



Department
for Environment
Food & Rural Affairs

Ocean Literacy Headline Report

England

2022

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Executive summary

- This headline report presents the headline findings for the English sample from the survey entitled: *Survey on Ocean Literacy in the UK*. This survey follows up on research undertaken in 2021, and was commissioned as part of the project *Understanding Ocean Literacy and Ocean Climate-related Behaviour Change in the UK*¹ by Defra in collaboration with the Ocean Conservation Trust, Natural Resources Wales and Marine Scotland.
- The primary focus of the survey is to better understand the extent and current levels of Ocean Literacy in civil audiences across England, Wales and Scotland.
- Across England, 7,060 people over the age of 16 participated in the online survey. Fieldwork was conducted between 7 March and 3 April 2022.
- The survey uses the IOC-UNESCO definition of ‘Ocean Literacy’ – an understanding of the ocean’s influence on a person and their influence on the ocean.
- The survey explores different dimensions of ‘Ocean Literacy’: including information on public awareness, knowledge, attitudes, communication, activism and behaviours related to the marine environment.
- The survey also explores barriers to promoting Ocean Literacy in the population.
- This survey builds on earlier research undertaken in 2021 and provides contextual information needed to understand behaviour change related to climate change and the attainment of Good Environmental Status (GES) in the UK marine environment.
- The objectives of the survey are to:
 - Provide robust information on the extent to which the public understands and are aware of the benefits they receive from the marine environment.
 - Identify pro-environmental behaviours among the public in relation to the marine environment, for example, switching to energy from marine renewable sources, buying more locally produced seafood products and using more public transport.
 - Measure the extent of the public’s attitudes towards protecting the marine environment, including intentions for change.
 - Provide estimates of the level and type of engagement with the marine environment, including visits and activities undertaken in the last 12 months, and identify the barriers and drivers that influence access and participation.
 - Provide information on the impact of visits to the marine environment on wellbeing within the population.

Figure 1 overleaf summarises the key findings from the survey.

¹ At the time of writing Northern Ireland’s Department of Agriculture, Environment and Rural Affairs is also participating in the survey for the first time in 2022 and the Northern Ireland headline report will be published at a later date.

Figure 1: Summary of key findings (weighted %)

Awareness	14% believe health of the global marine environment is very good/good 18% believe health of the marine environment around England is very good/good 29% with very good/good awareness of global challenges
Knowledge	Marine terms with highest understanding: <ul style="list-style-type: none">• 92% climate change• 82% sustainable fishing• 70% biodiversity
Attitudes	Top 3 benefits from marine environment: <ul style="list-style-type: none">• 50% diverse plant and animal habitats• 38% food• 30% renewable energy Top 3 benefits of salt marshes and seagrass meadows: <ul style="list-style-type: none">• Diverse habitats for wildlife (53% and 52%)• Natural forms of coastal protection (42% and 38%)• Pollution control and water purification (34% and 36%) Most important habitat for carbon capture was tropical rainforest (62%) 3 highest threats to the marine environment: <ul style="list-style-type: none">• 69% marine litter and plastic pollution• 58% chemical pollution• 51% overfishing 83% protecting marine environment very important/ important 88% human activity contributes to climate change 84% supported the creation of Marine Protected Areas
Communication	Sources of knowledge about the marine environment: <ul style="list-style-type: none">• 45% television/radio• 44% news• 38% documentaries• 22% social media
Behaviour	Top 3 pro-climate behaviours: <ul style="list-style-type: none">• 77% recycling• 69% reduced use of single use plastic• 65% reuse plastic 74% have or plan on making lifestyle changes Reasons for change: <ul style="list-style-type: none">• 69% concern about climate• 68% desire to be greener 48% believe lifestyle has impact
Activism	Top pro-marine acts: <ul style="list-style-type: none">• 32% lifestyle changes• 22% petitions

Personal or emotional connection	<p>Top emotional terms:</p> <ul style="list-style-type: none"> • 45% concern • 39% awe/wonder • 28% curiosity • 27% calm/relaxed
Access, experience & proximity	<p>11% never visited the marine environment</p> <p>Top activities:</p> <ul style="list-style-type: none"> • 59% walking • 29% photography • 28% visiting a coastal heritage site <p>Outcomes of visits:</p> <ul style="list-style-type: none"> • 78% mental health • 72% physical health • 59% time with others

Introduction

The headline report

This report presents the headline findings for the Survey on Ocean Literacy in England. This survey was commissioned as part of the project *Understanding Ocean Literacy and Ocean Climate-related Behaviour Change in the UK*² by Defra in collaboration with the Ocean Conservation Trust, Natural Resources Wales and Marine Scotland.

Across England, 7,060 people over the age of 16 participated in the online survey. Fieldwork was conducted between 7 March and 3 April 2022.

Background

The main aim of the survey is to better understand the extent and current level of Ocean Literacy in the England, Wales and Scotland.

The survey uses the IOC-UNESCO definition of ‘Ocean Literacy’ – ‘an understanding of the ocean’s influence on a person and their influence on the ocean’.

Using this definition, the survey explores different dimensions of ‘Ocean Literacy’: including information on public awareness, knowledge, attitudes, communication, activism and behaviours related to the marine environment.

The survey also explores barriers to promoting Ocean Literacy in the population.

Survey scope

This survey builds on earlier research undertaken in 2021 in England and Wales, and provides contextual information needed to understand behaviour change related to climate change and the attainment of Good Environmental Status (GES) in the UK marine environment.

The objectives of the survey are to:

- Provide robust information on the extent to which the public understands and are aware of the benefits they receive from the marine environment.

² At the time of writing Northern Ireland's Department of Agriculture, Environment and Rural Affairs is also participating in the survey for the first time in 2022 and the Northern Ireland headline report will be published at a later date.

- Identify pro-environmental behaviours among the public in relation to the marine environment, for example, switching to energy from marine renewable sources, buying more locally produced seafood products and using more public transport.
- Measure the extent of the public's attitudes towards protecting the marine environment, including intentions for change.
- Provide estimates of the level and type of engagement with the marine environment, including visits and activities undertaken in the last 12 months, and identify the barriers and drivers that shape participation.
- Provide information on the impact of visits to the marine environment on wellbeing.

A note on the data in this report

The findings in this report describe proportions of respondents from an overall weighted base. The weighted base is the adjusted sample size within each sub-group after weighting procedures have been applied to ensure the sample is nationally representative. This is applied to the overall unweighted base of 7,060 respondents, which is the total number of survey responses achieved.

The figures presented in the report have been rounded to the nearest whole percentage. In some instances, where percentages have been summed, this is done to a number of decimal places, which means that figures may appear to be ±1% up or down from the percentages when summed to zero decimal places.

Where available, comparisons have been made with the 2021 Survey on Ocean Literacy in England, and statistically significant movements over time have been noted at the 99% confidence level (i.e. three percentage points difference or more).

Further details about the methodology used in the survey, including sample design, weighting and demographic information are outlined in the technical report.

Further publications related to this survey will be made available [here](#):

- A technical report containing details of the survey methodology
- Data tables providing more detailed survey results
- Ocean Literacy in England and Wales Headline Findings Report 2021
- '*Understanding Ocean Literacy and ocean climate-related behaviour change in the UK – An Evidence Synthesis*'. Report produced for Ocean Conservation Trust and Defra

Dimensions of ocean literacy

Brennan et al. (2019) defined Ocean Literacy as having six dimensions: awareness, knowledge, attitudes, communication, behaviour and activism.

However, there are a number of other models and concepts relating to Ocean Literacy (e.g. marine citizenship), and, as such, the definition of Ocean Literacy continues to evolve. In addition to the six dimensions listed above, this report includes two additional dimensions: personal or emotional connection and access experience & proximity.

Further detail on these dimensions and the supporting evidence for them can be found in the 2020 report '*Understanding Ocean Literacy and ocean climate-related behaviour change in the UK – An Evidence Synthesis*', prepared for Defra and the Ocean Conservation Trust.

The full list of Ocean Literacy dimensions included in this report are:

- Awareness
- Knowledge
- Attitudes
- Communication
- Behaviour
- Activism
- Personal or emotional connection
- Access, experience, and proximity

Throughout this report, bullet points at the end of each section make clear which dimension of Ocean Literacy the findings presented relate to.

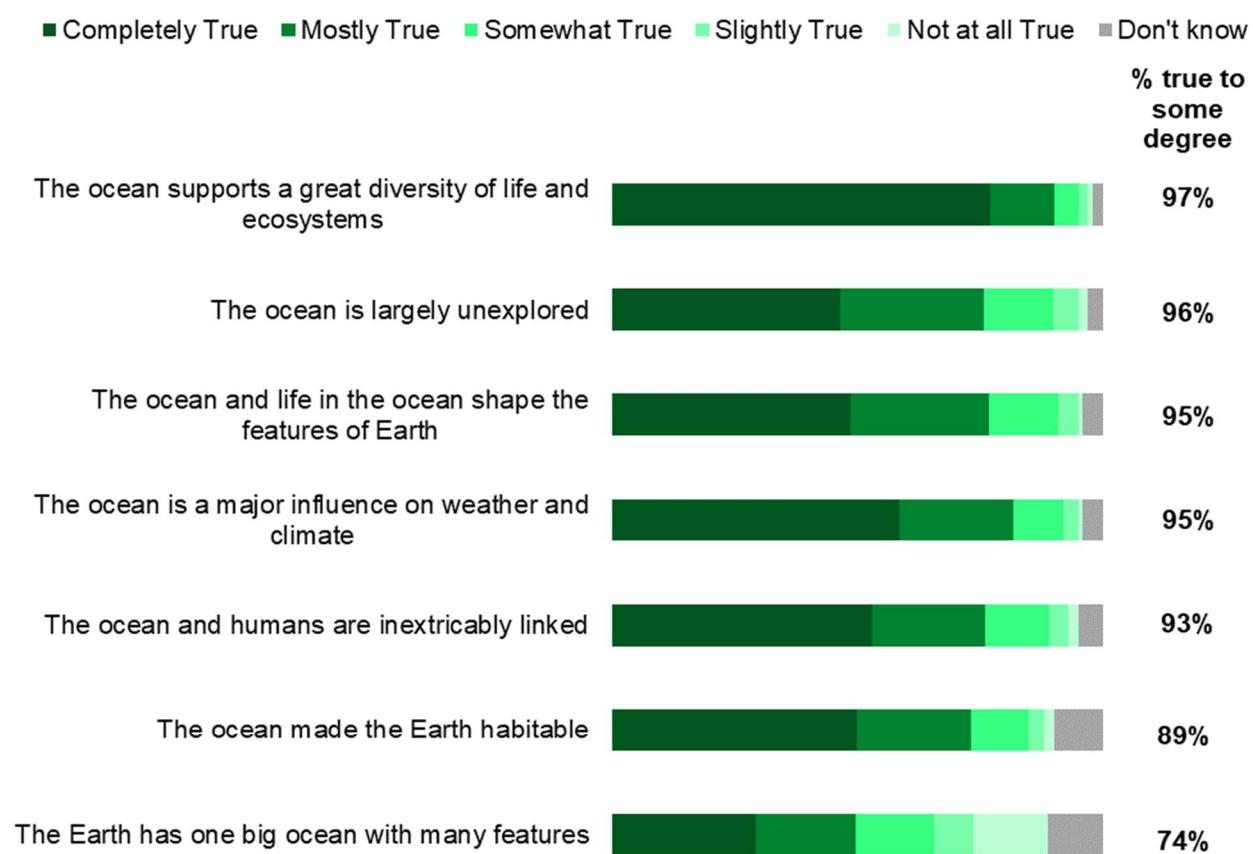
Principles of Ocean Literacy

Although there are questions regarding an agreed definition of Ocean Literacy, seven principles related to people's understanding of the impact on the ocean and the ocean's impact on them have underpinned Ocean Literacy initiatives in recent years. Survey respondents were asked to indicate the extent to which they believed these principles were true (Figure 2).

The vast majority believed that most of the principles were true to some degree, ranging from 97% who said the "The ocean supports a great diversity of life and ecosystems" was true to 89% who said "The ocean made the Earth habitable". While still a majority, respondents were least likely to believe that "The Earth has one big ocean with many features" was true to some extent (74%).

The pattern of results closely matched that in 2021.

Figure 2: Extent to which Ocean Literacy principles are perceived to be true (weighted %)



Q3. The following are principles about the marine environment. Please indicate how true you believe each statement to be.

Unweighted base: 7,060

Table 1: Extent to which Ocean Literacy principles are perceived to be true (weighted %)

Principle	Completely True	Mostly True	Somewhat True	Slightly True	Not at all True	Don't know	Summary: True (to some level)
The ocean supports a great diversity of life and ecosystems	77%	13%	5%	2%	1%	2%	97%
The ocean is largely unexplored	46%	29%	14%	5%	2%	3%	96%
The ocean and life in the ocean shape the features of Earth	48%	28%	14%	4%	1%	4%	95%
The ocean is a major influence on weather and climate	58%	23%	10%	3%	1%	4%	95%
The ocean and humans are inextricably linked	53%	23%	13%	4%	2%	5%	93%
The ocean made the Earth habitable	50%	23%	12%	3%	2%	10%	89%
The Earth has one big ocean with many features	29%	20%	16%	8%	15%	11%	74%

Dimensions:

- Personal or emotional connection
- Attitudes
- Knowledge
- Awareness

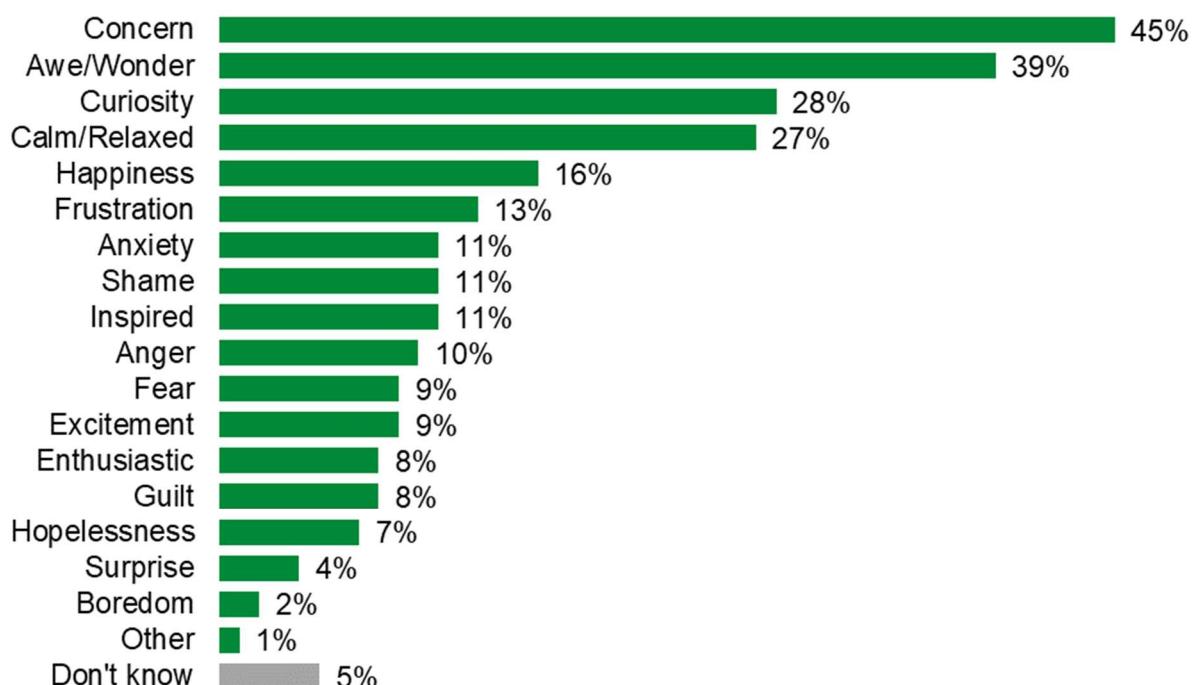
Emotional responses to the marine environment

Concern (45%) was the most commonly reported feeling when asked to think about the marine environment, closely followed by awe/wonder (39%). In both instances this represents a decline since 2021 (49% and 42% respectively). Other than these two responses, results were within 1% of those observed in 2021.

Curiosity (28%) and calm/relaxed (27%) were also frequently reported feelings (Figure 3).

Few respondents associated marine environments with boredom (2%) or surprise (4%).

Figure 3: Emotional responses to the marine environment (weighted %)



Q2. How do you feel when you think about the marine environment? Please select the three emotions which come closest to how you feel.

Unweighted base: 7,060

Dimensions:

- Personal or emotional connection

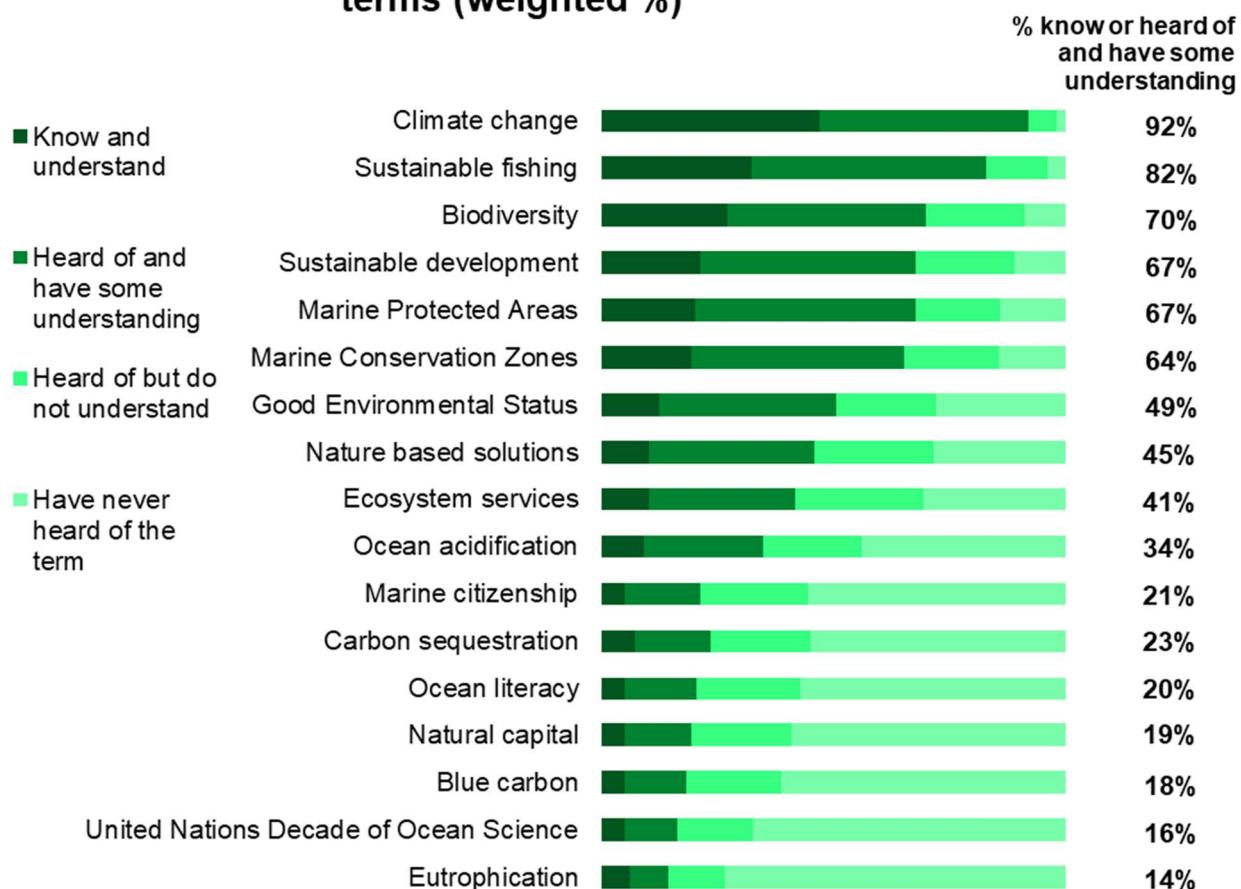
Knowledge of marine terms

Climate change (92%) and sustainable fishing (82%) were the terms most commonly known and understood (to at least some degree) (Figure 4). Other familiar terms were biodiversity (70%), sustainable development (67%), Marine Protected Areas (67%) and Marine Conservation Zones (64%).

In contrast almost three quarters said they had never heard of eutrophication (72%). Other terms which the majority had never heard of were the United Nations Decade of Ocean Science (66%), blue carbon (60%), natural capital (58%), Ocean Literacy (56%) carbon sequestration (54%), and marine citizenship (55%).

There have been declines since 2021 in the proportion who know and understand something about sustainable fishing (from 85% to 82%), sustainable development (from 73% to 67%), Marine Conservation Zones (from 67% to 64%) and Good Environmental Status (from 53% to 49%).

Figure 4: Knowledge and understanding of marine terms (weighted %)



Q7. Please indicate how familiar you are with each of the following terms.
Unweighted base: 7,060

Table 2: Knowledge and understanding of marine terms (weighted %)

Marine Term	Know and understand	Heard of and have some understanding	Heard of but do not understand	Have never heard of the term	Summary: Know or heard of and have some understanding
Climate change	47%	45%	6%	2%	92%
Sustainable fishing	32%	50%	13%	4%	82%
Biodiversity	27%	43%	21%	9%	70%
Sustainable development	21%	46%	21%	11%	67%
Marine Protected Areas	20%	47%	18%	14%	67%
Marine Conservation Zones	19%	45%	20%	14%	64%
Good Environmental Status	12%	37%	21%	27%	49%
Nature based solutions	10%	35%	25%	28%	45%
Ecosystem services	10%	31%	27%	30%	41%
Ocean acidification	9%	25%	21%	43%	34%
Marine citizenship	5%	16%	23%	55%	21%
Carbon sequestration	7%	16%	21%	54%	23%
Ocean literacy	5%	15%	22%	56%	20%
Natural capital	5%	14%	21%	58%	19%
Blue carbon	5%	13%	20%	60%	18%
United Nations Decade of Ocean Science	5%	11%	16%	66%	16%
Eutrophication	6%	8%	12%	72%	14%

Dimensions:

- Knowledge
- Awareness

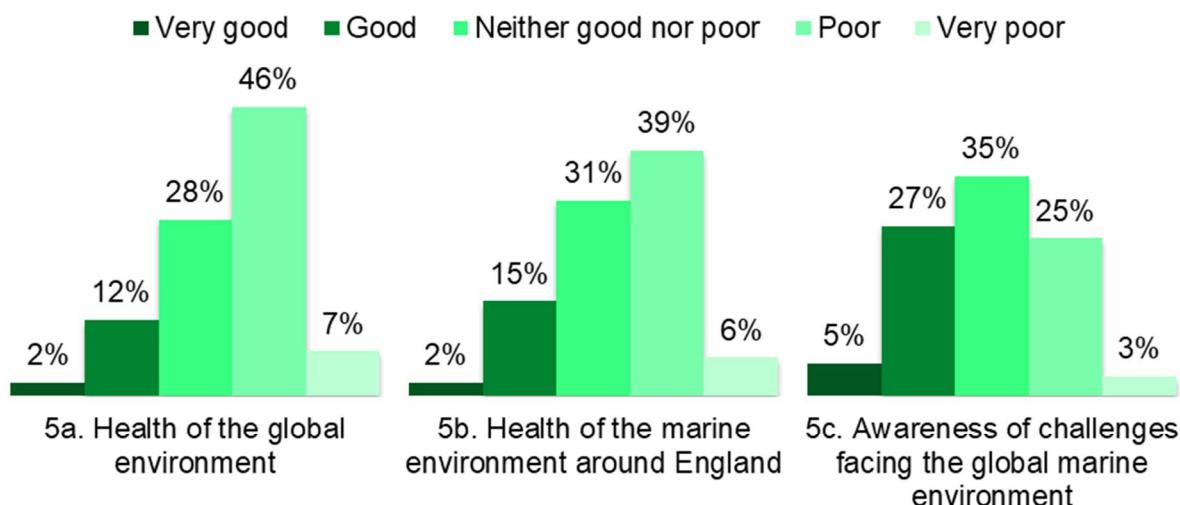
Perceptions of marine health and challenges

Fifty-three percent rated the health of the global marine environment as poor or very poor, a decrease on the 57% who did so in 2021, while 14% rated it as good or very good (Figure 5a) (compared to 12% in 2021).

A somewhat lower proportion rated the health of the marine environment around England as poor or very poor (44%) compared to the global marine environment, and 18% rated it as good or very good (Figure 5b), in line with 2021.

While 32% considered their awareness of the challenges facing the global marine environment to be poor or very poor, 29% rated their awareness as good or very good (Figure 5c), which represents a decline on the 32% who did so in 2021.

Figure 5: Perceptions of the health of and awareness of challenges facing the marine environment (weighted %)



Q4. How would you rate the health of the global marine environment? Q5. How would you rate the health of the marine environment around England? Q6. How would you rate your awareness of challenges facing the global marine environment?

Unweighted base: 7,060

Dimensions:

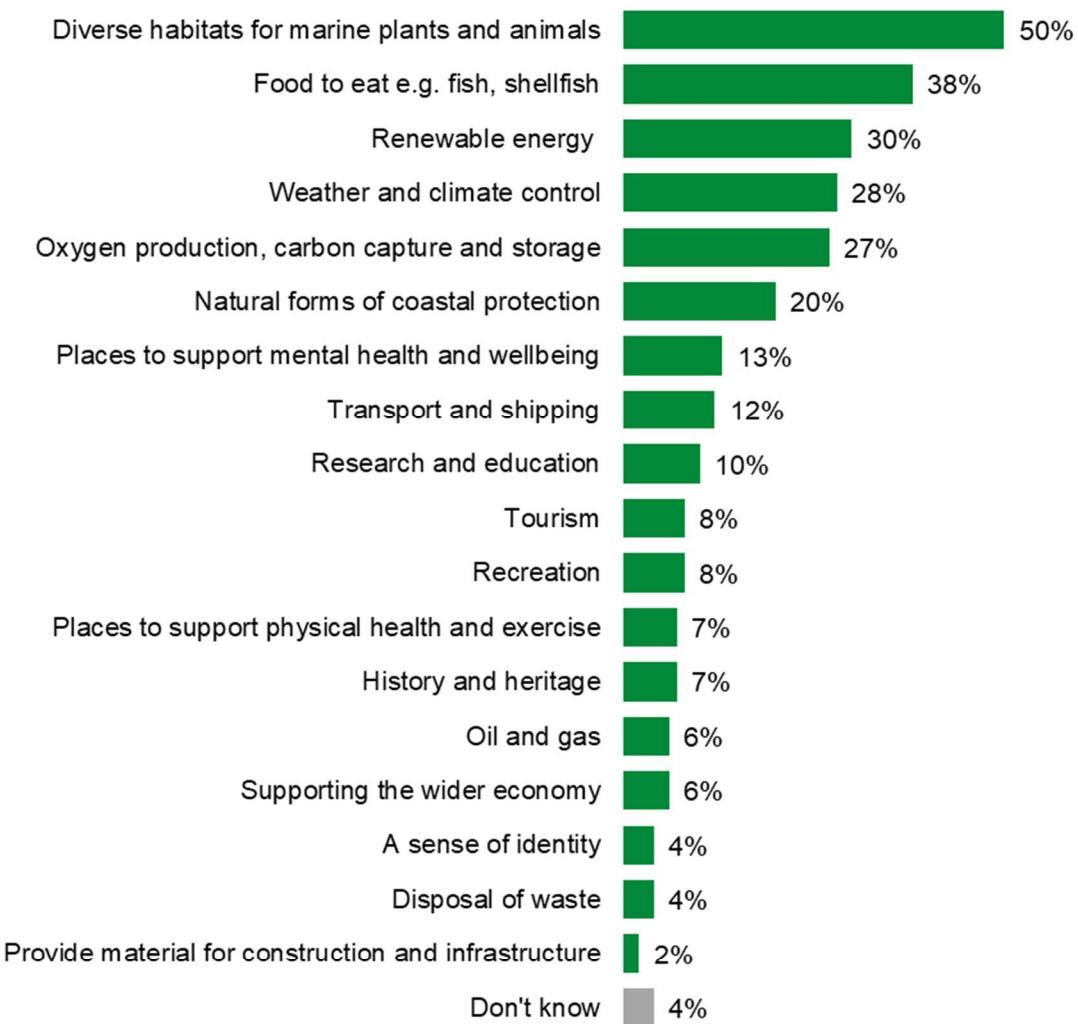
- Knowledge
- Awareness

Benefits of the marine environment

When asked what they thought the three most important benefits are of the marine environment in England (Figure 6), the top response was diverse habitats for marine plants and animals (50%) followed by food to eat (38%) and renewable energy (30%). In contrast, very few people felt that providing material for construction and infrastructure (2%), disposal of waste (4%) and a sense of identity (4%) were important benefits.

These results are largely in line with those observed in 2021, although there has been a marked increase in the proportion who mentioned oxygen production/ carbon capture/storage (from 21% to 27%). Although it should be noted that this code was updated in the 2022 survey from carbon sequestration to carbon capture and storage, which may have impacted responses. We have also seen a decrease in the proportion mentioning diverse habitats (from 53% to 50%), food (from 41% to 38%), and weather/climate control (from 31% to 28%).

Figure 6: Most important benefits of the marine environment (weighted %)



Q9. In your opinion, what are the three most important benefits that society gains from the marine environment in England?

Unweighted base: 7,060

Dimensions:

- Personal or emotional connection
- Attitudes
- Knowledge
- Awareness

Salt marshes and seagrass meadows

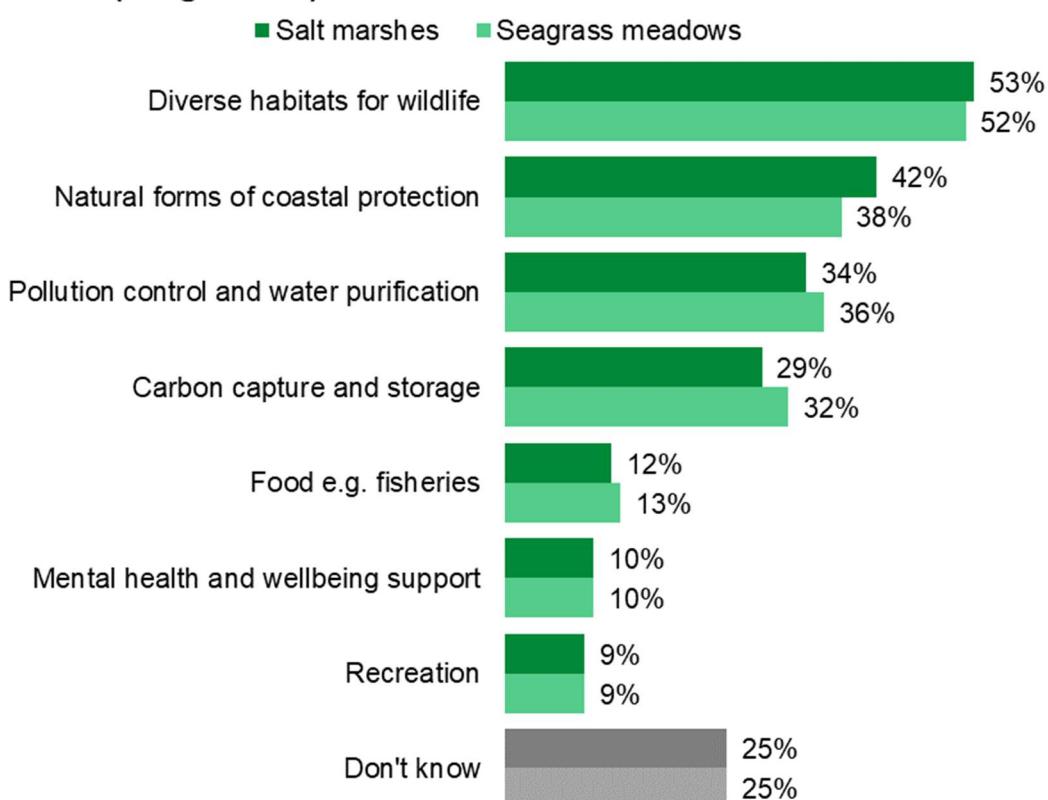
Potential benefits of salt marshes and seagrass meadows

There was a new section added to the survey for 2022 which focused in greater detail on a selection of marine habitats and the potential benefits they can provide.

The pattern of response was very similar for both salt marshes and seagrass meadows, with over half (53% and 52% respectively) feeling the diversity of habitats for wildlife is the most important benefit, followed by natural forms of coastal protection (42% and 38%), pollution control and water purification (34% and 36%) and carbon capture and storage (29% and 32%).

In both instances, a quarter (25%) indicated that they did not know what the benefits from these ecosystems are (Figure 7).

Figure 7: Potential benefits of salt marshes and seagrass meadows (weighted %)



NQ5. The following are a range of POTENTIAL BENEFITS of salt marshes and seagrass meadows. In your opinion for each habitat, which three do you think are the most important?

Unweighted base: 7,060

Dimensions:

- Personal or emotional connection
- Attitudes
- Knowledge
- Awareness

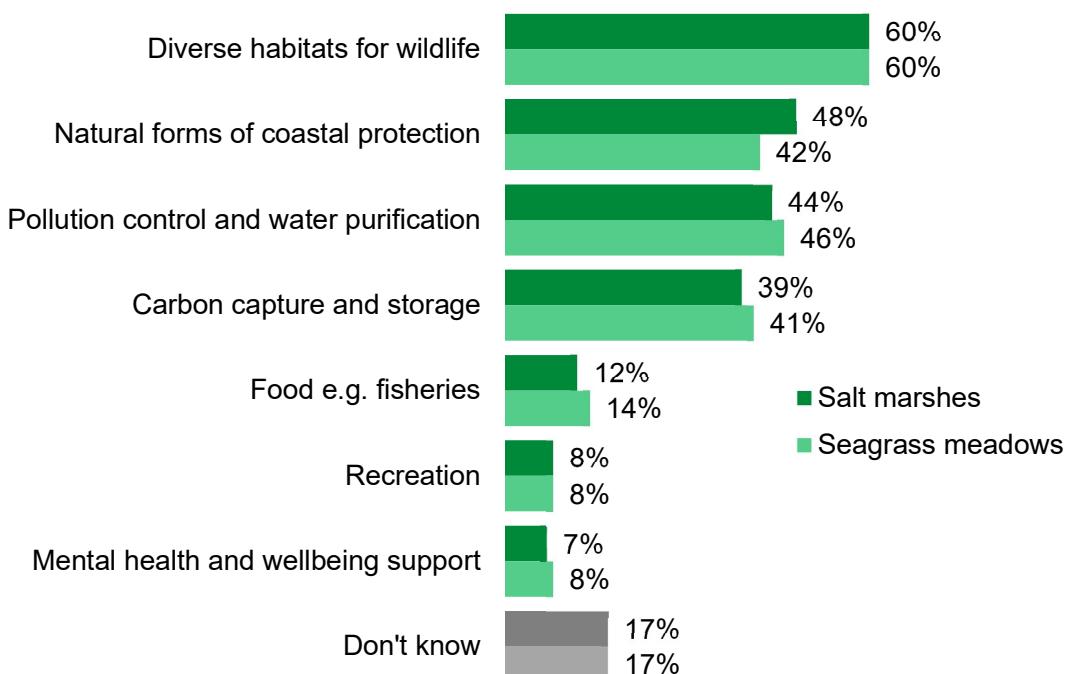
Restoring salt marshes and seagrass meadows

Nineteen percent of respondents said they were aware of efforts to restore salt marshes, and 15% said they were aware of efforts to restore seagrass meadows.

Respondents were then presented with a range of reasons for restoring salt marshes and seagrass meadows and were asked which three were most important (Figure 8).

Again, the pattern of response was very similar for both salt marshes and seagrass meadows, with diverse habitats for wildlife regarded as the most important (60% for both), followed by natural forms of coastal protection (48% and 42% respectively), pollution control and water purification (44% and 46%) and carbon capture and storage (39% and 41%).

Figure 8: Reasons for restoring salt marshes and seagrass meadows (weighted %)



NQ10. The following are a range of REASONS FOR RESTORING salt marshes and seagrass meadows. In your opinion for each habitat, which three do you think are the most important reasons to restore these habitats?

Unweighted base: 7,060

Dimensions:

- Personal or emotional connection
- Attitudes
- Knowledge
- Awareness

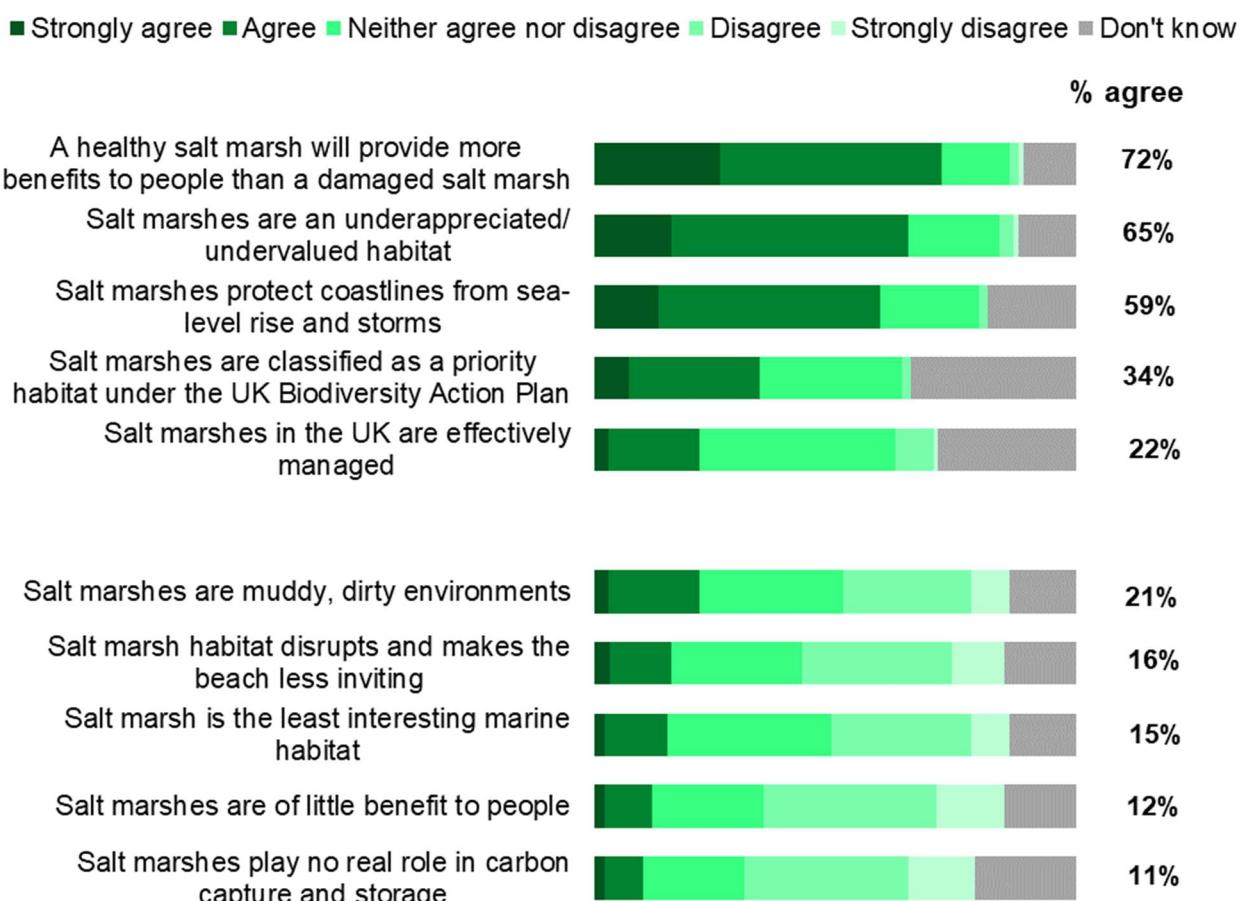
Views on salt marshes

Respondents were asked to rate their level of agreement with a range of statements relating to salt marshes which was a new question for the 2022 survey (Figure 9).

Agreement was strongest that a healthy salt marsh will provide more benefits to people than a damaged salt marsh (72%), followed by agreement that salt marshes are an underappreciated habitat (65%) and that salt marshes protect coastlines from sea-level rise and storms (59%).

There were relatively high levels of 'don't know' responses across the board, but particularly in relation to salt marshes being classified as a priority habitat under the UK Biodiversity Action Plan (34%) and salt marshes in the UK being effectively managed (29%).

Figure 9: Views on salt marshes (weighted %)



NQ11. The following are statements about salt marshes. For each habitat, please indicate to what extent you agree with each statement.

Unweighted base: 7,060

Table 3: Views on salt marshes (weighted %)

Statement	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Don't know	Summary: Agree
A healthy salt marsh will provide more benefits to people than a damaged salt marsh	26%	46%	14%	2%	1%	11%	72%
Salt marshes are an underappreciated/undervalued habitat	16%	49%	19%	3%	1%	12%	65%
Salt marshes protect coastlines from sea-level rise and storms	13%	45%	20%	2%	<0.5%	18%	59%
Salt marshes are classified as a priority habitat under the UK Biodiversity Action Plan	7%	27%	29%	2%	<0.5%	34%	34%
Salt marshes in the UK are effectively managed	3%	19%	41%	8%	1%	29%	22%
Salt marshes are muddy, dirty environments	3%	19%	30%	27%	8%	14%	21%
Salt marsh habitat disrupts and makes the beach less inviting	3%	13%	27%	31%	11%	15%	16%
Salt marsh is the least interesting marine habitat	2%	13%	34%	29%	8%	14%	15%
Salt marshes are of little benefit to people	2%	10%	23%	36%	14%	15%	12%
Salt marshes play no real role in carbon capture and storage	2%	8%	21%	34%	14%	21%	11%

Dimensions:

- Attitudes
- Knowledge

Views on seagrass meadows

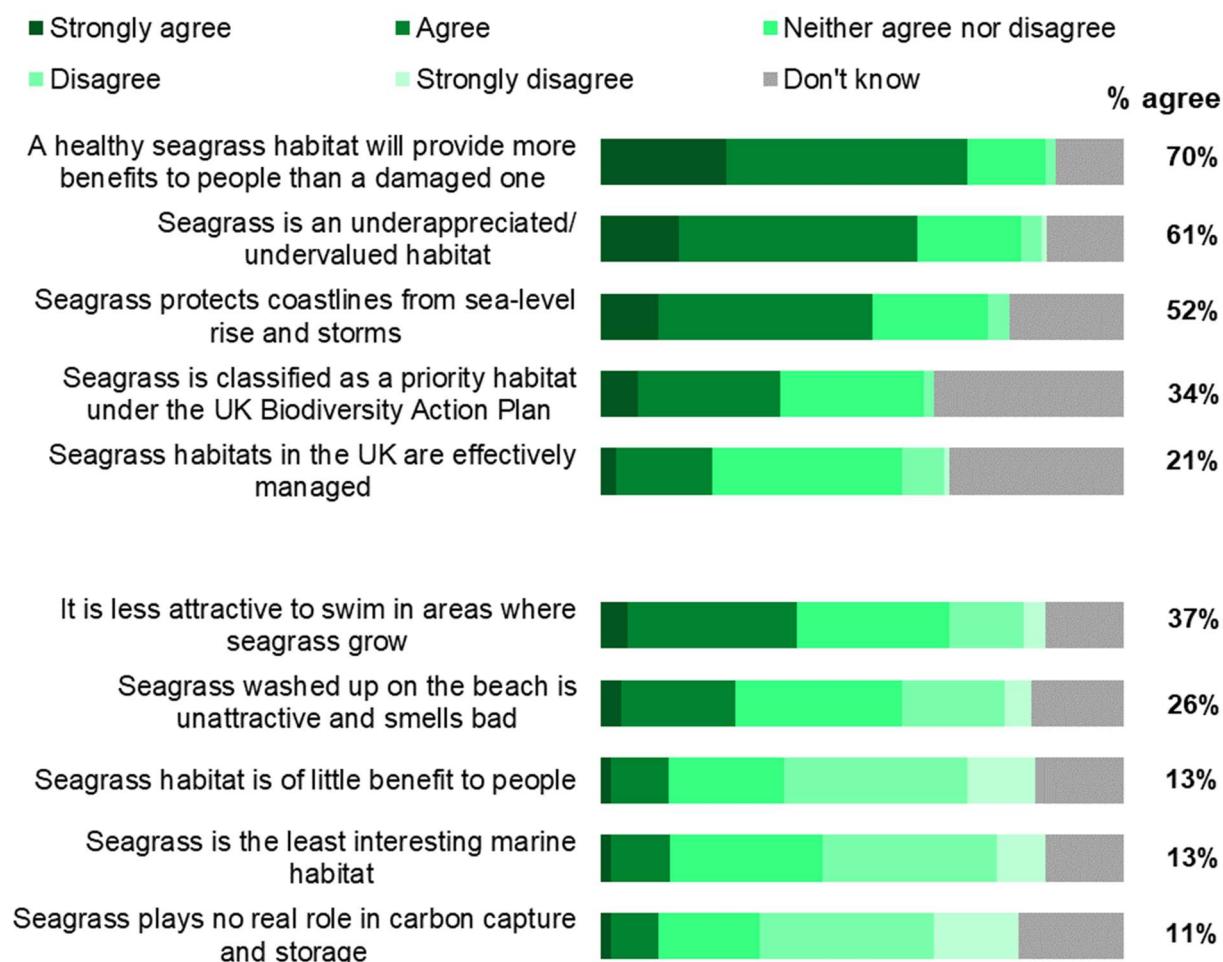
Respondents were asked to rate their level of agreement with a range of statements relating to seagrass meadows (Figure 10). Again, this was a new question for the 2022 survey.

As with salt marshes, agreement was strongest that a healthy seagrass habitat will provide more benefits to people than a damaged seagrass meadow (70%), followed by agreement that seagrass is an underappreciated habitat (61%) and that seagrass meadows protect coastlines from sea-level rise and storms (52%).

Again, there were relatively high levels of 'don't know' responses across the board, but particularly in relation to seagrass meadows being classified as a priority habitat under the UK Biodiversity Action Plan (36%) and seagrass meadows in the UK being effectively managed (33%).

Thirty-seven percent agreed that it is less attractive to swim in seagrass habitats.

Figure 10: Views on seagrass meadows (weighted %)



NQ12. The following are statements about seagrass meadows. For each habitat, please indicate to what extent you agree with each statement.

Unweighted base: 7,060

Table 4: Views on seagrass meadows (weighted %)

Statement	Strongly agree	Agree	Neither agree nor disagree		Strongly disagree	Don't know	Summary: Agree
			Disagree	Neither agree nor disagree			
A healthy seagrass habitat will provide more benefits to people than a damaged seagrass habitat	24%	46%	15%	2%	<0.5%	13%	70%
Seagrass is an underappreciated/undervalued habitat	15%	46%	20%	4%	1%	15%	61%
Seagrass protects coastlines from sea-level rise and storms	11%	41%	22%	4%	<0.5%	22%	52%
Seagrass is classified as a priority habitat under the UK Biodiversity Action Plan	7%	27%	27%	2%	<0.5%	36%	34%
Seagrass habitats in the UK are effectively managed	3%	18%	36%	8%	1%	33%	21%
It is less attractive to swim in areas where seagrass grow	5%	32%	29%	14%	4%	15%	37%
Seagrass washed up on the beach is unattractive and smells bad	4%	22%	32%	20%	5%	18%	26%
Seagrass habitat is of little benefit to people	2%	11%	22%	35%	13%	17%	13%
Seagrass is the least interesting marine habitat	2%	11%	29%	33%	9%	15%	13%
Seagrass plays no real role in carbon capture and storage	2%	9%	19%	33%	16%	20%	11%

Dimensions:

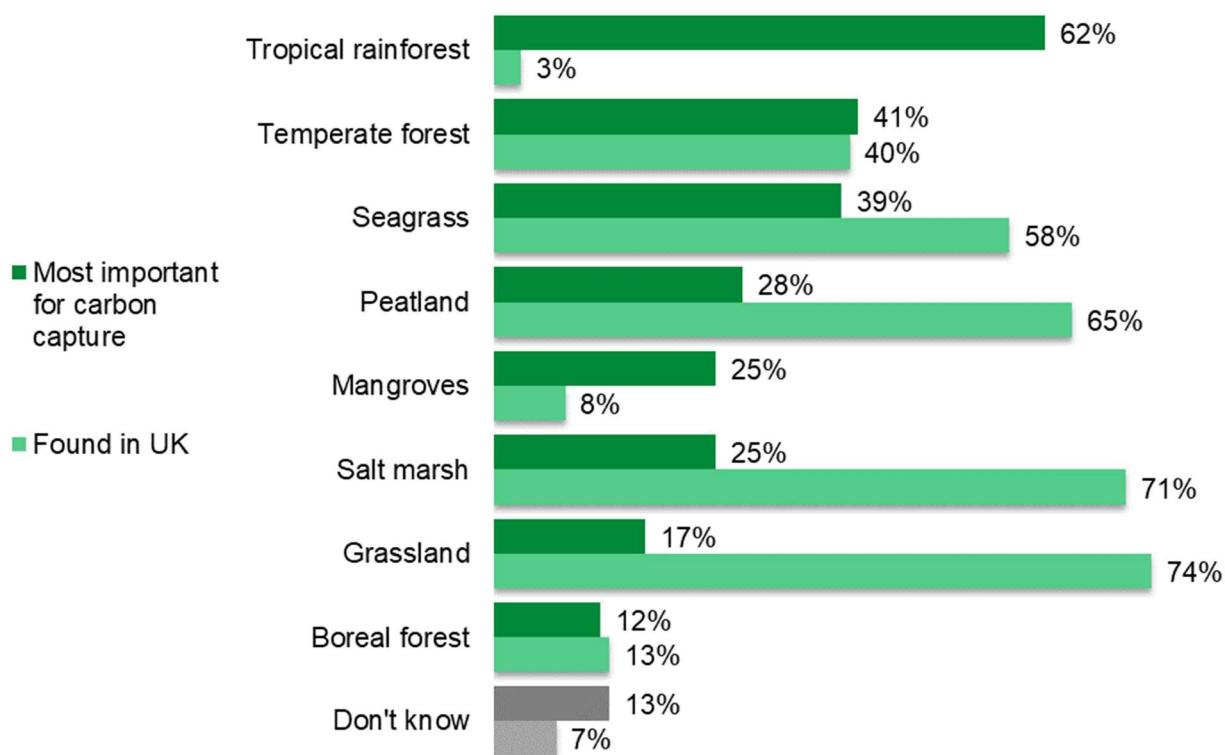
- Attitudes
- Knowledge

Carbon capture and storage

To assess the relative knowledge and importance of blue carbon habitats, respondents were presented with uncaptioned photographs of a range of natural habitats, and asked to indicate which three they thought to be the most important in relation to carbon capture (Figure 11). Tropical rainforest was regarded as the most important (62%), followed by temperate forests (41%) and seagrass (39%).

They were also asked which habitats they believe are found in the UK (Figure 11), and the most commonly mentioned were grassland (74%), salt marsh (71%), peatland (65%) and seagrass (58%).

Figure 11: Most important habitats for carbon capture/habitats found in the UK (weighted %)



NQ6. Thinking about carbon capture and storage, in your opinion which three habitats are the most important? NQ7. Which of the following habitats do you believe are found in the U.K.?

Unweighted base: 7,060

Dimensions:

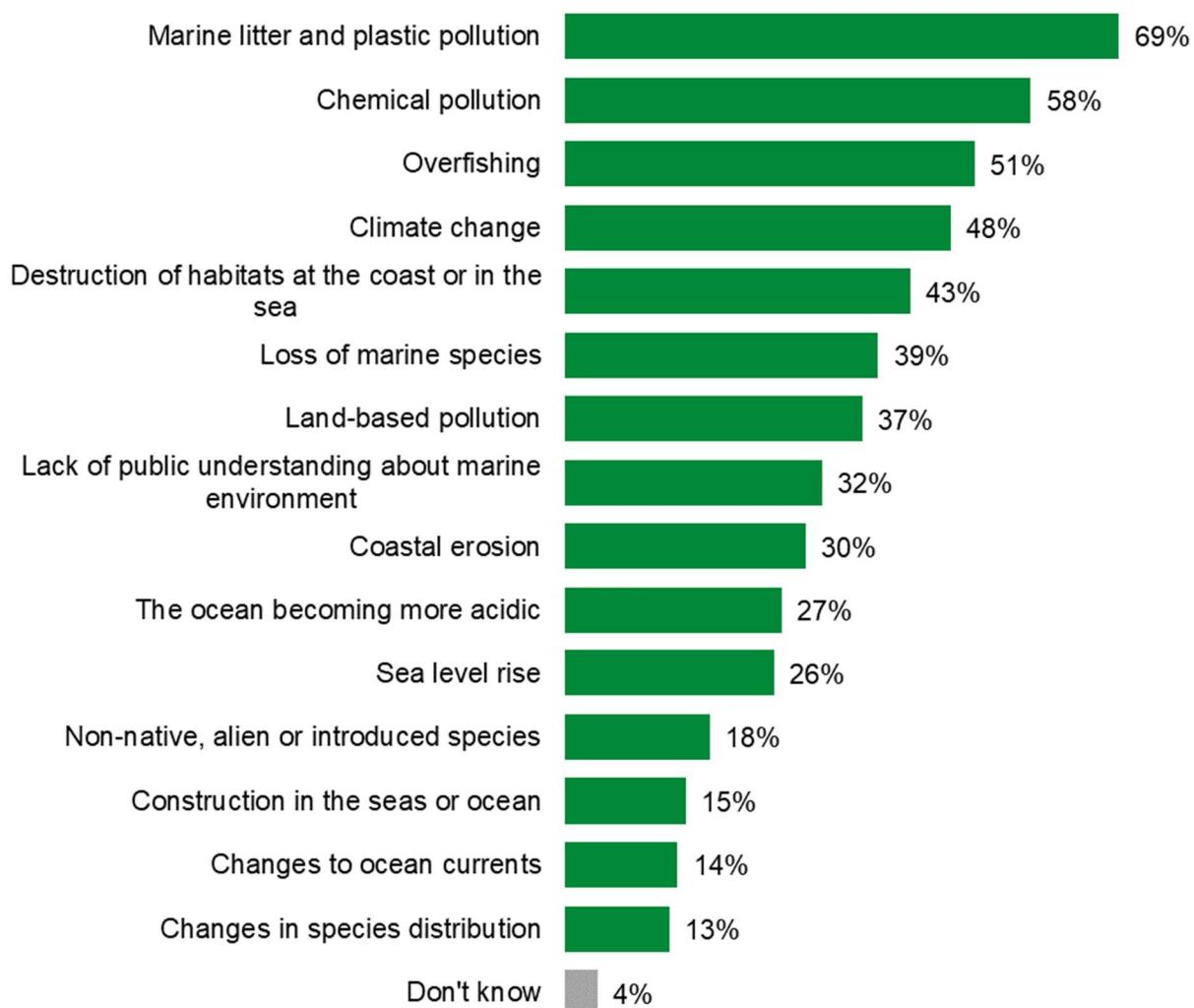
- Personal or emotional connection
- Attitudes
- Knowledge
- Awareness

Threats to the marine environment

Respondents were asked what they thought posed the most threat to the marine environment in England (Figure 12). Marine litter and plastic pollution was the pressure most commonly chosen (69%), although to a lesser extent than was the case in 2021 (74%), whilst chemical pollution (58%) and climate change (48%) also ranked highly. While over half (51%) thought overfishing posed a threat, this is lower than the 54% who selected this in 2021.

As was the case in 2021, pressures which were least likely to be selected as posing a threat to the marine environment were changes in species distribution (13%), changes to ocean currents (14%), construction in the seas or ocean (15%) and non-native, alien or introduced species (18%).

Figure 12: Pressures posing most threat to the marine environment (weighted %)



Q10. Which of the following if any, do you think pose the most threat to the marine environment in England?

Unweighted base: 7,060

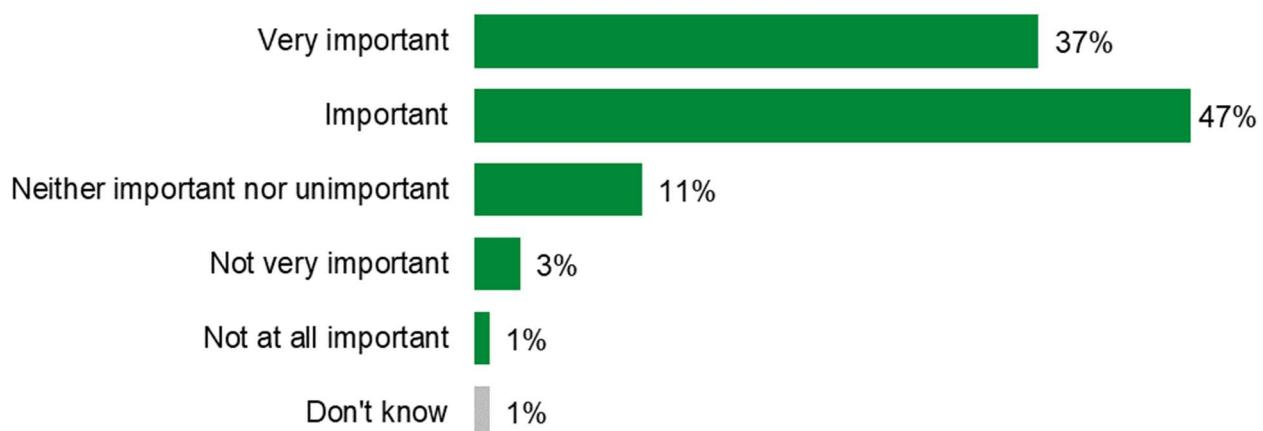
Dimensions:

- Attitudes
- Knowledge
- Awareness

Responding to threats to the marine environment

Eighty-four percent said that protecting the marine environment is very important or important to them personally which is relatively consistent with the 85% in 2021. Only 4% said that is not very/at all important (Figure 13).

Figure 13: Importance of protecting the marine environment (weighted %)



Q8. How important is protecting the marine environment to you personally?
Unweighted base: 7,060

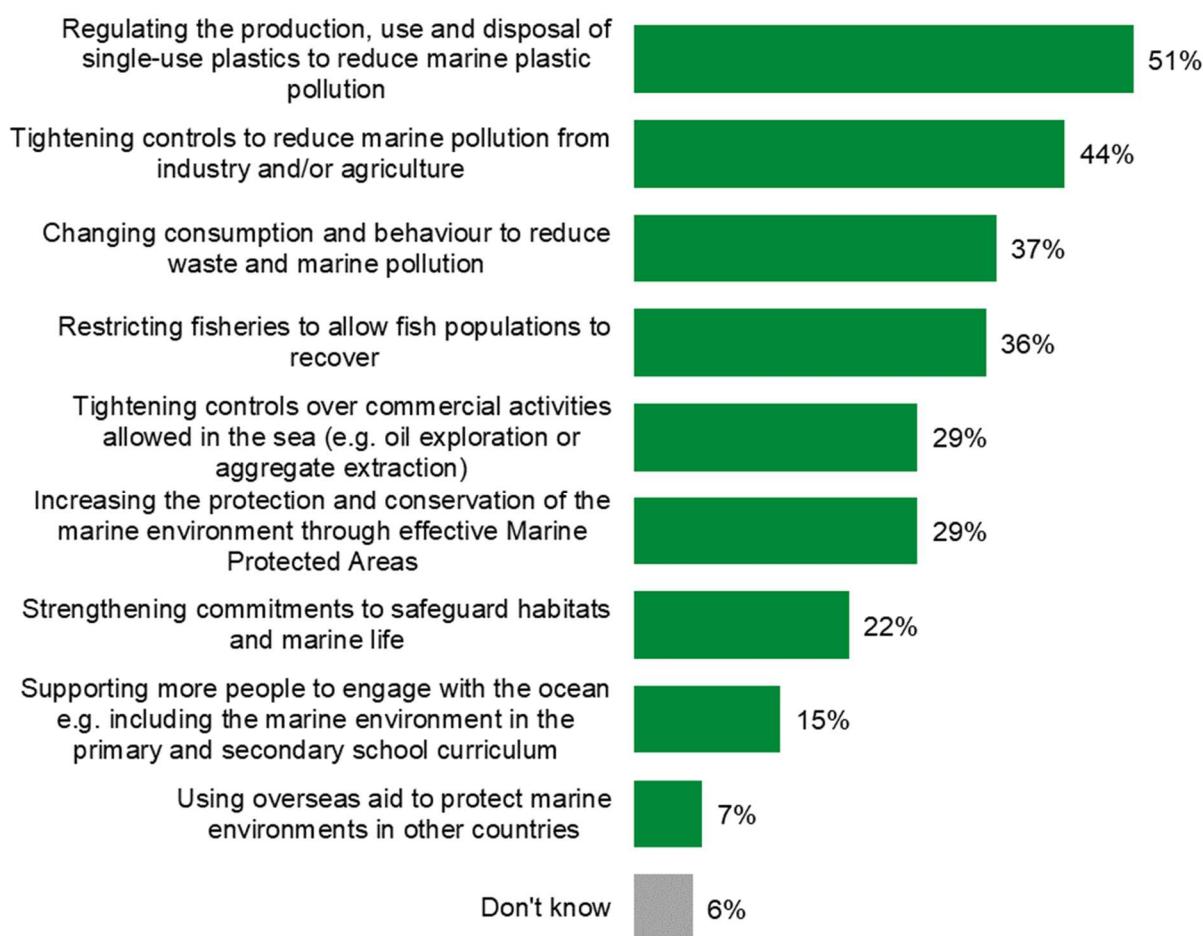
Dimensions:

- Attitudes
- Knowledge
- Awareness

A range of activities addressing other issues affecting the marine environment (i.e. non ocean climate issues) in England were provided to respondents who were asked to select the three most important (Figure 14).

Regulating single-use plastics (51%) was the top choice, followed by controls on pollution from industry and/or agriculture (44%), changing consumption, behaviour to reduce waste and marine pollution (37%), and restricting fisheries (36%). The activity least likely to be selected was using overseas development aid (7%). These results largely reflect those in 2021, with the exception that there has been a decline in relation to regulating single-use plastics (from 55%), and changing consumption and behaviour (from 42%).

Figure 14: Most important activities to address marine issues (weighted %)



Q13. The following activities all address other issues affecting the marine environment in England. In your opinion, which three do you think are the most important?

Unweighted base: 7,060

Dimensions:

- Attitudes
- Knowledge
- Awareness

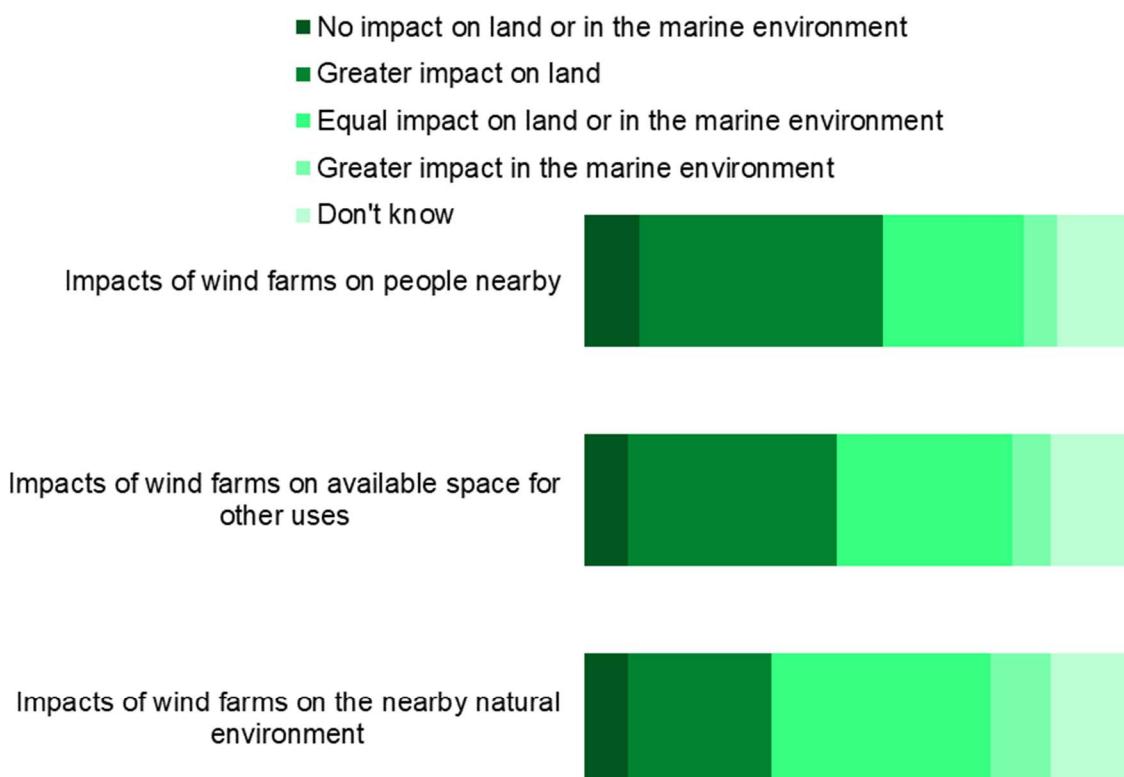
Views on wind farms

One in ten believed that wind farms have no impact on the land or in the marine environment in terms of people nearby (10%), the available space for other use (8%) and the nearby natural environment (8%) (Figure 15).

Forty-five percent felt there is a greater impact on land in terms of people nearby, 38% in terms of space available for other uses, and 26% in terms of the nearby natural environment.

Around one in ten felt that wind farms have a greater impact in the marine environment in terms of people nearby (6%), the space available for other uses (7%) and the nearby natural environment (11%).

Figure 15: Views on wind farms (weighted %)



NQ4. Do you think the following impacts of windfarms (including wind turbines and power transmission cables) are greater on land or in the marine environment?
Unweighted base: 7,060

Table 5: Views on wind farms (weighted %)

Statement	No impact on land or in the marine environment	Greater impact on land	Equal impact on land or in the marine environment	Greater impact in the marine environment	Don't know
Impacts of wind farms on people nearby	10%	45%	26%	6%	14%
Impacts of wind farms on available space for other uses	8%	38%	32%	7%	15%
Impacts of wind farms on the nearby natural environment	8%	26%	40%	11%	15%

Dimensions:

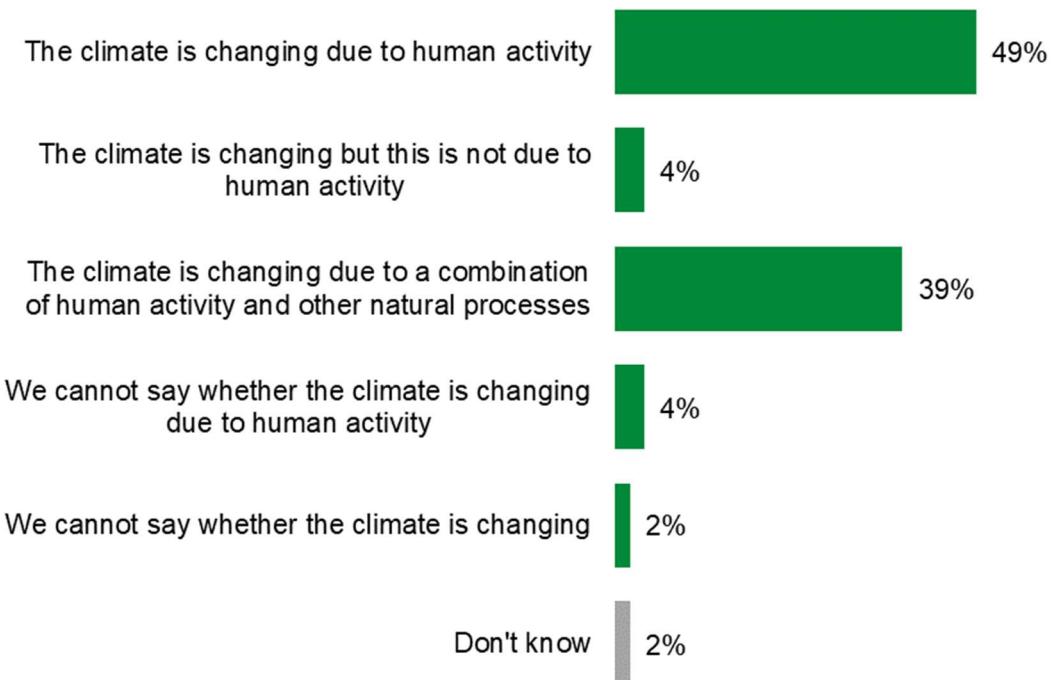
- Attitudes
- Knowledge
- Awareness

Attitudes to climate change

When asked about their views on climate change, the majority said the climate is changing (92%). However, views were split on causes of climate change with 49% saying this is due to human activity, 39% it is due to both human activity and natural processes, and 4% saying we cannot say whether it is due to human activity. Only 4% said climate change was not due to human activity (Figure 16).

There has been no change in views since 2021.

**Figure 16: Views on climate change and role of human activity
(weighted %)**



Q11. Thinking about the changing climate and human activity, which of the following statements comes closest to your view?
Unweighted base: 7,060

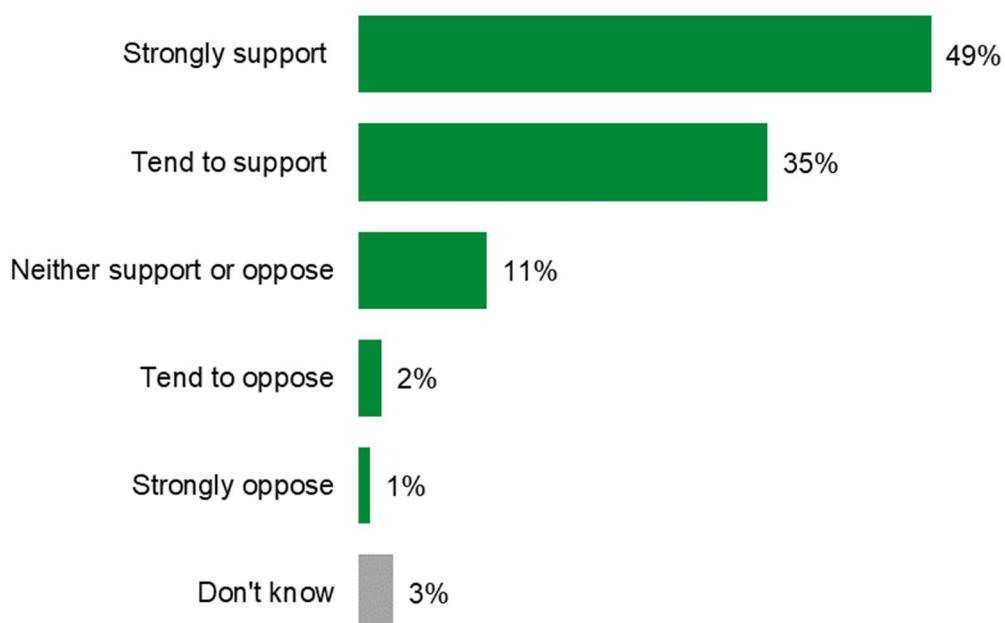
Dimensions:

- Attitudes
- Knowledge

Respondents were informed that Marine Protected Areas are specific areas of the marine environment which are managed to achieve long-term nature conservation and sustainable use, and were then asked the extent to which they support or oppose the creation of Marine Protected Areas in England (Figure 17). This was a new question added to the survey for 2022.

Eighty-four percent supported the creation of Marine Protected Areas in England, including 49% who strongly supported this, and just 2% opposed it.

Figure 17: Support for Marine Protected Areas (weighted %)



NQ3. To what extent do you support or oppose the creation of Marine Protected Areas in England?

Unweighted base: 7,060

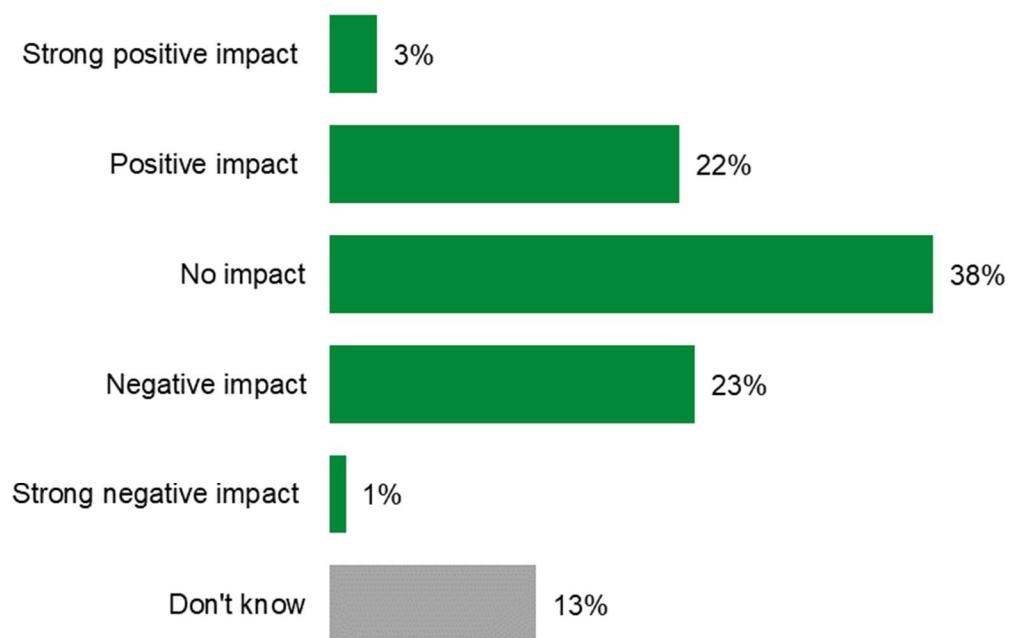
Dimensions:

- Attitudes
- Knowledge

Lifestyle impacts & changes

Overall, 50% thought their lifestyle has an impact on the marine environment. Slightly more thought that their lifestyle had a positive impact (26%) than that it had a negative impact (24%) (Figure 18). In 2021, 52% thought their lifestyle had an impact on the marine environment – 26% positive impact and 26% negative impact. 38% thought their lifestyle had no impact on the marine environment, an increase on the 36% who did so in 2021.

Figure 18: Perceived impact of lifestyle on the marine environment (weighted %)



Q17. What impact do you think your lifestyle has on the marine environment of England?

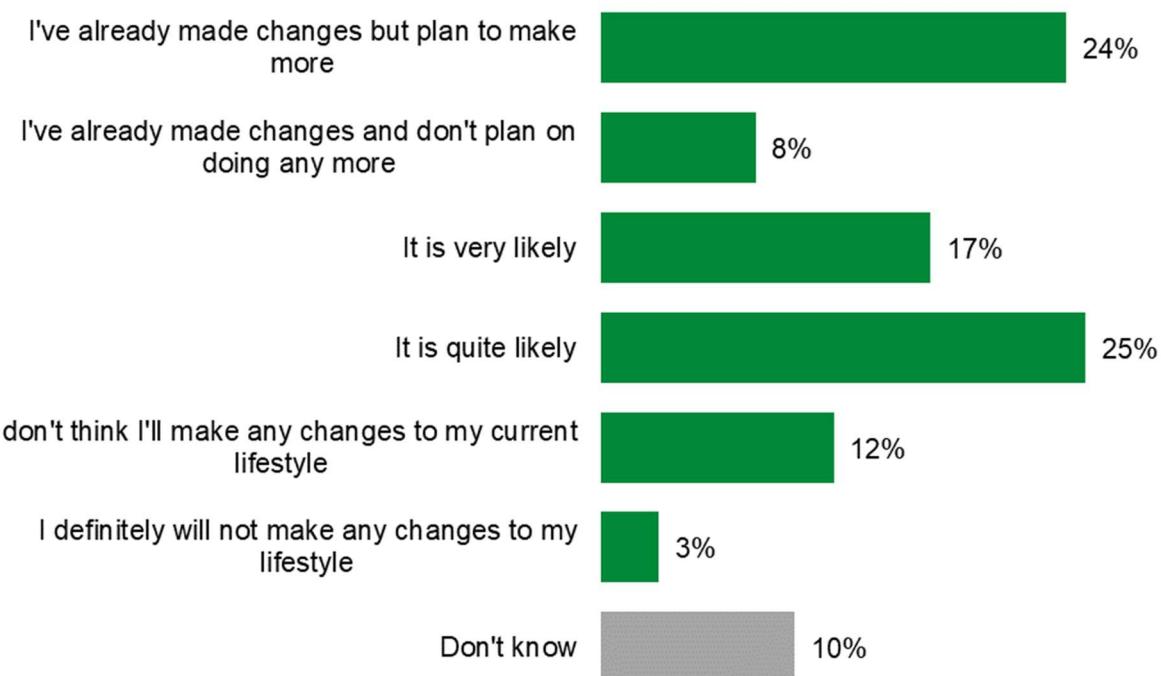
Unweighted base: 7,060

Dimensions:

- Activism
- Behaviour
- Attitudes
- Knowledge
- Awareness

Twenty-four percent said they've already made changes but plan on doing more, whilst 42% said it is quite or very likely they will make changes and 8% said they've already made changes but don't plan on doing any more. 15% said they will not or do not think they will make changes to their current lifestyle within the next 12 months in order to protect the marine environment in England (Figure 19). The pattern of results is very similar to 2021.

Figure 19: Planned lifestyle changes to protect marine environment (weighted %)



Q22. Within the next 12 months, do you plan on making changes to your lifestyle to protect the marine environment in England?

Unweighted base: 7,060

Dimensions:

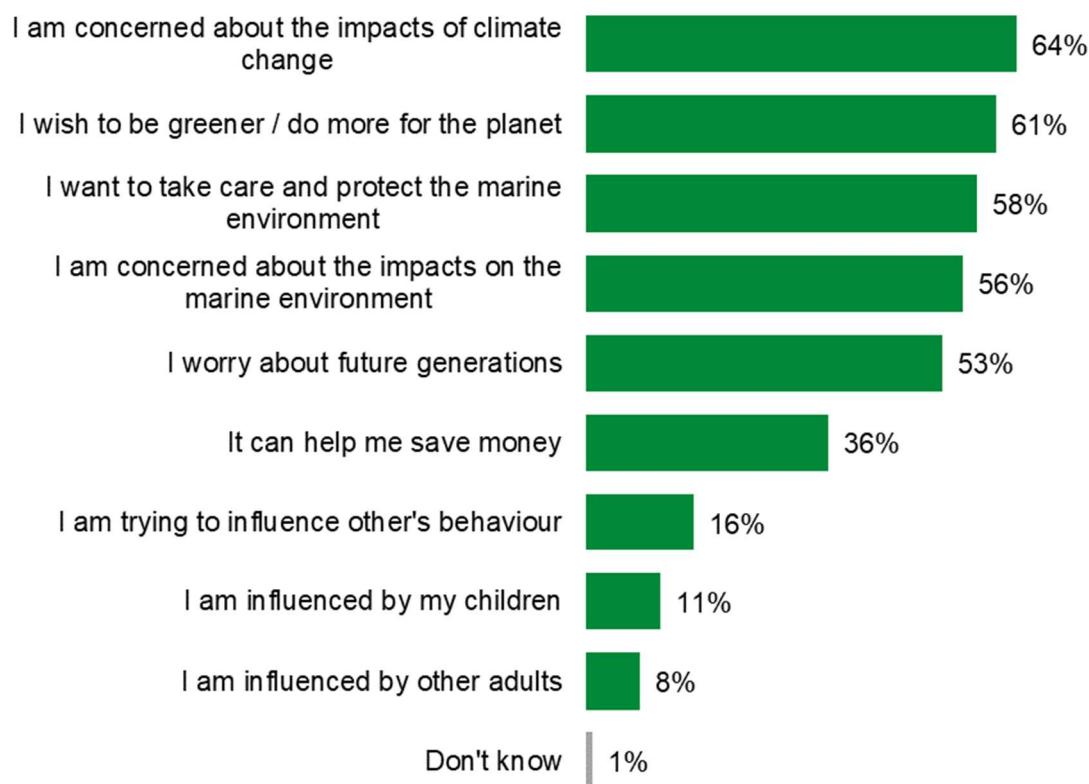
- Activism
- Behaviour
- Attitudes
- Knowledge
- Awareness

The top reasons for making or planning lifestyle changes (Figure 20) were concern over climate change (64%), a desire to be greener (61%), a desire to care and protect (58%), concerns about impacts on the marine environment (56%), and worry about future generations (53%).

There have been declines since 2021 in relation to wishing to be greener (from 68% to 61%), being concerned about climate change (from 69% to 64%), being concerned about the impacts on the marine environment (from 62% to 56%), wanting to take care and protect the marine environment (from 63% to 58%) and worrying about future generations (from 56% to 53%).

In contrast there has been an increase in the proportion who feel it can help them save money (from 31% to 36%).

Figure 20: Reasons for making or planning to make changes to lifestyle (weighted %)



Q24. Is this because...?

Unweighted base: where have made or plan to make changes: 5,295

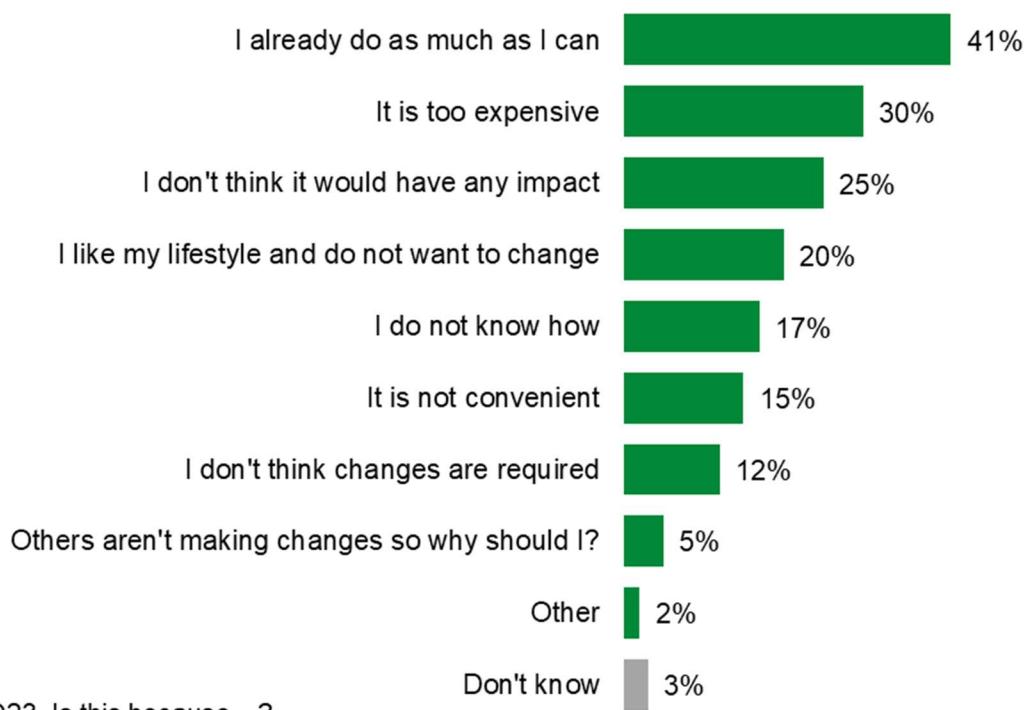
Dimensions:

- Activism
- Behaviour
- Attitudes
- Knowledge
- Awareness

In contrast, the top reason for not making lifestyle changes (Figure 21) was already doing as much as possible (41%) followed by it being too expensive (30%) and thinking it would not have an impact (25%).

Fewer said it was because they already do as much as they can than was the case in 2021 (41% compared to 44%), and more that it is too expensive (30% compared to 23%).

Figure 21: Reasons for not making or planning to make changes to lifestyle (weighted %)



Q23. Is this because...?

Unweighted base: where do not plan to make changes: 1,082

Dimensions:

- Activism
- Behaviour
- Attitudes
- Knowledge
- Awareness

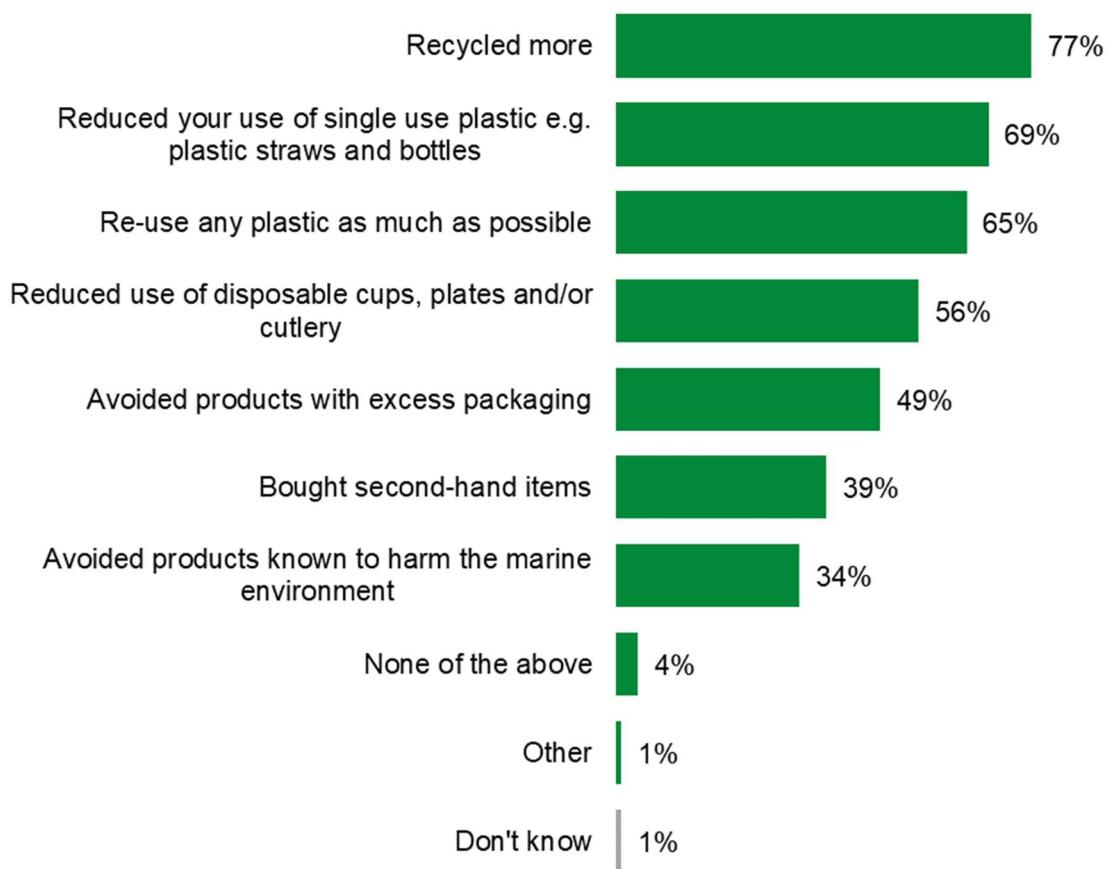
Purchasing and packaging actions

The most common activity undertaken in relation to purchases and packaging in the last 12 months was recycling more (77%) (Figure 22). A high proportion also said they had reduced single use plastics (69%) and had re-used plastic as much as possible (65%).

The least common activities were avoiding products known to harm the marine environment (34%) and buying second-hand items (39%) although these were still undertaken by more than a third of respondents.

There have been marked declines in the proportions who reported recycling more (from 81% to 77%), reducing use of single-use plastic (from 73% to 69%), re-using any plastic as much as possible (from 68% to 65%) reducing use of disposable items (from 59% to 56%) and avoiding products with excess packaging (from 52% to 49%).

Figure 22: Activities done in the last 12 months in relation to purchases and use of packaging (weighted %)



Q18. Thinking about the purchases you have made and your use of packaging, which of the following activities have you done in the last 12 months where possible?
Unweighted base: 7,060

Dimensions:

- Behaviour

Seafood purchasing actions

Seventy-six percent said that they purchase seafood (fish or shellfish).

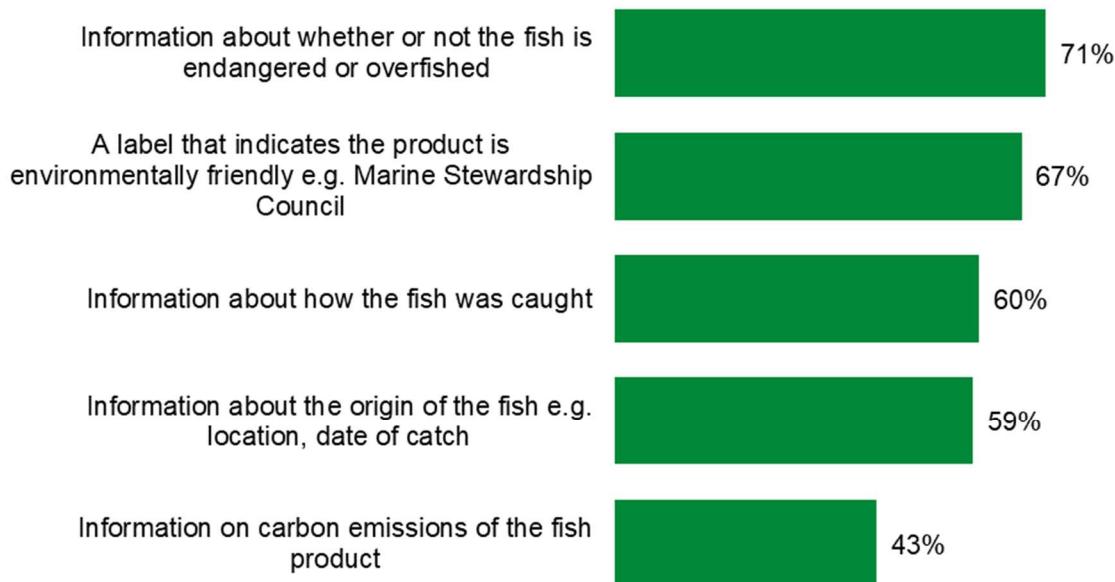
Of these, 71% said that information about whether or not the fish is endangered or overfished would influence their purchase (Figure 23). Labels indicating the product was environmentally friendly would influence 67% of people who bought seafood. Less significant, but still influencing the majority of people was information about how the fish was caught (60%) and the origin of the fish (59%).

There has been a decline in the proportion who said that information about endangerment would influence them (from 75% to 71%), as is the case in relation to labelling (from 71% to 67%).

Forty-three percent said that information on carbon emissions would influence their decisions which was a new statement in the 2022 survey.

**Figure 23: Information influencing seafood purchase
(weighted %)**

Would influence (rate 4 or 5 on 5 point scale)



Q20. When buying seafood (fish or shellfish), to what extent, would each of the following influence your purchase?

Unweighted base: Where purchase seafood: 5,364

Dimensions:

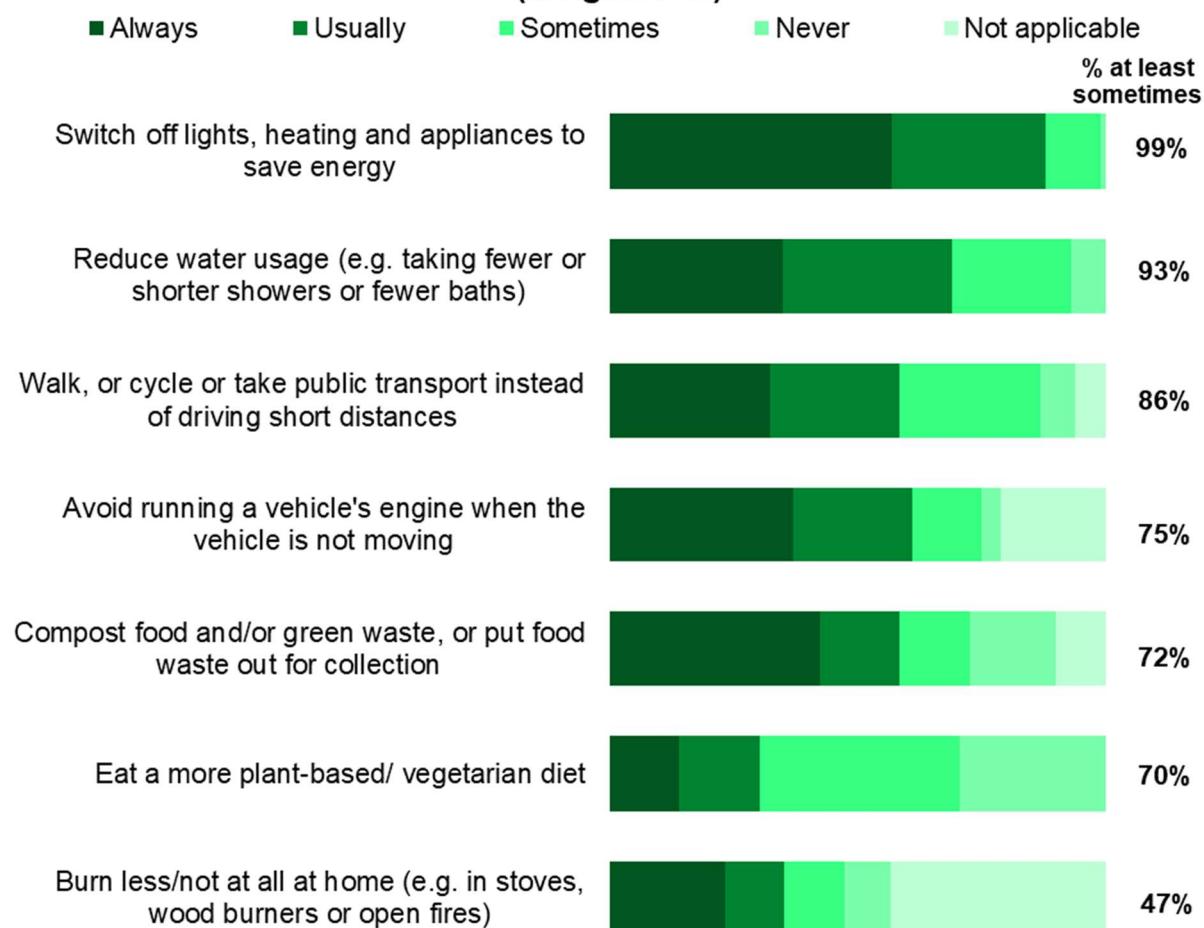
- Behaviour
- Communication
- Knowledge
- Awareness

Food, energy and transport actions

Ninety-nine percent switch off lights, heating and appliances to save energy, 93% reduce water usage and 86% walk, or cycle or take public transport instead of driving short distances (Figure 24).

The pattern of results closely reflects those in 2021.

**Figure 24: Frequency of food, energy and transport actions
(weighted %)**



Q21. Thinking about your food, energy and transport use, which of the following do you currently do?

Unweighted base: 7,060

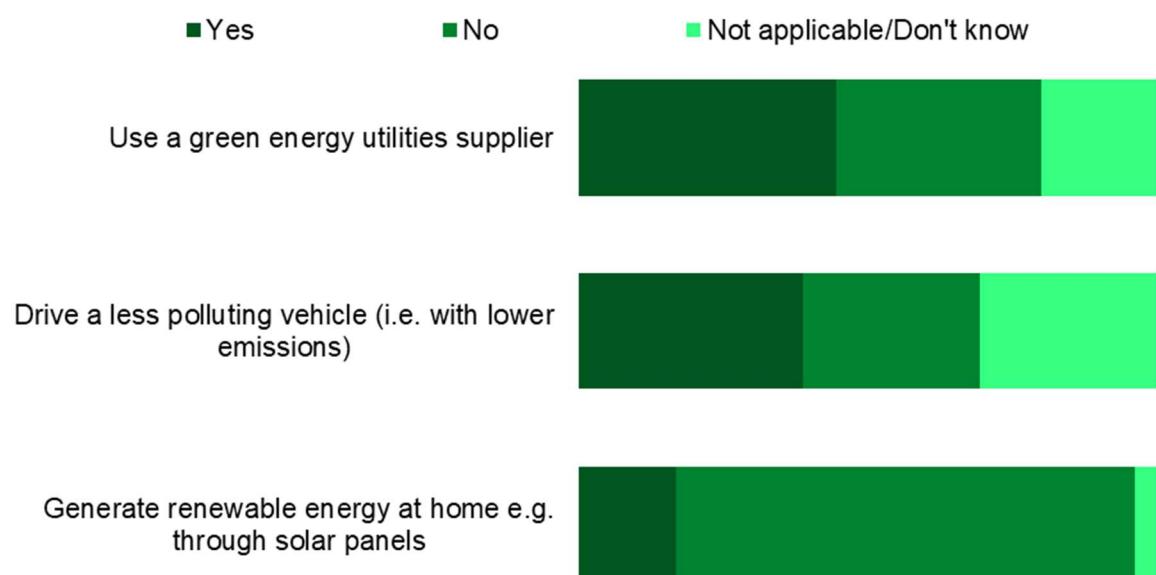
Table 6: Frequency of food, energy and transport actions (weighted %)

Action	Always	Usually	Sometimes	Never	Not applicable	Summary: At least sometimes
Switch off lights, heating and appliances to save energy	57%	31%	11%	1%	0%	99%
Reduce water usage (e.g. taking fewer or shorter showers or fewer baths)	35%	34%	24%	7%	0%	93%
Walk, or cycle or take public transport instead of driving short distances	32%	26%	28%	7%	6%	86%
Avoid running a vehicle's engine when the vehicle is not moving	37%	24%	14%	4%	21%	75%
Compost food and/or green waste, or put food waste out for collection	42%	16%	14%	17%	10%	72%
Eat a more plant-based/vegetarian diet	14%	16%	40%	29%	0%	70%
Burn less/not at all at home (e.g. in stoves, wood burners or open fires)	23%	12%	12%	9%	43%	47%

Dimensions:

- Behaviour
- Communication
- Knowledge
- Awareness

Figure 25: Utilities, vehicles and renewable energy (weighted %)



Q21. Thinking about your food, energy and transport use, which of the following do you currently do?

Unweighted base: 7,060

While 44% of people use green energy utilities suppliers and 39% drive less polluting vehicles, only 17% generate renewable energy at home (Figure 25). Nevertheless, this does represent an increase on the 13% who did so in 2021.

Table 7: Utilities, vehicles and renewable energy (weighted %)

Action	Yes	No	Not applicable/ Don't know
Use a green energy utilities supplier	44%	35%	20%
Drive a less polluting vehicle (i.e. with lower emissions)	39%	31%	31%
Generate renewable energy at home e.g. through solar panels	17%	80%	4%

Dimensions:

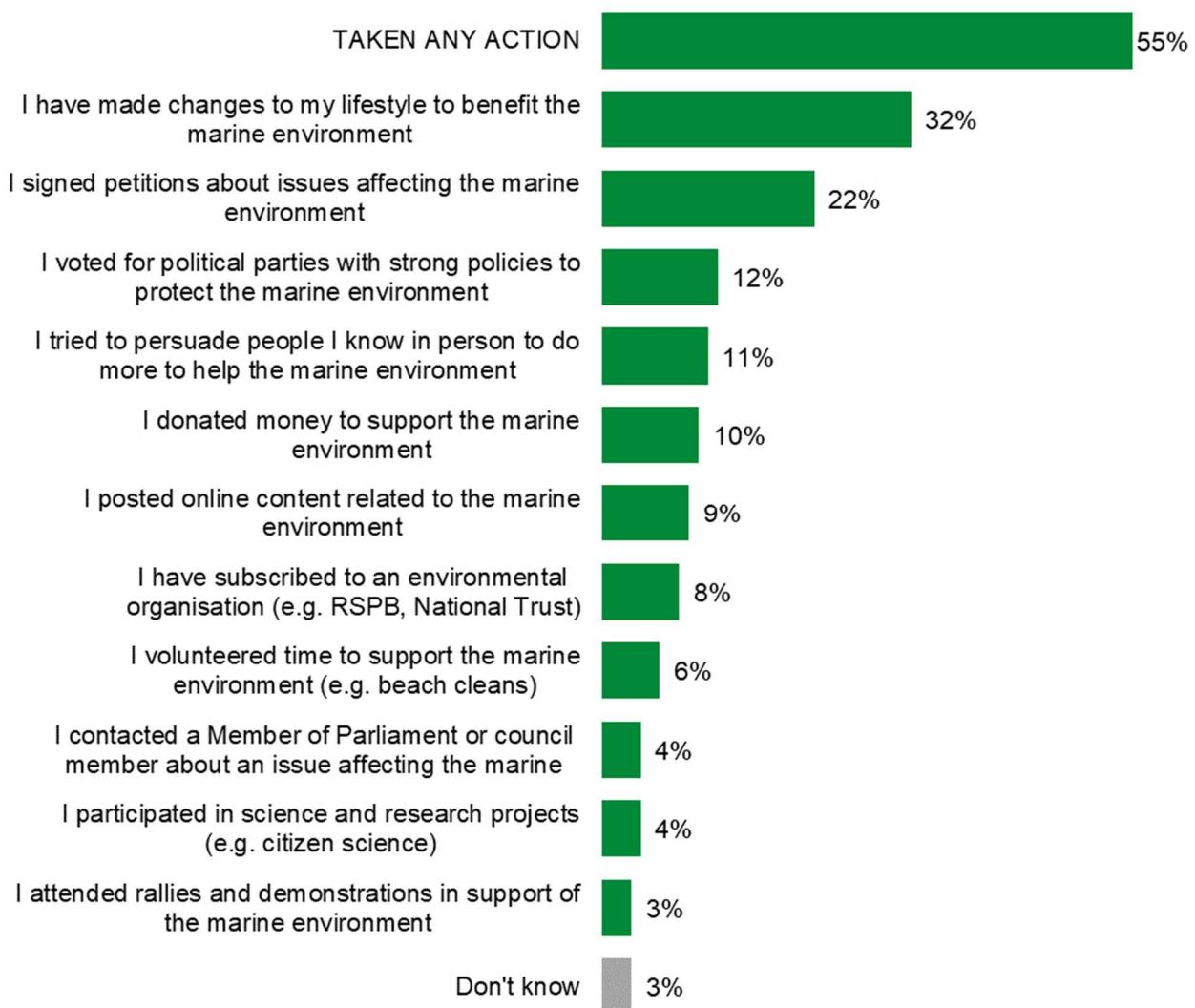
- Behaviour
- Communication
- Knowledge
- Awareness

Marine activism

Fifty-five percent had taken at least one of the listed actions to protect the marine environment (Figure 26), a decline on the 62% who had done so in 2021. The most common action people had undertaken was making lifestyle changes (32%) followed by signing petitions (22%).

Direct action in rallies or demonstrations (3%), involvement in citizen science (4%) and contacting elected representatives (4%) were the least undertaken actions.

Figure 26: Activities undertaken to protect the marine environment (weighted %)



Q15. Which of the following activities, if any, have you done to protect the marine environment in England?

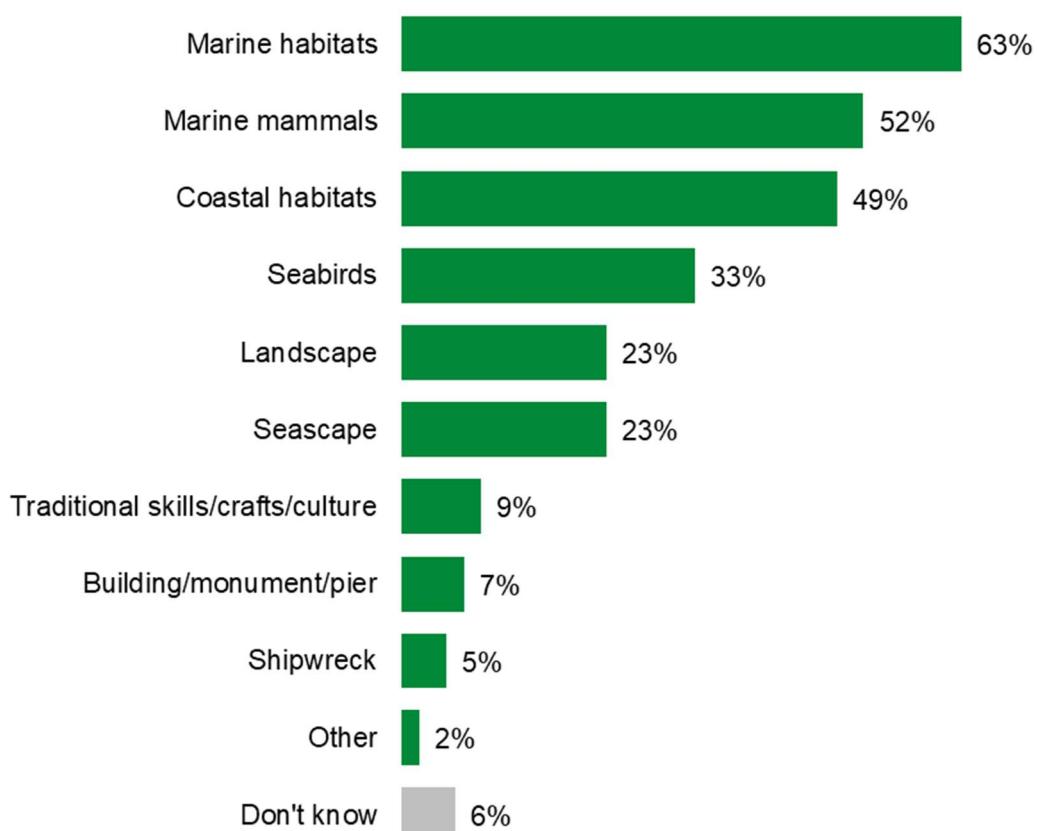
Unweighted base: 7,060

Dimensions:

- Activism
- Behaviour
- Attitudes

Where they had taken action to protect the marine environment, this was most commonly in relation to marine habitats (63%), followed by marine mammals (52%) and coastal habitats (49%) (Figure 27).

Figure 27: Aspects of marine environment intended to protect (weighted %)



Q16. What aspects of the marine environment was your activity intended to protect?

Unweighted base: Where tried to protect the marine environment: 3,941

Dimensions:

- Activism
- Behaviour
- Attitudes

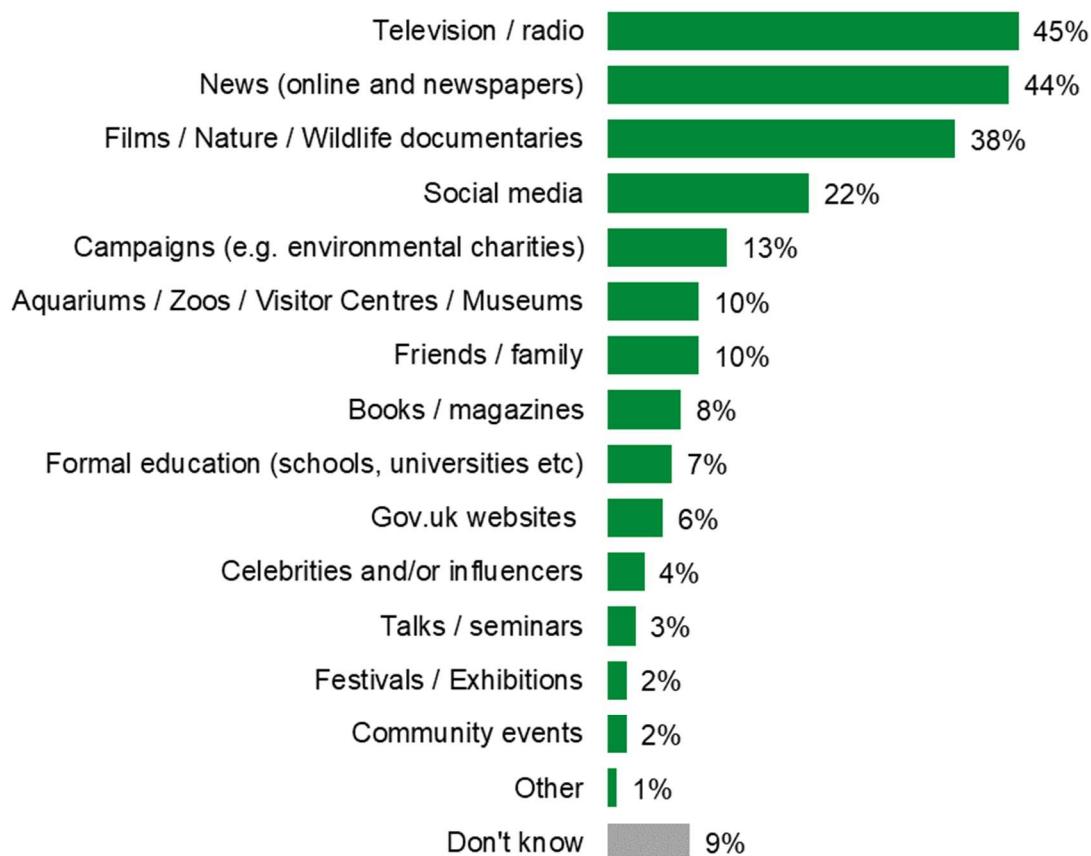
Communicating about the marine environment

The most common sources of knowledge/information about the marine environment in the last 12 months were TV and radio (45%), news (44%), films, nature and wildlife documentaries (38%) and social media (22%) (Figure 28).

Television/radio were mentioned at lower levels than was the case in 2021 (45% compared to 48%), as were films/documentaries (38% compared to 48%).

The least common sources were community events (2%), festivals/exhibitions (2%), talks/seminars (3%) and celebrities and/or influencers (4%).

Figure 28: Sources of knowledge about the marine environment (weighted %)



Q14. Thinking about the last 12 months, where has your knowledge/information about the marine environment in England mostly come from?

Unweighted base: 7,060

Dimensions:

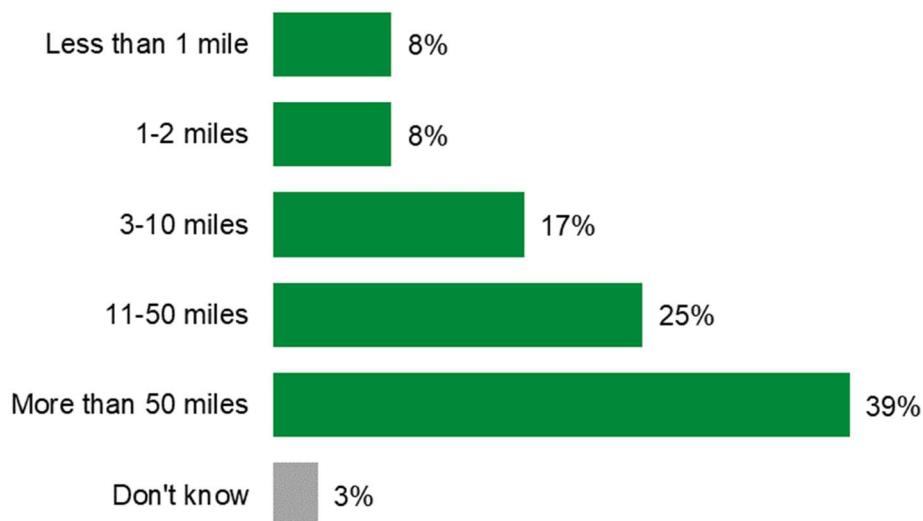
- Communication
- Knowledge
- Awareness

Visiting the marine environment

In the last 12 months, 50% had visited the marine environment, an increase on the 40% who reported doing so in 2021. 38% had not visited in the last 12 months and 11% had never visited.

Thirty-nine percent of these travelled over 50 miles, an uplift on the 33% who did so in 2021, 33% travelled under 10 miles, and 25% travelled between 11 and 50 miles (Figure 29).

Figure 29: Distance travelled for visit (weighted %)



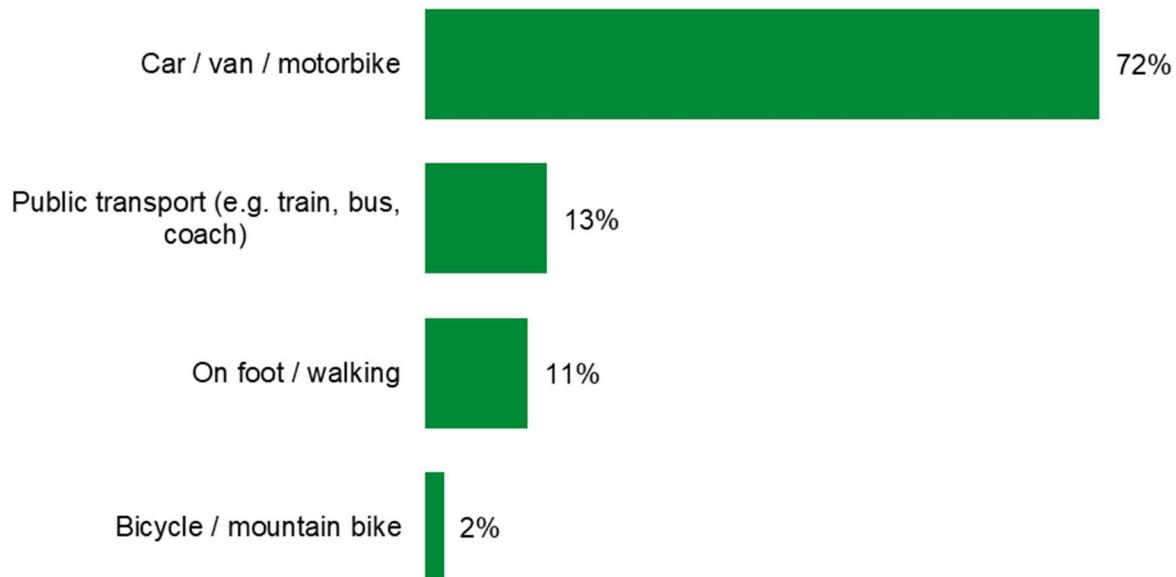
Q31. Approximately how far in miles did you travel to get there?
Unweighted base: where visited in last 12 months: 3,506

Dimensions:

- Access, experience, and proximity
- Behaviour

By far the most common form of transport used to travel to marine environments was car / van or motorbike (72%) (Figure 30), although this is a decrease on the 75% who did so in 2021. Fewer reported walking than was the case in 2021 (11% compared to 14%), with increases in those using public transport (from 8% to 13%).

Figure 30: Main mode of transport used for visit (weighted %)



Q32. What was the main form of transport you used to get there?

Unweighted base: where visited in last 12 months: 3,506

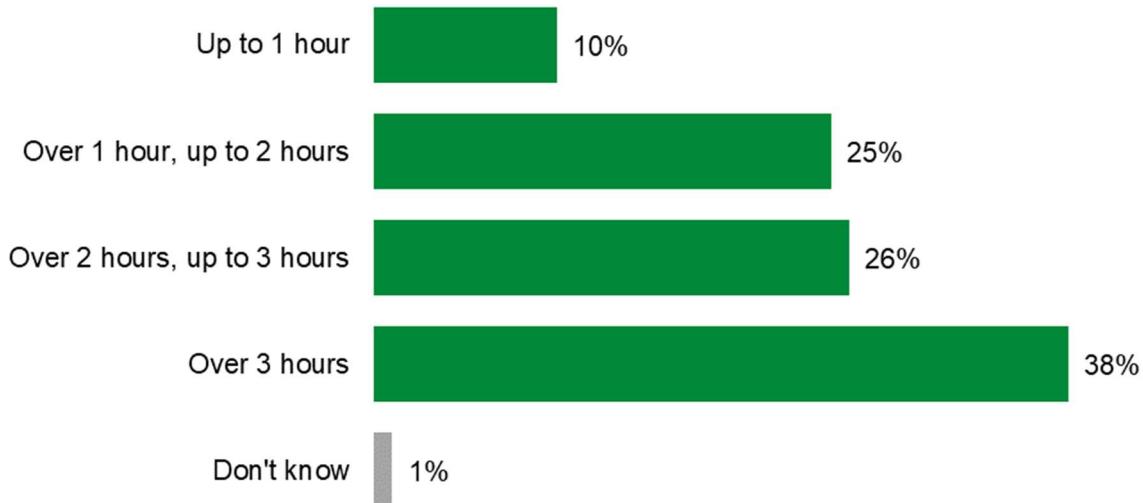
Dimensions:

- Access, experience, and proximity
- Behaviour

Length of visits

Of those who had visited the marine environment in the last 12 months, the most common length of time spent there at their last visit was over three hours (38%) (Figure 31).

Figure 31: Length of visit (weighted %)



Q28. Thinking about your most recent visit to the marine environment over the last 12 months, how long did you spend there?

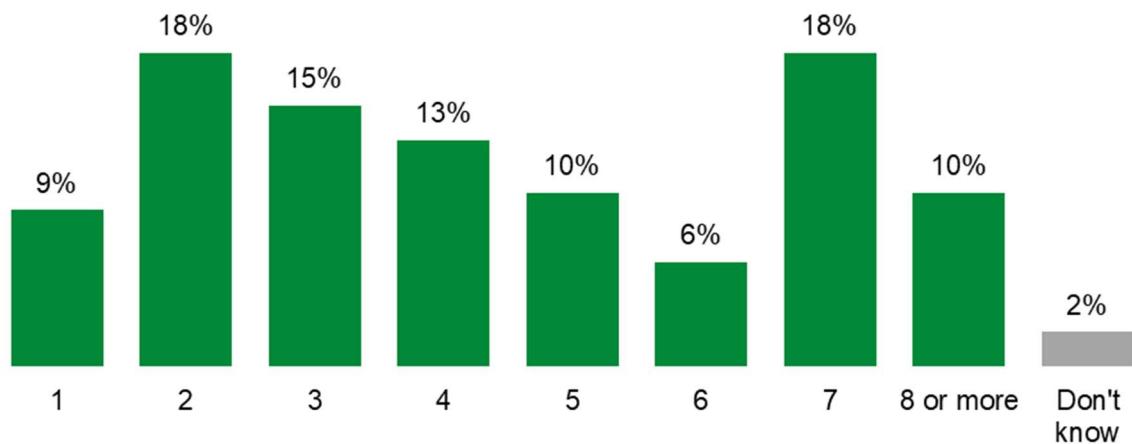
Unweighted base: where visited in last 12 months: 3,506

Dimensions:

- Access, experience, and proximity
- Behaviour

Fifty-eight percent of respondents who stayed over three hours stayed away from home overnight, and among this group the most popular length for an overnight stay was two nights (18%) or seven nights (18%) (Figure 32).

Figure 32: Number of nights stayed (weighted %)



Q30. How many nights did you stay away from your home during this trip?

Unweighted base: where stayed overnight: 767

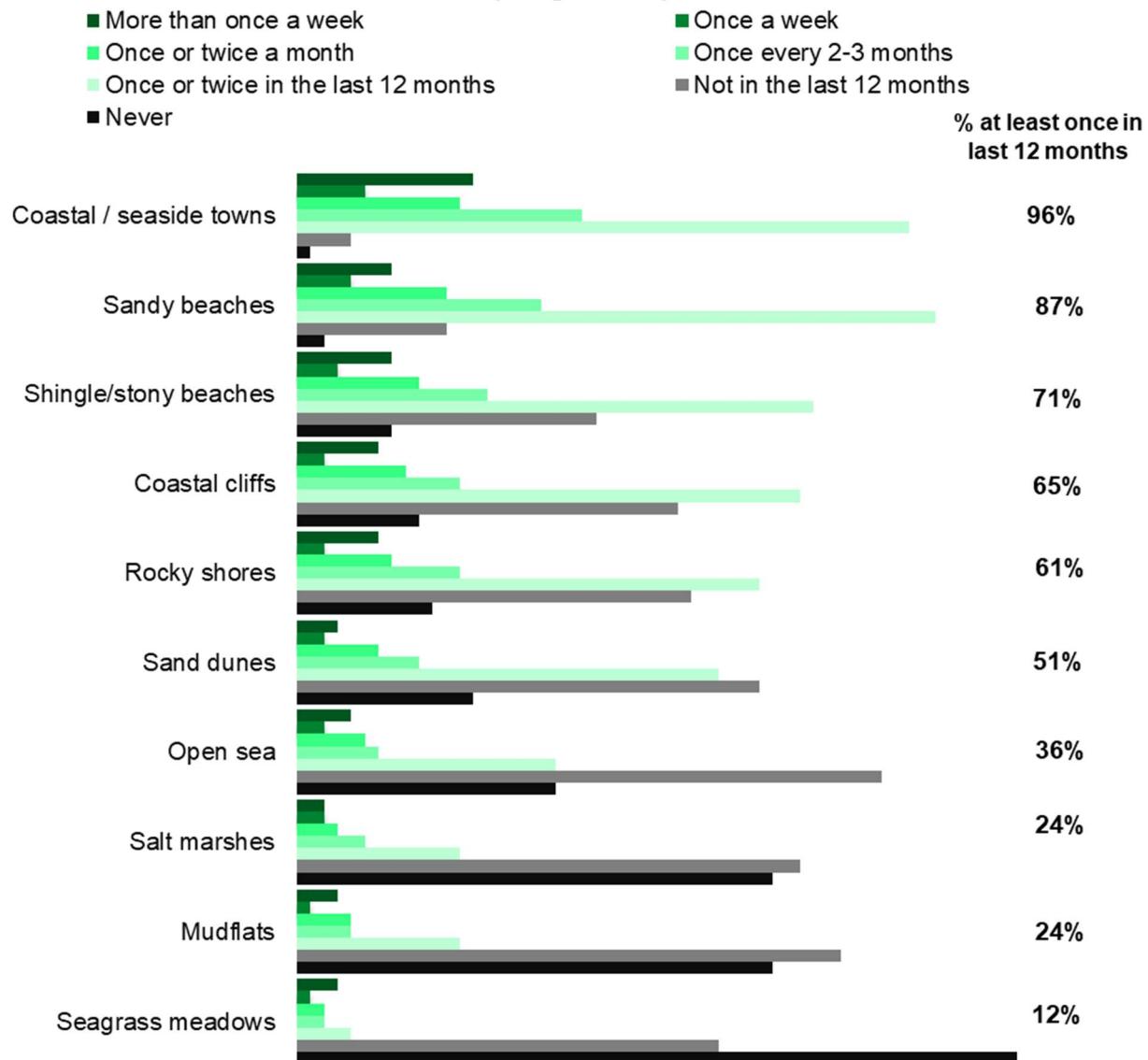
Dimensions:

- Access, experience, and proximity
- Behaviour

Marine destinations

Of those respondents who had visited the marine environment in the past 12 months, the places most visited for leisure were coastal/seaside towns (96%), sandy beaches (87%), shingle/stony beaches (71%), coastal cliffs (65%) and rocky shores (61%). Seagrass meadows (12%), mudflats (24%) and salt marshes (24%) were the least visited (Figure 33).

Figure 33: Frequency of visits by marine environment type (weighted %)



Q26. Thinking about the last 12 months, how often on average, if at all, have you spent your leisure time in the following marine environments?

Unweighted base: where visited in last 12 months: 3,506

Table 8: Frequency of visits by marine environment type (weighted %)

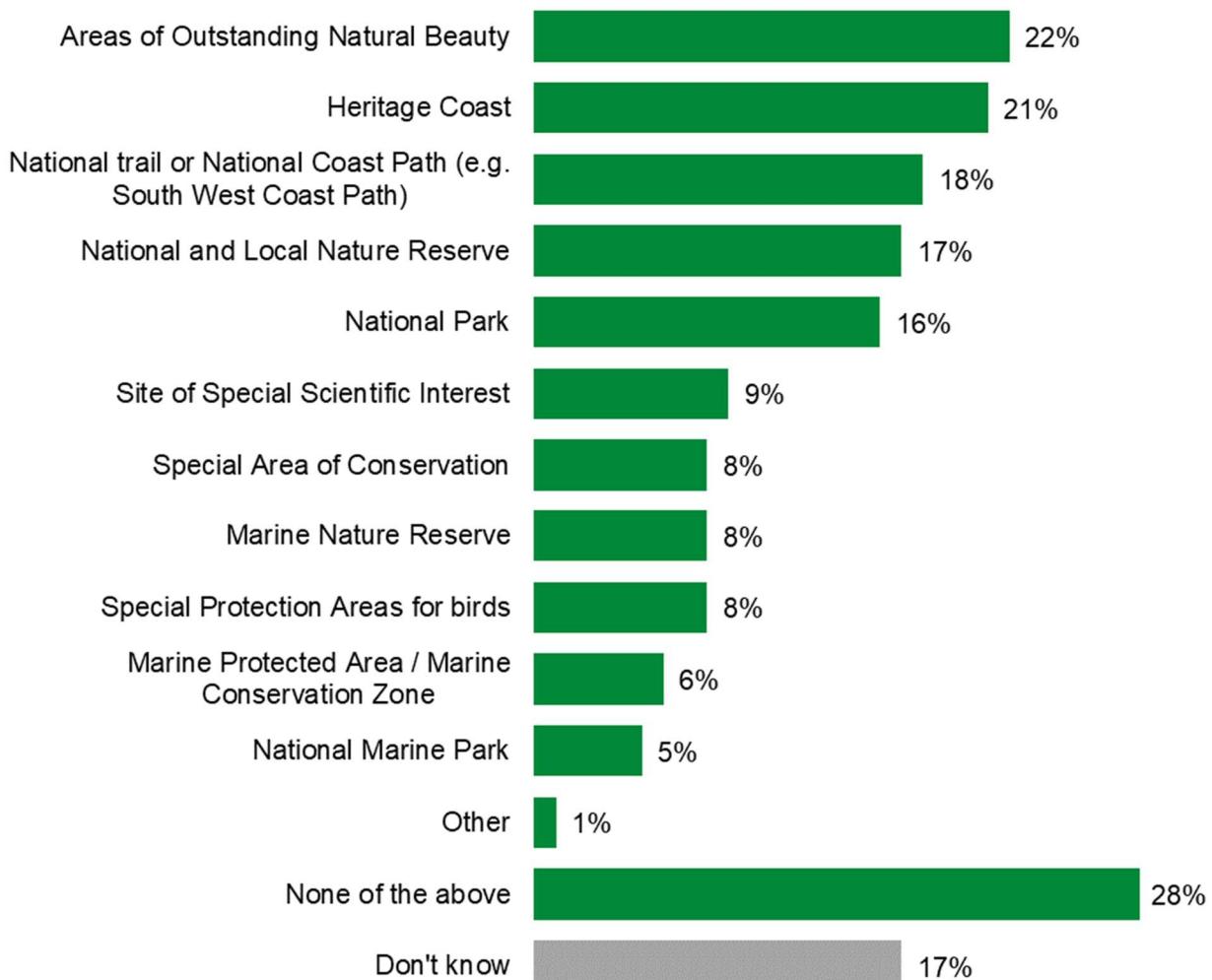
Type	More than once a week	Once a week	Once or twice a month	Once every 2-3 months	Once or twice in the last 12 months	Not in the last 12 months	Never	% at least once in last 12 months
Coastal / seaside towns	13%	5%	12%	21%	45%	4%	1%	96%
Sandy beaches	7%	4%	11%	18%	47%	11%	2%	87%
Shingle/stony beaches	7%	3%	9%	14%	38%	22%	7%	71%
Coastal cliffs	6%	2%	8%	12%	37%	28%	9%	65%
Rocky shores	6%	2%	7%	12%	34%	29%	10%	61%
Sand dunes	3%	2%	6%	9%	31%	34%	13%	51%
Open sea	4%	2%	5%	6%	19%	43%	19%	36%
Salt marshes	2%	2%	3%	5%	12%	37%	35%	24%
Mudflats	3%	1%	4%	4%	12%	40%	35%	24%
Seagrass meadows	3%	1%	2%	2%	4%	31%	53%	12%

Dimensions:

- Access, experience, and proximity
- Behaviour

Whilst 28% said they had not visited any designated or specific types of sites in the last 12 months, 22% said they had visited an AONB, 21% Heritage Coast, 18% a National trail or National Coast Path, 17% a National and Local Nature Reserve, and 16% a National Park (Figure 34).

Figure 34: Designated/specific types of sites visited on most recent visit (weighted %)



Q35. Thinking about the last 12 months, do you recall any visits to marine environments being to the following?

Unweighted base: where visited in last 12 months: 3,506

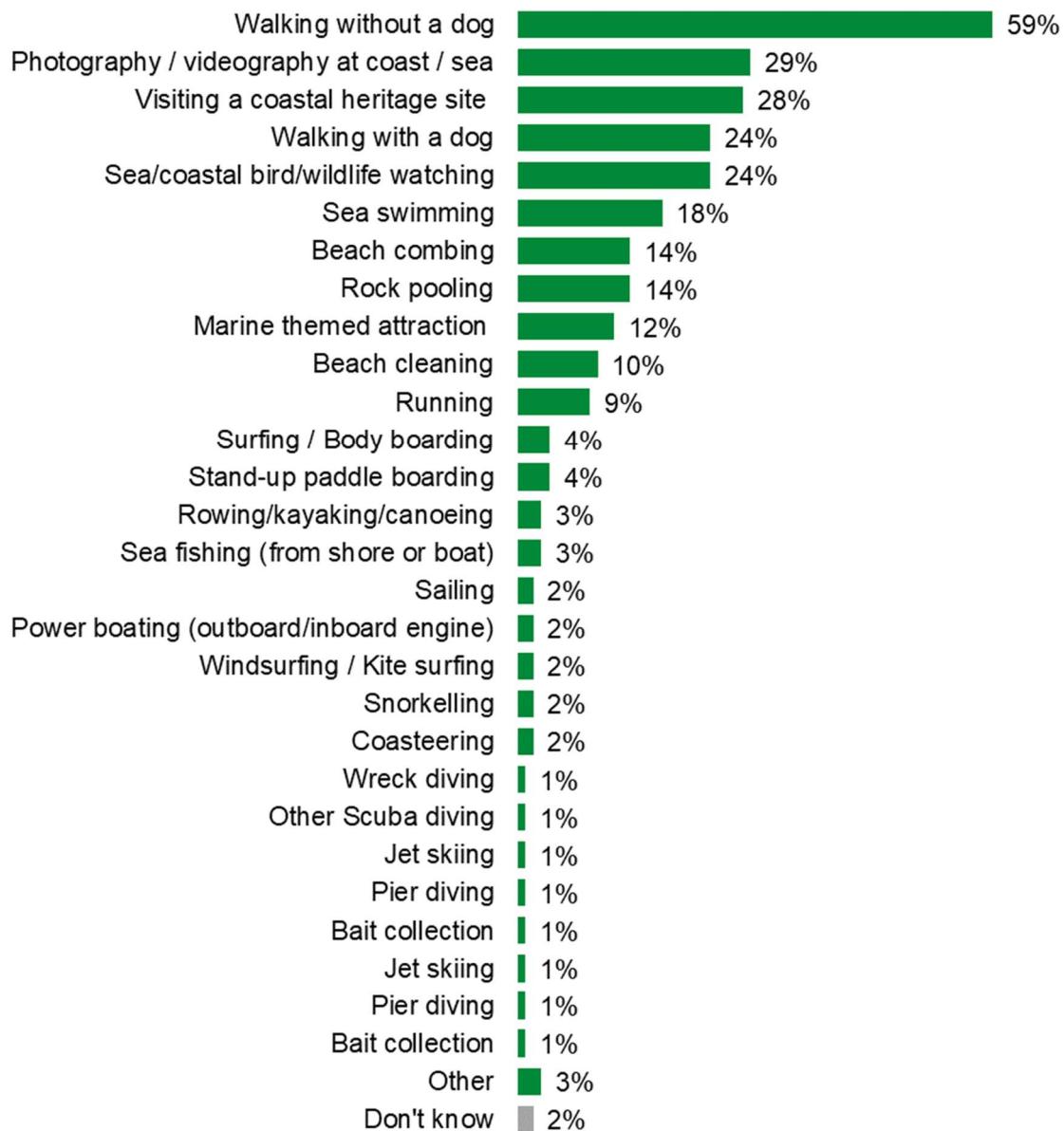
Dimensions:

- Access, experience, and proximity
- Behaviour
- Knowledge
- Awareness

Recreational activities

Walking, both without (59%) and with a dog (24%) were popular activities undertaken during visits to the marine environment in the last 12 months. Photography and videography (29%), visiting a coastal heritage site (28%) and sea/coastal bird/wildlife watching (24%) were also commonly undertaken activities (Figure 35).

Figure 35: Activities undertaken during visit(s) to the marine environment in last 12 months (weighted %)



Q34. What recreational activities did you undertake during your visit(s) to the marine environment in the last 12 months?

Unweighted base: where visited in last 12 months: 3,506

Dimensions:

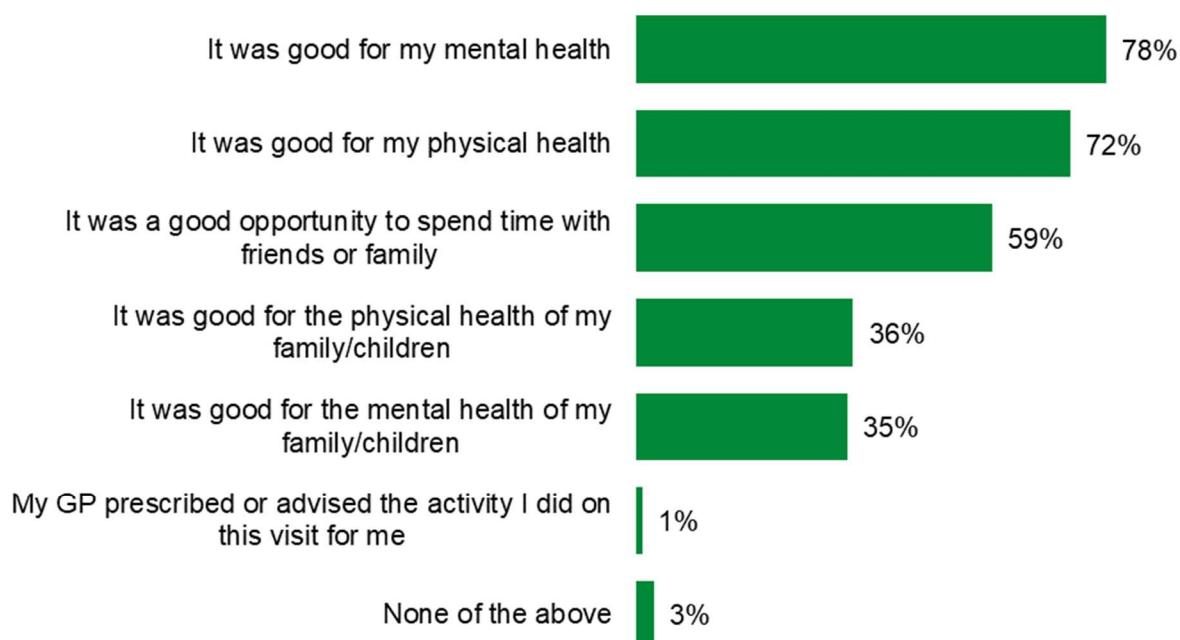
- Access, experience, and proximity
- Activism
- Behaviour

Outcomes and motivations of visits

Good mental health (78%) and physical health (72%) were the most frequently reported outcomes from spending time in a marine environment. Only 1% were prescribed or advised by their GP to undertake their activity (Figure 36).

Respondents were less likely to mention mental health benefits than was the case in 2021 (78% compared to 83%), and less likely to mention physical health benefits (72% compared to 79%), the physical health of family (36% compared to 39%) and the mental health of family (35% compared to 38%).

Figure 36: Outcomes associated with most recent visit to marine environment (weighted %)



Q33. Which of the following statements about this time spent at a marine environment are true?

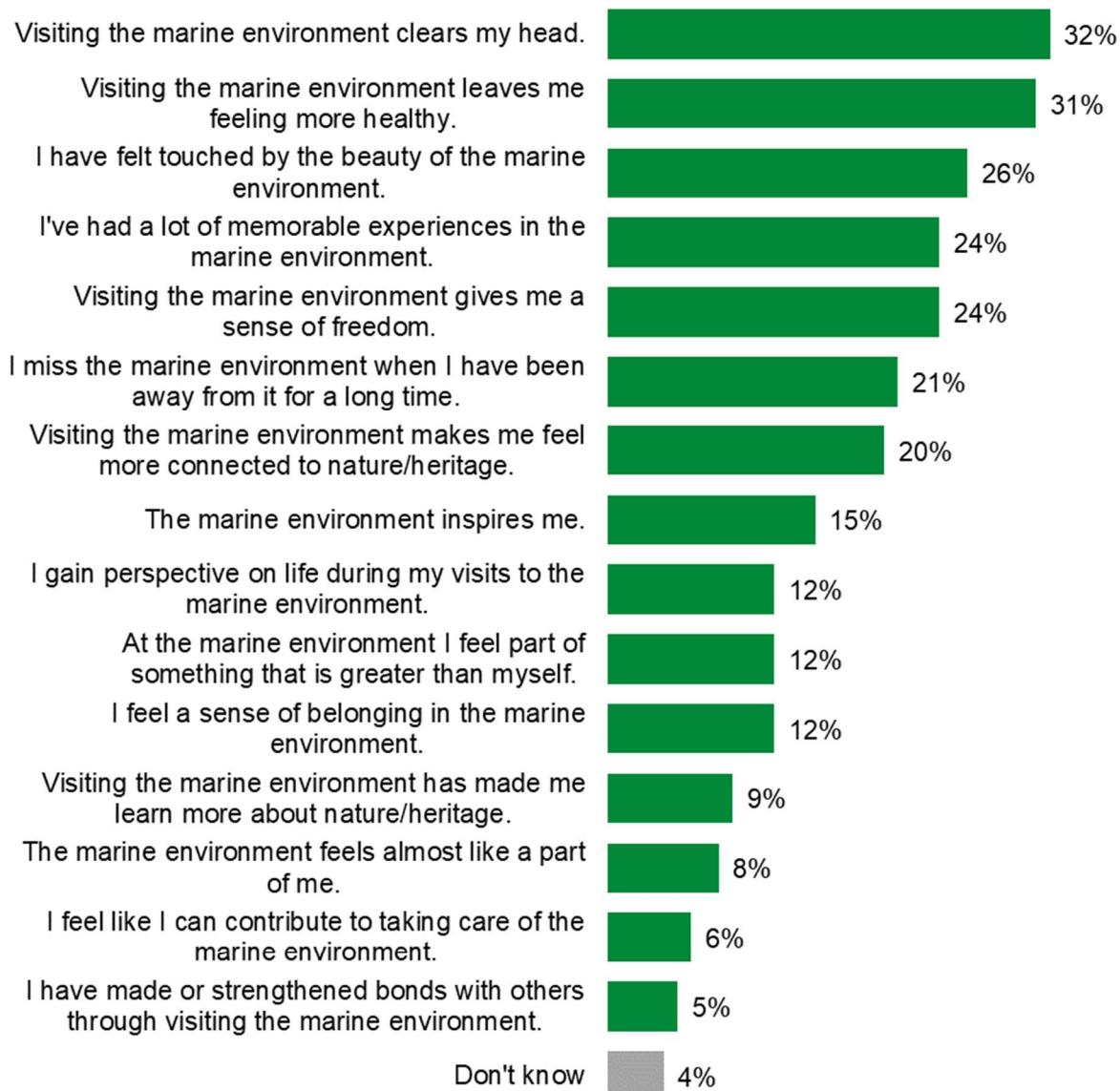
Unweighted base: where visited in last 12 months: 3,506

Dimensions:

- Access, experience, and proximity
- Personal or emotional connection
- Activism
- Behaviour
- Communication
- Attitudes
- Knowledge
- Awareness

Asked about general motivations for visiting marine environments, the most commonly reported reasons were clearing one's head (32%) and feeling healthier (31%) (Figure 37).

Figure 37: General motivations for visiting the marine environment (weighted %)



Q36. Thinking more generally about the marine environment, which three statements best describe your motivation to visit?

Unweighted base: where visited in last 12 months: 3,506

Dimensions:

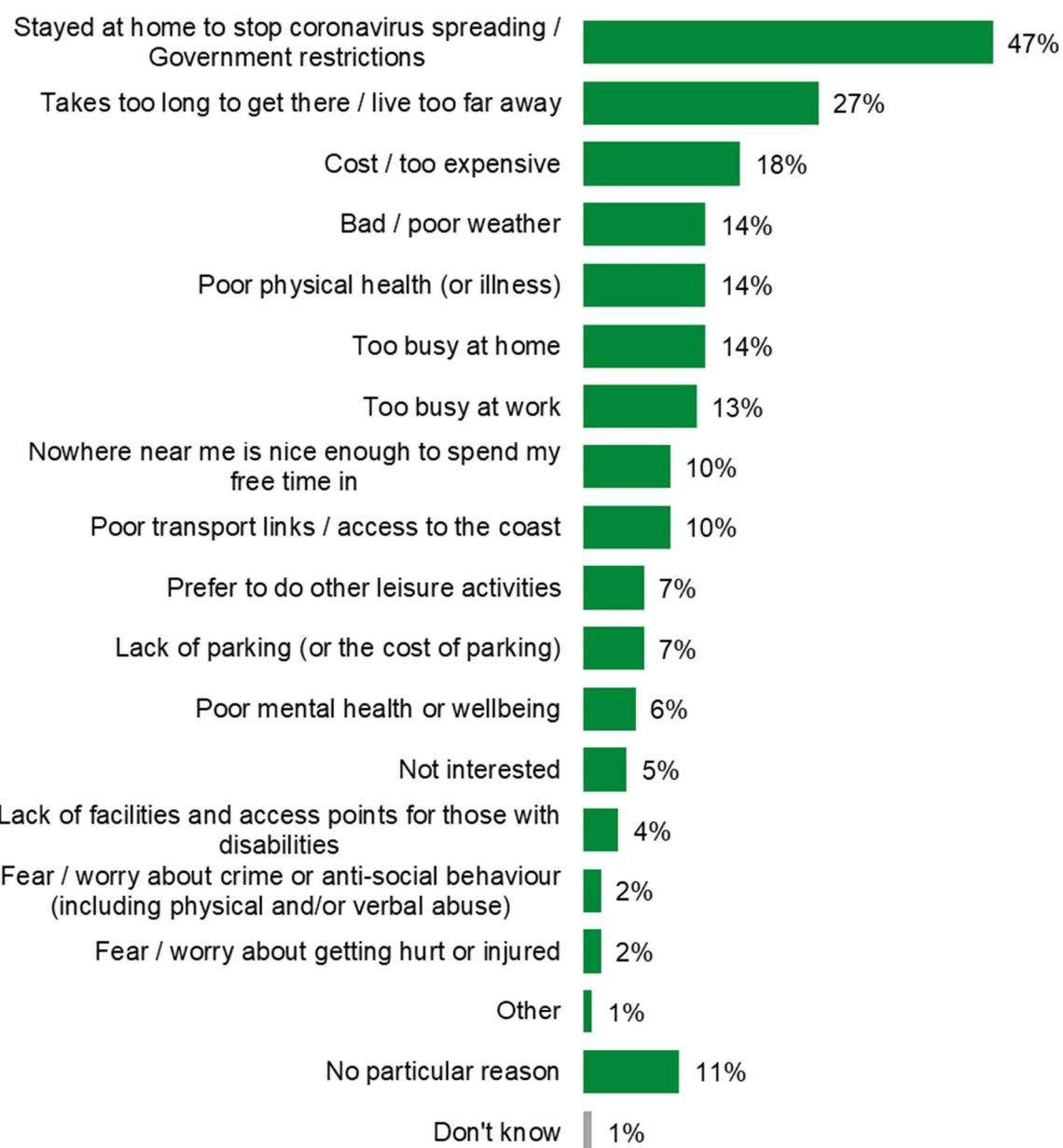
- Access, experience, and proximity
- Personal or emotional connection
- Activism
- Behaviour
- Communication
- Attitudes
- Knowledge
- Awareness

Barriers to visits

The main reason for not visiting a marine environment in the last 12 months was staying home due to COVID-19 (52%) (Figure 38), but this has, as expected, declined since 2021 (47%), reflecting the reduction in lockdown restrictions over time.

Distance/time taken to get to a marine environment (27%) and cost (18%) were the next most common barriers to visiting.

Figure 38: Reasons for not visiting the marine environment in the last 12 months (weighted %)



Q27. What was the main reason/s for not visiting a marine environment in the last 12 months?

Unweighted base: where not visited in last 12 months: 3,449

Dimensions:

- Access, experience, and proximity
- Personal or emotional connection
- Behaviour
- Attitudes

Annex 1: Note on Methodology

The research used an online panel method. Invitations were sent to members of online panels using BMG's 'panel blend' approach which uses simultaneous survey invitations across multiple panels to spread fieldwork. The method is designed to improve the quality of outputs by hedging against the risk of selecting a single panel provider. Quotas were set on age based on the latest Office for National Statistics mid-year estimates as well as whether the area was classified as coastal or non-coastal (based on participant Settlement) to ensure the interviews completed were representative of the population on this basis. These were monitored closely and any groups that were under-represented were sent further invitations and reminders in order that we achieved as close as possible to the original quotas set. In addition to this all respondents had to have been a permanent resident in Scotland for at least the last 5 years. Additional variables were also monitored during fieldwork to ensure a spread of responses were received:

- Region
- Gender
- Ethnicity
- IMD quintiles
- ONS Coastal Communities sub-groups
- Urban/rural

Further details on the methodology are available in the [Technical Report](#).