Climate Change in the Irish Mind (Wave 2)

Insight Report No. 3: Climate Literacy

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

YALE PROGRAM ON
Climate Change
Communication

National Dialogue on Climate Action

Rialtas na hÉireann
Government of Ireland

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Key Findings

While a majority of people in Ireland understand climate change is primarily human-caused, this understanding is not strongly linked to higher climate literacy.

Across topics, from emissions sources to behavioural impacts, knowledge gaps persist even among those most convinced of human influence. This suggests that recognition of human-caused climate change and knowledge of climate change topics are shaped by different factors, including trust, values, and communication exposure.

Close to 95% of Irish people understand that climate change is happening.

However, understanding that human activities cause climate change is higher in urban areas versus rural areas, and among those in employment categories associated with professional and managerial occupations versus those associated with manual or unskilled occupations. This may reflect less exposure to scientific framing of climate change topics or to targeted climate communication.

Acceptance that human activities cause climate change is consistent across age and gender.

People who understand climate change is mainly caused by humans are much more likely to support a wide range of climate policies, especially those that require bigger changes or personal effort.

They tend to show more urgency and willingness to act. In contrast, those who think natural changes play a role are less supportive overall. This indicates that understanding in human causation is a key driver of policy support and action.

The Irish public shows high recognition of climate-related terms but can struggle with deeper understanding. Many people confuse environmental actions with climate-effective ones, and underestimate impactful behaviours like dietary choice.

The limited differences between those who recognise human causation and those who don't recognize it on many factual questions underscore the need for more accessible, targeted education on climate change that bridges the gap between awareness, understanding, and informed action.

Introduction

The 'Climate Change in the Irish Mind' study (CCIM) is a nationally representative study of the Irish people's beliefs, attitudes, policy preferences and behaviours regarding climate change.

This work was undertaken by the EPA and the Yale Program on Climate Change Communication in support of the National Dialogue on Climate Action.

The approach to the project is based on the established methodology of the "Climate Change in the American Mind" survey conducted by the Yale Program on Climate Change Communication and the George Mason University Center for Climate Change Communication, which was tailored to meet Ireland's particular socio-economic context. This is the first nationally-representative survey of its kind in Ireland.

These Insights Reports are based on the findings of the second wave of CCIM, which was carried out in 2023 (Wave 1 baseline survey of CCIM was undertaken in 2021)

Methodology

CCIM Wave 2 fieldwork was conducted between the 30th of August and the 6th of October 2023 by the survey company Ipsos B&A following a recognised industry standard. The survey was conducted with a representative sample of the Irish people, aged 18 years and over.

Survey respondents were recruited using a random digit dial sample of live Irish telephone numbers. A total of 22,862 numbers were contacted by telephone, about 80% of survey respondents were reached through mobile phone numbers and 20% through landline phone numbers.

A total of 1,355 interviews were completed (including 25 pilot interviews to test survey wording and timing), for a response rate of 5.9%* . All questionnaires were administered by call agents using computer-assisted telephone interviewing (CATI) software. The survey took, on average, 25 minutes to complete.

Gender, age, work status, and region quotas were used to ensure sample representativeness. Key demographic variables were also weighted, post-survey, to match Central Statistics Office norms.

*Wave 1 of CCIM (2021) used a sample size of (N = 4,000) to build the statistical model underlying the CCIM Climate Opinion Maps. Wave 2 of CCIM (2023) uses a sample size of (N = 1,330) for the Main Report but builds on the statistical model from Wave 1 for the mapping output which uses an effective sample of (N = 5,330). Please see the Methodology and FAQ pages of the Climate Opinion Maps for more details.

Topic Focus

The national survey questionnaire contained a series of topics and themes:

- Worry about climate change impacts or extreme weather; Beliefs; Risk perceptions; Policy support; Behaviours (consumer and political); Norms; Personal experience of climate change; Media sources; and Climate literacy in the Irish public.

This report 'Climate Change in the Irish Mind – Climate Literacy' focuses on the relationship between the public's understanding of human driven climate change and their Climate Literacy; and how this relates to their climate change outlook and support for climate change policy.

Summary of National Findings

In summary, key overall findings from CCIM Wave 2 (2023) for climate change understanding and literacy included:

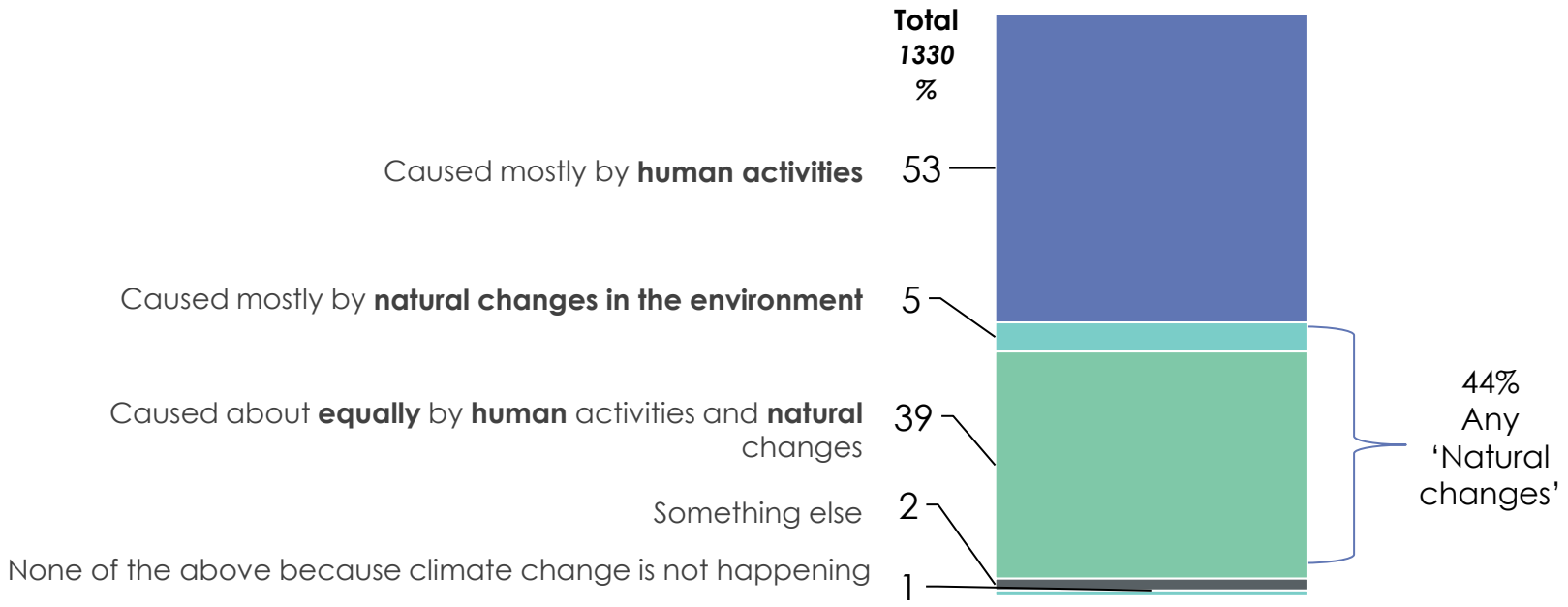
- Close to 95% of Irish people, both in urban and rural areas, understand that climate change is happening.
- A majority of people in Ireland (53%) understand that climate change is mostly human-caused and another 39% incorrectly say it is caused about equally by human activities and natural changes.
- A large majority of the Irish population have at least heard of climate change topics such as the "greenhouse effect" (96%), however only a very small percentage (5%) could distinguish the greenhouse effect from other environmental topics such as acid rain, or the ozone layer.
- There is a moderate level of recognition that carbon dioxide and methane trap heat in the atmosphere, but much less certainty about the effects of water vapour, hydrogen, and oxygen.
- When it comes to understanding the effects of behaviours on the carbon footprint of an average person, a majority of Irish people correctly identified that avoiding long distance flights and switching to renewable energy sources would have a large impact on carbon footprint.
- The carbon footprint impact of dietary choices was underestimated by a large majority, while the impact of behaviours such as switching to energy efficient lighting and using reusable shopping bags were overestimated by a large majority.
- The following analysis explores how the public's understanding of human-caused climate change connects to their overall climate knowledge, and examines how these factors influence their views on climate change and their support for related policies.

What is the cause of Climate Change

Close to 95% of Irish people, both in urban and rural areas, understand that climate change is happening.

A majority (53%) understand that climate change is mostly caused by human activities. An additional 39% think climate change results from a mix of human actions and natural environmental changes. Together, these groups represent a significant portion of the population who acknowledge at least some human influence on the climate.

For the purpose of analysis, we focused on the majority group, those who correctly attribute climate change primarily to human causes, and compared their views to those who erroneously include natural environmental changes in their explanation (a group comprising 44% of respondents). The objective of this comparison was to highlight any important differences in attitudes and understanding.



Climate Change in the Irish Mind National Survey (Q.8)
Base: All adults aged 18+; N – 1,330 (Wave 2)

What is the cause of Climate Change (demographic analysis)

Understanding of human-caused climate change is highest in Dublin (60%) and among employment categories associated with professional and managerial occupations (58%) (ABC1F50+*).

Rural residents (47%) and those from employment categories associated with manual or unskilled occupations (47%) (C2DEF50-) are least likely to attribute climate change mostly to human activity.**

Interestingly, understanding is consistent across age and gender, with similar levels among both younger adults (18–24, 55%) and older adults (65+, 53%), challenging assumptions that climate concern is driven primarily by youth.

	Total	Gender		Age					Social Class		Region		Area	
		Male	Female	18-24	25-34	35-49	50-64	65+	ABC1F 50+*	C2DEF 50-**	Dublin	Excl Dublin	Urban	Rural
Base	1330	724	606	110	226	389	308	297	839	446	395	935	926	404
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Caused mostly by **human activities**	53	54	53	55	53	56	50	53	58	47	60	51	57	47
Caused mostly by **natural changes in the environment**	5	6	4	3	4	6	5	7	4	7	4	6	5	7
Caused about **equally** by **human** activities and **natural** changes	39	36	41	40	42	37	39	37	36	43	34	40	37	42
Something else	2	2	1	2	1	1	3	2	1	1	1	2	1	3
None of the above because climate change is not happening	1	1	1	-	0	1	3	1	1	1	0	1	1	2

Significantly higher than total

Significantly lower than total

Climate Change in the Irish Mind National Survey (Q.8)
Base: All adults aged 18+; N – 1,330 (Wave 2)

*ABC1F50+ represents professional, managerial, supervisory, clerical, administrative workers, and those in larger farming enterprises 50 acres+
**C2DEF50- represents skilled, semi/unskilled workers, carers, unemployed, retired, and those on smaller farming enterprises - below 50 acres

Support for climate friendly energy policies

Support for sample climate policies is significantly higher among those who understand climate change is primarily human-caused. This group is more likely to back action across a range of areas—from taxing fossil fuel cars and banning polluting fuels, to supporting clean energy and helping low-income households improve energy efficiency.

The largest contrasts appear around more disruptive or systemic changes, such as reducing the national cattle herd. Notably, two policies related to the use of tax revenues from fossil fuels — returning equally to households and supporting fossil fuel workers—showed no difference in support between groups, suggesting broad agreement on fairness and transitional support. These findings highlight how understanding of climate change causation can strongly influence willingness to support policy action.

	Total	Climate change is…	
		Caused mostly by human activities	ANY Natural changes
Base	1330	717	575
	%	%	%
Banning peat, coal and oil for home heating purposes	25	31	18
Government grants to encourage residential and commercial building owners to install **cleaner and more efficient heating systems**	77	84	71
Government grants to make **electric vehicles** more affordable	65	72	58
Higher taxes on **cars that use petrol and diesel**	24	34	13
Reducing the size of the **national cattle herd** to reduce greenhouse gas emissions	29	39	17
Returning the money (from taxes on fossil fuels) to all Irish households in equal amounts.	35	30	39
Assisting (via taxes on fossil fuels) **workers in the fossil fuel industry** who may lose their jobs	58	60	56
Helping pay for **energy efficiency improvements** in low-income households	73	77	68
Supporting the further development of **new clean energy sources** such as marine and hydrogen power	75	80	71

Significantly higher than total

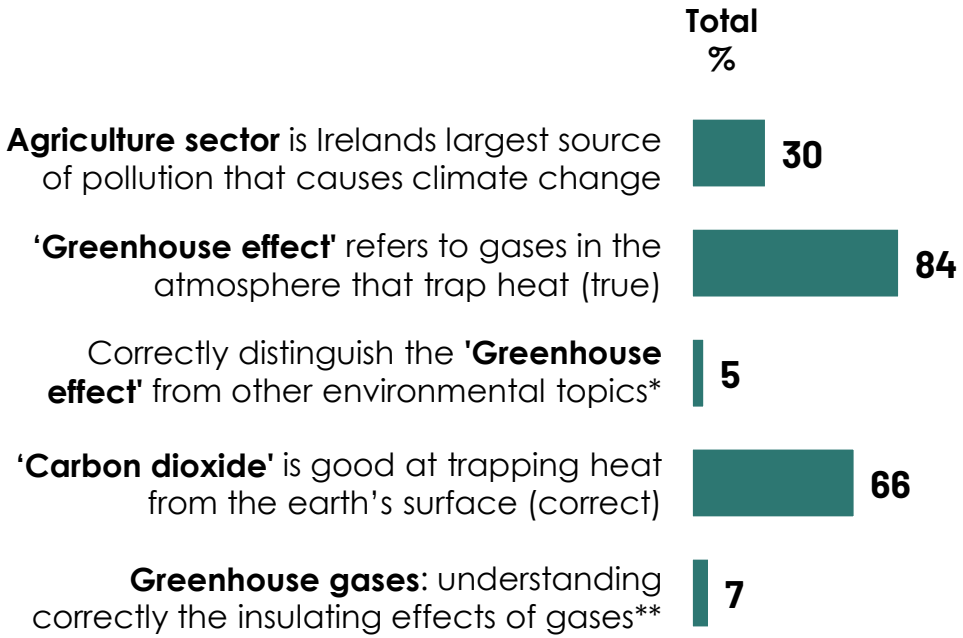
Significantly lower than total

Climate Change in the Irish Mind National Survey (Q.21/22/23)
Base: All adults aged 18+; N – 1,330 (Wave 2)

Climate change knowledge: Sources of pollution and the greenhouse effect/ gases

Despite broad awareness of climate change terms like the "greenhouse effect", true climate literacy remains modest in Ireland. Only 30% correctly identify agriculture as the country's top source of greenhouse gas emissions, and just 5% can accurately distinguish the greenhouse effect from other environmental issues.

Even among those who understand that climate change is primarily human-caused, knowledge levels can be only slightly higher. There is little meaningful difference between this group and those who include natural causes in their explanation. Understanding of how greenhouse gases like CO_2 and methane trap heat is moderate, but confusion remains around other gases. These findings suggest that recognition of human-caused climate change is not strongly linked to factual knowledge.



Climate change is…	Mostly caused by human activities	Any 'Natural change'
	34%	25%
	88%	82%
	8%	4%
	73%	58%
	8%	6%

Significantly higher than total | Significantly lower than total

Climate Change in the Irish Mind National Survey (Q.10/37/38)
Base: All adults aged 18+; N – 1,330 (Wave 2)

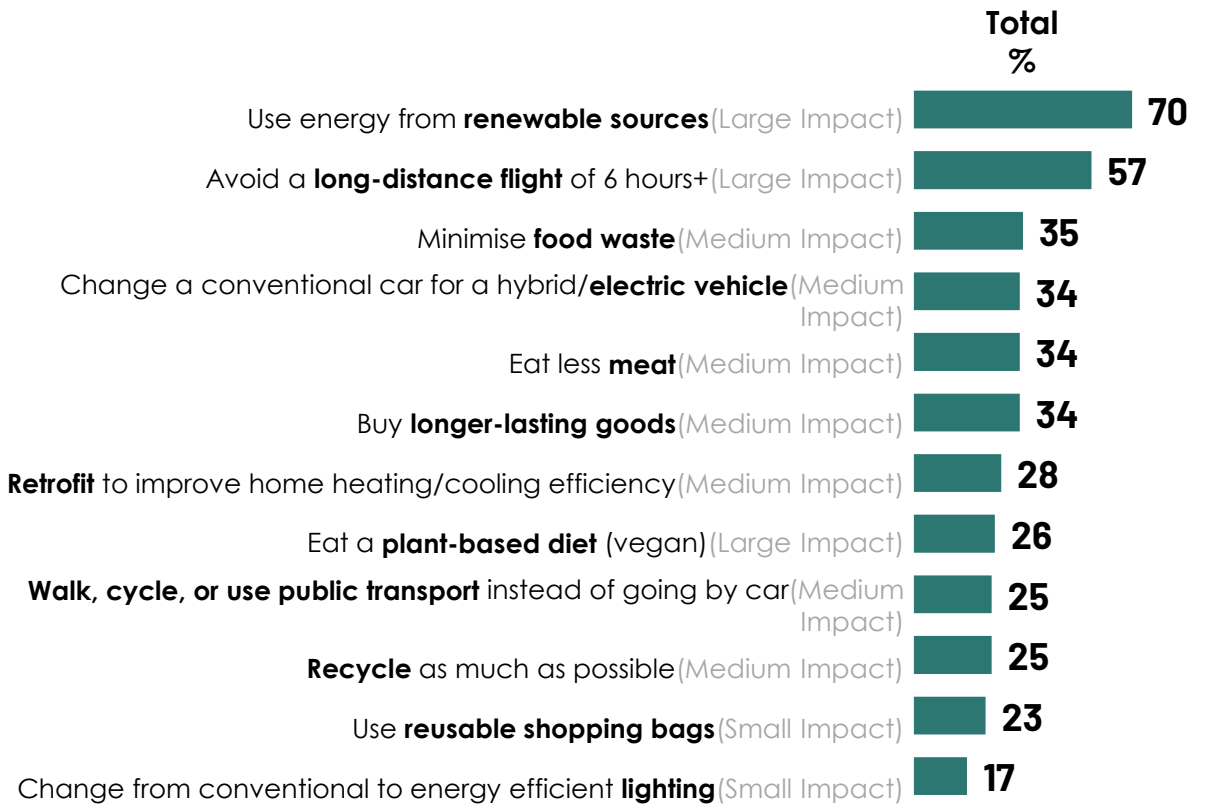
* E.g acid rain, ozone layer, 'how plants grow'

***To gauge the public's knowledge of gases contributing to the greenhouse effect, respondents were presented with a randomised list of gases and asked whether each one was good at trapping heat from Earth's surface in the atmosphere (making it a greenhouse gas): carbon dioxide (true); methane (true); water vapor (true); hydrogen (false); and oxygen (false).*

Understanding the impact of individual behaviours on an average person's carbon footprint (percent giving correct answer*)

Understanding of which behaviours meaningfully reduce a person's carbon footprint is generally modest. While most correctly identified renewable energy use (70%) and avoiding long-haul flights (57%) as high-impact actions, few recognised the impact of eating less meat and eating a plant-based diet. Importantly, there were few differences between those who believe climate change is primarily human-caused and those who attribute it partly to natural changes.

However, the 'human activities' group was significantly more likely to correctly identify the impact of these key behaviours —diet, energy source, and long-distance travel— suggesting a modest link between belief in human causation and deeper behavioural understanding.



Climate change is...	
Caused mostly by human activities	ANY Natural changes
717	575
%	%
76	66
62	52
38	32
36	33
39	29
35	32
27	29
31	21
25	26
27	24
26	20
17	16

Significantly higher than total

Significantly lower than total

Climate Change in the Irish Mind National Survey (Q.40)
Base: All adults aged 18+; N – 1,330 (Wave 2)

*To gauge the public's understanding of what behaviours can help reduce the carbon footprint of an average person, respondents were presented with a list of activities, and asked to consider if each activity would make a Large (5% or more), Medium (between 1-5%), or Small (less than 1%) contribution to reducing the carbon footprint of an average person.

Climate Change in the Irish Mind (Wave 2)

(Insight Report No. 3: Climate Literacy)

CCIM Insights Reports are based on the findings of the main CCIM study Wave 2, which was carried out in 2023. The study homepage can be accessed Here

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