avoiding waste. There are of course still areas that Directors could look at.

- If you already buy locally produced, sustainable food, go to the next level by growing vegetables and fruit yourself. Set yourself goals and follow them through.
- If you eat meat, eat it less often.
- Use your energy and drive for organization by joining or volunteering with an environmental organization.

Introverted Feeling (the Conscience): ISFP and INFP

These people are the least likely to be climate skeptics. They're the most likely to travel in a sustainable way and score highly on saving energy.

- Buy food or other products in bulk or from zero-waste shops to cut down on plastic and other packaging.
- Consciences are less likely to eat meat than other people. By growing your own food, you can contribute even more to a sustainable world—and demonstrate your values.
- If it gets cold, don't put on the heating, put on a sweater. Unplug electronic devices before leaving the house.

Extraverted Feeling (the Nurturer): ESFJ and ENFJ

Nurturers want the world to be in harmony with their values, and if these relate to sustainability, they will work hard to ensure that they, and others, behave in a sustainable way.

- Put your values into action by joining or volunteering for an environmental organization or taking part in protests or demonstrations.
- If you can, use public transportation or car-share rather than driving. Encourage your family and friends to drive less too.
- Look for a community garden, allotment, or communal plot where you can grow your own food while meeting new people (and maybe helping them).