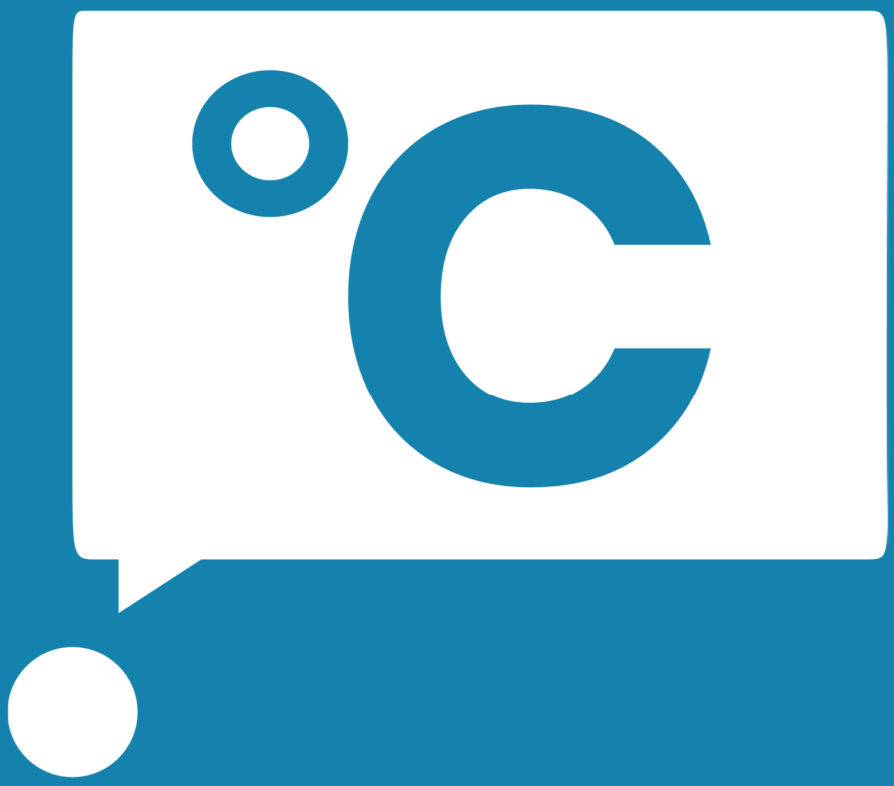

Survey report on misconceptions related to climate change

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Background Information

This document was produced by Circular Bioeconomy Hub as part of the CLIMAware project, co-funded by EACEA under Grant Agreement number: 101246545, CREA-CROSS-2025-MEDIALITERACY. The project will be implemented for 24 months, from March 2026 to February 2028, and aims to combat climate change misinformation and disinformation across Europe by enhancing media literacy, fostering critical thinking and equipping citizens, disadvantaged groups, educators and media professionals with innovative tools, training and resources to identify and counter disinformation.

Executive Summary

Between late May and early July 2026, the CLIMAware project ran a public survey on climate misinformation in Greece, Portugal, Spain, Finland and Ukraine, with a small additional group of respondents from other EU countries. The questionnaire had 23 questions and was available in six languages. In total 669 people took part, and 652 valid responses remained after quality checks. Every country passed its target of at least 100 valid responses. Because people chose to take part themselves, the results describe the people who answered, not whole national populations. Those who answered were, on the whole, younger, more educated and more interested in climate than the average citizen, which means the problems described below are probably larger in the general population than in our figures. The survey looked at three things: what misleading climate claims people believe, whether people can spot a badly built argument and where people get their climate information, including new AI tools.

On beliefs, outright denial of climate change is rare among our respondents. Very few agree that climate change is not happening. The claims that do find support are of a different kind. The most common are that climate change will mainly affect other people and future generations, that renewable energy is too unreliable to replace fossil fuels, and that the scientific agreement on climate change is exaggerated. In other words, the misinformation that works today is not "it isn't happening" but "it won't hit us", "the solutions won't work" and "the experts can't be trusted". This matches what researchers have seen in the material produced by misinformation sources over the last twenty years, and our survey shows that European audiences now mirror that shift. One more result deserves attention here. Only about two thirds of our respondents know that the large majority of climate scientists agree that humans are causing climate change. So even in a climate-interested audience, one person in three is missing this basic fact.

On spotting bad arguments, we found the single most important result of the survey. We showed people three arguments that were all badly built. Two of them argued against climate science, using a fake expert and a conspiracy story, and almost everyone correctly rejected them. The third was just as flawed, but its conclusion supported climate science, and two thirds of respondents rated it as reliable. Put simply, people judged the conclusion, not the argument. Education did not protect against this, and people who were most confident in their own judgement fell for it slightly more often. The lesson is that people do not need more help rejecting claims they already disbelieve. They need help judging the quality of claims they agree with, and that is a skill that has to be taught directly, which is exactly what the project's technique-based media literacy approach is designed to do.

On information channels, television and the press still reach the most people, and climate scientists are by far the most trusted source in every country, while influencers and politicians are the least trusted. People who rely only on social media for their climate information hold noticeably more misconceptions than people who also or only use traditional media. AI is already part of the picture. More than half of respondents have come across AI-generated climate content, most often fake images of extreme weather, and a quarter have asked an AI chatbot about climate change. Those users generally trusted the answers, but they were no better than anyone else at recognising AI-generated content. Guidance for the public on using AI tools has not kept up with how quickly people have adopted them.

The countries differ in instructive ways. Spanish and Portuguese respondents hold the fewest misconceptions but report a media environment full of old-style denial, much of it quoting foreign political leaders. Finnish respondents mostly report a different story, that climate action is pointless in a small country because of China and America, which is the delay narrative in its clearest form. Greek and Ukrainian respondents hold the most misconceptions. In Greece this goes together with very low trust in media and public institutions, while trust in scientists stays high, and it is not linked to political views, so rebuilding trust matters more there than political messaging. In Ukraine the main issue is attention, since under wartime conditions climate information simply reaches people less. The overall message of this survey is simple. Audiences are already well defended against the misinformation of the past. The project's work should concentrate on the misinformation of the present, on claims about solutions, experts and exaggeration, and on teaching people to judge arguments on their own side as carefully as they judge the other side's.

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0.1	15 July 2026	Creation of initial structure and table of contents; development of first draft sections.	Apostolos Malamakis - CBioHub
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Generative AI tools were used in the language and structural editing of the text and as an assistive step in the thematic coding of the responses reported in Chapter 5. All AI-assisted output was reviewed, verified and edited by the authors, who take full responsibility for the content of this report.

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Table of Abbreviations

Abbreviation	Description
AI	Artificial Intelligence
BH	Benjamini–Hochberg false discovery rate correction
CARDS	Contrarian Claims about climate change
CBioHub	Circular Bioeconomy Hub Civil Law Non-profit Company
CIBER	FUNDACION CIBERVOLUNTARIOS
CMI	Climate Misconception Index
DEGURBA	Degree of Urbanisation
EACEA	European Education and Culture Executive Agency
EN	English
EU	European Union
FLICC	Fake experts, Logical fallacies, Impossible expectations, Cherry-picking, Conspiracy theories
ISCED	International Standard Classification of Education
LAB	LAB-AMMATTIKORKEAKOULU OY
MMI	ASSOCIACAO MY MADEIRA ISLAND
NGO	Non-Governmental Organisation
PU	Dissemination level 'Public'
SD	Standard Deviation
WP	Work Package

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1 Introduction

1.1 Purpose and scope of the deliverable

This deliverable reports the design, execution and results of the cross-national public survey carried out under Task 2.1 of CLIMAware. Its purpose is to establish an empirical, data-driven picture of the climate-change misconceptions most prevalent among citizens across the participating countries, and to identify the misinformation narratives that most strongly shape public opinion in each national context. The findings set the evidential baseline on which the rest of the project builds, ensuring that subsequent research, tool development and engagement activities respond to misconceptions that are demonstrably widespread rather than assumed.

The survey was fielded online in six versions covering five national contexts, Greece, Portugal, Spain, Finland and Ukraine, together with an English-language master serving a cross-border European layer. It combines quantitative measurement with a qualitative open-response component and is organised around a three-layer taxonomy of climate misinformation that distinguishes (1) what people believe, (2) how misleading claims are rhetorically constructed, and (3) where citizens encounter climate information, including the emerging layer of AI-generated content. Alongside these three layers the instrument captures climate concern, trust in information sources, self-rated media and digital literacy, and standard demographic characteristics, so that misconception prevalence can be interpreted across demographic groups, communication channels and national settings. A minimum of 100 respondents per country, and at least 500 in total, was set to secure a reliable confidence level for the results.

D2.1 presents the full methodology, the achieved sample and the findings across all measured constructs, culminating in a ranked, per-country synthesis of key misinformation narratives. It reproduces the survey methodological brief and the final multilingual questionnaire as annexes, so that the evidence base is fully traceable and the instrument reusable. In scope are the questionnaire design and its grounding in established taxonomies, the sampling and quality-control approach, and the analysis of the collected responses. The results reported here feed directly into Task 2.2 and its deliverable D2.2, the WP3 FactSheets and ToolBox and the WP4 citizen-science workshops.

1.2 Survey objectives

Task 2.1 sets out to identify the public misconceptions about climate change that are most prevalent among citizens of the participating countries, and to do so through a single online survey administered at national level across the consortium. The task is designed to yield both quantitative and qualitative evidence on how different demographic groups perceive climate change, on the patterns of misinformation they encounter and on the influence that AI-generated content now exerts on public understanding. This dual objective, measuring the prevalence of specific misconceptions while also capturing the narratives and channels through which they spread, is what allows the results to function as a genuine evidence base for the project rather than a descriptive snapshot. By analysing the responses for trends, gaps and recurring misconceptions, and by comparing these across the participating countries, the task establishes where media-literacy effort is most needed and which narratives each national intervention will have to counter.

CBioHub leads Task 2.1 and holds responsibility for the methodological and analytical core of the work. This role began with defining the key thematic areas of climate misinformation the survey would address, spanning the causes of climate change, the reliability of climate data, the impact of human activities and the growing presence of AI-generated content, and translating those areas into a structured questionnaire grounded in established taxonomies. CBioHub developed and shared the master instrument with the partnership, coordinated its finalisation and retains ownership of the data analysis and of this deliverable. The results are analysed centrally so that the misconception profiles, cross-country comparisons and ranked narratives are produced on a consistent basis and remain directly comparable between countries. The project partners carry the responsibilities that only

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national actors can discharge. Each partner reviewed the master questionnaire and ensured its linguistic and cultural adaptation to the national context before fielding, so that items measured the same construct across languages rather than being literally translated. Partners then disseminated the survey through their institutional media, the project's social-media accounts and at least one local online press channel per country, in order to reach the minimum of 100 respondents per country (Finland, Greece, Portugal, Spain and Ukraine), and at least 500 across the consortium, needed to secure a reliable confidence level. This division of labour, a common instrument and central analysis held by CBioHub alongside nationally-owned adaptation and recruitment, makes the five-country evidence base both comparable and locally valid. It also produces the mapped misconceptions and key misinformation narratives that Task 2.1 hands on to the literature review in Task 2.2 and to the tool development and engagement activities in work packages 3 and 4.

1.3 Position in the workplan and links to downstream tasks

Task 2.1 opens the evidence-gathering strand of Work Package 2 and supplies the empirical foundation on which much of the subsequent project rests. Its defining feature within the workplan is that the taxonomy used to classify misconceptions here is the same taxonomy that organises the work downstream, so that a misconception measured in the survey, reviewed in the literature, addressed in a FactSheet and debunked in a workshop can be traced as a single continuous object across the project. This continuity is a deliberate design choice rather than a convenience. It means the survey does not simply describe public belief in the abstract but produces categories and rankings that later tasks can act on directly. It also allows CLIMAware to claim that its interventions are calibrated to demonstrated need rather than to assumption.

The most immediate link is to Task 2.2 and its literature review (D2.2), led by LAB. The survey findings guide the focus of the literature review. From Work Package 2 the results pass into Work Package 3, where the FactSheets developed in Task 3.1 and the ToolBox scenarios designed in Task 3.2, the responsibility of MMI and CIBER, target the misconceptions the survey has shown to be most widespread in each national context, ensuring that the corrective content answers what citizens actually believe and encounter.

The findings reach citizens through Work Package 4, where the local citizen-science workshops draw on the per-country misconception profiles to tailor their debunking material to the national narrative mix, rather than applying a single generic script across very different information environments. This deliverable therefore sits at the head of a chain that runs from measurement to review to tool development to public engagement, and its value to the project is realised only as its outputs are taken up by these later tasks. The concluding chapter returns to this handover in concrete terms, specifying which results transfer to which task and in what form.

1.4 Structure of the report

The report follows the logic of the survey itself, moving from the conceptual apparatus through the method and the achieved sample to the findings and their implications. Chapter 2 sets out the three-layer taxonomy of climate misinformation that underpins the instrument, explaining the design principles behind it and the content, technique and channel layers together with the cross-cutting constructs that surround them. Chapter 3 documents the methodology, covering questionnaire design and the mapping of items to the taxonomy as the instrument was actually fielded, the translation and cultural adaptation across national versions, the sampling and fielding strategy, the mechanisms used to protect data quality, the ethics and data-protection basis, and the analytical approach. Chapter 4 describes the achieved sample, reporting response volumes against the minimum threshold, the demographic profile, the representativeness of the sample and the weighting applied, and the outcomes of the quality-control checks.

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Chapter 5 presents the findings in full. It reports the climate beliefs and misconceptions captured in the content layer, including the Climate Misconception Index and the prevalence of each of the five CARDS categories with a cross-country ranking. It then covers the recognition of misleading techniques, the channels through which citizens encounter climate information and their exposure to AI-generated content, and the cross-cutting measures of concern, trust and self-rated literacy. It closes with the subgroup and correlation analysis, the qualitative coding of the open-text responses against the CARDS sub-claims, and a per-country synthesis of the key misinformation narratives. Chapter 6 discusses these results against the existing literature, states the limitations of the study and draws out the implications for media literacy and for the project's interventions. Chapter 7 sets out the conclusions and specifies the handover of results to the downstream tasks, and Chapter 8 lists the references. The annexes reproduce the methodological brief, the English master questionnaire and the national language versions, the full item-to-taxonomy mapping and the variable codebook, so that the evidence base is traceable and the instrument reusable.

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2 Three-layer taxonomy of climate misinformation

2.1 Design principles

Four principles governed the construction of the taxonomy and, through it, the questionnaire. The first is scientific credibility. Each layer of the framework is anchored in a published, peer-reviewed taxonomy that carries documented inter-rater reliability and a record of cross-disciplinary uptake, so that the consortium can defend its methodological choices to evaluators and external reviewers without inventing new constructs. The framework adapts established instruments rather than devising bespoke categories, which keeps the findings interpretable against the wider literature and allows the results to be compared with prior research rather than standing in isolation.

The second principle is operational feasibility. Public online surveys recruited through social media suffer steep drop-off as length increases, and any attrition of that kind bears directly on the minimum of 100 responses per country on which the reliability of the results depends. The framework therefore had to be expressible in a compact instrument completable in well under ten minutes, and the design set a working ceiling of roughly 25 to 30 items. The questionnaire was ultimately fielded at 23 items with an estimated completion time of six to seven minutes, comfortably within that constraint while still covering all three layers and the surrounding cross-cutting constructs.

The third principle is cross-country comparability. The structure had to hold across five diverse national contexts and a multilingual European online layer, so that a misconception measured in Greece is the same analytical object as the one measured in Finland or Ukraine. This requirement shaped both the choice of established taxonomies, which already carry cross-national validation, and the adaptation approach set out in the methodology, where functional equivalence across languages was prioritised over literal translation.

The fourth principle is evaluative continuity with the workplan. The categories used to classify misconceptions in Task 2.1 are the same categories that organise the literature review in Task 2.2, the FactSheets in Task 3.1 and the ToolBox scenarios in Task 3.2. Adopting a single shared taxonomy across these tasks lets a misconception be traced from measurement through review to corrective content as one continuous object, and it prevents the fragmentation that would follow if each task classified climate misinformation on its own terms. Figure 2.1 summarises the four principles.

Figure 2.1. The four principles underpinning the CLIMAware climate-misinformation taxonomy.

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2.2 Content layer (CARDS categories C1–C5)

The content layer captures what people believe, and it adapts the CARDS taxonomy (Coan, Boussalis, Cook, & Nanko, 2021). CARDS was built from a large corpus of conservative-think-tank and contrarian-blog text and resolves into five top-level climate disbeliefs, subdivided into 27 sub-claims and 49 sub-sub-claims, mirroring the five key climate beliefs identified in earlier survey research (van der Linden, Leiserowitz, Feinberg, & Maibach, 2015). CLIMAware adopts the five top-level categories as the organising structure of its belief measurement. The wording of the survey items is adapted from CARDS rather than reproduced from it, because the original items were written to classify contrarian source texts and not to be answered directly by members of the public, and self-report by a general-population respondent calls for plainer and less leading phrasing.

The first two categories form the older, science-focused wave of climate denial. C1, "It's not happening", gathers claims that global warming is not real, that it has paused or that it is contradicted by cold weather, glacier behaviour or sea-level observations. This wave was once thought to be in decline, and while impact- and solution-scepticism now dominate online denial discourse, recent research documents that outright denial resurfaces episodically around extreme-weather events on social media (Gounaridis & Newell, 2024; Maldita.es et al., 2024), which is why the category remains in the instrument. C2, "It's not us", holds that current climate change is natural rather than human-caused, attributing observed warming to solar activity, natural cycles, volcanoes or past warm periods and dismissing carbon dioxide as a meaningful driver.

The next two categories shift the ground from warming is happening to whether it matters and whether anything can be done. C3, "It's not bad", treats warming as benign or even beneficial, holding that ecosystems and species will adapt, that impacts are remote in time or geography or that elevated carbon dioxide greens the planet. C4, "Solutions won't work", holds that renewable energy is unreliable or uneconomic, that climate policy harms the poor, that electric vehicles and wind turbines are on balance harmful, that individual action is futile or that other countries should act first. Content analysis of contrarian output (Coan et al., 2021) documented a long-term movement between 2000 and 2020 away from science-based misinformation and toward this solutions-based form, and the five-country sample gathered here offers a means of testing whether the same shift is detectable across the participating European contexts.

The fifth category speaks most directly to the project's purpose. C5, "Experts are unreliable", gathers claims that climate scientists are politically biased, that they chase research funding, that the 97 percent consensus is fabricated, that the models are faulty or that the IPCC and mainstream media are alarmist and compromised. This is the category most closely tied to media literacy, and it has gained fresh salience as AI chatbots have begun to reproduce climate-conspiracy framings in their answers (Global Witness, 2025), which connects the content layer to the questions on AI-generated content in the channel layer.

Within the questionnaire the five categories are measured through a small set of belief statements to which respondents indicate agreement, mixed in with a few statements that state the established scientific position, which a well-informed respondent should agree with. Because the two kinds of statement point in opposite directions, they reveal anyone who simply ticks the same answer all the way down the list. The exact composition of this battery as it was fielded, and the mapping of each statement to its category, is set out in the methodology and in the item-to-taxonomy mapping annex.

2.3 Technique layer

The technique layer captures how misleading claims are rhetorically built, independently of the specific belief they promote, and it adapts the FLICC taxonomy (Cook, Ellerton, & Kinkead, 2018; Cook, 2020). Where the content layer asks what a person believes, this layer asks how a misleading argument works on them, and the two are analytically distinct because a single false claim can be carried out by more than one technique and, conversely, a single technique recurs across very

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different claims. FLICC has been validated across psychological, critical-thinking and computational research and functions as the rhetorical companion to CARDS, which is why the two are paired here.

FLICC distinguishes five techniques. (1) Fake experts present unqualified or fringe voices as though they carried scientific authority. (2) Logical fallacies cover flawed reasoning such as red herrings, false dichotomies and non-sequiturs. (3) Impossible expectations demand a standard of certainty that no science can meet and treat any residual uncertainty as grounds for dismissal. (4) Cherry-picking makes selective use of evidence, holding up a single cold winter, for instance, to deny a long-term warming trend. (5) Conspiracy theories allege that scientists or governments are coordinating a hoax. These five map onto the recurring machinery of climate misinformation and give the analysis a vocabulary for the form of a claim rather than only its substance.

In the questionnaire the layer is measured through brief stimulus items, each presenting a short example of a misleading argument and asking the respondent whether they find it reliable. This recognition format is a deliberate choice. Asking people to name the fallacy at work would presuppose the very media-literacy vocabulary the project is trying to build and would depress response rates among exactly the respondents whose recognition skills the survey most needs to measure. Asking instead whether a concrete argument seems trustworthy captures whether a person can detect manipulation in practice, which is the capacity that matters, without requiring them to label it. The instrument as fielded carries three such items, and their wording, together with the technique each one exemplifies, is documented in the methodology and in the item-to-taxonomy mapping annex. One of the three, the cherry-picking item, is framed toward a pro-science conclusion, so that agreement with the stimulus indicates sound rather than misled reasoning and the battery does not consistently equate agreement with error.

2.4 Channel and medium layer, including AI-generated content

The channel layer captures where and how respondents encounter climate information, and it is the layer through which CLIMAware contributes most directly to the current state of the field. Recent research has converged on the view that AI-mediated misinformation now constitutes a distinct and measurable construct rather than a sub-type of online misinformation, driven by the speed, volume and realism with which generative systems can produce and circulate misleading material. The World Economic Forum's Global Risks Perception Survey for 2023 to 2024 ranked misinformation and disinformation as the most severe perceived global risk over the two-year outlook, ahead of extreme weather, and there is a growing body of evidence that deepfake video and audio targeting climate actors is increasingly difficult for lay audiences to detect (Sippy et al., 2024). Treating the medium as a measured dimension in its own right, rather than as background to the belief items, is what lets the survey speak to this shift.

The layer resolves into three sub-dimensions. Channel exposure records where respondents encountered climate information in the past thirty days, across traditional media, social platforms, messaging apps, podcasts, search engines, AI chatbots and influencers, giving a picture of the information environment each respondent inhabits. AI-content encounters record self-reported exposure over the past twelve months to AI-generated images of extreme weather, deepfake video or audio of public figures, chatbot answers about climate and AI-generated articles later found to be inaccurate, distinguishing the several distinct forms that synthetic climate content now takes. Detection self-efficacy and verification record how confident respondents are that they could recognise AI-generated content and what concrete steps they take when they meet climate content online, whether checking the source, consulting a fact-checker or reading laterally.

This structure is what makes the survey forward-looking rather than only retrospective. Existing cross-country European surveys have largely treated AI content, where they address it at all, as an undifferentiated extension of online misinformation, and there is little precedent for a survey that integrates a structured measurement of exposure to AI-generated content with a CARDS-aligned

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measurement of belief. Pairing the two allows the analysis to test whether consumption of AI-mediated information is associated with higher misconception scores, a question taken up directly in the subgroup analysis in Chapter 5.

2.5 Cross-cutting constructs

Surrounding the three layers, the instrument captures four cross-cutting constructs that are needed to interpret the misconception data rather than to extend it. Prevalence figures for the five content categories mean little in isolation; they become interpretable only once it is known how concerned respondents are about climate change to begin with, whom they trust for information, how they rate their own capacity to judge what they read and which demographic groups they belong to. These constructs frame the belief, technique and channel measurements and supply the variables against which the findings are broken down throughout Chapter 5.

The first is climate-change concern and salience, the gateway belief that the climate-communication literature consistently identifies as shaping how people receive everything else, and which the survey places at the outset for that reason. The second is trust in information sources, measured across scientists, journalists, governments, non-governmental organisations, AI tools, social-media platforms, influencers, family and friends, since the credibility a person assigns to a source conditions the misinformation they absorb from it. The third is self-rated media and digital literacy, the respondent's own assessment of their ability to judge online climate content, which the recognition items in the technique layer then test against observed performance.

The fourth construct is the set of standard demographic stratifiers, namely country, age band, gender, education level and urban-rural residence, together with an optional political self-placement scale. These are what allow the analysis to show how misconceptions are distributed across the population rather than reporting a single undifferentiated average, and they are the axes along which the subgroup analysis is organised. The political self-placement item is retained as optional, with an explicit prefer-not-to-say response, because political ideology is a well-documented moderator of how climate misinformation is received (Coan et al., 2021) yet is sensitive in some national settings, particularly Ukraine. The consortium can therefore drop or retain the item at the Steering Committee's discretion without compromising the core misconception measurement, and Chapter 5 reports for each country whether it was ultimately retained, so that its absence reads as a design decision rather than as missing data.

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3 Methodology

3.1 Questionnaire design and item-to-taxonomy mapping as fielded

The methodological brief reproduced in Annex A describes the survey as it was fielded, with 23 items organised into seven sections, and those sections map directly onto the framework set out in Chapter 2. The complete item-by-item mapping, giving each item its EUSurvey element, its response format and its taxonomic code, is provided in Annex D; this section describes the design at the level of the instrument as a whole.

The seven sections follow the interpretive order established in Chapter 2. The questionnaire opens with the climate-concern items, placed first because how strongly a person cares about climate change shapes how they read everything that follows. It then presents the misconception-belief battery, whose statements operationalise the five CARDS categories and are interleaved with reverse-scored anchor statements grounded in scientific consensus, so that the same battery both measures belief and supports the detection of acquiescent or inattentive responding. The third section carries the three technique-recognition items drawn from FLICC, each presenting a short misleading argument and asking whether the respondent finds it reliable, with the cherry-picking stimulus deliberately framed toward a pro-science conclusion so that the battery does not uniformly equate agreement with error. The fourth section measures channel use and exposure to AI-generated content, the fifth measures trust in sources together with the verification steps respondents take online, the sixth records the demographic stratifiers using ISCED (International Standard Classification of Education) education bands and DEGURBA (Degree of Urbanisation) residence categories alongside the optional political self-placement item. The seventh invites a free-text description of a piece of climate information the respondent found misleading, supplying the qualitative material coded in Chapter 5.

Three divergences from the design documentation should be recorded explicitly, in keeping with the governing principle above. First, the brief set a working ceiling of roughly 25 to 30 items, whereas the instrument was fielded at 23; the reduction tightened the questionnaire without dropping any layer of the framework. Second, the brief anticipated a completion time of eight to ten minutes, whereas the published landing page states six to seven, a figure consistent with the shorter fielded instrument. Third, and most consequential for the analysis, the brief specified four data-quality mechanisms, of which an embedded attention-check item was removed before publication and a response-time criterion could not be applied because the fielding configuration did not capture response-duration data. The fielded design therefore relied on the reverse-scored consensus anchors embedded in the belief battery, complemented at the analysis stage by the completeness and straight-lining screens described in Section 3.4. The absence of both a trap item and a timing criterion means that no single planted question governs the response-cleaning protocol, which instead rests on these internal-consistency and completeness signals. None of these divergences affect the coverage of the taxonomy; each is noted here so that the fielded instrument and the planning brief in Annex A can be read together without apparent contradiction.

The response formats were chosen to suit each construct and to keep the instrument short and completable on a mobile device. Belief and trust items use ordinal agreement and rating scales, and the technique items a simple reliability judgement. Channel use and AI-content exposure use multiple-response checklists, the demographic items use the standardised ISCED (UNESCO Institute for Statistics, 2012) and DEGURBA (European Commission et al., 2021) classifications to preserve cross-country comparability, and the closing item is open text. Scoring conventions, including the direction of the reverse-scored consensus anchors and the construction of the Climate Misconception Index, are set out with the analytical approach in Section 3.6. Section 3.4 describes how the belief anchors and the response-time and straight-lining checks combine into the exclusion protocol.

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3.2 Translation and cultural adaptation across national versions

The instrument was deployed in six versions covering five national contexts, Greek, Portuguese, Spanish, Finnish and Ukrainian, alongside the English master that served the cross-border European online layer. The governing principle throughout adaptation was functional equivalence rather than literal translation: each national version had to measure the same underlying construct as the master, which at times required departing from a word-for-word rendering to preserve the meaning, register and difficulty of an item. This matters most for the belief and technique batteries, where a clumsy or overly literal translation could alter how leading a statement feels or how plausible a misleading argument sounds, and so shift the very quantity the item is meant to capture. A misconception measured in Greece therefore had to remain the same analytical object as the one measured in Finland or Ukraine, which is a requirement of meaning and not of vocabulary.

The workflow follows the division of labour set out in Chapter 2. CBioHub authored and finalised the English master, and each partner then reviewed it and produced the linguistic and cultural adaptation for its national context before fielding, with the versions deployed through EUSurvey's native multilingual capability so that a single instrument presented each respondent with the items in their chosen language. The demographic stratifiers illustrate why cultural adaptation, and not translation alone, was necessary. The DEGURBA residence categories were expressed through locally idiomatic labels in each version rather than through a single translated wording, because the everyday distinction between a city, a town and a rural area does not partition cleanly across these languages. Finnish is the clearest case, since it lacks a routine lexical contrast between city and town, and the Finnish version resolves this by using taajama for the built-up urban and semi-urban settlement and harvaan asuttu alue for the sparsely populated area, categories that a Finnish respondent recognises immediately and that still map back onto the common DEGURBA structure used in the analysis.

All six versions were completed on schedule and published simultaneously on EUSurvey, so every national audience received a fully adapted instrument in its own language from the opening of fieldwork, with no items presented in English fallback or in partial translation to any national sample. This uniform launch strengthens the comparability of the national samples, since differences observed between countries can be attributed to the respondents rather than to any unevenness in how the questionnaire was presented to them. Annex C reproduces the six versions as fielded, providing the full multilingual record of the instrument and, together with the item-to-taxonomy mapping in Annex D, allowing any national item to be checked against its English master. The completeness of all versions at launch is confirmed here so that the sample description in Chapter 4 can report the national response volumes without any accompanying caveat about differential language coverage.

3.3 Sampling and fielding strategy

The survey used non-probability self-selection sampling, the design implied by the task's dissemination-based recruitment and the standard approach for an online instrument promoted through institutional and social media. Respondents were not drawn from a sampling frame but reached the questionnaire through the channels each partner used to publicise it, which places clear limits on statistical representativeness that are stated openly in the limitations in Section 6.2 and shape how the findings are interpreted throughout. The strategy accepts this trade-off deliberately, since a self-selected online sample is the only feasible way to reach a sufficient number of respondents across six contexts within the project's resources, and the analysis compensates through the quality controls in Section 3.4 and the demographic weighting described in Chapter 4 rather than by claiming a representativeness the design cannot support.

Recruitment followed the routes set out in the task description and coordinated across the partnership. Each partner disseminated the survey through its own institutional media, through the project's social-media accounts and through at least one national online press channel, so that the instrument reached audiences beyond the consortium's immediate followers. Fieldwork opened with

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the simultaneous publication of all six language versions on EUSurvey, and dissemination ran in parallel across the countries so that no national sample was recruited under materially different conditions from the others. Partners were encouraged to spread promotion across the fielding window rather than concentrate it, so that responses were not drawn disproportionately from a single day or a single platform's audience.

The recruitment target derived from the reliability requirement in the task. A minimum of 100 respondents per country was set, giving a consortium floor of at least 500, the level judged to secure a reasonable confidence level for the descriptive and comparative analysis. The 100-per-country floor also governs the granularity of the reporting, since it is the threshold below which country-level breakdowns and subgroup comparisons cease to be reliable, and Chapter 4 reports the achieved volume against this floor for each country. The target functioned as a recruitment threshold rather than a quota, so partners continued to promote the survey to accumulate responses beyond the minimum where they could, improving the precision of the national estimates and the statistical power available for the subgroup analysis in Chapter 5.

3.4 Data-quality mechanisms

Open online recruitment through social media buys reach at the cost of control over who responds and how carefully they do so, and a self-selected sample of this kind is exposed to inattentive, acquiescent and low-effort responding that can distort prevalence estimates if left unchecked. The instrument therefore carried a set of embedded quality mechanisms, and the response set was cleaned against an explicit exclusion protocol before analysis. The fielded instrument embedded one such safeguard directly, and two further screens were applied to the response set at the analysis stage, all of them drawing on internal-consistency and completeness signals that detect low-effort responding through response patterns rather than through any single planted question, since neither the attention-check item nor a response-time criterion was available in the fielded design. They are described in turn below before the exclusion protocol that combined them.

The embedded safeguard is the set of consensus anchors interleaved through the misconception battery. These are statements of the established scientific position, scored in the opposite direction to the misconception items, so that a respondent who simply agrees with everything contradicts themselves between an anchor and the misconception statement it is paired with. The first analysis-stage screen is a completeness check that identifies abandoned and substantially incomplete submissions, which cannot support the cross-construct analysis. The second is a straight-lining check across the two matrix batteries, the misconception battery and the trust battery, which flags respondents who select the same response position down an entire battery, a pattern the reverse-scored anchors make especially visible in the belief items. The fielding configuration did not capture response-duration data, so no completion-time criterion forms part of the protocol.

The exclusion protocol combined these signals conservatively. Abandoned and substantially incomplete responses were removed first, since a partial submission cannot support the cross-construct analysis. The remaining cases were then screened for straight-lining across both matrix batteries, and respondents who straight-lined through both were excluded as the clearest available marker of non-engagement in the absence of the attention-check item. Because any exclusion rule applied to a self-selected sample carries a risk of removing genuine if hurried respondents, the analysis was run both with and without the excluded cases as a sensitivity check, and the substantive findings were confirmed to be stable across the two specifications. The number of responses removed at each stage, and the achieved analytical sample that results, are reported in the data-quality outcomes in Chapter 4, and the internal-consistency statistics that provide a further check on the belief battery are reported with the analytical approach in Section 3.6.

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3.5 Ethics and data protection

The survey was designed and conducted in compliance with the General Data Protection Regulation (Regulation (EU) 2016/679) and with the project's own data-management arrangements. Participation was voluntary and based on informed consent, obtained through a landing page that set out the purpose of the survey, the nature of the data collected, the expected six-to-seven-minute completion time and the respondent's right to withdraw before submission, with progression into the questionnaire conditional on the respondent's explicit agreement. The lawful basis for processing is consent under Article 6(1)(a) of the Regulation, which is the appropriate basis for voluntary participation in a research survey of this kind.

The instrument was built to be data-minimising and to avoid personal identification. It collected no names, contact details or open identifiers, and the demographic items were captured as broad categories, namely age bands, ISCED education levels and DEGURBA residence types, rather than as precise values that might in combination single out an individual. The one free-text field, the closing item inviting a description of misleading climate information, is the only route through which a respondent could volunteer identifying material, and the coding of those responses for Chapter 5 was carried out with any incidental personal detail disregarded and excluded from the published annex of coded responses. The single optional item touching on a special category of data, the political self-placement scale, carried an explicit prefer-not-to-say option and could be omitted entirely at national level, as set out in Chapter 2 and reported per country in Chapter 5.

Data were collected through EUSurvey (European Commission, n.d.), the European Commission's own survey platform, whose hosting within the Commission's infrastructure supports compliance with the Regulation's requirements on where and how the data are held. The contact point for data-protection matters, including any request from a respondent to exercise their rights, is CBioHub at info@cbiohub.gr, stated on the landing page in that capacity. The fuller data-management detail, covering storage, retention, access and the documented data set, sits with the project's data-management planning and the sensitive microdata deliverable rather than with this public report, and is referenced here rather than reproduced so that this deliverable can remain at public dissemination level.

3.6 Analytical approach

The analysis was conducted in Python 3 (Van Rossum & Drake, 2009), and this section sets out the conventions that govern every result reported in Chapters 4 and 5. The unit of analysis is the individual valid respondent, the 652 cases surviving the exclusion protocol of Section 3.4, with the fifteen European-layer respondents reported descriptively and held out of all inferential comparison. All statistics are unweighted, for the reasons given in Section 4.3. Ordinal items are treated as ordinal throughout, "don't know" and "no opinion" responses are coded as missing on the substantive scales and reported separately as informative categories in their own right rather than folded into a midpoint, and the age-band and urbanisation harmonisations described in Section 4.2 are applied before any scale is computed.

The Climate Misconception Index (CMI), constructed for this survey, is the respondent-level mean of the ten misconception items of Q4, each coded from 1 (strongly disagree) to 5 (strongly agree), computed for any respondent supplying a substantive answer to at least eight of the ten. Two anchor statements are excluded from the primary index: that most climate scientists attribute recent warming mainly to human activity, and that burning fossil fuels releases CO_2 that warms the planet. They were written as accuracy and quality checks rather than as misconception indicators, and because they are scored in the opposite direction they would otherwise pull against the construct. An alternative twelve-item specification including them is reported alongside the primary index in Section 5.1.1 as a robustness check. Internal consistency is assessed with Cronbach's α, McDonald's ω (McDonald, 1999) from a maximum-likelihood single-factor model and corrected item-rest correlations, all

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reported with the index in Section 5.1.1. The technique-recognition items are analysed on their fielded 0-to-10 reliability scale, and the individual-level concordance analysis of Section 5.2.1 rests on the respondents who supplied a substantive rating to all three.

Group comparisons follow the ordinal character of the data. Differences across the five country samples are tested with the Kruskal–Wallis H, two-group contrasts with the Mann–Whitney U and categorical associations such as item-level agreement by country with the χ^2 statistic. Effect sizes are reported for every substantive test, epsilon-squared (ε^2) for Kruskal–Wallis, the rank-biserial correlation (r) for Mann–Whitney and Cramér's V for χ^2, and are read against the conventional small, medium and large thresholds (Cohen, 1988); associations between ordinal measures are reported as Spearman rank correlations (ρ). Because Chapter 5 conducts a large family of cross-country tests, the Benjamini–Hochberg procedure (Benjamini & Hochberg, 1995) is applied to control the false-discovery rate across that family, and the text distinguishes throughout between contrasts that do and do not survive correction.

The subgroup and covariate analyses of Section 5.5 are exploratory and are labelled as such wherever they appear. A minimum cell size of thirty respondents governs all disaggregated reporting, so that groups below that floor are retained in totals but not reported as separate estimates. The covariate-adjustment models of Section 5.5.2 are ordinary least squares regressions of the Climate Misconception Index on country contrasts, estimated with and without demographic and political-orientation covariates; because they apply a least-squares estimator to an ordinal composite they are reported as robustness checks on the cross-country pattern rather than as a measurement model, and no causal interpretation is placed on any coefficient. The qualitative coding of the open-text responses is documented separately in Section 5.6.1, where the single-coder procedure, the CARDS-based codebook with its emergent extensions and the absence of inter-rater reliability testing are set out, and the counts it produces are read as indicative orderings rather than as precise prevalences.

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4 Sample description

4.1 Response volumes and achievement of the ≥100-per-country threshold

The survey was fielded on EUSurvey from 26 May 2026, with the analytical dataset extracted on 11 July 2026. Over this period the instrument received 669 submissions. All five national targets were met and, in four of five cases, exceeded, with 158 submissions from Portugal, 144 from Spain, 130 from Greece, 122 from Finland and 100 from Ukraine. A further 15 submissions were received from respondents residing in other EU countries (Germany, France, Sweden, Cyprus, Estonia, the Netherlands and Poland). Rather than discarding these responses, they are retained as the cross-border European layer anticipated in the project design; given their small number, they are reported descriptively and excluded from all per-country statistical comparisons.

After application of the data-quality protocol described later in Section 4.4, the valid analytical sample comprises 652 respondents, distributed as 155 from Portugal, 144 from Spain, 121 from Finland, 117 from Greece, 100 from Ukraine and 15 in the European layer (Table 4.1). Every partner country therefore meets or exceeds the ≥100-valid-response threshold set in the methodology, and the total of 652 exceeds the 500-response consortium minimum.

Table 4.1. Valid analytic sample metrics.

Country	Submitted	Excluded (abandonment)	Excluded (double straight-lining)	Valid N
Spain	144	0	0	144
Portugal	158	2	1	155
Finland	122	1	0	121
Ukraine	100	0	0	100
Greece	130	9	4	117
European layer	15	0	0	15
Total	669	12	5	652

4.2 Demographic profile

The valid sample skews young and highly educated. Respondents aged 25–34 form the largest age band (22.9%), followed by 18–24 (19.8%), 35–44 (18.9%), 45–54 (17.0%), 55–64 (12.3%) and 65 or over (8.1%); 1.1% preferred not to state their age. Women constitute 54.9% of the sample and men 42.3%, with 1.1% identifying as non-binary or self-describing and 1.7% preferring not to say. Spain is the only country sample with a male majority (41.7% women), while Portugal shows the strongest female skew (64.5%).

Educational attainment, recorded on the eight-level ISCED scale and collapsed into three bands for analysis, is dominated by tertiary qualifications, with 71.4% of respondents holding an ISCED 5–8 qualification (short-cycle tertiary through to doctoral level), 24.6% ISCED 3–4 (upper-secondary and post-secondary non-tertiary), and 4.0% ISCED 1–2 (primary and lower-secondary). This aggregate conceals a substantial compositional difference between country samples that must be borne in mind when interpreting cross-country results throughout Chapter 5. Tertiary attainment (a bachelor's degree or higher) ranges from 87.5% in Spain, 80.3% in Greece, 80.0% in Ukraine and 76.9% in Finland down to 38.7% in Portugal, whose sample is markedly closer to the general-population educational distribution than the other four.

On degree of urbanisation, classified using the DEGURBA-based item, 55.2% of respondents live in a large, densely populated city of more than 50,000 inhabitants, 32.5% in a smaller city, urban

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settlement or suburban area, and 10.4% in the countryside or a sparsely populated area, with the remainder preferring not to say. The full demographic profile is provided in Table 4.2 and Figure 4.1.

Table 4.2. Full demographic profile of the survey sample.

Characteristic	% of valid sample (N = 652)
Age 18-24	19.8
Age 25-34	22.9
Age 35-44	18.9
Age 45-54	17
Age 55-64	12.3
Age 65 or over	8.1
Age prefer not to say	1.1
Woman	54.9
Man	42.3
Non-binary / self-described	1.1
Gender prefer not to say	1.7
Education low (ISCED 1-2)	4
Education medium (ISCED 3-4)	24.6
Education high (ISCED 5-8)	71.4
Residence city (>50 000)	55.2
Residence town or suburb	32.5
Residence rural	10.4

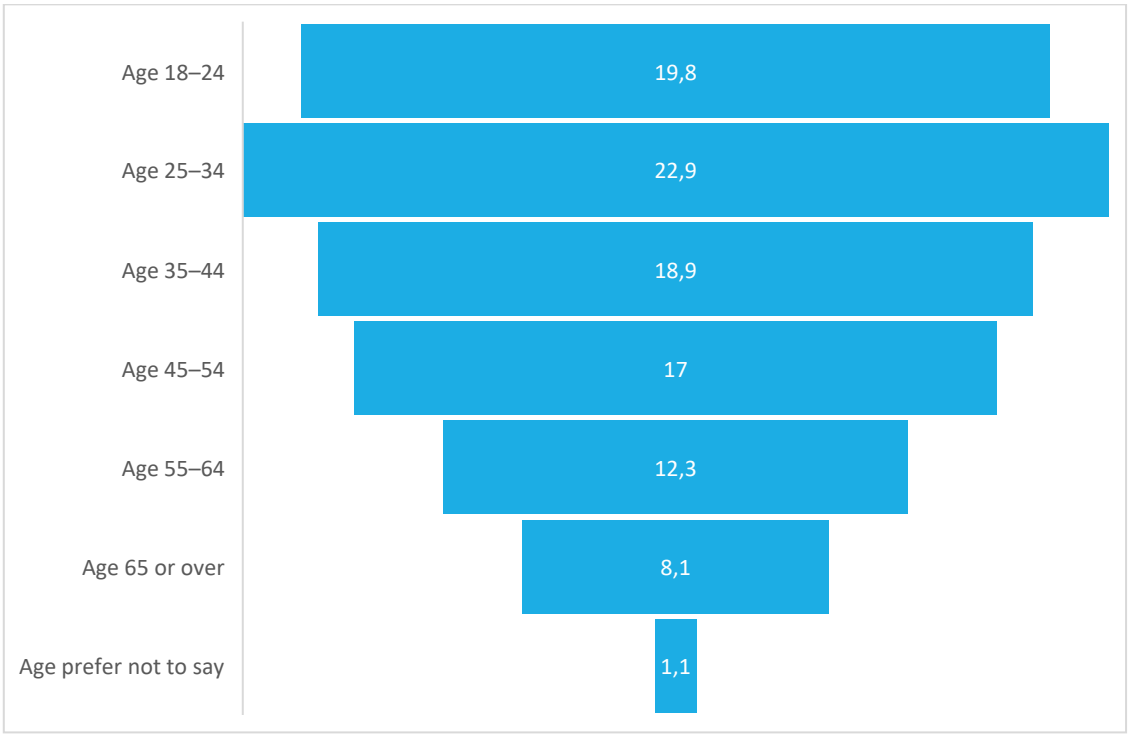

Figure 4.1. Age distribution funnel of the survey sample.

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During data preparation, sixteen responses carried age-band labels that differed slightly from the master instrument (for example 25–33 or 35–45 rather than 25–34 and 35–44), reflecting minor rendering variation across national language versions. These were harmonised to the master bands. The affected labels sit at band boundaries, so a small number of respondents at exact boundary ages may have been classified into an adjacent band; the issue affects at most 2.5% of the sample and is noted among the limitations in Section 6.2.

4.3 Representativeness, quotas and weighting

Recruitment followed the mixed convenience strategy described in Chapter 3, combining partner networks, social media dissemination and institutional channels, with soft quotas monitored during fielding. The resulting sample is a non-probability sample. It over-represents tertiary-educated, urban and climate-attentive respondents relative to the general populations of the participating countries, a pattern typical of online opt-in surveys on environmental topics. No post-stratification weights are applied, for two reasons. First, weighting a non-probability sample to census margins creates a misleading appearance of population representativeness without correcting the underlying self-selection. Second, the analytical purpose of T2.1 is comparative and diagnostic, namely to identify which misconception families, techniques and channels are most salient among reachable, media-engaged publics in each country, rather than to estimate national population prevalences.

All findings in this report should accordingly be read as characterising the survey respondents, not the national populations. Where the text refers to countries, this is shorthand for the respective country samples. The likely direction of the resulting bias is conservative for the project's purposes, since a younger, more educated and more climate-engaged sample can be expected to under-state, rather than over-state, the prevalence of climate misconceptions in the wider population.

4.4 Data-quality outcomes

The survey as fielded carried one built-in consistency safeguard, the consensus anchors, and two further checks were applied at the analysis stage: a completeness screen and a straight-lining screen. Response-duration data were not captured by the fielding configuration. Twelve submissions answering fewer than half of the core closed items were classified as abandonments and excluded. Straight-lining, meaning the selection of the same answer for every statement in a battery, was assessed on the two multi-item batteries, the twelve-statement belief battery (Q4) and the eight-source trust battery (Q14). The belief battery embeds two reverse-keyed, consensus-affirming anchor statements precisely so that an identical response across all twelve items is internally contradictory. Twenty-nine respondents straight-lined at least one battery; the five who straight-lined both batteries with a substantive (non-"don't know") response were excluded, while the remaining twenty-four were flagged and retained, since a uniform response on a single battery can reflect a genuine response style, and uniform "don't know" responding is a plausible expression of low topical knowledge rather than carelessness. No duplicate submissions were detected.

Seventeen submissions (2.5%) were excluded in total, yielding the valid sample of 652. Exclusions were concentrated in the Greek sample (thirteen cases), with three in Portugal and one in Finland. The headline results were also re-computed on the unfiltered dataset. The CMI changes by less than 0.01 scale points overall (1.985 unfiltered against 1.986 filtered), and country means are identical to two decimal places. The exclusion protocol therefore does not drive any substantive finding reported in this deliverable.

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5 Survey findings

5.1 Climate beliefs and misconceptions (Layer 1)

5.1.1 Climate Misconception Index, overall and per country

The ten misconception statements in Q4, spanning the five CARDS claim families, were coded from 1 (strongly disagree) to 5 (strongly agree), with "don't know / no opinion" responses treated as missing on the ordinal scale and reported separately. The Climate Misconception Index (CMI) is the mean of a respondent's valid item scores, computed where at least eight of the ten items carry a substantive response, a condition met by 621 of the 652 valid respondents (95.2%). The scale shows excellent internal consistency, with Cronbach's α = .89 and McDonald's ω = .89 (maximum-likelihood single-factor estimate), and all corrected item-rest correlations between .46 and .73, supporting the use of a single composite index. An alternative twelve-item specification incorporating the two reverse-scored consensus anchors yields α = .87 and does not alter any conclusion; the ten-item index is retained as the primary measure because the anchors were designed as accuracy and quality checks rather than as misconception indicators.

Across the full sample the CMI mean is 1.99 (SD 0.73, median 1.90) on the 1–5 scale, where a lower score means fewer misconceptions. Most of these respondents therefore reject the misconception statements rather than endorsing them, as expected for a highly educated, climate-attentive sample. The index nonetheless discriminates clearly between country samples. The five countries fall into two groups. Spain (1.69), Portugal (1.88) and Finland (1.92) record lower misconception levels, while Ukraine (2.27) and Greece (2.29) are distinctly higher. The difference across the five countries is statistically significant with a moderate effect size (Kruskal–Wallis $H(4) = 73.07$, $p < .001$, $\varepsilon^2 = .115$). The test establishes that at least one country differs from the others, not that every pair of countries differs. The result survives Benjamini–Hochberg correction across the full family of cross-country tests reported in this chapter. The European layer records the highest mean (2.62), but with fifteen respondents this figure is reported for completeness only. Figure 5.1 displays the country means and Table 5.1 the accompanying test statistics.

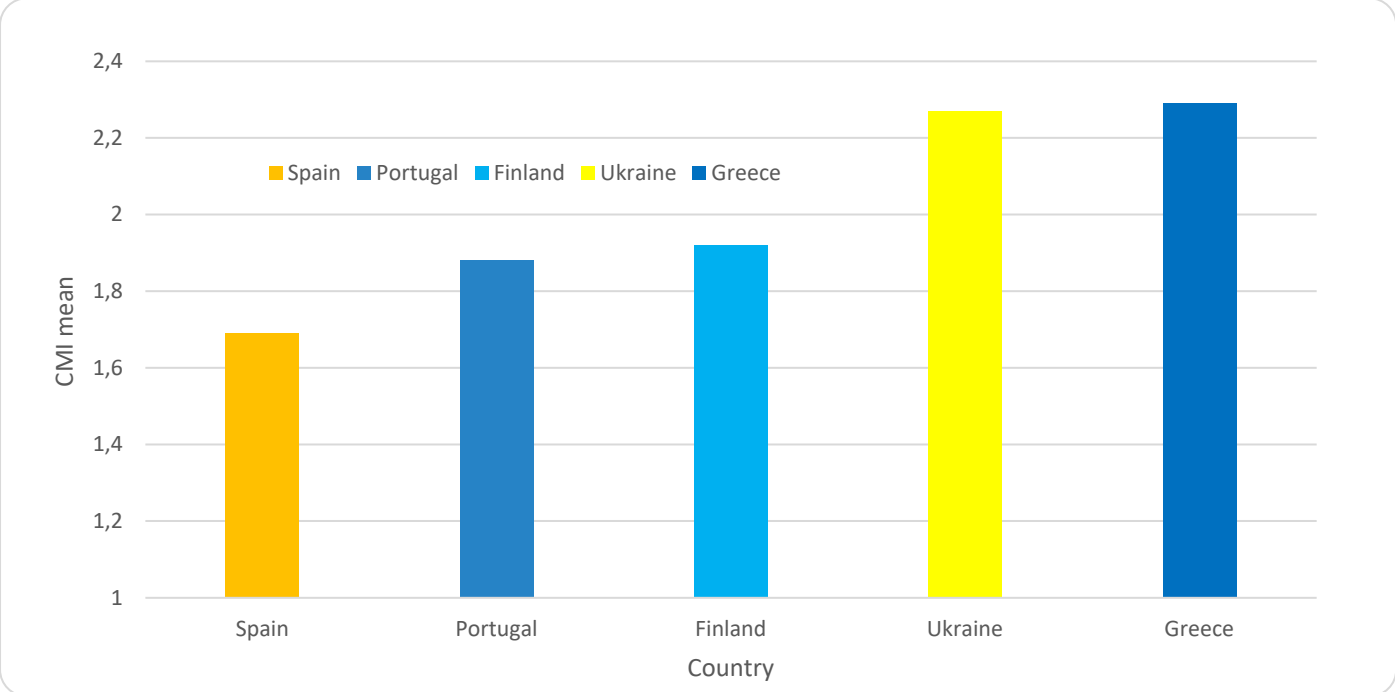

Figure 5.1. Climate Misconception Index by country (1 = low, 5 = high).

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It bears repeating that these comparisons describe the country samples, not the national populations, and that the country samples differ compositionally, most notably in the educational profile of the Portuguese sample described in Section 4.2. Subgroup analyses in Section 5.5 examine how far demographic composition accounts for the observed differences.

Table 5.1. Endorsement of the five CARDS categories and the composite Climate Misconception Index, with cross-country test statistics (N = 652; p-values Benjamini–Hochberg corrected across the family of cross-country tests).

Measure	Overall mean (1–5)	Kruskal–Wallis H (df = 4)	p (BH-corrected family)	Epsilon-squared
C1 it's not happening	1.98	76.46	< .001	0.117
C2 it's not us (single item)	2.04	33.88	< .001	0.048
C3 it's not bad	1.86	45.93	< .001	0.068
C4 solutions won't work	2.12	56.46	< .001	0.084
C5 experts are unreliable	2.14	63.99	< .001	0.098
CMI (10 items)	1.99	73.07	< .001	0.115

5.1.2 C1 It's not happening

The C1 family, which groups claims that climate change is not happening (the full item list is in Annex D), is measured by two items, and both attract limited but non-trivial endorsement. The statement that cold winters and recent snowstorms show global warming is not really happening is endorsed by 7.8% of respondents, the second-lowest endorsement of any item, suggesting that the simplest form of denial, the claim that the warming trend is not real, finds little support in this sample. The statement that sea-level rise has been exaggerated by the media and by scientists performs differently, drawing 13.5% agreement and a further 4.9% "don't know", making it the third most endorsed item overall. Claims that the risk has been exaggerated therefore reach further than outright denial of the warming trend. Such claims shift the argument away from the science itself and towards distrust of those who report it.

At the category level, C1 records a mean of 1.98 and, notably, the largest cross-country effect of any category ($H(4) = 76.46$, $p < .001$, $\varepsilon^2 = .117$). This is driven by elevated endorsement in Greece (category mean 2.43, with 20.5% agreeing that sea-level rise is exaggerated) and Ukraine (2.29), against 1.71 in Spain, 1.77 in Portugal and 1.85 in Finland.

5.1.3 C2 It's not us

As fielded, the instrument operationalises the C2 family, which groups claims that humans are not the main cause of climate change (the full item list is in Annex D), through a single item, the statement that the climate has always changed naturally and that current changes are not mainly caused by humans. The C2 score is therefore a single-indicator measure whose internal consistency cannot be assessed, and it is interpreted alongside the item-level results rather than as a multi-item scale. The item is endorsed by 12.7% of respondents, with the lowest "don't know" rate in the battery (1.4%), indicating that respondents hold definite views on attribution. The category mean of 2.04 differs significantly across countries ($H(4) = 33.88$, $p < .001$, $\varepsilon^2 = .048$), following the same split between the two country groups, from 1.79 in Spain to 2.36 in Greece, though with the smallest cross-country effect of the five categories. Natural-variability attribution thus appears as a relatively uniform residual belief across all five samples.

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5.1.4 C3 It's not bad

The C3 family, which groups claims that the impacts of climate change will not be serious (the full item list is in Annex D), records the lowest category mean (1.86) yet contains the single most endorsed item in the battery. The statement that climate change will mostly affect future generations and other countries is endorsed by 14.6% of respondents, rising to 22.4% in the Greek sample, and is one of only three items whose cross-country differences survive Benjamini–Hochberg correction (χ^2 test, Cramér's V = .14). This item measures psychological distancing, the belief that the impacts fall on other people and on later generations. It is the most widely endorsed of all the belief statements in the battery, ahead of every claim that disputes the science itself. The two remaining C3 items attract the weakest support in the battery, with 5.5% agreeing that a warmer climate will bring net benefits to their country and 4.8% agreeing that more CO_2 is good because plants need it, the latter drawing a comparatively high 5.4% "don't know". The category mean differs across countries ($H(4) = 45.93$, $p < .001$, $\varepsilon^2 = .068$), from 1.56 in Spain to 2.12 in Greece.

5.1.5 C4 Solutions won't work

The C4 family, which groups claims that climate solutions will not work (the full item list is in Annex D), sits together with C5 at the top of the category ranking, with a mean of 2.14 for C5 and 2.12 for C4. Within C4, the statement that renewable energy sources are too unreliable to replace fossil fuels draws 13.8% agreement, the second-highest endorsement in the battery, peaking at 20.2% in the Ukrainian sample and reaching its minimum of 6.2% in Spain; this is the second of the three items whose country differences survive multiple-comparison correction. The statement that individual actions are pointless because they make no real difference draws 12.4% agreement with little cross-country variation. The category mean differs significantly across countries ($H(4) = 56.46$, $p < .001$, $\varepsilon^2 = .084$), with Greece (2.43) and Ukraine (2.42) again forming the upper tier.

5.1.6 C5 Experts are unreliable

The C5 family, which groups claims that scientists and experts are unreliable (the full item list is in Annex D), records the highest category mean of the five families (2.14) and, after C1, the second-largest cross-country effect ($H(4) = 63.99$, $p < .001$, $\varepsilon^2 = .098$). Category means range from 1.78 in Spain to 2.46 in Greece and 2.56 in Ukraine, the highest single category-country score among the five national samples. The statement that the claim of near-universal scientific agreement is exaggerated draws 12.1% agreement. The statement that climate models have been wrong too often to be trusted draws 9.7%, alongside the highest "don't know" rate in the battery (7.5%). This suggests genuine uncertainty about model performance rather than firm rejection.

Two further statements, written to affirm established science rather than to measure misconception, sharpen this picture. Only 66.0% of respondents agree that the large majority of climate scientists attribute recent climate change mainly to human activity, while 13.6% actively disagree and roughly one in five is neutral or answer "don't know". Similarly, 69.1% affirm the basic causal mechanism that burning fossil fuels releases CO_2 that warms the planet, with 11.7% disagreeing. In a sample in which 62.5% describe themselves as very or extremely concerned about climate change, roughly a third of respondents nonetheless fail to affirm the scientific consensus, a direct measurement of the consensus gap, which Section 6.1 discusses against international literature. This matters directly for the project's media-literacy work: how much agreement people believe scientists have is one of the strongest predictors of their other climate attitudes (van der Linden et al., 2015).

5.1.7 Cross-country prevalence map and cluster ranking

Two regularities organise the cross-country results. The first is the two country groups already visible in the CMI: the Spanish, Portuguese and Finnish samples record consistently lower endorsement, and the Greek and Ukrainian samples consistently higher. This pattern holds for every one of the five CARDS categories (Figure 5.2).

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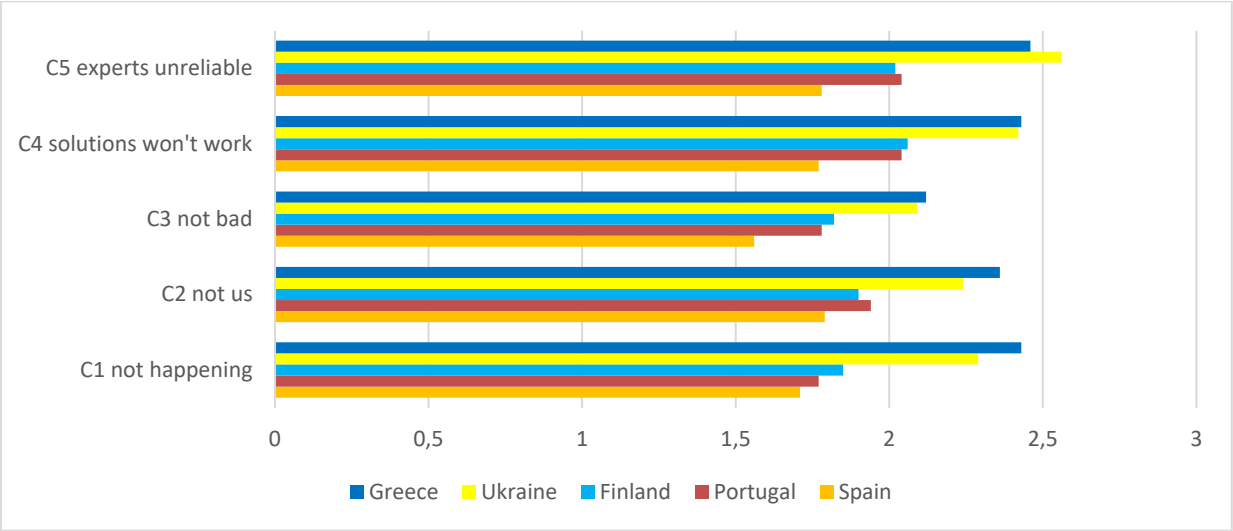

Figure 5.2. Mean endorsement by CARDS misinformation category and country

The second is the stability of the category ranking within countries. In the pooled sample the ranking runs C5 (2.14), C4 (2.12), C2 (2.04), C1 (1.98), C3 (1.86), and the dominance of expert-directed and solutions-directed claims over science-denial claims recurs in every national sample. This ordering directly mirrors the long-term shift documented in the supply of climate misinformation (Coan et al., 2021), away from claims that climate change is not happening or not human-caused and toward claims that solutions will not work and that experts cannot be trusted. The present data indicate that what reachable European publics believe has taken the same shape, which carries a clear implication for the project's interventions, namely that media-literacy content weighted toward classic science denial would miss the misconception families that are most alive in these samples.

At the level of individual items, cross-country differences are more modest than the aggregate contrasts suggest, with effect sizes (Cramér's V) between .09 and .14, and only three item-level contrasts surviving Benjamini–Hochberg correction, namely psychological distancing, renewables unreliability and net-benefit claims. The two country groups thus arise from small, consistent differences accumulated across the whole battery rather than from a few nationally distinctive misconceptions, with the partial exception of the Greek sample's elevated endorsement of exaggeration and distancing claims. Figure 5.3 shows endorsement of the individual misconception items across the valid sample.

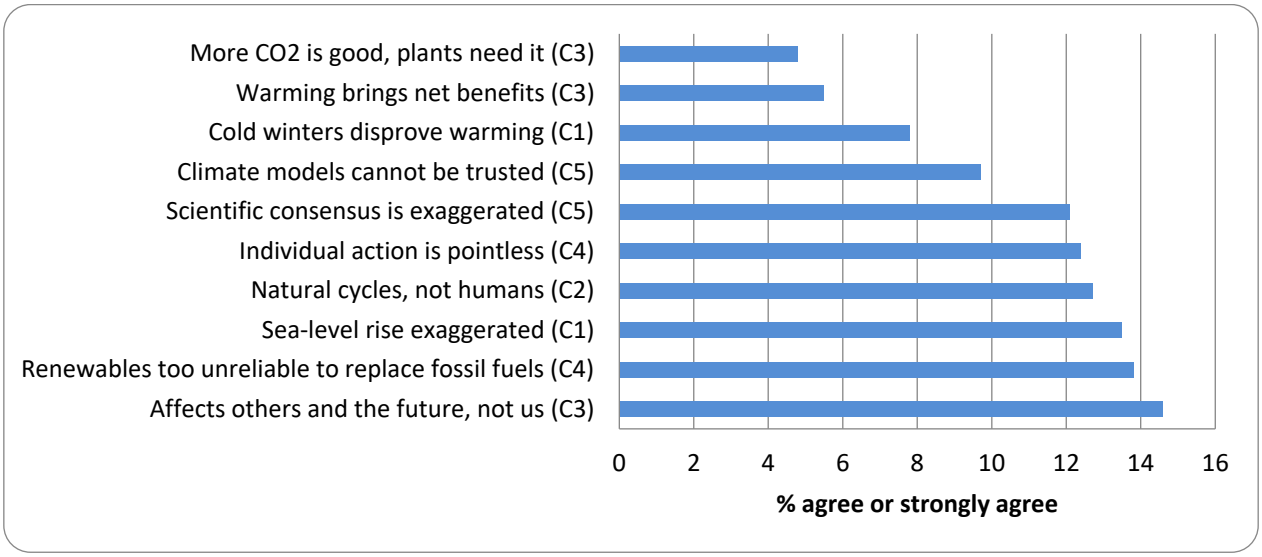

Figure 5.3. Endorsement of individual misconception items (valid sample)

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5.2 Recognition of misleading techniques (Layer 2)

5.2.1 Performance on the technique-recognition items

The three scenario items operationalise the FLICC framework by presenting short arguments and asking respondents to rate their reliability on an eleven-point scale from 0 (not at all reliable) to 10 (completely reliable). The design deliberately crosses argument quality with conclusion direction. The first scenario presents a logically flawed argument with a conclusion congenial to climate-concerned respondents, namely that a single record cold snap in February 2025 "proves" that extreme weather will become more frequent because of climate change; a single weather event can prove no such thing, and the item tests whether respondents notice the anecdotal over-generalisation when the conclusion points the "right" way. The second scenario embodies the fake-expert technique, a retired engineer with a large YouTube following attributing warming to the sun, and the third embodies conspiratorial reasoning, the claim that scientists exaggerate the threat to attract research funding. In both of these the flawed technique carries a contrarian conclusion. A respondent evaluating arguments on their merits should rate all three as unreliable; a respondent evaluating conclusions should rate the first as reliable and the other two as unreliable.

The results fall almost entirely into the second pattern (respondents judged the arguments by their conclusions, not by their quality). The fake-expert argument was decisively rejected, with a mean rating of 1.63 (median 1, SD 2.05, n = 607) and 86.2% of respondents rating it between 0 and 3, against only 4.0% rating it 7 or above. The funding-conspiracy argument was also rejected, though less emphatically, with a mean of 2.76 (median 2, SD 2.72, n = 579), 68.9% rating it 0–3 and 12.6% rating it 7–10. The flawed pro-science argument, by contrast, was rated as reliable, with a mean of 6.75 (median 7, SD 2.58, n = 593); 65.9% of respondents rated it 7 or above and only 13.7% placed it at 3 or below. The same population that sees through a fake expert almost unanimously accepts an equally flawed argument when its conclusion aligns with scientific mainstream. It should be noted that item non-response on these three items (7.8% to 12.0%) ran higher than on the Likert batteries, plausibly reflecting the greater cognitive demand of argument evaluation; the analysis is based on the substantive responses in each case. Table 5.2 reports the full distribution and rating bands for the three scenario arguments.

Table 5.2. Perceived reliability of the three FLICC scenario arguments, distribution and rating bands (eleven-point scale, 0 = not at all reliable to 10 = completely reliable; valid n per item).

Argument	Valid n	Mean	Median	SD	% rating 7–10	% rating 4–6	% rating 0–3
Anecdote, pro-science conclusion (Q5)	593	6.75	7	2.58	65.9	20.4	13.7
Fake expert (Q6)	607	1.63	1	2.05	4	9.9	86.2
Funding conspiracy (Q7)	579	2.76	2	2.72	12.6	18.5	68.9

Individual-level analysis makes the asymmetry concrete. Among the 536 respondents who rated all three arguments, 66.0% correctly rejected both misleading contrarian arguments (rating each 3 or below), demonstrating genuine capacity to dismiss bad arguments. Yet 60.8% of those who rejected the fake expert simultaneously rated the flawed pro-science argument at 7 or above, and 49.1% of the full triad-completing group rejected both contrarian arguments while accepting the flawed congenial one. Only 7.1% applied consistent scepticism across all three arguments. Technique recognition, in other words, is not a stable individual skill in this sample; it is switched on and off by the direction of the conclusion.

The correlational evidence identifies the switch. Ratings of the flawed pro-science argument correlate positively with climate concern ($\rho = .34$, $p < .001$), while ratings of the funding-conspiracy argument

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correlate negatively with concern at almost exactly the same magnitude (ρ = −.35, p < .001), a mirror-image pattern that is the statistical signature of myside evaluation, with each group finding congenial arguments more "reliable". Consistent with this, respondents with lower misconception scores rated the flawed pro-science argument more highly (ρ = −.43 with the CMI), and the two contrarian arguments were rated coherently with one another (ρ = .53), indicating that respondents treated them as a class. Perhaps most tellingly for the design of interventions, self-rated ability to judge online climate information correlates positively with acceptance of the flawed argument (ρ = .13, p = .001); those most confident in their own discernment were slightly more, not less, likely to be taken in when the conclusion flattered their prior view. Educational attainment offers no protection either, with mean ratings of the flawed argument essentially flat across ISCED bands (6.7 among tertiary-educated respondents against 6.8 and 7.2 in the medium and low bands).

5.2.2 Patterns by technique type and country

All three items differ significantly across the five country samples after Benjamini–Hochberg correction, with the largest effect on the flawed pro-science item (Kruskal–Wallis H(4) = 57.98, p < .001, ε^2 = .094, against ε^2 = .049 for the fake-expert item and ε^2 = .058 for the funding-conspiracy item). Figure 5.4 plots the mean perceived reliability of the three arguments.

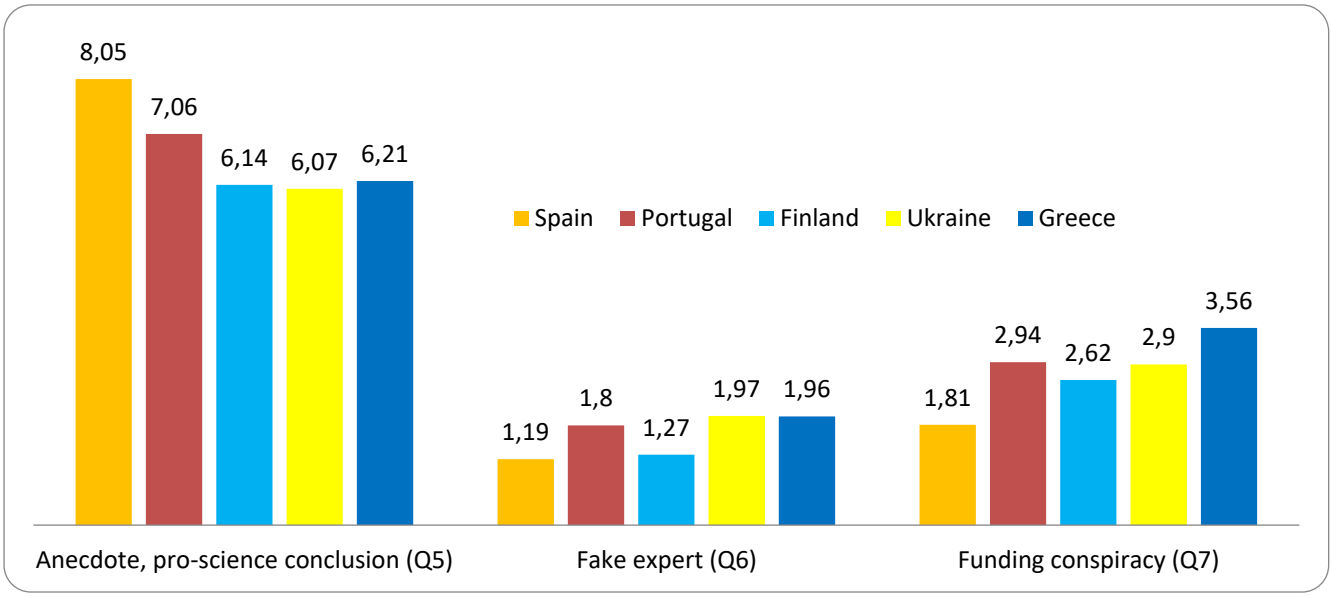

Figure 5.4. Mean perceived reliability of three misleading arguments (0 = not at all, 10 = completely)

The country pattern, however, inverts the one observed for misconception endorsement, and the inversion is instructive. The Spanish sample, which records the lowest CMI and the highest climate concern, rates the flawed pro-science argument most reliable of all (mean 8.05), while also rejecting the fake expert (1.19) and the funding conspiracy (1.81) most emphatically. The Spanish sample is thus simultaneously the most resistant to contrarian misinformation and the most receptive to flawed argumentation on its own side, the clearest single illustration in the dataset that conclusion-based evaluation, not technique recognition, drives responses. Portugal follows a similar pattern (7.06 on the flawed argument), while Finland (6.14), Ukraine (6.07) and Greece (6.21) sit lower. Conversely, the Greek and Ukrainian samples, which lead on misconception endorsement, rate the contrarian arguments somewhat higher than the others (fake expert 1.96 and 1.97 respectively; funding conspiracy 3.56 in Greece, the highest national mean for that item, consistent with the elevated expert-directed distrust reported in Section 5.1.6).

Two implications follow for the project's intervention logic. First, media-literacy work that measures success only by whether audiences reject contrarian content will overstate how resilient they are.

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These audiences already reject such content almost universally. The real weakness is how they judge claims they already agree with, and that is where flawed or exaggerated material spreads unchecked among like-minded people. Second, the results provide direct empirical support for technique-based inoculation as developed by other researchers (Cook, Ellerton, & Kinkead, 2018; Cook, 2020). Teaching the anecdote, fake-expert and conspiracy techniques as recognisable patterns, independently of the conclusion they support, is the main approach that can close a gap which concern, confidence and education do not.

5.3 Channels and AI-generated content (Layer 3)

5.3.1 Channel exposure in the past 30 days

Respondents encountered climate information across a wide and layered channel repertoire in the thirty days preceding the survey, and only 5.4% reported encountering none at all. Traditional media remain the backbone of climate information exposure in these samples. Television leads at 60.0%, followed by print or online press at 47.5% and radio or podcasts at 30.1%; taken together, 77.0% of respondents encountered climate information through at least one traditional channel. Interpersonal conversation is the third-ranked single channel at 43.4%, a reminder that climate information circulates socially and not only through media. Social platforms follow closely as a class, with 72.1% of respondents exposed through at least one platform, led by Instagram at 40.6%, Facebook at 27.5% and YouTube at 26.4%, with TikTok at 16.7%, LinkedIn at 13.3%, messaging applications at 11.7% and X at 6.9%. Search engines account for 23.8%, and workplaces and educational settings contribute 21.0% and 22.4% respectively.

The pattern by age follows the expected gradient on the social side while remaining remarkably flat on the traditional side. Exposure through at least one social platform declines from 84.5% among respondents aged 18–24 to 52.8% among those 65 or over, whereas traditional-channel exposure remains between 69% and 85% across every age band and is in fact highest among the youngest respondents (82.9%), who thus emerge not as a social-media-only audience but as the most omnivorous consumers in the sample.

When asked to name their main sources (with a maximum of three), respondents consolidate toward curated and searchable channels. Television (51.7%) and the press (50.6%) top the list, but search engines rise sharply from 23.8% exposure to 31.6% main-source status, and Instagram converts strongly (31.0%). Two channels convert in the opposite direction, with conversations falling from 43.4% exposure to 24.2% main-source status and influencers from 10.9% to 5.1%, which may reflect a distinction between where people happen to encounter information and where they deliberately look for it. AI chatbots warrant particular attention in this respect. Their thirty-day exposure figure is modest at 8.0%, yet 10.1% of respondents name them among their main sources of information generally, a conversion ratio unmatched by any other channel. For the minority who use them, chatbots appear to function as a primary reference point rather than as an ambient channel. Figure 5.5 shows the exposure and main-source figures side by side for all channels.

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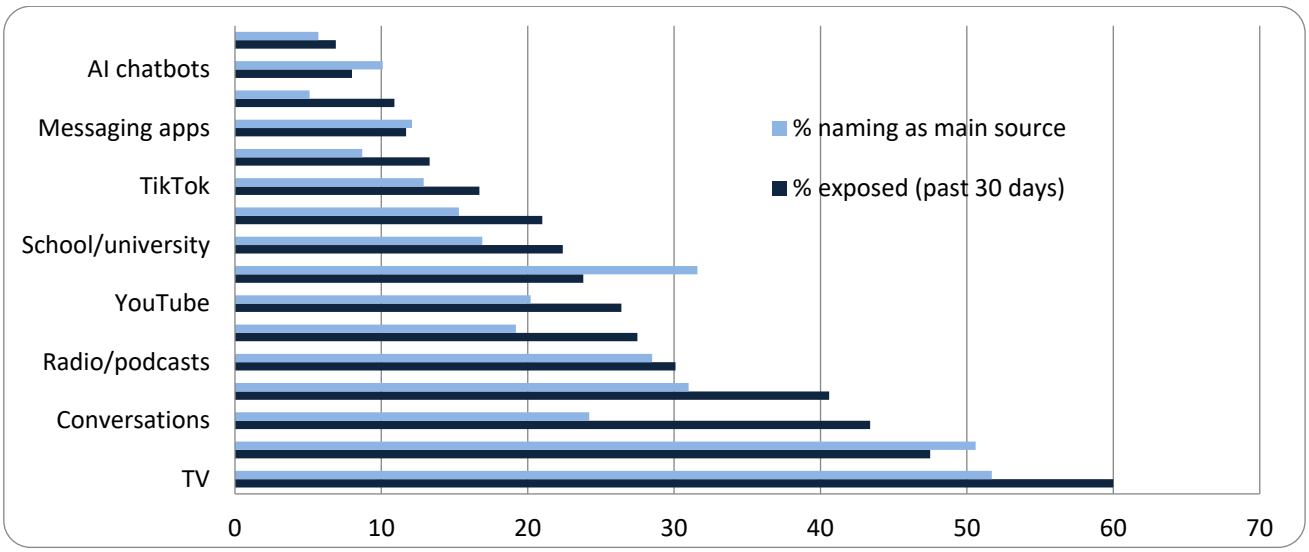

Figure 5.5. Climate information channels, exposure against main-source status.

5.3.2 AI-content encounters in the past 12 months

A majority of respondents, 59.0%, reported at least one encounter with problematic or suspected AI-generated climate content in the preceding twelve months. The most common encounter by a wide margin was fabricated AI imagery of extreme weather events, reported by 44.5% of respondents, followed by deepfake video or audio of a politician, scientist or public figure speaking about climate (24.8%), AI-generated articles later found to be inaccurate (17.0%) and chatbot answers the respondent judged inaccurate or misleading (12.0%). A further 20.7% reported encountering AI-generated climate content whose accuracy they could not assess, and 16.7% were not sure whether they had encountered such content at all, two figures that together describe a substantial grey area in which respondents cannot tell whether content was AI-generated. Only 23.0% confidently reported encountering none of these. Encounter rates are highest in the Spanish (67.4%), Greek (63.2%) and Portuguese (61.9%) samples and lower in Ukraine (51.0%) and Finland (48.8%). The prominence of fabricated extreme-weather imagery is consistent with the monitoring literature identifying weather disasters as the principal flashpoint for visual climate disinformation, and it aligns Layer 3 empirically with the extreme-weather framing already tested in the Layer 2 scenarios. Figure 5.6 shows the distribution of AI-content encounters over the past twelve months.

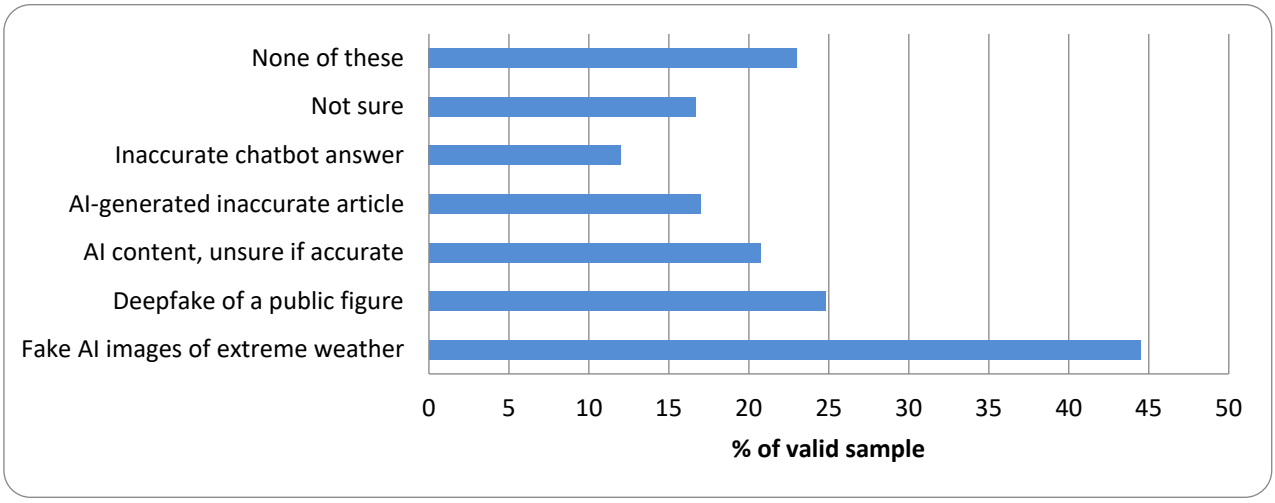

Figure 5.6. Encounters with AI-generated climate content in the past 12 months.

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5.3.3 Detection self-efficacy and verification behaviours

Confidence in detecting AI-generated content is middling and thinly stretched. Only 21.2% of respondents describe themselves as very or extremely confident that they could recognise AI-generated climate content such as fake images or deepfakes, 40.1% are moderately confident, and 38.7% are slightly or not at all confident. Confidence declines monotonically with age, from a mean of 3.04 on the five-point scale among 18–24-year-olds to 2.22 among 55–64-year-olds, identifying older cohorts as the priority audience for detection-focused literacy content. Notably, confidence is a poor proxy for behaviour or accuracy elsewhere in the data, and the two self-assessments the survey contains are themselves strongly correlated (ρ=.39 between detection confidence and general self-rated discernment), suggesting that both ratings reflect a general tendency to rate oneself highly, rather than two separately measured skills.

Verification practice is selective. Asked how often they check the original source before believing climate information on social media, 16.8% of respondents say always and 24.7% often, while 26.7% say sometimes, 19.4% rarely and 7.5% never (5.0% do not use social media). Asked what they actually did in the past thirty days in response to climate content, 38.0% checked an original source, 35.3% cross-checked with another news outlet, 26.2% consulted a dedicated fact-checking site and 25.3% asked someone they know, while only 5.4% reported content to a platform. Encouragingly, a mere 4.0% admit to sharing content without checking, though 17.2% simply ignored questionable content and 25.8% took no verification action at all. The number of distinct verification behaviours a respondent reports correlates positively with self-rated discernment (ρ = .25) and negatively with the Climate Misconception Index (ρ = −.18), small but consistent associations suggesting that active verification travels with, even if it does not necessarily cause, more accurate climate beliefs.

5.3.4 AI-chatbot users compared with non-users

One quarter of respondents (24.7%) have used an AI chatbot to ask about climate change, with a further 8.2% unsure; use is highest in the Finnish (34.7%) and Ukrainian (31.0%) samples and lowest in Greece (17.1%). Users skew younger, with 45.3% aged under 35 against 38.9% of non-users. Among users, trust in the answers received is substantial, as 73.6% trusted the chatbot's climate answer moderately, a lot or completely, and only 5.0% did not trust it at all, figures that sit in instructive tension with the low generic trust in AI chatbots reported by the full sample in Section 5.4.2.

Three comparisons between users and non-users complete the picture. Users express markedly higher generic trust in AI chatbots as a climate information source (mean 2.68 against 1.93, Mann–Whitney $p < .001$, rank-biserial $r = .44$), the largest user/non-user difference in the dataset, indicating that familiarity and trust travel together, whichever direction the causality runs. Users also score somewhat higher on the Climate Misconception Index (2.13 against 1.92, $p = .010$), though the effect is small ($r = .14$) and confounded with the age and country composition of the user group, so no causal reading is warranted. The association is nonetheless worth monitoring as chatbot use grows, given the documented capacity of conversational AI to reproduce contrarian framings. Strikingly, users are no more confident than non-users in their ability to detect AI-generated content (2.71 against 2.68, $p = .84$), so direct experience with the technology might confer no perceived detection advantage. Equally, users may become more cautious about their own ability as they use these tools, while non-users overestimate theirs. For the project, this combination of a small but highly trusting user base, a strong conversion of chatbot use into main-source status and no accompanying gain in detection confidence marks conversational AI as the channel where literacy provision is furthest behind adoption.

5.4 Cross-cutting constructs

5.4.1 Climate concern and salience

Climate concern in the sample is high, as anticipated for an opt-in survey on the topic. In total 62.5% of respondents describe themselves as very (38.9%) or extremely (23.7%) concerned about climate

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change, 23.2% are moderately concerned, and only 13.7% report slight or no concern. Concern differs significantly across countries ($H(4) = 60.10$, $p < .001$, $\varepsilon^2 = .089$), and the ordering is noteworthy, with Spain highest at a mean of 4.13 on the five-point scale, followed by Portugal (3.81), Finland (3.66) and Greece (3.63), and Ukraine markedly lowest at 3.04. The Ukrainian figure invites a contextual rather than attitudinal reading, as a population under full-scale invasion faces an acute competing emergency, and comparative research consistently finds that immediate security threats compress the expressed salience of longer-horizon risks; the Ukrainian sample's misconception and technique results do not suggest disengagement from the topic itself. Figure 5.7 displays climate concern by country.

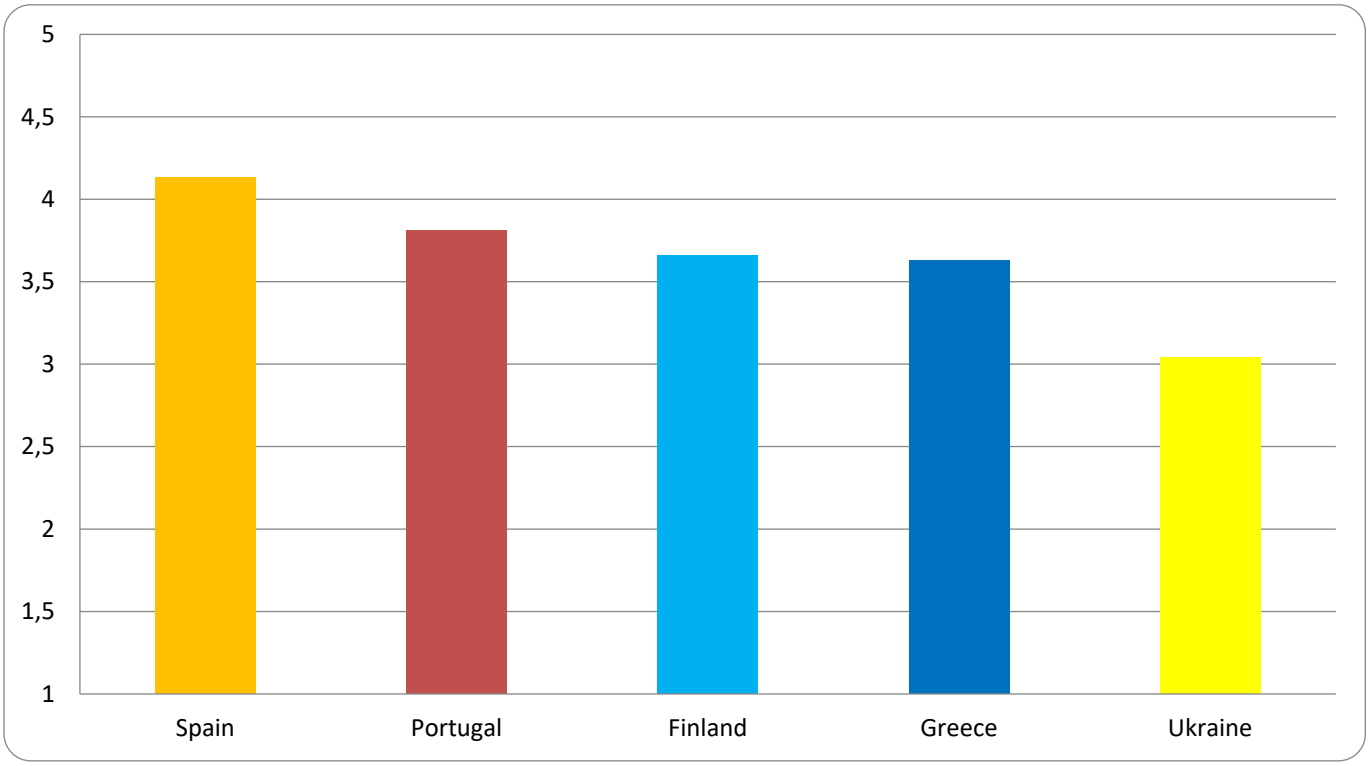

Figure 5.7. Climate concern by country (1 = not at all, 5 = extremely).

Climate information is also highly salient in daily media diets. Nearly half of respondents (49.7%) encounter climate information several times a week or daily, a further 31.3% about once a week, and only 1.2% never. This salience comes with growing difficulty, however: 39.5% of respondents find it more difficult today than two years ago to distinguish true from false climate information, against 20.9% who find it easier and 33.1% who notice no change. This difficulty is unevenly distributed, reported by 52.9% in Portugal and 48.6% in Spain but only around 28% in Finland and Greece, with Ukraine intermediate at 37.0%. Notably, the countries reporting the most difficulty are those where respondents encounter AI-generated content most often, not those with the highest misconception levels. This suggests that the sense that the information environment is getting worse owes more to the volume of AI-generated material than to how susceptible people are to it.

5.4.2 Trust in information sources

The trust hierarchy is steep, consistent across countries in its ordering and anchored at the top by science. Climate scientists and research institutions command by far the highest trust (mean 3.98 on the five-point scale), followed by environmental NGOs (3.37), national governments and public institutions (3.09) and mainstream news media (2.92). A pronounced gap then separates the interpersonal and emerging sources, with family, friends and colleagues at 2.69 and AI chatbots at 2.14, and the hierarchy bottoms out with political leaders and parties (1.96) and social media

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influencers (1.83). The ordering of the top and bottom of this hierarchy is identical in all five national samples, and its practical implication for the project is direct, namely that scientist-fronted communication retains a trust premium everywhere, while influencer-mediated formats start from a serious credibility deficit even among the social-media-native audiences most exposed to them.

The middle of the hierarchy, by contrast, is where countries diverge, and institutional rather than scientific trust carries the variation. Cross-country differences are largest for mainstream media ($H(4) = 68.64$, $p < .001$, $\varepsilon^2 = .104$), where the Greek sample stands apart with a mean of 2.36 against 3.20 to 3.22 in Portugal and Finland, and substantial for government and public institutions ($\varepsilon^2 = .071$), where Greece is again lowest at 2.62 against 3.46 in Finland. Trust in climate scientists varies least ($\varepsilon^2 = .042$) and remains high everywhere, from 3.70 in Greece to 4.30 in Spain. The Greek configuration, in which scientific trust holds while media and institutional trust collapse, is consistent with the elevated expert-adjacent scepticism and exaggeration claims recorded in Sections 5.1.2 and 5.1.6 and suggests that in the Greek context climate misinformation resonates less as science denial than as an extension of generalised institutional distrust, a distinction with direct consequences for message-framing in the national interventions. Figure 5.8 sets out trust in each source of climate information.

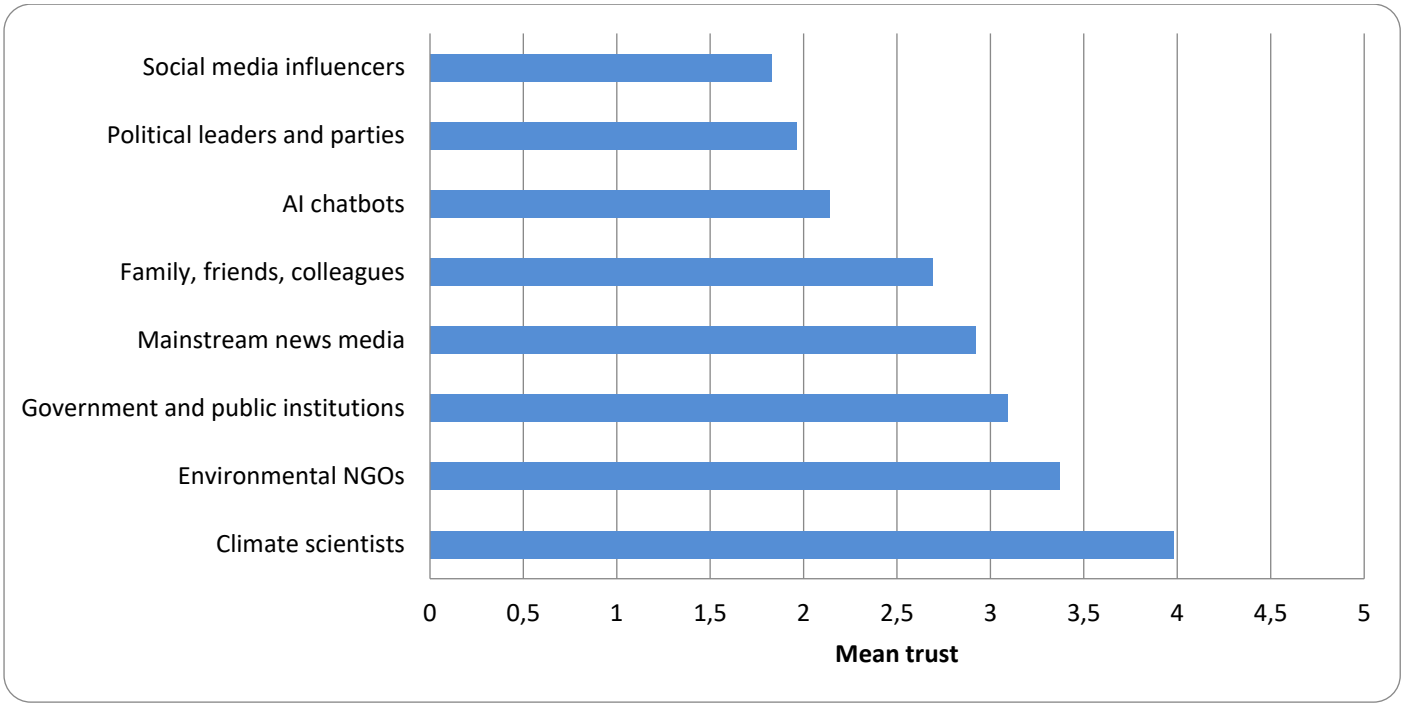

Figure 5.8. Trust in sources of climate information (1 = none, 5 = complete).

5.4.3 Self-rated media and digital literacy

Self-assessed ability to judge the truth of online climate information clusters in the comfortable middle of the scale. Nearly half of respondents (47.8%) rate their ability as good or very good, 43.1% as average, and only 9.1% as poor or very poor, with national means in a narrow band from 3.21 in Ukraine to 3.69 in Finland. Self-rated ability relates to other constructs in a revealing pattern. It correlates negatively with the Climate Misconception Index ($\rho = -.25$) and positively with the breadth of actual verification behaviour ($\rho = .25$), indicating that self-assessment is not empty, yet, as reported in Section 5.2.1, it correlates positively with acceptance of the flawed pro-science argument, the one performance-based test the survey contains. Self-rated literacy, in short, tracks resistance to misinformation from the other side but not the ability to judge claims that agree with one's own position, which is precisely the skill the FLICC results identify as scarce. For evaluation design in the later work packages, this argues for retaining performance-based items alongside self-report

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measures, since self-report alone would register improvement on exactly the dimension where the deficit is smallest.

5.4.4 Political self-placement

The optional left–right self-placement item was retained in all five national versions and answered by 91.1% of valid respondents, with item non-response between 7.4% and 12.0% by country, an acceptable level for a sensitive optional item. The pooled distribution is broadly centred, with 22.1% of those answering placing themselves at the midpoint of the 1–10 scale and the remainder spread with a mild leftward tilt. National sample means range from 3.67 in Spain, the most left-leaning sample, through 4.88 in Finland, 5.34 in Portugal and 5.40 in Greece, to 5.79 in Ukraine. Right self-placement correlates moderately with the Climate Misconception Index (CMI, the average level of agreement with the ten misconception statements; $\rho = .34$, $p < .001$), the familiar ideological gradient in climate beliefs. Its magnitude is worth registering, since it is comparable to the association between the CMI and trust in scientists and smaller than the association between the CMI and climate concern ($\rho = -.55$). Ideology, in these samples, is one predictor among several rather than the dominant cleavage, and the country differences reported in Section 5.1 are only partly a matter of political composition. Section 5.5.2 shows that the smaller differences among Spain, Portugal and Finland are largely carried by that composition, while the higher misconception levels in Greece and Ukraine persist after adjusting for it. Table 5.3 reports mean left–right self-placement and the item response rate by country.

Table 5.3. Left–right self-placement by country, mean position and item response rate (optional item, 1 = left to 10 = right; response rate as % of valid country sample).

Country	Mean left–right (1–10)	Item response rate %
Spain	3.67	91.7
Finland	4.88	92.6
Portugal	5.34	92.3
Greece	5.4	88
Ukraine	5.79	90

5.5 Subgroup and correlation analysis

The analyses in this section are exploratory, examining how misconception levels vary across demographic groups, how far the country differences reported in Section 5.1 survive adjustment for sample composition, and how misconception levels relate to information-channel repertoires including AI-mediated consumption. A minimum cell size of thirty respondents is applied throughout, so groups below that threshold (respondents with ISCED 1–2 education, non-binary and self-described respondents, and those preferring not to state a characteristic) are included in totals but not reported separately, to avoid presenting unstable estimates.

5.5.1 Misconception scores by age, gender, education and urban–rural residence

Age relates to misconception endorsement significantly but weakly and, more importantly, non-monotonically ($H(5) = 17.31$, $p = .004$, $\varepsilon^2 = .020$). The lowest CMI means belong to the youngest and oldest bands, 1.85 among both 18–24-year-olds and those 65 or over, while the 25–34 and 35–44 bands record the highest means at 2.11. There is, in these samples, no story of digitally naive elders or credulous youth; the modest peak sits in early-to-mid working age, and the effect size counsels against building interventions around age targeting on belief grounds alone, even as the channel analysis in Section 5.3.1 justifies age targeting on reach grounds.

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Gender shows a more consistent association. Men record a higher CMI than women (2.12 against 1.87, $H(1) = 12.75$, $p < .001$), an effect that, while small in pooled terms ($\varepsilon^2 = .020$), replicates within three of the five country samples. The difference is significant in Portugal (2.29 among men against 1.69 among women, $p < .001$), Finland (2.12 against 1.71, $p = .002$) and Greece (2.44 against 2.15, $p = .007$), while being entirely absent in Spain (1.69 in both groups) and non-significant in Ukraine. A male skew in climate-contrarian belief is one of the more robust findings in the international literature, and its selective appearance here, present in three national contexts and flat in Spain, the sample with the highest climate concern and the lowest misconception scores, suggests it is a context-dependent regularity rather than a demographic constant.

Education, within the range this sample covers, is unrelated to misconception endorsement, with the medium (ISCED 3–4) and high (ISCED 5–8) bands recording identical means of 1.99 ($p = .95$). Given the strong tertiary skew documented in Section 4.2, this null should be read as applying to the medium-to-high educational range rather than the full population distribution; the low band is too small (26 respondents with computable CMI scores) to report. Urban–rural residence is likewise unrelated to the CMI (city 2.01, town or suburb 1.91, rural 2.07, $p = .49$). This null has practical value of its own, since it indicates that the project's predominantly urban recruitment did not select a belief-atypical audience along the residence dimension and that intervention content need not be differentiated by settlement type on belief grounds. Table 5.4 reports the Climate Misconception Index for each subgroup.

Table 5.4. Climate Misconception Index by age, gender, education and degree of urbanisation and by main-source profile.

Subgroup	CMI mean	Median	n
Age 18–24	1.85	1.7	125
Age 25–34	2.11	2	147
Age 35–44	2.11	2	113
Age 45–54	1.88	1.8	106
Age 55–64	2.06	2	75
Age 65 or over	1.85	1.78	49
Men	2.12	2	266
Women	1.87	1.8	337
Education medium (ISCED 3–4)	1.99	1.95	148
Education high (ISCED 5–8)	1.99	1.9	451
City	2.01	1.9	345
Town/suburb	1.91	1.9	201
Rural	2.07	1.9	63
Main sources traditional only	1.82		199
Main sources mixed	1.99		298
Main sources social only	2.21		98

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5.5.2 Country differences under adjustment for sample composition and political orientation

Sections 5.1.1 and 5.4.4 committed this section to testing whether the split between the two country groups is an artefact of the compositional differences between national samples, most obviously the distinctive educational profile of the Portuguese sample and the differing political centres of gravity. Two complementary checks answer the question, and both answer it in the negative for the pattern's core.

The first check examines education within countries. If Portugal's comparatively low CMI (1.88) were an artefact of its less tertiary-dominated sample, its medium-educated respondents should score higher than its tertiary-educated ones; in fact they score slightly lower, though not significantly so (1.79 against 2.03, p = .17). Portugal is the only country sample with enough medium-educated respondents to permit the comparison at all. The data therefore point in the opposite direction to the compositional explanation: if education composition were driving Portugal's low score, its less-educated respondents would score higher, and they do not. This matches the pooled result that education is unrelated to misconception scores.

The second check is a set of exploratory covariate-adjustment models, ordinary least squares regressions of the CMI on country contrasts (with Spain, the lowest-scoring sample, as reference), estimated first unadjusted, then adding age band, gender and education, then adding left–right self-placement. Given the ordinal character of the outcome, these are reported as robustness checks rather than as a measurement model. The demographic adjustment does not shrink the country contrasts at all, and in fact slightly enlarges them (the Portugal contrast rises from b = 0.19 to b = 0.32, and Greece and Ukraine remain at b ≈ 0.62–0.63, both p < .001), establishing that age, gender and education composition explain none of the cross-country variation. Adding political self-placement changes the picture selectively and informatively. The political gradient itself is substantial (b = 0.10 per scale point, p < .001, implying nearly a full CMI point across the ten-point left–right range, with the gender difference persisting at b = −0.26 for women), and its inclusion attenuates the small differences within the lower-scoring group to non-significance (Portugal b = 0.17, Finland b = 0.12). The modest CMI differences among Spain, Portugal and Finland are therefore largely carried by the differing political composition of those samples, and in particular by the left-leaning Spanish sample. The upper tier, however, does not reduce, as Greece (b = 0.47, p < .001) and Ukraine (b = 0.42, p < .001) remain clearly elevated after full adjustment, with overall explained variance reaching R^2 = .25. The elevation of misconception endorsement in the Greek and Ukrainian samples is therefore a substantive finding about those information environments, not a by-product of who was recruited. Table 5.5 reports the unadjusted and adjusted models behind these estimates.

Table 5.5. Ordinary least squares models of the Climate Misconception Index on country contrasts, estimated unadjusted and with successive covariate blocks (reference category Spain; * p < .05, ** p < .01, *** p < .001).

Country contrast (ref. Spain)	Unadjusted b (n=608, R2=.099)	+ demographics b (n=585, R2=.158)	+ political b (n=533, R2=.248)
Portugal	0.192*	0.317**	0.169 (ns)
Finland	0.235**	0.254**	0.117 (ns)
Ukraine	0.583***	0.631***	0.422***
Greece	0.599***	0.623***	0.474***
Left–right placement (per point)	—	—	0.102***
Woman (vs man)	—	—	−0.259***

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A within-country correlation analysis explains why political adjustment behaves this way and adds one of the more striking findings of the report. The association between right self-placement and the CMI varies enormously across countries, from ρ = .46 in Finland, .37 in Ukraine and .31 in Spain, down to .18 in Portugal and effectively zero in Greece (ρ = .05, p = .60). In the Greek sample, uniquely, climate misconceptions are not ideologically structured at all; they are distributed across the political spectrum, which is precisely what the institutional-distrust interpretation advanced in Section 5.4.2 predicts, since generalised distrust of media and public institutions is not the property of one political camp in the Greek context. The practical consequence is considerable, namely that debunking and prebunking content designed for ideologically motivated audiences, the default assumption in much of the international literature, fits the Finnish, Ukrainian and Spanish contexts but would mistarget the Greek one, where the gateway is trust repair rather than ideological counter-messaging. Table 5.6 reports the within-country correlations.

Table 5.6. Within-country association between right self-placement and the Climate Misconception Index (Spearman's ρ; European layer excluded).

Country	Spearman rho (left–right x CMI)	p	n
Finland	0.456	<.001	110
Ukraine	0.37	.001	76
Spain	0.306	<.001	130
Portugal	0.184	.028	142
Greece	0.054	.603	95

5.5.3 Channel mix, AI use and misconception levels

Misconception levels vary more sharply across information repertoires than across any demographic characteristic in this section. Classifying respondents by their self-nominated main sources yields three well-populated profiles, and their CMI means order cleanly. Respondents relying on traditional channels only (television, press, radio; n = 199) average 1.82, those mixing traditional and social sources (n = 298) 1.99, and those relying on social platforms only (n = 98) at 2.21. The contrast between the social-only and traditional-only profiles is the largest subgroup difference in this chapter (Mann–Whitney p < .001, rank-biserial r = .31), exceeding the gender and age effects by a wide margin. Consistent with the protective reading of repertoire breadth, the number of distinct channels through which a respondent encountered climate information correlates negatively, if weakly, with the CMI (ρ = −.12, p = .003). The causal direction cannot be established from cross-sectional data, and selection into channel profiles is certainly not random, but the descriptive fact stands, namely that the audience segment most reliant on algorithmically curated feeds carries the highest misconception burden. This segment is also the youngest, and the least expensive to reach, because the same feeds can be used to deliver corrective content to it.

The association between AI-mediated consumption and misconception levels, which this section is tasked with examining, is real but modest and should be reported with restraint. As established in Section 5.3.4, respondents who have used a chatbot for climate questions score somewhat higher on the CMI than non-users (2.13 against 1.92, p = .010, r = .14). Respondents who name AI chatbots among their main climate information sources (n = 62) score higher than the remainder in the same direction, but not significantly so (2.10 against 1.97, p = .14). Respondents naming influencers among their main sources, a group often presumed vulnerable, show no elevation at all (1.95, n = 30, p = .80). Taken together, the AI-related differences are an order of magnitude smaller than the social-only repertoire effect. The appropriate conclusion at this stage is one of vigilance rather than alarm, with the chatbot-user association flagged for re-measurement in the project's later waves as adoption

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grows, particularly given the trust asymmetry documented in Section 5.3.4, in which the small user base already extends chatbots considerably more credibility than non-users do. Figure 5.9 compares the Climate Misconception Index across main-source profiles.

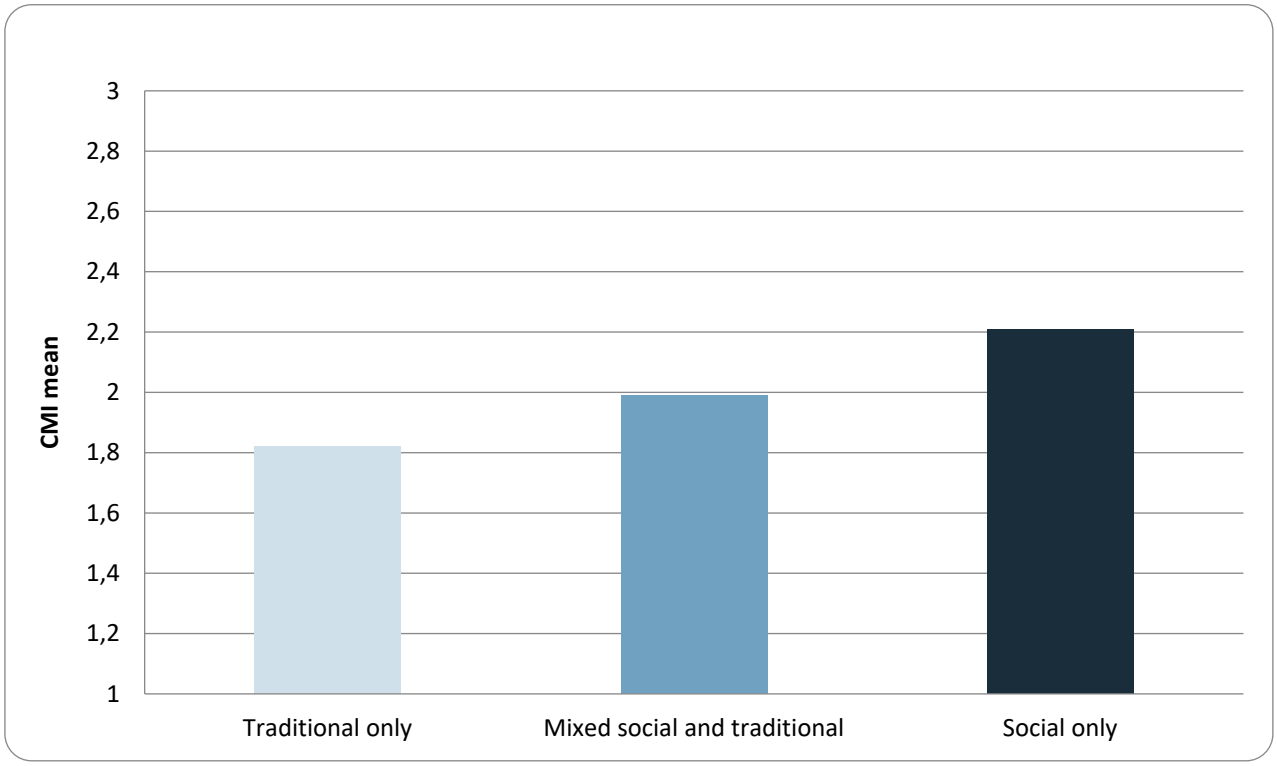

Figure 5.9. Climate Misconception Index by main-source profile.

5.6 Qualitative findings from open-text responses

5.6.1 Response corpus, codebook and coding procedure

The final survey item invited respondents to describe, in their own words and in up to 250 characters, the most misleading claim about climate change they had seen recently. Of the 652 valid respondents, 224 provided a substantive answer (34.4%), distributed as 80 from Spain, 42 from Portugal, 47 from Finland, 22 from Ukraine, 29 from Greece and 4 from the European layer. Responses were coded to a single primary theme using a codebook built around the CARDS claim families, extended with emergent categories that the material itself demanded, namely contested catastrophism, contrarian-voiced responses, political-leader statements cited without a specific claim, AI-generated content, greenwashing and false reassurance, and over-attribution of unrelated events to climate change. Coding was performed in the respondent's original language, was conducted by a single coder with model assistance and was not subjected to inter-rater reliability testing; the counts reported here should accordingly be read as indicative orderings rather than precise prevalences, and the full coded dataset accompanies this deliverable for verification and re-coding. Thirty-six responses in the five partner countries (16.4%) contained no codable claim, most often because the respondent stated they had encountered no misinformation, leaving 184 codable responses on which the following analysis rests. Illustrative quotations are translated into English and identified by country and anonymised respondent number.

5.6.2 Thematic distribution against the CARDS families and shared narratives

The single most striking regularity in the open-text material is that the misinformation respondents spontaneously recall is the older kind, meaning claims that deny the science itself rather than the newer claims about solutions and experts. Natural-variability claims (45 responses) and outright denial or hoax claims (43) together account for 47.8% of all codable responses, towering over every

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other theme, whereas the solutions-directed (16) and expert-directed (15) families, which Section 5.1 identified as the most endorsed in respondents' own beliefs, are reported at a third of that rate. The inversion is the qualitative mirror of the technique-recognition asymmetry documented in Section 5.2, and it admits the same reading: publics readily notice and name the misinformation they already reject, the crude denialism of "it does not exist" or "the climate has always changed", while the misinformation that actually finds purchase in their own beliefs, claims about unreliable renewables, futile individual action and untrustworthy experts, largely escapes their radar as misinformation at all. A Ukrainian respondent's answer illustrates how well-equipped many respondents are against the classic claims, dismantling the natural-cycles argument by noting that past change is real "but today's warming is much faster and coincides with the sharp rise in greenhouse gas emissions from burning fossil fuels" (Ukraine, R244); no respondent in the entire corpus offered a comparably structured rebuttal of a delay narrative. Table 5.7 reports the primary-theme distribution of the open-text responses by country.

Table 5.7. Primary-theme distribution of open-text responses by country (Q23, n = 220 responses in the five partner countries)

Theme (primary code)	Spain	Portugal	Finland	Ukraine	Greece	Total
C2 natural, not human	26	3	7	5	4	45
C1 denial/hoax	20	12	4	3	4	43
No codable claim	7	5	11	7	6	36
Catastrophism/overclaiming contested	5	6	3	3	1	18
C4 solutions-directed	0	2	11	1	2	16
C5 experts/conspiracy	7	2	3	2	1	15
Contrarian-voiced response	4	4	2	1	4	15
Political-leader statements	2	2	3	0	3	10
C3 not bad/beneficial	4	3	1	0	1	9
Greenwashing/false reassurance	4	0	2	0	1	7
AI-generated content	0	3	0	0	1	4
Over-attribution of unrelated events	1	0	0	0	1	2

Political elites appear throughout the corpus as the most frequently named vector of denial claims. Beyond the ten responses citing political leaders without a specific claim, statements attributed to the current US administration recur across the Portuguese, Greek, Finnish, Spanish and Ukrainian material as the archetype of encountered denial, with Portuguese respondents in particular repeatedly citing presidential statements that "global warming is nonsense". The pattern indicates that, in these samples, high-salience denial is experienced primarily as an elite import with a named foreign face rather than as an anonymous social-media phenomenon.

A substantial secondary current runs in the opposite direction. Eighteen respondents named catastrophist or overclaiming content as the most misleading material they encounter, citing claims that "the world will end", that "we are going to die soon because of climate change" (Portugal, R523) or that destruction is due within a decade, alongside critiques of decontextualised temperature records and of responsibility framings. This bidirectional quality of perceived misinformation matters

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for the project's communications, since audiences evidently police exaggeration on the pro-climate side as well, and content that overclaims will be filed by part of the audience in the same category as denial. Related but distinct, seven responses flagged greenwashing and false reassurance, from corporate distraction campaigns to the notion that governments are genuinely acting, and fifteen respondents used the open box to voice contrarian positions of their own, disputing anthropogenic attribution or the feasibility of mitigation, a share (6.8% of substantive responses) broadly consistent with the upper tail of the CMI distribution. Only four responses named AI-generated content specifically, but their concreteness corroborates the exposure figures of Section 5.3.2, the clearest being a Portuguese account of a realistic TikTok video, later realised to be AI-generated, of a man ice-skating on the frozen Douro river during the January cold spell (Portugal, R574).

5.6.3 National inflections

The national sub-corpora inflect these shared patterns in distinctive ways. The Finnish material is dominated not by denial but by the futility narrative, with eleven of forty-seven responses reporting solutions-directed claims, six of them the specific whataboutist form that "there is no point doing anything here in little Finland, because it doesn't matter when China and America have much bigger volumes" (Finland, R557). The remainder combine policy-cost delayism ("Finland already does enough; the green transition threatens the competitiveness of our export industry", R129) and the occasional benefit claim that warming is good for Finnish tourism (R631). The Spanish corpus is saturated with classic science denial, with 46 of 80 responses reporting natural-cycles or non-existence claims, frequently attributed to right-wing media and politicians, and it also contains the corpus's only fringe conspiracies, from chemtrails to the claim that "American bases in the Middle East control the climate with their radars" (Spain, R368). The Portuguese corpus leads on outright denial (12 of 42), overwhelmingly foreign-sourced and Trump-attributed, and is the only national corpus with concrete AI-fabrication anecdotes. The Greek corpus is small but distinctive in that its contrarian current runs through respondents' own voices rather than reported claims, with four respondents naming full anthropogenic attribution itself as the misleading claim, for example "that we supposedly know climate change depends entirely on human activity" (Greece, R666). This attribution-scepticism is entirely consonant with the elevated C2 and C5 endorsement and the trust profile documented for the Greek sample. The Ukrainian corpus is marked above all by low salience, with seven of twenty-two respondents reporting that climate information barely reaches them at present ("my priorities are elsewhere now", R323). One unmistakably war-shaped response names as the most misleading claims "that the anthropogenic factor is negligible, and that Russia is not committing ecocide in Ukraine" (Ukraine, R402), a reminder that in the Ukrainian information environment climate misinformation is entangled with the wider informational dimension of the war.

5.7 Cross-country synthesis of key misinformation narratives

This section draws the quantitative belief data (5.1), the technique-recognition results (5.2), the channel and trust profiles (5.3–5.4), the subgroup structure (5.5) and the open-text corpus (5.6) into a ranked narrative picture per country, of the kind the project's national interventions in later work packages can act on directly.

5.7.1 Ranked narratives per country

The rankings below order, for each national sample, the misinformation narratives that matter most for intervention design. The ordering weighs three properties established in the preceding sections, namely the purchase a narrative has in respondents' own beliefs (Sections 5.1 and 5.5), its salience in the information environment as respondents report encountering it (Sections 5.3 and 5.6), and the structural conditions of trust, channel use and political alignment that determine which counter-strategies can reach it (Sections 5.4 and 5.5). These properties frequently diverge, and the divergence is itself the central lesson of the chapter, since the narratives citizens most readily name as misinformation are rarely the narratives that shape their beliefs. The rankings are therefore led by

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purchase rather than salience, on the reasoning that the project's scarce intervention resources should target what is believed rather than what is merely noticed.

In the Spanish sample, the leading narrative by purchase is barely a misinformation problem at all, since Spain records the lowest misconception endorsement in every CARDS family and the highest climate concern. What ranks first instead is the vulnerability identified in Section 5.2, the uncritical acceptance of flawed argumentation on the pro-climate side, on which the Spanish sample scores highest of all (mean reliability rating 8.05 for the flawed pro-climate argument). Second ranks the classic denial that saturates the Spanish information environment without persuading it, as 46 of the 80 Spanish open-text responses reported natural-cycles or non-existence claims, typically attributed to right-wing media and politicians; this narrative demands monitoring and rebuttal capacity rather than belief change. Third ranks the ideological structuring of what residual misconception exists (ρ = .31 between right self-placement and the CMI), which indicates that the small susceptible segment is politically identifiable. Spanish intervention content can accordingly lean on the strongest scientist trust in the study (4.30) but should build in the discipline of technique-based evaluation applied to congenial claims, precisely because audience confidence is highest there.

In the Portuguese sample, the first-ranked narrative is imported elite denial, encountered rather than endorsed, with outright denial leading the national open-text corpus (12 of 42 responses), overwhelmingly foreign-sourced and attributed to statements of the current US administration. Its practical weight comes less from persuasion, since Portuguese misconception endorsement sits in the lower-scoring group (CMI 1.88), than from the growing difficulty it creates, which is greatest in Portugal, where 52.9% of respondents find it harder than two years ago to distinguish true from false climate information. Second ranks synthetic visual content, since Portugal combines a high AI-encounter rate (61.9%) with the corpus's only concrete AI-fabrication anecdotes, and the fabricated extreme-weather imagery that leads AI encounters across the study is the natural carrier of this strain. Third ranks the gendered structure of residual belief, as Portugal shows the largest gender gap in the study (CMI 2.29 among men against 1.69 among women), which identifies the audience segment where the lower-tier narratives retain purchase. The Portuguese configuration argues for literacy content focused on checking where material comes from and on spotting AI-generated content over belief-corrective content.

In the Finnish sample, the ranking is led by the futility and delay narrative, the clearest case in the study of alignment between what is believed and what is encountered. Solutions-directed claims dominate the Finnish open-text corpus (11 of 47 responses), six of them the specific whataboutist form that action in a small country is pointless given Chinese and American emissions, accompanied by policy-cost delayism framed around export competitiveness. This narrative family corresponds to the C4 scores that place Finland's misconception profile in the same rank order as every other country, and it is the most ideologically structured belief pattern in the study, with the strongest within-country association between right self-placement and the CMI (ρ = .46). Second ranks conversational AI as an emerging channel, since Finland leads chatbot use (34.7%) while sharing the general pattern in which users report higher trust in chatbots without higher confidence in detecting AI-generated content. Whether familiarity with chatbots produces that trust, or more trusting users simply adopt them sooner, cannot be determined from these data. Third, and lowest, ranks classic science denial, which has little purchase and modest salience in the Finnish material. Finland is consequently the national context where ideologically targeted prebunking of economic delay arguments, of the kind the international literature is best developed for, fits most cleanly.

In the Greek sample, the first-ranked narrative is exaggeration, the claim that scientists, media and institutions overstate the threat. It leads on every criterion at once, with the highest national endorsement of the sea-level exaggeration item (20.5%), the highest expert-directed category score among national samples bar Ukraine (C5 at 2.46), the highest national mean for the funding-conspiracy scenario (3.56), and a trust profile in which confidence in scientists holds (3.70) while trust in media (2.36) and public institutions (2.62) collapses. Second ranks psychological distancing,

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endorsed by 22.4% of Greek respondents, the highest national figure for the most endorsed item in the study. Third ranks attribution scepticism, distinctive in that it appears in the open-text corpus in respondents' own voices rather than as reported claims. The decisive structural finding is that none of this is ideologically organised, as the ideology–CMI correlation is effectively zero in Greece alone (ρ = .05), which means the counter-messaging designed for politically motivated audiences elsewhere would mistarget the Greek context. The Greek ranking points to trust repair, scientist-fronted communication bypassing distrusted media and institutional intermediaries, and proximity framing against distancing, rather than ideological counter-messaging.

In the Ukrainian sample, the first-ranked narrative is solutions scepticism centred on renewables unreliability, which reaches its study-wide peak in Ukraine (20.2% endorsement) within a C4 category score of 2.42 and sits alongside the highest expert-directed category score in the study (C5 at 2.56). Second ranks the compression of climate salience by the war, as Ukraine records much the lowest concern mean (3.04) and the open-text corpus is marked by respondents reporting that climate information barely reaches them at present (7 of 22 responses); this is not a misinformation narrative in itself, but it is the binding constraint on any intervention's reach. Third ranks the entanglement of climate information with the wider informational dimension of the war, visible in the open-text material's pairing of attribution denial with denial of environmental war damage. With comparatively high chatbot use (31.0%) and low current salience, the Ukrainian context favours interventions that meet audiences inside existing information routines, address the energy-security register in which renewables scepticism is framed, and treat climate communication as inseparable from the broader wartime information environment rather than as a free-standing topic.

Across all five countries, one shared ranking principle should govern the handover to the national interventions. The narratives with the greatest purchase everywhere belong to the solutions-directed and expert-directed families, while the narratives with the greatest salience are the classic denial claims that audiences already reject and readily name. Interventions aimed at the most visible narratives would therefore fight yesterday's misinformation with today's budget, and the per-country rankings above are ordered specifically to prevent that misallocation.

5.7.2 Narratives across the European online layer

The European layer functions in this synthesis less as a sixth sample than as a lens on which narratives travel transnationally. Its own quantitative results are reported for completeness only, since fifteen respondents, four of whom answered the open-text item, cannot support inference. The question it raises is answered instead from the five national corpora, by asking which narratives recur everywhere and which remain nationally bound.

Four narratives emerge as genuinely European in circulation. The first is elite-attributed denial with a named foreign face, as statements attributed to the current US administration recur in the Portuguese, Greek, Finnish, Spanish and Ukrainian material alike. The second is fabricated extreme-weather imagery, the leading AI-content encounter in every national sample and the modal form (44.5% pooled) through which synthetic climate content reaches European publics. The third is the futility narrative in its whataboutist form, which invokes the same third parties, China and the United States, whichever country it is voiced in. The fourth is the consensus gap, since in every sample a substantial minority declines to affirm the near-universal scientific agreement on human causation. Against these stand the narratives that do not travel, namely the Greek fusion of exaggeration claims with generalised institutional distrust, the Finnish framing of delay around export competitiveness and the Ukrainian entanglement of climate information with the war, each of which demands nationally specific treatment in the WP3 materials and WP4 workshops.

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6 Discussion

6.1 Findings considering the literature

The survey's most consequential structural finding is that the demand side of climate misinformation in five European publics has the same shape as its documented supply side. Analysis of two decades of contrarian output (Coan et al., 2021) established a long-term migration of climate misinformation away from claims that warming is not happening or not human-caused and toward claims that solutions will not work and that experts cannot be trusted. The present data show the corresponding pattern in what reachable European publics actually believe, with the expert-directed (C5) and solutions-directed (C4) families outscoring the science-denial families in every one of the five national samples, and the most endorsed single items being psychological distancing, renewables unreliability and consensus scepticism rather than any claim against the physical reality of warming. To our knowledge this is among the first cross-national European measurements to document the supply shift on the belief side using an instrument explicitly built on the CARDS taxonomy, and it converts what was a content-analysis finding about producers of misinformation into an audience finding with direct programmatic weight, since it locates the live front of the contest at efficacy and trust rather than at physical science.

At the same time, the data qualify any suggestion that classic denial has become irrelevant. Outright denial remains the most visible misinformation in respondents' lived experience, dominating the open-text corpus and arriving, in their telling, principally through political elites and above all through statements of the current US administration. This is consistent with recent scholarship documenting that outright denial resurfaces episodically (Gounaridis & Newell, 2024; Maldita.es et al., 2024), concentrated around extreme-weather events and high-profile political voices. It suggests a division of labour in the contemporary misinformation environment, with elite denial supplying the salient, quotable surface while the quieter delay and distrust narratives do the persuasive work underneath (Mann, 2021). The exaggeration variant of denial, that sea-level rise or the threat generally has been overstated by media and scientists, travels measurably further in our samples than trend denial itself (13.5% against 7.8% endorsement), which is precisely the shading of denial into messenger-distrust that the resurgence literature describes.

The consensus-gap finding replicates one of the most robust results in climate communication research within a sample where it might least be expected. Only 66% of respondents affirm that the large majority of climate scientists attribute recent warming mainly to human activity, in a sample in which 62.5% are very or extremely concerned and trust in climate scientists is the highest of any source measured. Research in the gateway-belief tradition (van der Linden et al., 2015) has repeatedly shown that perceived scientific consensus functions as a foundational belief on which acceptance, concern and policy support build, and that publics systematically underestimate the actual level of agreement. The present data indicate that even in climate-attentive European publics roughly a third of the audience lacks this gateway belief, which argues for consensus communication as low-cost, high-leverage content in the project's outputs, while the 13.6% who actively reject the consensus statement mark the audience segment where C5-style expert-directed misinformation has already landed.

The technique-recognition results connect the survey to the literatures on motivated reasoning and inoculation, and the pattern in the data is unusually clear. Climate concern works in opposite directions on the two arguments: the more concerned respondents were, the more reliable they rated the flawed pro-climate argument, and the less reliable they rated the conspiratorial contrarian one, at almost the same strength. This is the pattern predicted by research on identity-protective reasoning (Kahan et al., 2012), in which people judge an argument by whether its conclusion fits what they already believe rather than by how sound it is. Two refinements deserve emphasis. First, the mechanism works the same way on both sides, but its practical effect here is one-sided. Because these samples lean pro-climate, most respondents accepted a flawed pro-climate argument (65.9% rated it reliable) while almost all rejected the contrarian one. The weak point for these publics is therefore misleading content

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that comes from their own side. Second, neither education nor self-rated discernment mitigates the effect, and confidence slightly aggravates it, which matches findings across the misinformation literature that people's own judgement of their ability is a poor guide to how well they actually perform. The results therefore support the technique-based inoculation approach (Cook, Ellerton, & Kinkead, 2018; Cook, 2020). Its core premise is that spotting manipulative techniques must be taught as a skill that does not depend on the topic of the claim, because judging a claim by its content is shaped by what a person already believes. This is the skill the data show these publics currently lack.

Three further findings sit squarely within established literatures while adding European texture. The gender difference, men endorsing misconceptions more than women, replicates a well-documented regularity across industrialised democracies (Bush & Clayton, 2023; Poortinga et al., 2019), though its selective appearance (strong in Portugal and Finland, absent in Spain) supports contextual rather than essentialist readings. The heterogeneity of the ideological gradient extends comparative European work (McCright, Dunlap, & Marquart-Pyatt, 2016), showing that the left–right structuring of climate scepticism familiar from Anglophone contexts is far from uniform across Europe. Its virtual absence in Greece, where misconceptions instead track a generalised collapse of media and institutional trust with scientific trust intact, identifies a distinct national configuration in which misinformation resonance is trust-mediated rather than ideology-mediated. The channel findings, with the social-only repertoire segment carrying the highest misconception burden while traditional media retain both reach and a trust advantage, are consistent with the broad association between social-media reliance and misperception documented across topics (Bridgman et al., 2020; Stecuła, Kuru, & Jamieson, 2020). The AI-specific results — majority exposure to synthetic climate content, a small but highly trusting chatbot user base and no detection-confidence advantage from use — provide early European baseline numbers for a channel the literature has only begun to measure, following warnings (Global Witness, 2025) that conversational AI can reproduce contrarian framings. Finally, the prominence of contested catastrophism in the open-text corpus echoes the argument that doomism now operates as a delay discourse in its own right (Mann, 2021), and it confirms that audiences themselves police overclaiming on the pro-climate side.

6.2 Limitations

The findings should be read against the study's limitations, which are disclosed here in full and, where possible, quantified. The sample is a non-probability, opt-in sample recruited through partner networks and social channels, and no weighting is applied for the reasons given in Section 4.3. All prevalence figures characterise respondents rather than national populations. The plausible direction of self-selection bias, toward educated, urban and climate-attentive publics, implies that population misconception levels are likely higher than those reported here, making the misconception and consensus-gap figures conservative. Country samples differ compositionally, most visibly in the educational profile of the Portuguese sample and the average political position of the Spanish one; Section 5.5.2 shows the core cross-country findings survive covariate adjustment, but residual confounding by unmeasured composition cannot be excluded in a cross-sectional design, and no causal claims are made anywhere in this report. The educational range restriction (71.4% tertiary) limits what can be said about education effects, and the null reported here applies to the medium-to-high range only. The European layer (n = 15) is reported descriptively and supports no inference.

On instrumentation, the as-fielded questionnaire captured no response-duration data and contained no attention-check item, so data quality relies on the completeness and straight-lining screens described in Section 4.4, with a sensitivity analysis showing results robust to the exclusions. The C2 family is operationalised by a single item, precluding reliability assessment for that category score. The technique layer rests on one scenario per technique, and its central contrast, between a flawed congenial and flawed uncongenial argument, does not include a sound-argument benchmark. The interpretation of conclusion-driven evaluation rests on the cross-item asymmetry and the correlational signature rather than on a full argument-quality design, and item non-response on these more

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demanding items (7.8–12.0%) exceeded that of the Likert batteries. Likert responses are treated as ordinal throughout, "don't know" responses are excluded from scale scores and reported separately, and the covariate models of Section 5.5.2 apply least squares to an ordinal composite and are labelled exploratory accordingly. The multiple-comparison burden of the cross-country family is controlled by Benjamini–Hochberg correction, but Section 5.5 as a whole is exploratory and its findings await confirmation in later waves. Translation followed a functional-equivalence approach across six language versions, and two residual artefacts are documented, the age-band label variants affecting sixteen respondents (harmonised, with boundary ambiguity for a handful of cases) and the national adaptations of the urbanisation item, which used locally idiomatic labels around common thresholds. The qualitative coding of Section 5.6 is single-coder with model assistance and without inter-rater reliability testing; the codebook and fully coded corpus are published with this deliverable to permit independent re-coding, and counts are presented as indicative orderings. Lastly, the political self-placement item was optional and carries 8.9% item non-response, and fieldwork coincided with a specific news period (late May to early July 2026), so salience-sensitive results, particularly in Ukraine, reflect that moment.

6.3 Implications for media literacy and project interventions

Five implications follow directly from the evidence and are stated here as inputs to the design work of the subsequent tasks and work packages.

1. Teaching should focus on how misleading claims are built, rather than only on which claims are false. The convergent finding of the belief battery, the scenario items and the open-text corpus is that these publics already reject the misinformation they can see and are moved by the misinformation they cannot, and only content-neutral technique training, of the FLICC-based inoculation type, addresses the second category. Debunking libraries organised around classic denial claims would target the solved part of the problem. Where content-focused material is produced, the priority families are solutions scepticism and expert distrust, led by the specific claims the survey found most alive, psychological distancing, renewables unreliability and consensus denial, with consensus communication itself as a proven, low-cost component given the measured gap.
2. Training and evaluation must also cover misleading arguments that support climate action, not only arguments that deny it. Practically, this means training materials should include flawed arguments with pro-climate conclusions as core exercises rather than as curiosities. It also means audience-facing content must itself be scrupulously non-overclaiming, since the data show audiences react against exaggerated claims and treat them much like denial. Finally, the project's own evaluation instruments must retain performance-based items of the Layer 2 type, because people's own rating of their skills does not match how they actually perform and an evaluation built on self-report would register spurious success.
3. National strategies should follow the country profiles set out in Section 5.7 rather than one uniform template. Each country needs a different emphasis: for Spain, training in judging the quality of an argument, since this audience already rejects denial but is exposed to flawed claims from its own side. Portugal needs verification skills and work on AI-generated content, which this audience finds hard to tell apart from real material. Finland needs material on whether climate action works and on "what about others" arguments, which dominate there. Greece needs communication led by scientists and kept light on institutional branding, where no ideological target exists and institutional channels carry a trust penalty. Ukraine needs the profile of climate issues raised through the information channels already used during the war, where the war-environment nexus is the demonstrated point of engagement.
4. Channel strategy should exploit the measured trust and reach structure. Scientists carry the only strong trust premium in every country and should front content wherever possible.

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Traditional media retain the widest reach, including among the young, and remain the natural carrier for consensus and technique content. The social-only segment, youngest and highest in misconception burden, must be reached natively on platform, but influencer-mediated formats start from the lowest credibility floor measured and should be used as carriers of scientist-fronted material rather than as sources in their own right.

5. Conversational AI, meaning chatbots, needs its own forward-looking line of work. Adoption for climate questions is already at a quarter of these samples and rising with youth, users extend chatbots substantially more trust than non-users while showing no higher confidence in their own ability to spot AI-generated content, chatbots convert to main-source status more strongly than any other channel, and the user group carries a small, presently inconclusive misconception elevation. Literacy provision is behind adoption on this channel, and the project is well placed to pioneer chatbot-specific guidance — how to prompt for sources, how to verify chatbot claims and what chatbots systematically get wrong on climate — while re-measuring the user-group association in later waves, where growth in the user base will supply the statistical power this baseline lacks.

Taken together, the survey delivers what T2.1 was designed to deliver, a differentiated, evidence-based map of where climate misinformation actually lives in the participating publics. Its central message to the work packages that follow is a reorientation: away from defending audiences against claims they already disbelieve, and toward equipping them for the harder task of judging the information environment on their own side of the argument.

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7 Conclusions and handover to downstream work packages

The survey delivers the differentiated, evidence-based map of climate misinformation that Task 2.1 was designed to produce, and its central result reorients the work that follows. Among the reachable European publics sampled here, the older wave of misinformation, which denies the science itself, is largely solved, while the newer wave, which attacks climate solutions and the credibility of experts, is not. Outright denial is rare in belief and near-universally rejected in argument, whereas solutions scepticism, expert distrust and the acceptance of flawed arguments that support what people already believe remain live. What these publics believe has taken the same shape as the misinformation that research finds being produced, and the project's scarce intervention resources should follow the evidence to where misconception actually resides rather than to where it is merely most visible. The remainder of this chapter specifies what transfers to each downstream task, and in what form.

To the literature review in Task 2.2 (D2.2, LAB), Task 2.1 hands the category ranking and the item-level prevalence evidence that should set the review's main focus. The results show that claims about the trustworthiness of experts (C5) and about climate solutions (C4) are more widely accepted than the three science-denial families. Three specific misconceptions stood out: the belief that the impacts fall on distant people and places, doubts about the reliability of renewable energy and the claim that climate action does not bring net benefits. These three held up across all five countries under strict statistical testing. The review should therefore focus on the C5 and C4 claim families and on these specific misconceptions, so that D2.2 addresses the misconceptions this survey found to be most widely accepted, rather than the ones that are simply easiest to expect. The cross-country prevalence map and the module on exposure to AI-generated content are potential perspectives for the joint scientific paper of T2.1 and T2.2.

To the corrective content of Work Package 3, Task 2.1 hands both a target list and a design constraint. The FactSheets of Task 3.1 (D3.1, MMI) and the ToolBox scenarios of Task 3.2 (D3.2, CIBER) should prioritise the highest-purchase families identified here, led by the specific claims the survey found most alive — psychological distancing, renewables unreliability and consensus scepticism. Consensus communication should be carried as a low-cost, high-leverage component given the one-third consensus gap measured even in this climate-attentive sample. The design constraint follows from the technique-recognition result. Because these publics evaluate congenial claims far less critically than uncongenial ones, technique-based material of the FLICC-inoculation type must sit at the centre of the ToolBox, and its exercises must include flawed arguments with pro-climate conclusions rather than only contrarian ones. The item-to-taxonomy mapping in Annex D and the item-level percentages in the accompanying workbook give WP3 the granularity to build each asset against a named claim.

To the engagement activities of Work Package 4, Task 2.1 hands the per-country ranked narratives of Section 5.7 as ready-made tailoring templates for the citizen-science and impact workshops (D4.1, LAB; D4.2, Detector Media). Each national workshop can take its country's ranked configuration directly: Spain needs training in judging the quality of an argument; Portugal, verification skills and work on AI-generated content, which this audience finds hard to tell apart from real material; Finland, material on whether climate action works and on "what about others" arguments, which dominate there; Greece, rebuilding trust through communication led by scientists, since this audience distrusts institutions; and Ukraine, raising the profile of climate issues through the information channels already used during the war, rather than applying a single script across five very different information environments. The trust and reach structure of Sections 5.4.2 and 5.3.1 informs the communications planning of Work Package 5 in parallel, since scientists carry the only strong trust premium in every country, traditional media retain the widest reach including among the young, and conversational AI marks the channel where literacy provision is furthest behind adoption.

Two handover conditions attach to these transfers. The survey's evidential authority rests on the milestone MS2 validation, in which D2.1 and D2.2 are evaluated by the project's scientific experts during the Task 2.3 meetings at Month 12. This deliverable is structured, with its full methodology and

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reproducible analysis, to support that scrutiny. Any revisions arising from it will propagate to the downstream tasks named above. The one association this baseline cannot yet resolve, the small misconception elevation among chatbot users that is confounded with the age and country composition of that group, is handed forward as a monitoring task rather than as a finding, to be re-measured in the project's later survey activity as the user base grows and supplies the statistical power this wave lacks.

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9 Annexes

Annex A — T2.1 methodological brief, full

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Creative Europe

MEDIA

CREA-CROSS-2025-MEDIALITERACY

CLIMAware

T2.1 Methodological brief on survey

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Circular Bioeconomy Hub

Thessaloniki, May 2026

Contents

1. Purpose and scope

This brief presents the methodological foundation of Task 2.1 of CLIMAware to be applied across all participating countries.

The objective of T2.1 is to identify the most prevalent public misconceptions about climate change among citizens, capturing both quantitative prevalence and qualitative texture, and to detect how these misconceptions are distributed across demographic groups, communication channels, and the emerging layer of AI-generated content.

A taxonomy is the precondition for all of this to avoid generating descriptive rather than a usable evidence base.

2. Design principles

The taxonomy is anchored in four design principles.

1. **Scientific credibility.** Each layer of the framework maps to a published, peer-reviewed taxonomy with documented inter-rater reliability and cross-disciplinary uptake, so the consortium can defend its methodological choices to evaluators and external reviewers without inventing new constructs.
2. **Operational easiness**: The framework must be expressible in a 25–30 item questionnaire completable in 8–10 minutes. Longer surveys generate steep drop-off in responses and would jeopardise the ≥100 respondents-per-country threshold.
3. **Cross-country comparability**: the structure must hold across diverse national contexts and a multilingual European online layer.
4. **Evaluative continuity with workplan.** The categories used to classify misconceptions in T2.1 must be the same categories used by:
    a. T2.2 to organise the literature review
    b. T3.1 to organise the FactSheets
    c. T3.2 to design the ToolBox scenarios.

3. The three-layer taxonomy

The framework distinguishes three analytically separate but empirically linked dimensions of climate misinformation: **what** people believe (content), **how** the

misinformation is rhetorically constructed (technique), and **where** people encounter it (channel and medium, including AI-generated content). Treating these as separate layers - rather than collapsing them into a single list - is essential because a single misleading claim can carry one or more techniques and travel through multiple channels, and effective interventions need to address all three.

3.1 Layer 1 — Content: what people believe

Layer 1 adapts the CARDS taxonomy developed by Coan et al. 2021. CARDS was constructed from a large corpus of conservative-think-tank and contrarian-blog text and yields five top-level "key climate disbeliefs" with 27 sub-claims and 49 sub-sub-claims, mirroring the five "key climate beliefs" identified in earlier survey research. The five top-level categories used in CLIMAware are:

- **C1 — It's not happening.** Claims that global warming is not real, has paused, or is contradicted by cold weather, glacier dynamics, or sea-level observations. This category captures the older, science-denial wave of misinformation but remains relevant: recent research (Oxford ECI, 2024; Oxford Academic, 2025) documents a partial resurgence of outright denial after several years in which it appeared to be in decline, especially around extreme-weather events on social media.
- **C2 — It's not us.** Claims that current climate change is natural rather than anthropogenic, attributing observed warming to solar activity, natural cycles, volcanoes, or past warm periods, and dismissing CO_2 as a meaningful driver.
- **C3 — It's not bad.** Claims that warming is benign or beneficial, that ecosystems and species will adapt, that impacts are distant in time or geography, or that elevated CO_2 "greens" the planet.
- **C4 — Solutions won't work.** Claims that renewable energy is unreliable or uneconomic, that climate policy harms the poor, that EVs and wind turbines are net-negative, that individual action is futile, or that other countries should act first. Coan et al. 2021 documented a long-term shift, between 2000 and 2020, from science-based misinformation (C1–C2) toward solutions-based misinformation (C4); CLIMAware's six-country sample will allow us to test whether the same shift is detectable in the participating European contexts.
- **C5 — Experts are unreliable.** Claims that climate scientists are politically biased, chase research funding, fabricate the 97% consensus, rely on faulty models, or that the IPCC and mainstream media are alarmist or compromised. This is the layer most directly connected to media literacy and to the project's core mission, and it has gained renewed salience as AI chatbots have begun reproducing climate-conspiracy framings (Global Witness, 2025).

The questionnaire operationalises each of C1–C5 through two carefully worded items per category, balanced with two reverse-scored anchor items grounded in scientific consensus, so that data analysts can detect straight-lining and acquiescence bias. The wording is adapted from CARDS, because CARDS items were written for text classification of contrarian sources, not for direct self-report by general-public respondents.

3.2 Layer 2 — Technique: how misinformation is rhetorically constructed

Layer 2 adapts the FLICC taxonomy developed by Cook et al., which classifies the rhetorical and logical techniques used to mislead. FLICC has been validated across psychological, critical-thinking, and computational research and is the rhetorical companion to CARD.

FLICC distinguishes five techniques:

Fake experts (presenting unqualified individuals as authoritative),

Logical fallacies (red herrings, false dichotomies, non-sequiturs),

Impossible expectations (demanding unrealistic standards of certainty before accepting science),

Cherry-picking (selective use of evidence, such as one cold winter to deny a warming trend), and

Conspiracy theories (claims that scientists or governments are coordinating a hoax).

In the questionnaire, Layer 2 is captured through brief stimulus items that present a short example of a misleading argument and ask whether the respondent considers it reliable. This recognition-task format is preferable to asking respondents to name fallacies directly (which would assume prior literacy and would suppress response rates).

3.3 Layer 3 — Channel and medium, including AI-generated content

Layer 3 captures **where** and **how** respondents encounter climate information and is the layer where CLIMAware contributes most clearly to the current state of the field. Recent literature has converged on the view that AI-mediated misinformation now constitutes a distinct measurable construct rather than a sub-type of online

misinformation. The World Economic Forum's Global Risks Perception Survey (2023–2024) ranked AI-generated misinformation as the second-highest perceived global risk after extreme weather. Documented cases include a growing body of evidence that deepfake video and audio targeting climate actors is increasingly difficult to detect by lay audiences (Alan Turing Institute, 2024).

CLIMAware's Layer 3 therefore measures three sub-dimensions:

- **Channel exposure.** Where respondents encountered climate information in the past 30 days, across traditional media, social platforms, messaging apps, podcasts, search engines, AI chatbots, and influencers.
- **AI-content encounters.** Self-reported exposure in the past 12 months to AI-generated images of extreme weather, deepfake video or audio of public figures, AI chatbot answers about climate, and AI-generated articles found to be inaccurate.
- **Detection self-efficacy and verification behaviours.** Confidence in spotting AI-generated content, and concrete actions taken (source-checking, fact-checking, lateral reading) when encountering climate content online.

This layer makes the survey forward-looking rather than only retrospective Little evidence exist of major cross-country European survey to yet integrate structured measurement of AI-content exposure with a CARDS-aligned content layer.

3.4 Cross-cutting constructs

Surrounding the three layers, the instrument captures four cross-cutting constructs that are essential for interpreting the C1–C5 prevalence data: climate-change concern and salience (the gateway belief consistently identified in the climate-communication literature), trust in information sources (scientists, journalists, governments, NGOs, AI tools, social media platforms, influencers, family and friends), self-rated media and digital literacy, and standard demographic stratifiers (country, age band, gender, education level, urban-rural residence, and an optional political self-placement scale). The political self-placement item is retained as optional, with explicit "prefer not to say", because political ideology is a well-documented moderator of climate-misinformation reception (Coan et al., 2021; Oxford Academic, 2025) but is sensitive in some national contexts, particularly Ukraine — the consortium can drop or retain it at the Steering Committee's discretion without compromising the core misconception measurement.

4. Sampling, fielding and quality controls

The instrument will be fielded online in six national versions (EN master plus PT, UK, ES, EL, FI), with forward translation by each partner and independent back-translation review for items in Sections 2 and 3, where wording sensitivity is highest. The minimum sample is 100 respondents per country, totalling at least 600 respondents — the threshold set by the Grant Agreement. Each partner will deploy soft demographic quotas (≥40% women, ≥20% age 55+, ≥20% rural) to counter the typical young-urban-male skew of social-media recruitment; deviations will be documented and reweighted in analysis. Recruitment relies on partners' institutional channels, the project's Instagram and LinkedIn accounts (live from M3 under D5.1/D5.2), at least one local online press release per country, and snowball through Advisory Board members. No incentive is offered, in order to avoid selection bias.

Data quality is protected by four mechanisms embedded in the design. Two reverse-scored anchor items grounded in scientific consensus allow detection of straight-lining and acquiescence bias. A median completion-time threshold flags speeders (responses below two minutes) for exclusion. One attention-check item ("Please select 'Disagree' for this item") is embedded in the content section. A soft one-response-per-device control via cookie limits duplicate submissions without imposing identification.

Ethics and data protection follow the Data Management Plan (D1.2) led by CIBER. The lawful basis is consent under Article 6(1)(a) GDPR; if political self-placement is retained, processing of that field falls under Article 9(2)(a) explicit consent and is reflected in the DMP. The instrument is restricted to respondents aged 18 or above. No IP addresses or email addresses are logged. Aggregate microdata are documented in D2.3 (Sensitive); raw responses are retained for five years after project end per the Grant Agreement and then deleted under the DMP.

5. Analysis and link to downstream work packages

Analysis will follow a four-step plan. First, descriptive prevalence statistics for each C1–C5 cluster, by country, with a cross-country heat-map. Second, construction of a *Climate Misconception Index* — the mean Likert score across the disbelief items, with anchors reverse-scored — reported per country with Cronbach's α to document internal consistency. Third, subgroup analysis by age, education, urban-rural residence, and channel-mix, with particular attention to AI-chatbot users versus non-users, to test whether AI-mediated information consumption is associated with higher misconception scores. Fourth, thematic coding of the optional open-text item,

mapped back to the CARDS sub-claims, both to validate Layer 1 and to surface emergent national-context misconceptions that the closed items might miss.

The output, D2.1, is a public report of approximately 40 pages in English, structured around the three-layer taxonomy and ranked findings per country. Cluster rankings are then transferred to LAB so that the literature review (T2.2 / D2.2) prioritises the highest-prevalence misconceptions; to MMI and CIBER so that the WP3 FactSheets and ToolBox attack the misconceptions empirically shown to be most widespread in each country; and to all partners so that the WP4 local citizen-science workshops can tailor their debunking content to their national misconception profile. Two anchor results — the cross-country prevalence map and the AI-chatbot exposure module — are also intended for inclusion in the joint scientific paper that the Grant Agreement foresees as a shared output of T2.1 and T2.2.

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Annex B — Final questionnaire, EN master

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CLIMAware survey on defining key thematic areas of climate misinformation/disinformation.

Disclaimer
The European Commission is not responsible for the content of questionnaires created using the EUSurvey service - it remains the sole responsibility of the form creator and manager. The use of EUSurvey service does not imply a recommendation or endorsement, by the European Commission, of the views expressed within them.

Anonymous mode
The anonymous option has been activated. As a result, your contribution to this survey will be anonymous as the system will not save any personal data such as your IP address.

A short survey on climate information in the age of AI

CLIMAware is a research and media-literacy project co-funded by the European Union under the Creative Europe Programme (Grant Agreement No. 101246545). The project studies how people across Europe encounter and understand information about climate change — including misinformation and content generated by Artificial Intelligence.

What we will ask you. A short questionnaire (about 6–7 minutes) on what you have read or seen about climate change recently, what you believe about it, how you check information, and a few demographic questions for analysis.

Voluntary and anonymous. Participation is voluntary. You can stop at any time by closing the page. We do not collect your name, email, or IP address. All responses are aggregated for statistical analysis.

How your data are used. Your answers will be analysed in aggregate and published in a public report. Anonymised microdata will be retained for five years after the end of the project, in line with the project's Data Management Plan, and then deleted. The data controller for this study is Circular Bioeconomy Hub; for any data-protection question or to exercise your rights under the EU General Data Protection Regulation (Articles 15–22), contact info@cbiohub.gr.

Co-funded by the European Union · Grant Agreement No. 101246545. The views expressed are those of the authors only and do not necessarily reflect those of the European Union or EACEA.

Climate concern and information environment

1. How concerned are you about climate change?
- ◯ Not at all concerned
- ◯ Slightly concerned
- ◯ Moderately concerned
- ◯ Very concerned
- ◯ Extremely concerned
- ◯ Don't know / Prefer not to say

2. How often do you come across information about climate change (in news, on social media, in conversations, anywhere)?
- ◯ Never
- ◯ Rarely (once or twice a month)
- ◯ Sometimes (once a week)
- ◯ Often (several times a week)
- ◯ Very often (every day or almost every day)

3. Compared with two years ago, how easy or difficult is it for you to distinguish true from false information about climate change?
- ◯ Much easier today
- ◯ Slightly easier today
- ◯ About the same
- ◯ Slightly more difficult today
- ◯ Much more difficult today
- ◯ Don't know

Beliefs about climate change

4. The following statements have been made about climate change. Please indicate how much you agree or disagree with each one. It is not a matter of what the real (right or wrong) answers might be - we are interested in what you personally think.

-	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know/No opinion
Cold winters and recent snowstorms show that global warming is not really happening.	○	○	○	○	○	○
Sea-level rise has been exaggerated by the media and by scientists.	○	○	○	○	○	○
The climate has always changed naturally; current changes are not mainly caused by humans.	○	○	○	○	○	○
More CO_2 in the atmosphere is good because plants need it to grow.	○	○	○	○	○	○
A warmer climate will, on balance, bring more benefits than harm to my country.	○	○	○	○	○	○
Climate change will mostly affect future generations and other countries, not us.	○	○	○	○	○	○
Renewable energy sources such as wind and solar are too unreliable to replace fossil fuels.	○	○	○	○	○	○
Individual actions to reduce emissions are pointless because they don't make a real difference.	○	○	○	○	○	○
The claim that almost all climate scientists agree on human-caused climate change is exaggerated.	○	○	○	○	○	○
Climate models have been wrong so often that we cannot trust their predictions.	○	○	○	○	○	○
Burning fossil fuels such as oil, coal and gas releases CO_2 that warms the planet.	○	○	○	○	○	○
The large majority of climate scientists agree that recent climate change is mainly caused by human activity.	○	○	○	○	○	○

Recognising misleading arguments

Below are three short examples of arguments you might encounter online or in the news. For each one, please tell us whether you think the argument is reliable.

"In February 2025, a record cold snap hit parts of Europe with heavy snowfall. This proves that extreme weather patterns are likely to happen more often due to climate change."

5. How reliable do you find this argument?
Move the slider or accept the initial position.

Not at all reliable — Very reliable

5

0 — 10

"A retired engineer with a popular YouTube channel argues that climate change is mostly caused by the sun, and that climate scientists are exaggerating. He has more than one million subscribers."

6. How reliable do you find this argument?
Move the slider or accept the initial position.

Not at all reliable — Very reliable

5

0 — 10

"Some people argue that scientists exaggerate climate change because they receive more research funding when they say it is dangerous."

7. How reliable do you find this argument?

Move the slider or accept the initial position.

Not at all reliable — Very reliable

5

0 — 10

Channels and AI-generated content

8. Where have you seen, read, or heard about climate change in the past 30 days? (Select all that apply.)

- ☐ Television (news or programmes)
- ☐ Print or online newspapers and magazines
- ☐ Radio or podcasts
- ☐ Facebook

- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (formerly Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram or other messaging apps
- [ ] Search engines (Google, Bing, etc.)
- [ ] AI chatbots (ChatGPT, Gemini, Copilot, Grok, MetaAI, etc.)
- [ ] Influencers, content creators, or vloggers
- [ ] At work
- [ ] At school/university
- [ ] Conversations with family, friends, or colleagues
- [ ] Other:
- [ ] I have not encountered any climate-related information in the past 30 days

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9. Which channels are your main sources of information? (choose max. 3)

- [ ] Television (news or programmes)
- [ ] Print or online newspapers and magazines
- [ ] Radio or podcasts
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (formerly Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram or other messaging apps
- [ ] Search engines (Google, Bing, etc.)
- [ ] AI chatbots (ChatGPT, Gemini, Copilot, Grok, MetaAI, etc.)
- [ ] Influencers, content creators, or vloggers
- [ ] At work
- [ ] At school/university
- [ ] Conversations with family, friends, or colleagues
- [ ] Other:

10. In the past 12 months, have you encountered any of the following? (Select all that apply.)

- [ ] AI-generated images of extreme weather (e.g., floods, fires, hurricanes) that turned out to be fake
- [ ] Deepfake video or audio of a politician, scientist, or public figure speaking about climate
- [ ] An AI chatbot answer about climate change that you found inaccurate or misleading
- [ ] An online article about climate that you later learned was generated by AI and was inaccurate
- [ ] I have encountered AI-generated climate content but I am not sure if it was accurate
- [ ] I have not encountered any of these
- [ ] I am not sure

11. How confident are you that you could recognise content about climate change that has been generated by Artificial Intelligence (such as fake images, deepfake videos, or AI-written articles)?

- ○ Not at all confident
- ○ Slightly confident
- ○ Moderately confident
- ○ Very confident
- ○ Extremely confident

12. When you see climate-change information on social media, how often do you check the original source (if any) before believing it?

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always
- ○ I don't use social media

13. Have you ever used an AI chatbot (such as ChatGPT, Gemini, Copilot, Grok, or MetaAI) to ask about climate change?

- ○ Yes
- ○ No
- ○ I am not sure

Trust and verification behaviour

14. How much do you trust each of the following sources when it comes to information about climate change?

-	Do not trust at all	Trust slightly	Trust moderately	Trust a lot	Trust completely	Don't know
Climate scientists and research institutions	○	○	○	○	○	○
Mainstream news media (TV, newspapers)	○	○	○	○	○	○
National government and public institutions	○	○	○	○	○	○
Environmental NGOs	○	○	○	○	○	○
Social media influencers and content creators	○	○	○	○	○	○
AI chatbots (ChatGPT, Gemini, Copilot, etc.)	○	○	○	○	○	○
Family, friends, and colleagues	○	○	○	○	○	○
Political leaders and parties	○	○	○	○	○	○

15. How would you rate your own ability to judge whether something you read online about climate change is true or false?

- ○ Very poor

- ○ Poor
- ○ Average
- ○ Good
- ○ Very good

16. In the past 30 days, have you done any of the following because of something you saw or read about climate change? (Select all that apply.)

- ☐ Checked the original source of the information
- ☐ Searched for a fact-check on a dedicated website
- ☐ Cross-checked it with another news source
- ☐ Asked a friend, family member, or colleague what they thought
- ☐ Reported the post or content to the platform
- ☐ Shared it without checking
- ☐ Ignored it
- ☐ None of the above

About you

These last questions help us analyse the results across different groups. All answers remain anonymous and you can choose "Prefer not to say" for any item.

17. What is your country of residence?

18. What is your age?

- ○ 18–24
- ○ 25–34
- ○ 35–44
- ○ 45–54
- ○ 55–64
- ○ 65 or over
- ○ Prefer not to say

19. How do you describe your gender?

- ○ Woman
- ○ Man
- ○ Non-binary
- ○ Prefer to self-describe:
- ○ Prefer not to say

20. What is the highest level of education you have completed?

- ○ Primary education
- ○ Lower secondary education
- ○ Upper secondary education
- ○ Post-secondary non-tertiary education
- ○ Short-cycle tertiary education
- ○ Bachelor's or equivalent level
- ○ Master's or equivalent level
- ○ Doctoral or equivalent level

21. Where do you live?

- ○ Large city — densely populated area with more than 50,000 inhabitants
- ○ Smaller city, urban settlement or suburban area — intermediate-density area
- ○ Countryside or sparsely populated area
- ○ Prefer not to say

22. In politics, people sometimes describe themselves on a scale from "left" to "right". Where would you place yourself on a scale from 1 (left) to 10 (right)?

Move the slider or accept the initial position.

Left Right

6

1 10

One last thing...

23. In your own words: what is the most misleading claim about climate change you have seen recently? (Up to 250 characters. You can skip this question.)

Co-funded by the European Union

(/eusurvey/forms/runner) Submit

(/eusurvey/forms)

Version v1.6 (13/07/2026 10:50)

Annex C — National language versions (EL, ES, FI, PT, UK)

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Ερωτηματολόγιο του έργου CLIMAware σχετικά με τον καθορισμό βασικών θεματικών τομέων εσφαλμένης πληροφόρησης/ παραπληροφόρησης για το κλίμα.

Δήλωση αποποίησης ευθύνης
Η Ευρωπαϊκή Επιτροπή δεν φέρει καμία ευθύνη για το περιεχόμενο των ερωτηματολογίων που δημιουργούνται μέσω της υπηρεσίας EUSurvey. Την αποκλειστική ευθύνη φέρουν ο δημιουργός και ο διαχειριστής τους. Η χρήση της υπηρεσίας EUSurvey δεν σημαίνει ότι η Ευρωπαϊκή Επιτροπή συνιστά ή εγκρίνει τις απόψεις που εκφράζονται στα ερωτηματολόγια.

Λειτουργία «Διατήρηση ανωνυμίας»
Η επιλογή «Διατήρηση ανωνυμίας» έχει ενεργοποιηθεί. Ως εκ τούτου, οι απαντήσεις σας στην παρούσα έρευνα θα είναι ανώνυμες, καθώς το σύστημα δεν θα αποθηκεύσει δεδομένα προσωπικού χαρακτήρα, όπως η διεύθυνση IP σας.

Σύντομη έρευνα σχετικά με τις πληροφορίες για το κλίμα στην εποχή της Τεχνητής Νοημοσύνης

Το CLIMAware είναι ένα έργο έρευνας για τον γραμματισμό στα μέσα επικοινωνίας που συγχρηματοδοτείται από την Ευρωπαϊκή Ένωση στο πλαίσιο του προγράμματος «Δημιουργική Ευρώπη» (GA-101246545). Το έργο μελετά τον τρόπο με τον οποίο οι άνθρωποι σε ολόκληρη την Ευρώπη έρχονται αντιμέτωποι και κατανοούν τις πληροφορίες σχετικά με την κλιματική αλλαγή — συμπεριλαμβανομένης της παραπληροφόρησης και του περιεχομένου που παράγεται από την τεχνητή νοημοσύνη.

Τι θα σας ρωτήσουμε. Σύντομο ερωτηματολόγιο (περίπου 6-7 λεπτά) σχετικά με όσα διαβάσατε ή είπατε πρόσφατα για την κλιματική αλλαγή, τι πιστεύετε γι' αυτήν, πώς ελέγχετε τις πληροφορίες και ορισμένες δημογραφικές ερωτήσεις προς ανάλυση.

Εθελοντικά και ανώνυμα. Η συμμετοχή είναι εθελοντική. Μπορείτε να σταματήσετε ανά πάσα στιγμή κλείνοντας τη σελίδα. Δεν συλλέγουμε το όνομα, τη διεύθυνση ηλεκτρονικού ταχυδρομείου ή τη διεύθυνση IP σας. Όλες οι απαντήσεις συγκεντρώνονται για στατιστική ανάλυση.

Πώς χρησιμοποιούνται τα δεδομένα σας. Οι απαντήσεις σας θα αναλυθούν συγκεντρωτικά και θα δημοσιευθούν σε δημόσια έκθεση. Τα ανωνυμοποιημένα μικροδεδομένα θα διατηρούνται για πέντε έτη μετά την ολοκλήρωση του έργου, σύμφωνα με το σχέδιο διαχείρισης δεδομένων του έργου, και στη συνέχεια θα διαγράφονται. Υπεύθυνος επεξεργασίας δεδομένων για την παρούσα μελέτη είναι η Κόμβος Κυκλικής Βιοοικονομίας ΑΜΚΕ. Για οποιοδήποτε ζήτημα προστασίας δεδομένων ή για την άσκηση των δικαιωμάτων σας βάσει του γενικού κανονισμού της ΕΕ για την προστασία δεδομένων (άρθρα 15-22), επικοινωνήστε με το info@cbiohub.gr.

Συγχρηματοδοτείται από την Ευρωπαϊκή Ένωση GA-101246545. Οι απόψεις που εκφράζονται είναι αποκλειστικά εκείνες των συντακτών και δεν απηχούν κατ' ανάγκη τις απόψεις της Ευρωπαϊκής Ένωσης ή του EACEA.

Ανησυχία για το κλίμα και το περιβάλλον πληροφοριών

1. Πόσο ανησυχείτε για την κλιματική αλλαγή;
- ◯ Δεν με απασχολεί καθόλου
- ◯ Με απασχολεί λίγο
- ◯ Με απασχολεί σε μέτριο βαθμό
- ◯ Με απασχολεί πολύ
- ◯ Με απασχολεί εξαιρετικά πολύ
- ◯ Δεν γνωρίζω/Προτιμώ να μην απαντήσω

2. Πόσο συχνά συναντάτε πληροφορίες σχετικά με την κλιματική αλλαγή (ειδήσεις, μέσα κοινωνικής δικτύωσης, συζητήσεις, οπουδήποτε);
- ◯ Ποτέ
- ◯ Σπάνια (μία ή δύο φορές τον μήνα)
- ◯ Μερικές φορές (μία φορά την εβδομάδα)
- ◯ Συχνά (μερικές φορές την εβδομάδα)
- ◯ Πολύ συχνά (κάθε μέρα ή σχεδόν κάθε μέρα)

3. Σε σύγκριση με δύο χρόνια πριν, πόσο εύκολο ή δύσκολο είναι για εσάς να διακρίνετε την αλήθεια από τις ψευδείς πληροφορίες σχετικά με την κλιματική αλλαγή;
- ◯ Πολύ ευκολότερο σήμερα
- ◯ Κάπως ευκολότερο σήμερα
- ◯ Περίπου το ίδιο
- ◯ Κάπως δυσκολότερο σήμερα
- ◯ Πολύ δυσκολότερο σήμερα
- ◯ Δεν γνωρίζω

Page

Πεποιθήσεις σχετικά με την κλιματική αλλαγή

4. Έγιναν οι ακόλουθες δηλώσεις σχετικά με την κλιματική αλλαγή. Αναφέρετε σε ποιον βαθμό συμφωνείτε ή διαφωνείτε με τον καθένα. Δεν έχει σημασία ποιες μπορεί να είναι οι πραγματικές (σωστές ή λανθασμένες) απαντήσεις — μας ενδιαφέρουν οι προσωπικές σας απόψεις.

-	Διαφωνώ απόλυτα	Διαφωνώ	Ούτε συμφωνώ ούτε διαφωνώ	Συμφωνώ	Συμφωνώ απόλυτα	Δεν γνωρίζω/ Δεν έχω άποψη
Οι ψυχροί χειμώνες και οι πρόσφατες χιονοθύελλες δείχνουν ότι η υπερθέρμανση του πλανήτη δεν συμβαίνει πραγματικά.	○	○	○	○	○	○
Η άνοδος της στάθμης της θάλασσας ως γεγονός έχει διογκωθεί από τα μέσα ενημέρωσης και τους επιστήμονες.	○	○	○	○	○	○
Το κλίμα ανέκαθεν άλλαζε με φυσικό τρόπο· οι τρέχουσες αλλαγές δεν προκαλούνται κυρίως από τον άνθρωπο.	○	○	○	○	○	○
Η αύξηση του CO_2 στην ατμόσφαιρα είναι καλή, διότι τα φυτά το χρειάζονται για να αναπτυχθούν.	○	○	○	○	○	○
Ένα θερμότερο κλίμα θα αποφέρει, σε τελική ανάλυση, περισσότερα οφέλη από ότι βλάβη στη χώρα μου.	○	○	○	○	○	○
Η κλιματική αλλαγή θα επηρεάσει κυρίως τις μελλοντικές γενιές και άλλες χώρες, όχι εμάς.	○	○	○	○	○	○
Οι ανανεώσιμες πηγές ενέργειας, όπως η αιολική και η ηλιακή, είναι υπερβολικά αναξιόπιστες για να αντικαταστήσουν τα ορυκτά καύσιμα.	○	○	○	○	○	○
Οι μεμονωμένες δράσεις για τη μείωση των εκπομπών είναι άσκοπες, διότι δεν κάνουν πραγματικά τη διαφορά.	○	○	○	○	○	○
Ο ισχυρισμός ότι σχεδόν όλοι οι κλιματολόγοι συμφωνούν σχετικά με την ανθρωπογενή κλιματική αλλαγή είναι υπερβολικός.	○	○	○	○	○	○
Τα κλιματικά μοντέλα υπήρξαν λάθος τόσο συχνά που δεν μπορούμε να εμπιστευτούμε τις προβλέψεις τους.	○	○	○	○	○	○
Η καύση ορυκτών καυσίμων, όπως το πετρέλαιο, ο άνθρακας και το φυσικό αέριο, εκλύει CO_2 που θερμαίνει τον πλανήτη.	○	○	○	○	○	○
Η μεγάλη πλειονότητα των κλιματολόγων συμφωνεί ότι η πρόσφατη κλιματική αλλαγή οφείλεται κυρίως στην ανθρώπινη δραστηριότητα.	○	○	○	○	○	○

Αναγνώριση παραπλανητικών επιχειρημάτων

Ακολουθούν τρία σύντομα παραδείγματα επιχειρημάτων που μπορεί να συναντήσετε στο διαδίκτυο ή στις ειδήσεις. Για καθένα από αυτά, πείτε μας αν πιστεύετε ότι το επιχείρημα είναι αξιόπιστο.

«Τον Φεβρουάριο του 2025, ένα ισχυρό ψύχος έπληξε τμήματα της Ευρώπης με έντονο χιόνι. Αυτό αποδεικνύει ότι τα ακραία καιρικά φαινόμενα είναι πιθανό να συμβαίνουν συχνότερα λόγω της κλιματικής αλλαγής.»

5. Πόσο αξιόπιστο θεωρείτε αυτό το επιχείρημα;
Μετακινήστε τον συρόμενο δείκτη ή αποδεχθείτε την αρχική θέση του..

Καθόλου αξιόπιστο — Πολύ αξιόπιστο

5
0 10

«Ένας συνταξιούχος μηχανικός με δημοφιλές κανάλι στο YouTube υποστηρίζει ότι η κλιματική αλλαγή προκαλείται κυρίως από τον ήλιο και ότι οι κλιματολόγοι είναι υπερβολικοί. Έχει πάνω από ένα εκατομμύριο συνδρομητές. "

6. Πόσο αξιόπιστο θεωρείτε αυτό το επιχείρημα;
Μετακινήστε τον συρόμενο δείκτη ή αποδεχθείτε την αρχική θέση του..

Καθόλου αξιόπιστο — Πολύ αξιόπιστο

5
0 10

«Ορισμένοι υποστηρίζουν ότι οι επιστήμονες υπερτονίζουν την κλιματική αλλαγή διότι λαμβάνουν περισσότερη χρηματοδότηση για την έρευνα όταν λένε ότι είναι επικίνδυνη.»

7. Πόσο αξιόπιστο θεωρείτε αυτό το επιχείρημα;

Μετακινήστε τον συρόμενο δείκτη ή αποδεχθείτε την αρχική θέση του..

Καθόλου αξιόπιστο — Πολύ αξιόπιστο

5
0 10

Δίαυλοι και περιεχόμενο που παράγεται από την Τεχνητή Νοημοσύνη

8. Πού έχετε δει, διαβάσει ή ακούσει για την κλιματική αλλαγή τις τελευταίες 30 ημέρες; (Επιλέξτε όλες τις σχετικές απαντήσεις)

- [ ] Τηλεόραση (ειδήσεις ή προγράμματα)
- [ ] Έντυπες ή ηλεκτρονικές εφημερίδες και περιοδικά
- [ ] Ραδιόφωνο ή podcast
- [ ] Στο Facebook
- [ ] Instagram
- [ ] Τίκτοκ
- [ ] YouTube
- [ ] X (πρώην Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram ή άλλες εφαρμογές ανταλλαγής μηνυμάτων
- [ ] Μηχανές αναζήτησης (Google, Bing κ.λπ.)
- [ ] Chatbot (ChatGPT, Gemini, Copilot, Grok, MetaAI κ.λπ.)
- [ ] Influencers, δημιουργοί περιεχομένου ή vloggers
- [ ] Στην εργασία
- [ ] Στο σχολείο/πανεπιστήμιο
- [ ] Συζητήσεις με συγγενείς, φίλους ή συναδέλφους
- [ ] Άλλο:
- [ ] Δεν έχω συναντήσει πληροφορίες σχετικά με το κλίμα τις τελευταίες 30 ημέρες

9. Ποιοι δίαυλοι είναι οι κύριες πηγές ενημέρωσής σας; (επιλέξτε το πολύ 3)

- [ ] Τηλεόραση (ειδήσεις ή προγράμματα)
- [ ] Έντυπες ή ηλεκτρονικές εφημερίδες και περιοδικά
- [ ] Ραδιόφωνο ή podcast
- [ ] Facebook
- [ ] Instagram
- [ ] Τίκτοκ
- [ ] YouTube
- [ ] X (πρώην Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram ή άλλες εφαρμογές ανταλλαγής μηνυμάτων
- [ ] Μηχανές αναζήτησης (Google, Bing κ.λπ.)
- [ ] Chatbot (ChatGPT, Gemini, Copilot, Grok, MetaAI κ.λπ.)
- [ ] Επηρεαστές γνώμης, δημιουργοί περιεχομένου ή vloggers
- [ ] Η εργασία
- [ ] Το σχολείο/πανεπιστήμιο
- [ ] Συζητήσεις με συγγενείς, φίλους ή συναδέλφους
- [ ] Άλλα:

10. Τους τελευταίους 12 μήνες συναντήσατε κάποιο από τα ακόλουθα; (Επιλέξτε όλες τις σχετικές απαντήσεις)

- [ ] Εικόνες ακραίων καιρικών φαινομένων (π.χ. πλημμύρες, πυρκαγιές, τυφώνες) που παράγονται από AI και αποδείχθηκαν ψευδείς
- [ ] Βαθυπαραποιημένο (deepfake) βίντεο ή ήχος πολιτικού, επιστήμονα ή δημόσιου προσώπου που μιλά για το κλίμα
- [ ] Μια απάντηση AI chatbot σχετικά με την κλιματική αλλαγή που διαπιστώσατε ανακριβή ή παραπλανητική
- [ ] Ένα διαδικτυακό άρθρο σχετικά με το κλίμα, το οποίο αργότερα μάθατε, δημιουργήθηκε από την AI και ήταν ανακριβές
- [ ] Έχω συναντήσει κλιματικό περιεχόμενο που παράγεται από AI, αλλά δεν είμαι βέβαιος αν ήταν ακριβές
- [ ] Δεν έχω συναντήσει κανένα από αυτά
- [ ] Δεν είμαι βέβαιος/-η

11. Πόσο σίγουροι είστε ότι θα μπορούσατε να αναγνωρίσετε περιεχόμενο σχετικά με την κλιματική αλλαγή που έχει παραχθεί από τεχνητή νοημοσύνη (όπως ψευδείς εικόνες, βίντεο βαθυπαραποίησης ή άρθρα που έχουν συνταχθεί με AI);

- ○ Καμία βεβαιότητα
- ○ Ελάχιστη βεβαιότητα
- ○ Με μέτρια βεβαιότητα
- ○ Μεγάλη βεβαιότητα
- ○ Με εξαιρετική βεβαιότητα

12. Όταν βλέπετε πληροφορίες για την κλιματική αλλαγή στα μέσα κοινωνικής δικτύωσης, πόσο συχνά ελέγχετε την αρχική πηγή (εάν υπάρχει) προτού την πιστέψετε;

- ○ Ποτέ
- ○ Σπανίως
- ○ Μερικές φορές
- ○ Συχνά
- ○ Πάντοτε
- ○ Δεν χρησιμοποιώ τα μέσα κοινωνικής δικτύωσης

13. Έχετε χρησιμοποιήσει ποτέ AI chatbot (όπως το ChatGPT, το Gemini, το Copilot, το Grok ή το MetaAI) για να ρωτήσετε σχετικά με την κλιματική αλλαγή;

- ○ Ναι
- ○ Όχι
- ○ Δεν είμαι βέβαιος/-η

Συμπεριφορά εμπιστοσύνης και επαλήθευσης

14. Πόσο εμπιστεύεστε καθεμία από τις ακόλουθες πηγές όσον αφορά τις πληροφορίες σχετικά με την κλιματική αλλαγή;

-	Δεν εμπιστεύομαι καθόλου	Εμπιστεύομαι ελαφρώς	Εμπιστεύομαι σε μέτριο βαθμό	Εμπιστεύομαι σε μεγάλο βαθμό	Εμπιστεύομαι πλήρως	Δεν γνωρίζω
Κλιματολόγοι και ερευνητικά ιδρύματα	○	○	○	○	○	○

-	Δεν εμπιστεύομαι καθόλου	Εμπιστεύομαι ελαφρώς	Εμπιστεύομαι σε μέτριο βαθμό	Εμπιστεύομαι σε μεγάλο βαθμό	Εμπιστεύομαι πλήρως	Δεν γνωρίζω
Βασικά ειδησεογραφικά μέσα (τηλεόραση, εφημερίδες)	○	○	○	○	○	○
Εθνική κυβέρνηση και δημόσιοι οργανισμοί	○	○	○	○	○	○
Περιβαλλοντικές ΜΚΟ	○	○	○	○	○	○
Επηρεαστές γνώμης στα μέσα κοινωνικής δικτύωσης και δημιουργοί περιεχομένου	○	○	○	○	○	○
AI chatbot (ChatGPT, Gemini, Copilot κ.λπ.)	○	○	○	○	○	○
Οικογένεια, φίλοι και συνάδελφοι	○	○	○	○	○	○
Πολιτικοί ηγέτες και κόμματα	○	○	○	○	○	○

15. Πώς θα αξιολογούσατε την ικανότητά σας να κρίνετε αν κάτι που διαβάζετε στο διαδίκτυο σχετικά με την κλιματική αλλαγή είναι αληθές ή ψευδές;
- ○ Πολύ κακή
- ○ Κακη
- ○ Μέση
- ○ Καλή
- ○ Πολύ καλή

16. Τις τελευταίες 30 ημέρες, έχετε κάνει κάποιο από τα ακόλουθα λόγω κάποιου γεγονότος που είδατε ή διαβάσατε σχετικά με την κλιματική αλλαγή; (Επιλέξτε όλες τις σχετικές απαντήσεις)
- ☐ Έλεγξα την αρχική πηγή των πληροφοριών
- ☐ Αναζήτηση για έλεγχο γεγονότων σε ειδικό ιστότοπο
- ☐ Διασταύρωσα με άλλη πηγή ειδήσεων
- ☐ Ρώτησα έναν φίλο, μέλος της οικογένειας ή συνάδελφο τι πίστευε
- ☐ Ανέφερα την ανάρτηση ή το περιεχόμενο στην πλατφόρμα
- ☐ Το μοιράστηκα χωρίς να το ελέγξω
- ☐ Το αγνόησα
- ☐ Καμία από τις παραπάνω

Σχετικά με σας

Οι τελευταίες αυτές ερωτήσεις μάς βοηθούν να αναλύσουμε τα αποτελέσματα σε διάφορες ομάδες. Όλες οι απαντήσεις παραμένουν ανώνυμες και μπορείτε να επιλέξετε «Προτιμώ να μην απαντήσω» για οποιοδήποτε στοιχείο.

17. Ποιά είναι η χώρα διαμονής σας

18. Ποια είναι η ηλικία σας;
- ○ 18-24
- ○ 25-34
- ○ 35-44
- ○ 45-54
- ○ 55-64
- ○ 65 και άνω
- ○ Προτιμώ να μην απαντήσω

19. Πώς περιγράφετε το φύλο σας;
- ○ Γυναίκα
- ○ Άνδρας
- ○ Μη δυαδικό
- ○ Προτιμώ να περιγράψω ο/η ίδιος/-α:
- ○ Προτιμώ να μην απαντήσω

20. Ποιο είναι το υψηλότερο επίπεδο εκπαίδευσης που έχετε ολοκληρώσει;
- ○ Πρωτοβάθμια εκπαίδευση ή κατώτερη
- ○ Κατώτερη δευτεροβάθμια εκπαίδευση
- ○ Ανώτερη δευτεροβάθμια εκπαίδευση
- ○ Μεταδευτεροβάθμια μη τριτοβάθμια εκπαίδευση
- ○ Τριτοβάθμια εκπαίδευση σύντομου κύκλου
- ○ Πτυχίο πανεπιστημίου ή ισοδύναμο επίπεδο
- ○ Μεταπτυχιακό ή ισοδύναμο επίπεδο
- ○ Διδακτορικό ή ισοδύναμο επίπεδο

21. Πού μένετε;
- ○ Μεγάλη πόλη (με περισσότερους από 100,000 κατοίκους)
- ○ Πόλη ή μικρή πόλη (10,000 έως 100,000 κάτοικοι)
- ○ Χωριό ή αγροτική περιοχή (κάτω των 10,000 κατοίκων)
- ○ Προτιμώ να μην απαντήσω

22. Στην πολιτική, μερικές φορές οι άνθρωποι αυτοχαρακτηρίζονται σε κλίμακα από «αριστερά» έως «δεξιά». Πού θα τοποθετούσατε τον εαυτό σας σε κλίμακα από το 1 (αριστερά) έως το 10 (δεξιά);
Μετακινήστε τον συρόμενο δείκτη ή αποδεχθείτε την αρχική θέση του..

(/eusurvey/forms/runner)

Αριστερά Δεξιά

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Ένα τελευταίο πράγμα...

23. Με δικά σας λόγια: ποιος είναι ο πιο παραπλανητικός ισχυρισμός για την κλιματική αλλαγή που έχετε δει πρόσφατα; (Έως 250 χαρακτήρες. Μπορείτε να παραλείψετε αυτή την ερώτηση.)

Co-funded by the European Union

Υποβολή

(/eusurvey/forms)

Έκδοση v1.6 (13/07/2026 10:50)

Encuesta CLIMAware sobre la definición de ámbitos temáticos clave de la información errónea/desinformación sobre el clima.

Cláusula de exención de responsabilidad
La Comisión Europea no se hace responsable del contenido de los cuestionarios creados por medio del servicio EUSurvey. La responsabilidad del contenido del cuestionario recae exclusivamente en su creador y gestor. El uso del servicio EUSurvey no implica que la Comisión Europea recomiende ni avale las opiniones manifestadas en ellos.

Modo anónimo
Se ha activado la opción de anonimato. En consecuencia, su contribución a esta encuesta será anónima, ya que el sistema no guardará ningún dato personal, como su dirección IP.

Breve encuesta sobre la información climática en la era de la IA

CLIMAware es un proyecto de investigación y alfabetización mediática cofinanciado por la Unión Europea en el marco del Programa Europa Creativa (acuerdo de subvención n.º 101246545). El proyecto estudia cómo las personas de toda Europa encuentran y comprenden la información sobre el cambio climático, incluida la desinformación y los contenidos generados por la inteligencia artificial.

Lo que le preguntaremos.
Un breve cuestionario (entre 6 y 7 minutos) sobre lo que ha leído o visto recientemente sobre el cambio climático, lo que piensa sobre el tema, cómo comprueba la información y algunas preguntas demográficas para su análisis.

Voluntaria y anónima.
La participación es voluntaria. Puede abandonar el cuestionario en cualquier momento cerrando la página. No recopilamos su nombre, correo electrónico ni dirección IP. Todas las respuestas se agruparán para su análisis estadístico.

Cómo se utilizan sus datos.
Sus respuestas se analizarán de forma agregada y se publicarán en un informe público. Los microdatos anonimizados se conservarán durante cinco años a partir de la finalización del proyecto, de acuerdo con el Plan de Gestión de Datos del proyecto, y posteriormente se eliminarán. El responsable del tratamiento de datos de este estudio es Circular Bioeconomy Hub; para cualquier consulta relacionada con la protección de datos o para ejercer sus derechos conforme al Reglamento General de Protección de Datos de la UE (artículos 15–22), puede contactar con info@cbiohub.gr.

Cofinanciado por la Unión Europea· Convenio de subvención n.º 101246545. Las opiniones expresadas son únicamente las de los autores y no reflejan necesariamente las de la Unión Europea ni las de la EACEA.

Preocupación por el clima y entorno de información

1. ¿Hasta qué punto le preocupa el cambio climático?
- ◯ No me preocupa en absoluto
- ◯ Me preocupa ligeramente
- ◯ Me preocupa moderadamente
- ◯ Me preocupa mucho
- ◯ Me preocupa muchísimo
- ◯ No lo sé/Prefiero no contestar

2. ¿Con qué frecuencia encuentra información sobre el cambio climático (en noticias, en las redes sociales, en conversaciones o en cualquier lugar)?
- ◯ Nunca
- ◯ Rara vez (una o dos veces al mes)
- ◯ A veces (una vez a la semana)
- ◯ A menudo (varias veces por semana)
- ◯ Muy a menudo (todos o casi todos los días)

3. En comparación con hace dos años, ¿hasta qué punto le resulta fácil o difícil distinguir la información verdadera de la falsa sobre el cambio climático?
- ◯ Mucho más fácil hoy en día
- ◯ Algo más fácil en la actualidad
- ◯ Más o menos igual
- ◯ Algo más difícil en la actualidad
- ◯ Mucho más difícil hoy en día
- ◯ No lo sé

Creencias sobre el cambio climático

4. Se han realizado las siguientes afirmaciones sobre el cambio climático. Indique en qué medida está de acuerdo o en desacuerdo con cada una de ellas. No se trata de cuáles podrían ser las respuestas reales (correctas o erróneas): nos interesa lo que usted piensa personalmente.

-	Totalmente en desacuerdo	Desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo	No sé/Sin opinión
Los inviernos fríos y las recientes tormentas de nieve muestran que el calentamiento global no está ocurriendo realmente.	○	○	○	○	○	○
El aumento del nivel del mar ha sido exagerado por los medios de comunicación y los científicos.	○	○	○	○	○	○
El clima siempre ha cambiado de forma natural; los cambios actuales no son causados principalmente por los seres humanos.	○	○	○	○	○	○
Una mayor cantidad de CO_2 en la atmósfera es positiva porque las plantas lo necesitan para crecer.	○	○	○	○	○	○
Un clima más cálido traerá, en conjunto, más beneficios que perjuicios a mi país.	○	○	○	○	○	○
El cambio climático afectará principalmente a las generaciones futuras y a otros países, no a nosotros.	○	○	○	○	○	○
Las fuentes de energía renovables, como la eólica y la solar, son demasiado poco fiables para sustituir a los combustibles fósiles.	○	○	○	○	○	○
Las acciones individuales para reducir las emisiones carecen de sentido porque no marcan una verdadera diferencia.	○	○	○	○	○	○
La afirmación de que casi todos los científicos especializados en el clima están de acuerdo en el cambio climático causado por el ser humano es exagerada.	○	○	○	○	○	○
Los modelos climáticos han sido erróneos con tanta frecuencia que no podemos confiar en sus predicciones.	○	○	○	○	○	○
La combustión de combustibles fósiles como el petróleo, el carbón y el gas libera CO2 que calienta el planeta.	○	○	○	○	○	○
La gran mayoría de los científicos especializados en el clima está de acuerdo en que el cambio climático reciente se debe principalmente a la actividad humana.	○	○	○	○	○	○

Reconocimiento de argumentos engañosos

A continuación se presentan tres ejemplos breves de argumentos que podría encontrar en internet o en las noticias. Para cada uno, indique si considera que el argumento es fiable.

«En febrero de 2025, una ola de frío sin precedentes golpeó partes de Europa con fuertes nevadas. Esto demuestra que es probable que los patrones meteorológicos extremos se produzcan con mayor frecuencia debido al cambio climático»

5. ¿En qué medida considera fiable este argumento?

Mueva el deslizador o acepte la posición inicial.

Nada fiable — Muy fiable

5

0 — 10

«Un ingeniero jubilado con un popular canal de YouTube sostiene que el cambio climático se debe principalmente al sol y que los científicos especializados en el clima están exagerando. Cuenta con más de un millón de abonados. "

6. ¿En qué medida considera fiable este argumento?

Mueva el deslizador o acepte la posición inicial.

Nada fiable — Muy fiable

5

0 — 10

«Algunas personas sostienen que los científicos exageran el cambio climático porque reciben más financiación para la investigación cuando afirman que es peligroso».

7. ¿En qué medida considera fiable este argumento?

Mueva el deslizador o acepte la posición inicial.

Nada fiable — Muy fiable

Canales y contenidos generados por IA

8. ¿Dónde has visto, leído u oído hablar del cambio climático en los últimos 30 días? (Seleccione todas las opciones que procedan)

- [ ] Televisión (noticias o programas)
- [ ] Periódicos y revistas impresos o en línea
- [ ] Radio o pódcast
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (anteriormente Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram u otras aplicaciones de mensajería
- [ ] Motores de búsqueda (Google, Bing, etc.)
- [ ] Chatbots de IA (ChatGPT, Gemini, Copilot, Grok, MetaAI, etc.)
- [ ] Influencers, creadores de contenidos o vloggers
- [ ] En el trabajo
- [ ] En la escuela/universidad
- [ ] Conversaciones con familiares, amigos o compañeros
- [ ] Otros:
- [ ] No he encontrado ninguna información relacionada con el clima en los últimos 30 días

9. ¿Cuáles son sus principales fuentes de información? (elija un máximo de 3)

- [ ] Televisión (noticias o programas)
- [ ] Periódicos y revistas impresos o en línea
- [ ] Radio o pódcast
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (anteriormente Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram u otras aplicaciones de mensajería
- [ ] Motores de búsqueda (Google, Bing, etc.)
- [ ] Chatbots de IA (ChatGPT, Gemini, Copilot, Grok, MetaAI, etc.)
- [ ] Influencers, creadores de contenidos o vloggers
- [ ] En el trabajo
- [ ] En la escuela/universidad
- [ ] Conversaciones con familiares, amigos o compañeros
- [ ] Otros:

10. En los últimos 12 meses, ¿se ha encontrado con alguna de las siguientes situaciones? (Seleccione todas las opciones que procedan)

- [ ] Imágenes generadas por IA de condiciones meteorológicas extremas (por ejemplo, inundaciones, incendios, huracanes) que resultaron ser falsas
- [ ] Vídeo o audio deepfake de un político, científico o figura pública que habla sobre el clima
- [ ] Una respuesta de chatbot de IA sobre el cambio climático que te pareció inexacta o engañosa
- [ ] Un artículo en línea sobre el clima que más tarde supo que había sido generado por IA y era inexacto
- [ ] He encontrado contenido climático generado por IA, pero no estoy seguro de que fuera preciso
- [ ] No he encontrado ninguno de estos
- [ ] No sé

11. ¿Hasta qué punto está seguro de que podría reconocer los contenidos sobre el cambio climático generados por la inteligencia artificial (como imágenes falsas, vídeos deepfake o artículos escritos por IA)?

- ○ No confío en absoluto
- ○ Algo seguro
- ○ Confianza moderada
- ○ Mucha
- ○ Extremadamente seguro/a

12. Cuando ve información sobre el cambio climático en redes sociales, ¿con qué frecuencia comprueba la fuente original, si la hay, antes de creerla?

- ○ Nunca
- ○ Raramente
- ○ A veces
- ○ Frecuentemente
- ○ Siempre
- ○ No utilizo las redes sociales

13. ¿Has utilizado alguna vez un chatbot de IA (como ChatGPT, Gemini, Copilot, Grok o MetaAI) para preguntar sobre el cambio climático?

- ○ Sí
- ○ No
- ○ No sé

Confianza y comportamiento de verificación

14. ¿En qué medida confía en cada una de las siguientes fuentes en lo que respecta a la información sobre el cambio climático?

	No confío en absoluto	Confío levemente	Confío moderadamente	Confío mucho	Confío plenamente	No lo sé
Científicos e instituciones de investigación climática	○	○	○	○	○	○
Medios informativos generales (televisión, periódicos)	○	○	○	○	○	○
Gobierno nacional e instituciones públicas	○	○	○	○	○	○
ONG medioambientales	○	○	○	○	○	○
nfluencers de las redes sociales y creadores de contenidos	○	○	○	○	○	○
Chatbots de IA (ChatGPT, Gemini, Copilot, etc.)	○	○	○	○	○	○
Familia, amigos y compañeros	○	○	○	○	○	○
Dirigentes y partidos políticos	○	○	○	○	○	○

15. ¿Cómo calificaría su propia capacidad para juzgar si algo que lee en línea sobre el cambio climático es verdadero o falso?

- ○ Muy insuficiente
- ○ Pobre
- ○ Promedio
- ○ Bien
- ○ Muy buena

16. En los últimos 30 días, ¿ha realizado alguna de las siguientes actividades debido a algo que ha visto o leído sobre el cambio climático? (Seleccione todas las opciones que procedan)

- ☐ Ha comprobado la fuente original de la información
- ☐ Buscó una verificación de datos en un sitio web específico
- ☐ Cotejó con otra fuente de noticias
- ☐ Preguntó a un amigo, familiar o compañero qué pensaban
- ☐ Ha notificado la publicación o el contenido a la plataforma
- ☐ Lo compartió sin comprobarlo
- ☐ Lo ignoró
- ☐ Ninguno de los anteriores

Sobre usted

Estas últimas preguntas nos ayudan a analizar los resultados en diferentes grupos. Todas las respuestas son anónimas y puede elegir «Prefiero no contestar» para cualquier elemento.

17. ¿Cuál es su país de residencia?

18. ¿Cuál es su edad?

- ○ 18-24
- ○ 25-34
- ○ 35-44
- ○ 45-54
- ○ 55-64
- ○ 65 años o más
- ○ Prefiero no responder

19. Indique su género

- ○ Mujer
- ○ Hombre
- ○ No binario
- ○ Prefieren autodescribirse:
- ○ Prefiero no responder

20. ¿Cuál es el nivel máximo de estudios que ha completado?

- ○ Educación primaria o inferior
- ○ Primer ciclo de educación secundaria
- ○ Segundo ciclo de educación secundaria
- ○ Educación postsecundaria no superior
- ○ Enseñanza terciaria de ciclo corto
- ○ Grado o nivel equivalente
- ○ Máster o equivalente
- ○ Doctorado o equivalente

21. ¿Dónde vive?

- ○ Gran ciudad (más de 100,000 habitantes)
- ○ Localidad o pequeña ciudad (de 10,000 a 100,000 habitantes)
- ○ Localidad o zona rural (menos de 10,000 habitantes)
- ○ Prefiero no responder

22. En la política, las personas a veces se describen a sí mismas en una escala de «izquierda» a «derecha». ¿Dónde se situaría en una escala del 1 (izquierda) al 10 (derecha)?

Mueva el deslizador o acepte la posición inicial.

Izquierda Derecha

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Una última cosa...

23. Con sus propias palabras: ¿cuál es la afirmación más engañosa sobre el cambio climático que ha visto recientemente? (Hasta 250 caracteres. Puede omitir esta pregunta).

Co-funded by the European Union

Enviar

CLIMAware-kysely ilmastonmuutokseen liittyvän mis- ja disinformaation keskeisten teemojen määrittämiseksi.

Vastuuvapauslauseke
Euroopan komissio ei vastaa EUSurvey-palvelun avulla tehtyjen kyselyjen sisällöstä. Vastuu sisällöstä on yksinomaan lomakkeen laatijalla ja hallinnoijalla. EUSurvey-palvelun käyttö ei merkitse sitä, että Euroopan komissio hyväksyisi kyselyissä esitetyt näkemykset.

Anonyymi kysely
Kysely on määritelty anonyymiksi. Näin ollen kyselyvastaukset käsitellään nimettöminä, sillä vastaajien henkilötietoja ja muita vastaajakohtaisia tietoja, kuten IP-osoitteita, ei tallenneta järjestelmään.

Lyhyt kysely ilmastonmuutosta koskevasta tiedosta tekoälyn aikakaudella

CLIMAware on Euroopan unionin Luova Eurooppa -ohjelmasta (rahoitussopimus nro 101246545) osarahoitettu tutkimus- ja medialukutaitohanke. Hankkeessa tutkitaan, miten ihmiset eri puolilla Eurooppaa vastaanottavat ja tulkitsevat ilmastonmuutokseen liittyvää tietoa. Tutkimus kattaa myös ilmastonmuutosta koskevan väärän tai valheellisen tiedon sekä tekoälyn tuottamien sisältöjen tarkastelun.

Mitä kysymme sinulta? Pyydämme sinua vastaamaan lyhyeen kyselyyn (vastausaika noin 6–7 minuuttia) jonka avulla kartoitamme, minkälaisia ilmastonmuutosta koskevia väittämiä olet lukenut tai nähnyt viime aikoina, kuinka uskottavana pidät kohtaamiasi väittämiä sekä siitä, miten tarkistat väitteiden todenperäisyyden. Lisäksi kysymme lopuksi muutaman taustakysymyksen tulosten analysointia ja luokittelua varten.

Vapaaehtoinen ja nimetön. Osallistuminen on vapaaehtoista. Voit lopettaa vastaamisen milloin tahansa sulkemalla sivun. Emme kerää nimeäsi, sähköpostiosoitettasi tai IP-osoitettasi. Kaikki vastaukset kootaan yhteen tilastoanalyysia varten.

Miten tietoja käytetään. Kerätyt vastaukset analysoidaan kootusti ja tulokset julkaistaan julkisessa raportissa. Anonymisoidut vastaustiedot säilytetään viiden vuoden ajan hankkeen päättymisen jälkeen hankkeen tiedonhallintasuunnitelman mukaisesti, minkä jälkeen ne poistetaan. Tämän tutkimuksen rekisterinpitäjä on Circular Bioeconomy Hub; jos sinulla on kysyttävää tietosuojasta tai jos haluat käyttää EU:n yleisen tietosuoja-asetuksen (15–22 artiklan) mukaisia oikeuksiasi, ota yhteyttä info@cbiohub.gr.

Euroopan unionin osarahoittama· Rahoitussopimus nro 101246545. Esitetyt näkemykset ovat ainoastaan kirjoittajien näkemyksiä, eivätkä ne välttämättä vastaa unionin tai EACEA:n näkemyksiä.

Ilmastohuolet ja tietoympäristö

1. Miten huolissasi olet ilmastonmuutoksesta?
- ◯ En lainkaan huolissani
- ◯ Hieman huolissani
- ◯ Kohtalaisen huolissani
- ◯ Hyvin huolissani
- ◯ Erittäin huolissani
- ◯ En osaa sanoa/En halua vastata

2. Kuinka usein törmäät tietoon ilmastonmuutoksesta (uutisissa, sosiaalisessa mediassa, keskusteluissa, missä tahansa)?
- ◯ En koskaan
- ◯ Harvoin (kerran tai kahdesti kuukaudessa)
- ◯ Joskus (kerran viikossa)
- ◯ Usein (useita kertoja viikossa)
- ◯ Hyvin usein (joka päivä tai melkein joka päivä)

3. Verrattuna kahden vuoden takaiseen tilanteeseen, arvioi, kuinka helppoa on erottaa ilmastonmuutosta koskeva oikea tietoa väärästä tai valheellisesta tiedosta?

- ◯ Paljon helpompaa nykyisin
- ◯ Hieman helpompaa nykyisin
- ◯ Suunnilleen yhtä helppoa
- ◯ Hieman vaikeampaa nykyisin
- ◯ Paljon vaikeampaa nykyisin
- ◯ En osaa sanoa

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4. Ilmastonmuutoksesta on esitetty seuraavia väittämiä. Kerro, missä määrin olet samaa tai eri mieltä kunkin väittämän kanssa. Kyse ei ole siitä, mitkä väittämistä ovat tosia/epätosia – olemme kiinnostuneita siitä, mitä ajattelet henkilökohtaisesti.

-	Täysin eri mieltä	Eri mieltä	En samaa enkä eri mieltä	Samaa mieltä	Täysin samaa mieltä	En osaa sanoa/ei mielipidettä
Kylmät talvet ja viimeaikaiset lumimyrskyt osoittavat, että ilmasto ei todellisuudessa lämpene.	○	○	○	○	○	○
Tiedotusvälineet ja tutkijat ovat liioitelleet merenpinnan nousua.	○	○	○	○	○	○
Ilmasto on aina muuttunut luonnollisesti. Nykyiset muutokset eivät johdu pääasiassa ihmisistä.	○	○	○	○	○	○
Ilmakehän hiilidioksidin lisääntyminen on hyvä asia, koska kasvit tarvitsevat sitä kasvaakseen.	○	○	○	○	○	○
Lämpimämpi ilmasto tuo kaiken kaikkiaan enemmän hyötyä kuin haittaa maalleni.	○	○	○	○	○	○
Ilmastonmuutos vaikuttaa pääasiassa tuleviin sukupolviin ja muihin maihin, ei meihin.	○	○	○	○	○	○
Uusiutuvat energialähteet, kuten tuuli- ja aurinkoenergia, ovat liian epäluotettavia korvaamaan fossiilisia polttoaineita.	○	○	○	○	○	○
Yksittäiset toimet päästöjen vähentämiseksi ovat turhia, koska niillä ei ole todellista vaikutusta.	○	○	○	○	○	○
Väite, jonka mukaan lähes kaikki ilmastotutkijat ovat yhtä mieltä ihmisen aiheuttamasta ilmastonmuutoksesta, on liioiteltu.	○	○	○	○	○	○
Ilmastomallit ovat olleet niin usein vääriä, että emme voi luottaa niiden ennusteisiin.	○	○	○	○	○	○
Fossiilisten polttoaineiden, kuten öljyn, hiilen ja maakaasun, polttamisesta vapautuu hiilidioksidia, joka lämmittää maapalloa.	○	○	○	○	○	○
Suurin osa ilmastotutkijoista on samaa mieltä siitä, että viimeaikainen ilmastonmuutos johtuu pääasiassa ihmisen toiminnasta.	○	○	○	○	○	○

Harhaanjohtavien väitteiden tunnistaminen

Seuraavassa on kolme lyhyttä esimerkkiä väitteistä, joita saatat kohdata verkossa tai uutisissa. Kerro kunkin väitteen osalta, onko väite mielestäsi luotettava.

”Helmikuussa 2025 ennätyksellisen kylmä säärintama iski Euroopan eri osiin aiheuttaen rankkoja lumisateita. Tämä osoittaa, että äärimmäisiä sääilmiöitä esiintyy todennäköisesti useammin ilmastonmuutoksen vuoksi.”

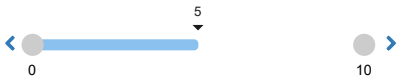
5. Kuinka luotettavana pidät tätä väitettä?
Siirrä liukusäädintä tai hyväksy alkuperäinen asento.

Ei lainkaan luotettava — Erittäin luotettava

”Eläkkeellä oleva insinööri, jolla on suosittu YouTube-kanava, väittää, että ilmastonmuutos johtuu pääasiassa auringosta ja että ilmastotutkijat liioittelevat. Hänellä on yli miljoona tilaajaa.”

6. Kuinka luotettavana pidät tätä väitettä?
Siirrä liukusäädintä tai hyväksy alkuperäinen asento.

Ei lainkaan luotettava — Erittäin luotettava



”Tietyt ihmiset väittävät, että tutkijat liioittelevat ilmastonmuutosta saadakseen enemmän tutkimusrahoitusta vaaralliseksi luonnehtimalleen ilmiölle.”

7. Kuinka luotettavana pidät tätä väitettä?

Siirrä liukusäädintä tai hyväksy alkuperäinen asento.

Ei lainkaan luotettava — Erittäin luotettava

Kanavat ja tekoälyn tuottama sisältö

8. Missä olet nähnyt, lukenut tai kuullut ilmastonmuutoksesta viimeisten 30 päivän aikana? (Voit valita useita vaihtoehtoja)

- [ ] Televisio (uutiset tai ohjelmat)
- [ ] Painetut tai verkkosanoma- ja aikakauslehdet
- [ ] Radio tai podcast-lähetykset
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (entinen Twitter)
- [ ] LinkedIn
- [ ] WhatsApp-, Viber-, Telegram- tai muut viestisovellukset
- [ ] Hakukoneet (Google, Bing jne.)
- [ ] Tekoälyyn perustuvat chattibotit (ChatGPT, Gemini, Copilot, Grok, MetaAI jne.)
- [ ] Vaikuttajat, sisällöntuottajat tai vloggaajat
- [ ] Työpaikalla
- [ ] Koulussa/yliopistossa
- [ ] Keskustelut perheen, ystävien tai työtovereiden kanssa
- [ ] Muut:
- [ ] En ole törmännyt tietoon ilmastonmuutoksesta viimeisten 30 päivän aikana.

9. Mitkä ovat pääasialliset tietolähteesi? (valitse enintään 3)

- [ ] Televisio (uutiset tai ohjelmat)
- [ ] Painetut tai verkkosanoma- ja aikakauslehdet
- [ ] Radio tai podcast-lähetykset
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (entinen Twitter)
- [ ] LinkedIn
- [ ] WhatsApp-, Viber-, Telegram- tai muut viestisovellukset
- [ ] Hakukoneet (Google, Bing jne.)
- [ ] Tekoälyyn perustuvat chattibotit (ChatGPT, Gemini, Copilot, Grok, MetaAI jne.)
- [ ] Vaikuttajat, sisällöntuottajat tai vloggaajat
- [ ] Työpaikka
- [ ] Koulu/yliopisto
- [ ] Keskustelut perheen, ystävien tai työtovereiden kanssa
- [ ] Muut:

10. Oletko havainnut viimeksi kuluneiden 12 kuukauden aikana jotakin seuraavista? (Voit valita useita vaihtoehtoja)

- [ ] Tekoälyn tuottamat kuvat äärimmäisistä sääilmiöistä (esim. tulvat, tulipalot, hurrikaanit), jotka osoittautuivat väärennetyiksi
- [ ] Deepfake (syväväärennetty) video tai äänite ilmastosta puhuvalta poliitikolta, tutkijalta tai julkisuuden henkilöltä
- [ ] Tekoälyä hyödyntävän chattibotin vastaus ilmastonmuutokseen, jota pidät epätarkkana tai harhaanjohtavana
- [ ] Ilmastonmuutosta käsittelevä verkkoartikkeli, joka myöhemmin osoittautui tekoälyn luomaksi ja sisälsi epätarkkaa tai virheellistä tietoa.
- [ ] Olen kohdannut tekoälyn tuottamaa ilmastosisältöä, mutta en ole varma, oliko se paikkansapitävää
- [ ] En ole kohdannut mitään näistä
- [ ] En ole varma.

11. Miten luottavainen olet siihen, että tunnistat tekoälyn tuottaman ilmastonmuutokseen liittyvän sisällön (kuten väärennetyt kuvat, syväväärennökset tai tekoälyllä kirjoitetut artikkelit)?

- ○ Ei lainkaan luottavainen
- ○ Jossain määrin luottavainen
- ○ Kohtalaisen luottavainen
- ○ Hyvin luottavainen
- ○ Erittäin luottavainen

12. Kun näet ilmastonmuutosta koskevia tietoja sosiaalisessa mediassa, kuinka usein tarkistat alkuperäisen lähteen (jos sellainen on) ennen kuin uskot tiedon olevan totta?

- ○ En koskaan
- ○ Harvoin
- ○ Joskus
- ○ Usein
- ○ Aina
- ○ En käytä sosiaalista mediaa

13. Oletko koskaan käyttänyt tekoälychattibottia (kuten ChatGPT, Gemini, Copilot, Grok tai MetaAI) kysyäksesi ilmastonmuutoksesta?

- ○ Kyllä
- ○ Ei
- ○ En ole varma.

Luottamus ja todentamiskäyttäytyminen

14. Kuinka paljon luotat seuraaviin lähteisiin ilmastonmuutosta koskevien tietojen osalta?

-	En luota lainkaan	Luotan hieman	Luotan kohtalaisesti	Luotan paljon	Luotan täysin	En osaa sanoa
Ilmastotutkijat ja -tutkimuslaitokset	○	○	○	○	○	○
Valtavirtaa edustavat uutismediat (televisio, sanomalehdet)	○	○	○	○	○	○
Valtionhallinto ja julkiset laitokset	○	○	○	○	○	○
Ympäristöjärjestöt	○	○	○	○	○	○

	En luota lainkaan	Luotan hieman	Luotan kohtalaisesti	Luotan paljon	Luotan täysin	En osaa sanoa
Sosiaalisen median vaikuttajat ja sisällöntuottajat	○	○	○	○	○	○
Tekoälyyn perustuvat chattibotit (ChatGPT, Gemini, Copilot jne.)	○	○	○	○	○	○
Perhe, ystävät ja työtoverit	○	○	○	○	○	○
Poliittiset johtajat ja puolueet	○	○	○	○	○	○

15. Miten arvioisit omaa kykyäsi arvioida, onko verkossa lukemasi ilmastonmuutosta koskeva tieto totta vai virheellistä?

- ○ Erittäin heikko
- ○ Heikko
- ○ Kohtalainen
- ○ Hyvä
- ○ Erittäin hyvä

16. Oletko viimeksi kuluneiden 30 päivän aikana tehnyt jotain seuraavista ilmastonmuutoksesta havaitsemasi tai lukemasi seikan vuoksi? (Voit valita useita vaihtoehtoja)

- ☐ Tarkistanut alkuperäisen tietolähteen
- ☐ Hakenut tietoa ilmastonmuutosta käsittelevältä verkkosivustolta faktantarkistusta varten.
- ☐ Tarkistanut asian todenperäisyyttä toisesta uutislähteestä
- ☐ Kysynyt ystävältä, perheenjäseneltä tai kollegalta, mitä he ajattelivat
- ☐ Ilmoitanut julkaisusta tai sisällöstä alustalle
- ☐ Jakanut sisältöä tarkistamatta
- ☐ Jättänyt asian huomiotta
- ☐ Ei mikään edellä mainituista

Vastaajaa koskevat tiedot

Viimeiset kysymykset auttavat analysoimaan tuloksia eri ryhmissä. Kaikki vastaukset pysyvät nimettöminä, ja voit valita minkä tahansa kysymyksen kohdalla vaihtoehdon "En halua vastata".

17. Mikä on asuinmaasi?

18. Kuinka vanha olet?

- ○ 18–24 vuotias
- ○ 25–34 vuotias
- ○ 35–44 vuotias
- ○ 45–54 vuotias
- ○ 55–64 vuotias
- ○ 65 vuotta tai vanhempi
- ○ En halua kertoa

19. Miten kuvailisit sukupuoltasi?

- ○ Nainen
- ○ Mies
- ○ Muunsukupuolinen
- ○ Haluan mieluummin kuvata itse:
- ○ En halua kertoa

20. Mikä on korkein koulutustaso, jonka olet suorittanut?

- ○ Alempi perusasteen koulutus (alakoulu)
- ○ Ylempi perusasteen koulutus (yläkoulu)
- ○ Keskiasteen koulutus (lukio, ammatillinen koulutus)
- ○ Erikoisammattikoulutusaste (Erikoisammattitutkinto)
- ○ Opistoasteen ammatillinen tutkinto
- ○ Alempi korkeakoulututkinto (amk tai kandi) tai vastaava
- ○ Ylempi korkeakoulututkinto (yamk tai maisteri) tai vastaava
- ○ Tohtoritaso

21. Missä asut?

- ○ Suuri kaupunki (yli 50,000 asukasta)
- ○ Pienempi kaupunki, kunta tai esikaupunkialue
- ○ Maaseutu tai harvaan asuttu alue
- ○ En halua kertoa

22. Politiikassa ihmiset toisinaan kuvaavat itsensä olevan "vasemmalla" tai "oikealla". Miten asettaisit itsesi asteikkolle 1 (vasemmalla) – 10 (oikealla)?
Siirrä liukusäädintä tai hyväksy alkuperäinen asento.

Vasen Oikea

6

1 10

Viimeinen kysymys...

23. Kuvaa omin sanoin, mikä on kaikkein harhaanjohtavin väittämä ilmastonmuutoksesta, johon olet viime aikoina törmännyt? (Enintään 250 merkkiä. Voit ohittaa tämän kysymyksen.)

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Co-funded by the European Union

Lähetä

Versio v1.6 (13/07/2026 10:50)

Inquérito CLIMAware sobre a definição dos principais domínios temáticos da informação incorreta/desinformação sobre o clima.

Declaração de exoneração de responsabilidade
A Comissão Europeia não é responsável pelo conteúdo dos questionários criados com ajuda o serviço EUSurvey, que são da exclusiva responsabilidade dos respetivos autores e gestores. A utilização do serviço EUSurvey não pressupõe qualquer recomendação ou aprovação dos pontos de vista expressos nesses questionários por parte da Comissão Europeia.

Modo anónimo
A opção «modo anónimo» foi ativada. Isto significa que a sua contribuição para este inquérito será anónima, ou seja, o sistema não conservará quaisquer dados pessoais, tais como o seu endereço IP.

Um breve inquérito sobre as informações climáticas na era da IA

O CLIMAware é um projeto de investigação e literacia mediática cofinanciado pela União Europeia ao abrigo do Programa Europa Criativa (convenção de subvenção n.º 101246545). O projeto estuda a forma como as pessoas em toda a Europa encontram e compreendem informações sobre as alterações climáticas, incluindo desinformação e conteúdos gerados por inteligência artificial.

O que lhe vamos perguntar. Um breve questionário (cerca de 6 a 7 minutos) sobre o que leu ou viu recentemente sobre as alterações climáticas, o que acredita acerca das mesmas, como verifica as informações e algumas perguntas demográficas para análise.
Voluntário e anónimo. A participação é voluntária. Pode parar a qualquer momento fechando a página. Não recolhemos o seu nome, endereço de correio eletrónico ou endereço IP. Todas as respostas são agregadas para análise estatística.
Como serão utilizados os seus dados. As suas respostas serão analisadas de forma agregada e publicadas num relatório público. Os microdados anonimizados serão conservados durante cinco anos após a conclusão do projeto, em conformidade com o plano de gestão de dados do projeto, e posteriormente apagados. O responsável pelo tratamento de dados deste estudo é o Circular Bioeconomy Hub. Para qualquer questão relacionada com a proteção de dados e exercício dos seus direitos ao abrigo do Regulamento Geral sobre a Proteção de Dados da União Europeia (Artigos 15.º–22.º), contacte: info@cbiohub.gr.

Cofinanciado pela União Europeia· Convenção de Subvenção n.º 101246545. As opiniões expressas são apenas as dos autores e não refletem necessariamente as da União Europeia ou da EACEA.

Preocupações climáticas e ambiente de informação

1. Qual é a sua preocupação com as alterações climáticas?
- ◯ Nada preocupado
- ◯ Ligeiramente preocupado
- ◯ Moderadamente preocupado
- ◯ Muito preocupado
- ◯ Extremamente preocupado
- ◯ Não sei/prefiro não responder

2. Com que frequência encontra informações sobre as alterações climáticas (nas notícias, nas redes sociais, nas conversas, em qualquer lugar)?
- ◯ Nunca
- ◯ Raramente (uma ou duas vezes por mês)
- ◯ Por vezes (uma vez por semana)
- ◯ Frequentemente (várias vezes por semana)
- ◯ Muito frequentemente (todos os dias ou quase todos os dias)

3. Em comparação com há dois anos, quão fácil ou difícil é distinguir informações verdadeiras de informações falsas sobre as alterações climáticas?
- ◯ Atualmente, é muito mais fácil
- ◯ Atualmente, é ligeiramente mais fácil
- ◯ Relativamente idêntico
- ◯ Atualmente, é um pouco mais difícil
- ◯ Atualmente, é muito mais difícil
- ◯ Não sei

Crenças sobre as alterações climáticas

4. Foram feitas as seguintes declarações sobre as alterações climáticas: Indique em que medida concorda ou discorda de cada uma delas. Não se trata de saber quais poderão ser as respostas reais (corretas ou erradas) — estamos interessados naquilo que pensa pessoalmente.

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-	Discordo totalmente	Discordo	Não concordo, nem discordo	Concordo	Concordo totalmente	Não sei/Sem opinião
Os invernos frios e as recentes tempestades de neve mostram que o aquecimento global não está realmente a acontecer.	○	○	○	○	○	○
A subida do nível do mar foi exagerada pelos meios de comunicação social e pelos cientistas.	○	○	○	○	○	○
O clima mudou sempre naturalmente; as alterações atuais não são causadas principalmente por seres humanos.	○	○	○	○	○	○
Mais CO_2 na atmosfera é bom porque as plantas necessitam dele para crescer.	○	○	○	○	○	○
Um clima mais quente trará, em geral, mais benefícios do que danos ao meu país.	○	○	○	○	○	○
As alterações climáticas afetarão sobretudo as gerações futuras e outros países, e não nós.	○	○	○	○	○	○
As fontes de energia renováveis, como a energia eólica e solar, são demasiado pouco fiáveis para substituir os combustíveis fósseis.	○	○	○	○	○	○
As ações individuais para reduzir as emissões são inúteis porque não fazem uma verdadeira diferença.	○	○	○	○	○	○
A alegação de que quase todos os cientistas climáticos concordam com as alterações climáticas de origem humana é exagerada.	○	○	○	○	○	○
Os modelos climáticos têm estado errados com tanta frequência que não podemos confiar nas suas previsões.	○	○	○	○	○	○
A queima de combustíveis fósseis, como o petróleo, o carvão e o gás, liberta CO2 que aquece o planeta.	○	○	○	○	○	○
A grande maioria dos cientistas climáticos concorda que as recentes alterações climáticas são principalmente causadas pela atividade humana.	○	○	○	○	○	○

Reconhecer argumentos enganosos

Seguem-se três breves exemplos de argumentos que poderá encontrar em linha ou nas notícias. Para cada um deles, indique se considera que o argumento é fiável.

“Em fevereiro de 2025, uma vaga de frio recorde atingiu partes da Europa com fortes quedas de neve. Isto prova que os padrões meteorológicos extremos são suscetíveis de ocorrer mais frequentemente devido às alterações climáticas.”

5. Em que medida considera este argumento fiável?
Mova o cursor ou aceite a posição inicial.

Nada fiável Muito fiável

5

0 10

“Um engenheiro reformado com um popular canal YouTube argumenta que as alterações climáticas são principalmente causadas pelo sol e que os cientistas climáticos estão a exagerar. Ele tem mais de um milhão de assinantes. "

6. Em que medida considera este argumento fiável?
Mova o cursor ou aceite a posição inicial.

Nada fiável Muito fiável

5

0 10

«Algumas pessoas argumentam que os cientistas exageram as alterações climáticas porque recebem mais financiamento para a investigação quando afirmam que tal é perigoso.»

7. Em que medida considera este argumento fiável?

Mova o cursor ou aceite a posição inicial.

Nada fiável Muito fiável

5

0 10

Canais e conteúdos gerados por IA

8. Onde viu, leu ou ouviu falar das alterações climáticas nos últimos 30 dias? (Assinale todas as respostas aplicáveis.)

- [ ] Televisão (notícias ou programas)
- [ ] Jornais e revistas em formato impresso ou digital
- [ ] Rádio ou podcasts
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (antigo Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram ou outras aplicações de mensagens
- [ ] Motores de pesquisa (Google, Bing, etc.)
- [ ] Chatbots de IA (ChatGPT, Gemini, Copilot, Grok, MetaAI, etc.)
- [ ] Influenciadores, criadores de conteúdos ou vloggers
- [ ] No trabalho
- [ ] Na escola/universidade
- [ ] Conversas com familiares, amigos ou colegas
- [ ] Outras:
- [ ] Não encontrei quaisquer informações relacionadas com o clima nos últimos 30 dias

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9. Quais são as suas principais fontes de informação? (escolher, no máximo, 3)

- [ ] Televisão (notícias ou programas)
- [ ] Jornais e revistas em formato impresso ou digital
- [ ] Rádio ou podcasts
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (antigo Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram ou outras aplicações de mensagens
- [ ] Motores de pesquisa (Google, Bing, etc.)
- [ ] Chatbots de IA (ChatGPT, Gemini, Copilot, Grok, MetaAI, etc.)
- [ ] Influenciadores, criadores de conteúdos ou vloggers
- [ ] No trabalho
- [ ] Na escola/universidade
- [ ] Conversas com familiares, amigos ou colegas
- [ ] Outras:

10. Nos últimos 12 meses, deparou-se com alguma das seguintes situações? (Assinale todas as respostas aplicáveis.)

- [ ] Imagens geradas pela IA de condições meteorológicas extremas (por exemplo, inundações, incêndios, furacões) que se revelaram falsas
- [ ] Vídeo ou áudio falsificado de um político, cientista ou figura pública falando sobre o clima
- [ ] Uma resposta do chatbot de IA sobre as alterações climáticas que considerou inexata ou enganosa
- [ ] Um artigo online sobre alterações climáticas que mais tarde descobriu ter sido gerado por IA e ser impreciso
- [ ] Encontrei conteúdos climáticos gerados por IA, mas não tenho a certeza de que são exatos
- [ ] Não encontrei nenhum destes
- [ ] Não sei

11. Até que ponto está confiante de que consegue reconhecer conteúdos sobre as alterações climáticas gerados por inteligência artificial (como imagens falsas, vídeos falsificados ou artigos escritos com IA)?

- ○ Nada confiante
- ○ Ligeiramente confiante
- ○ Moderadamente confiante
- ○ Muito confiante
- ○ Extremamente confiante

12. Quando vê informações sobre as alterações climáticas nas redes sociais, com que frequência verifica a fonte original (se for caso disso) antes de acreditar na mesma?

- ○ Nunca
- ○ Raramente
- ○ Por vezes
- ○ Frequentemente
- ○ Sempre
- ○ Não utilizo as redes sociais

13. Alguma vez utilizou um Chatbot de IA (como o ChatGPT, o Gemini, o Copilot, o Grok ou o MetaAI) para fazer perguntas sobre as alterações climáticas?

- ○ Sim
- ○ Não
- ○ Não sei

Comportamento de confiança e verificação

14. Até que ponto confia nas seguintes fontes no que diz respeito à informação sobre alterações climáticas?

-	Não confio de todo	Confio ligeiramente	Confio moderadamente	Confio muito	Confio totalmente	Não sei
Cientistas e instituições de investigação no domínio do clima	○	○	○	○	○	○
Principais meios de comunicação social (televisão, jornais)	○	○	○	○	○	○
Governo nacional e instituições públicas	○	○	○	○	○	○
ONG de proteção do ambiente	○	○	○	○	○	○

	Não confio de todo	Confio ligeiramente	Confio moderadamente	Confio muito	Confio totalmente	Não sei
Influenciadores das redes sociais e criadores de conteúdos	○	○	○	○	○	○
Chatbots de IA (ChatGPT, Gemini, Copilot, etc.)	○	○	○	○	○	○
Família, amigos e colegas	○	○	○	○	○	○
Líderes e partidos políticos	○	○	○	○	○	○

15. Como classificaria a sua própria capacidade para avaliar se alguma coisa que leu online sobre as alterações climáticas é verdadeira ou falsa?

- ○ Muito fraca
- ○ Pobre
- ○ Média
- ○ Boa
- ○ Muito boa

16. Nos últimos 30 dias, fez alguma das seguintes ações devido a algo que viu ou leu sobre as alterações climáticas? (Assinale todas as respostas aplicáveis.)

- ☐ Verificou a fonte original da informação
- ☐ Procurou uma verificação de factos num site especializado
- ☐ Comparou-o com outra fonte de notícias
- ☐ Perguntou a um amigo, membro da família ou colega o que pensavam
- ☐ Reportou a publicação ou o conteúdo à plataforma
- ☐ Partilhou-o sem verificar
- ☐ Ignorou-o
- ☐ Nenhum dos anteriores

Informação pessoal

Estas últimas perguntas ajudam-nos a analisar os resultados em diferentes grupos. Todas as respostas permanecem anónimas e pode escolher «Prefiro não responder» para qualquer elemento.

17. Qual é o seu país de residência?

18. Qual a sua idade?

- ○ 18 — 24
- ○ 25 — 34
- ○ 35 — 44
- ○ 45 — 54
- ○ 55 — 64
- ○ 65 anos ou mais
- ○ Prefiro não dizer

19. Como descreve o seu género?

- ○ Feminino
- ○ Masculino
- ○ Não binário
- ○ Prefiro autodescrever-me:
- ○ Prefiro não dizer

20. Qual é o nível de escolaridade mais elevado que completou?

- ○ Ensino primário ou inferior (1.º ciclo)
- ○ Ensino básico (2.º e 3.º ciclos)
- ○ Ensino secundário ou profissional
- ○ Ensino pós-secundário não superior
- ○ Ensino superior de ciclo curto
- ○ Licenciatura ou equivalente
- ○ Mestrado ou equivalente
- ○ Doutoramento ou equivalente

21. Onde reside?

- ○ Grande cidade — área densamente povoada com mais de 50 000 habitantes
- ○ Cidade ou pequena cidade (10,000 a 100,000 habitantes)
- ○ Zona rural ou área pouco povoada
- ○ Prefiro não dizer

22. Na política, as pessoas por vezes descrevem-se numa escala entre “esquerda” e “direita”. Onde se colocaria numa escala de 1 (esquerda) a 10 (direita)?

Mova o cursor ou aceite a posição inicial.

Esquerda Direita

6

1 10

Uma última coisa...

23. Por suas próprias palavras: qual foi a afirmação mais enganosa sobre as alterações climáticas que viu recentemente? (Até 250 caracteres. Pode optar por não responder a esta pergunta.)

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Enviar

Versão v1.6 (13/07/2026 10:50)

Опитування CLIMAware щодо визначення ключових тематичних напрямів дезінформації та неправдивої інформації про зміну клімату.

Disclaimer
The European Commission is not responsible for the content of questionnaires created using the EUSurvey service - it remains the sole responsibility of the form creator and manager. The use of EUSurvey service does not imply a recommendation or endorsement, by the European Commission, of the views expressed within them.

Anonymous mode
The anonymous option has been activated. As a result, your contribution to this survey will be anonymous as the system will not save any personal data such as your IP address.

Короткe опитування про інформацію щодо зміни клімату в епоху штучного інтелекту

CLIMAware — це дослідницький та медіаосвітній проєкт, що співфінансується Європейським Союзом у рамках програми «Креативна Європа» (Грантова угода № 101246545). Проєкт вивчає, як люди в різних країнах Європи стикаються з інформацією про зміну клімату та як її сприймають, зокрема дезінформацію та контент, створений штучним інтелектом.

Про що ми вас запитаємо. Короткий опитувальник (приблизно 6–7 хвилин) про те, що ви нещодавно читали чи бачили стосовно зміни клімату, у що ви вірите, як перевіряєте інформацію, а також кілька демографічних запитань для аналізу.

Добровільність та анонімність. Участь є добровільною. Ви можете припинити її будь-якої миті, закривши сторінку. Ми не збираємо ваше ім'я, електронну адресу чи IP-адресу. Усі відповіді узагальнюються для статистичного аналізу.

Як використовуватимуться ваші дані. Ваші відповіді буде проаналізовано в узагальненому вигляді та опубліковано у відкритому звіті. Анонімізовані мікродані зберігатимуться протягом п'яти років після завершення проєкту відповідно до Плану управління даними проєкту, після чого будуть видалені. Контролером даних для цього дослідження є Circular Bioeconomy Hub; з будь-яких питань щодо захисту даних або для реалізації ваших прав згідно з Загальним регламентом ЄС про захист даних (статті 15–22) звертайтеся до info@cbiohub.gr.

Співфінансується Європейським Союзом · Грантова угода № 101246545. Висловлені погляди належать виключно авторам і не обов'язково відображають погляди Європейського Союзу або EACEA.

Стурбованість зміною клімату та інформаційне середовище

1. Наскільки ви стурбовані зміною клімату?
- ◯ Зовсім не стурбований(а)
- ◯ Трохи стурбований(а)
- ◯ Помірно стурбований(а)
- ◯ Дуже стурбований(а)
- ◯ Надзвичайно стурбований(а)
- ◯ Не знаю / Волію не відповідати

2. Як часто ви стикаєтеся з інформацією про зміну клімату (у новинах, соціальних мережах, розмовах — будь-де)?
- ◯ Ніколи
- ◯ Рідко (один-два рази на місяць)
- ◯ Іноді (раз на тиждень)
- ◯ Часто (кілька разів на тиждень)
- ◯ Дуже часто (щодня або майже щодня)

3. Порівняно з тим, що було два роки тому, наскільки легко або складно вам відрізнити правдиву інформацію від хибної про зміну клімату?
- ◯ Сьогодні набагато легше
- ◯ Сьогодні трохи легше
- ◯ Приблизно так само
- ◯ Сьогодні трохи складніше
- ◯ Сьогодні набагато складніше
- ◯ Не знаю

Переконання щодо зміни клімату

4. Нижче наведено твердження щодо зміни клімату. Будь ласка, вкажіть, наскільки ви погоджуєтеся або не погоджуєтеся з кожним із них.
Тут не йдеться про те, які відповіді є «правильними» чи «неправильними» — нас цікавить особисто ваша думка.

-	Категорично не погоджуюся	Не погоджуюся	Ні погоджуюся, ні не погоджуюся	Погоджуюся	Цілком погоджуюся	Не знаю / Не маю думки
Холодні зими та нещодавні снігопади свідчать про те, що глобального потепління насправді не відбувається.	○	○	○	○	○	○
Підвищення рівня моря перебільшено засобами масової інформації та науковцями.	○	○	○	○	○	○
Клімат завжди змінювався природним чином; нинішні зміни не спричинені переважно діяльністю людини.	○	○	○	○	○	○
Більше CO_2 в атмосфері — це добре, адже рослинам він потрібен для росту.	○	○	○	○	○	○
Тепліший клімат, у підсумку, принесе моїй країні більше користі, ніж шкоди.	○	○	○	○	○	○
Зміна клімату переважно вплине на майбутні покоління та інші країни, а не на нас.	○	○	○	○	○	○
Відновлювані джерела енергії, такі як вітер і сонце, занадто ненадійні, щоб замінити викопне паливо.	○	○	○	○	○	○
Індивідуальні дії зі скорочення викидів марні, бо вони не дають реального результату.	○	○	○	○	○	○
Твердження, що майже всі вчені-кліматологи погоджуються щодо зумовленої людиною зміни клімату, є перебільшеним.	○	○	○	○	○	○
Кліматичні моделі помилялися так часто, що їхнім прогнозам не можна довіряти.	○	○	○	○	○	○
Спалювання викопного палива, такого як нафта, вугілля та газ, призводить до викидів CO_2, які зігрівають планету.	○	○	○	○	○	○
Переважна більшість учених-кліматологів погоджується з тим, що нинішня зміна клімату спричинена переважно діяльністю людини.	○	○	○	○	○	○

Розпізнавання оманливих аргументів

Нижче наведено три короткі приклади аргументів, які ви могли б зустріти в інтернеті або в новинах. Для кожного з них зазначте, чи вважаєте ви цей аргумент надійним.

«У лютому 2025 року рекордне похолодання охопило частини Європи з рясними снігопадами. Це доводить, що екстремальні погодні явища, ймовірно, ставатимуть частішими через зміну клімату.»

5. Наскільки надійним ви вважаєте цей аргумент?
Move the slider or accept the initial position.

Зовсім ненадійним — Дуже надійним

5
0 10

«Інженер на пенсії, який веде популярний YouTube-канал, стверджує, що зміна клімату спричинена переважно Сонцем, а вчені-кліматологи перебільшують. У нього понад мільйон підписників.»

6. Наскільки надійним ви вважаєте цей аргумент?
Move the slider or accept the initial position.

Зовсім ненадійним — Дуже надійним

5
0 10

«Дехто стверджує, що вчені перебільшують зміну клімату, бо отримують більше дослідницького фінансування, коли кажуть, що вона є небезпечною.»

7. Наскільки надійним ви вважаєте цей аргумент?

Move the slider or accept the initial position.

Зовсім ненадійним — Дуже надійним

5
0 10

Канали та контент, створений штучним інтелектом

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8. Де ви бачили, читали або чули інформацію про зміну клімату за останні 30 днів? (Виберіть усі підхожі варіанти.)

- [ ] Телебачення (новини або програми)
- [ ] Друковані або онлайн-газети та журнали
- [ ] Радіо або подкасти
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (раніше Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram або інші месенджери
- [ ] Пошукові системи (Google, Bing тощо)
- [ ] ШІ-чатботи (ChatGPT, Gemini, Copilot, Grok, MetaAI тощо)
- [ ] Інфлюенсери, автори контенту або влогери
- [ ] На роботі
- [ ] У школі / університеті
- [ ] Розмови з родиною, друзями або колегами
- [ ] Інше:
- [ ] За останні 30 днів я не зустрічав(ла) жодної інформації, пов'язаної з кліматом

9. Які канали є вашими основними джерелами інформації? (виберіть не більше 3)

- [ ] Телебачення (новини або програми)
- [ ] Друковані або онлайн-газети та журнали
- [ ] Радіо або подкасти
- [ ] Facebook
- [ ] Instagram
- [ ] TikTok
- [ ] YouTube
- [ ] X (раніше Twitter)
- [ ] LinkedIn
- [ ] WhatsApp, Viber, Telegram або інші месенджери
- [ ] Пошукові системи (Google, Bing тощо)
- [ ] ШІ-чатботи (ChatGPT, Gemini, Copilot, Grok, MetaAI тощо)
- [ ] Інфлюенсери, автори контенту або влогери
- [ ] На роботі
- [ ] У школі / університеті
- [ ] Розмови з родиною, друзями або колегами
- [ ] Інше:

10. Чи зустрічали ви за останні 12 місяців щось із наведеного нижче? (Виберіть усі підхожі варіанти.)

- [ ] Створені штучним інтелектом зображення екстремальних погодних явищ (наприклад, повеней, пожеж, ураганів), які виявилися підробкою
- [ ] Дипфейк-відео або аудіо політика, науковця чи публічної особи, що говорить про клімат
- [ ] Відповідь ШІ-чатбота про зміну клімату, яку ви вважали неточною або оманливою
- [ ] Онлайн-статтю про клімат, про яку ви згодом дізналися, що її було згенеровано штучним інтелектом і вона була неточною
- [ ] Я зустрічав(ла) контент про клімат, створений ШІ, але не впевнений(а), чи був він точним
- [ ] Я не зустрічав(ла) нічого з переліченого
- [ ] Я не впевнений(а)

11. Наскільки ви впевнені, що можете розпізнати контент про зміну клімату, створений штучним інтелектом (наприклад, підроблені зображення, дипфейк-відео або статті, написані ШІ)?

- ○ Зовсім не впевнений(а)
- ○ Трохи впевнений(а)
- ○ Помірно впевнений(а)
- ○ Дуже впевнений(а)
- ○ Надзвичайно впевнений(а)

12. Коли ви бачите інформацію про зміну клімату в соціальних мережах, як часто ви перевіряєте першоджерело (якщо воно є), перш ніж їй повірити?

- ○ Ніколи
- ○ Рідко
- ○ Іноді
- ○ Часто
- ○ Завжди
- ○ Я не користуюся соціальними мережами

13. Чи ви коли-небудь користувалися ШІ-чатботом (наприклад, ChatGPT, Gemini, Copilot, Grok або MetaAI), щоб запитати про зміну клімату?

- ○ Так
- ○ Ні
- ○ Я не впевнений(а)

Довіра та перевірка інформації

14. Наскільки ви довіряєте кожному з наведених нижче джерел, коли йдеться про інформацію про зміну клімату?

-	Зовсім не довіряю	Трохи довіряю	Помірно довіряю	Дуже довіряю	Цілком довіряю	Не знаю
Вчені-кліматологи та дослідницькі установи	○	○	○	○	○	○
Провідні засоби масової інформації (телебачення, газети)	○	○	○	○	○	○
Національний уряд і державні установи	○	○	○	○	○	○

	Зовсім не довіряю	Трохи довіряю	Помірно довіряю	Дуже довіряю	Цілком довіряю	Не знаю
Екологічні неурядові організації	○	○	○	○	○	○
Інфлюенсери в соціальних мережах та автори контенту	○	○	○	○	○	○
ШІ-чатботи (ChatGPT, Gemini, Copilot тощо)	○	○	○	○	○	○
Родина, друзі та колеги	○	○	○	○	○	○
Політичні лідери та партії	○	○	○	○	○	○

15. Як ви оцінили б власну здатність визначати, чи є те, що ви читаєте онлайн про зміну клімату, правдивим або хибним?

- ○ Дуже погано
- ○ Погано
- ○ Посередньо
- ○ Добре
- ○ Дуже добре

16. Чи робили ви за останні 30 днів щось із наведеного нижче через те, що побачили чи прочитали про зміну клімату? (Виберіть усі підхожі варіанти.)

- ☐ Перевірив(ла) першоджерело інформації
- ☐ Шукав(ла) перевірку фактів на спеціалізованому сайті
- ☐ Перевірив(ла) інформацію в іншому джерелі новин
- ☐ Запитав(ла) думку друга, члена сім'ї або колеги
- ☐ Поскаржився(лася) на допис або контент платформі
- ☐ Поділився(лася) ним без перевірки
- ☐ Проігнорував(ла) його
- ☐ Жодного з наведеного

Про вас

Ці останні запитання допомагають нам аналізувати результати для різних груп. Усі відповіді залишаються анонімними, і для будь-якого пункту ви можете обрати «Волію не відповідати».

17. Яка ваша країна проживання?

18. Скільки вам років?

- ○ 18–24
- ○ 25–34
- ○ 35–44
- ○ 45–54
- ○ 55–64
- ○ 65 або більше
- ○ Волію не відповідати

19. Як ви описуєте свою стать?

- ○ Жінка
- ○ Чоловік
- ○ Небінарна особа
- ○ Волію описати самостійно:
- ○ Волію не відповідати

20. Який найвищий рівень освіти ви здобули?

- ○ Початкова освіта або нижче
- ○ Базова середня освіта
- ○ Повна загальна середня освіта
- ○ Післясередня, не вища освіта
- ○ Короткий цикл вищої освіти
- ○ Ступінь бакалавра або еквівалентний рівень
- ○ Ступінь магістра або еквівалентний рівень
- ○ Докторський ступінь або еквівалентний рівень

21. Де ви проживаєте?

- ○ Велике місто (понад 100 000 мешканців)
- ○ Місто або невелике місто (від 10 000 до 100 000 мешканців)
- ○ Село або сільська місцевість (менше 10 000 мешканців)
- ○ Волію не відповідати

22. У політиці люди іноді описують себе за шкалою від «лівих» до «правих». Де б ви розмістили себе на шкалі від 1 (ліві) до 10 (праві)?
Move the slider or accept the initial position.

Ліві Праві

6

1 10

І наостанок...

23. Своїми словами: яке найбільш оманливе твердження про зміну клімату ви бачили нещодавно? (До 250 символів. Це запитання можна пропустити.)

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Annex D — Item-to-taxonomy mapping table

This annex records the authoritative mapping between the 23 items of the fielded instrument and the study's analytical frameworks, using the verbatim wording of the English master version as deployed on EUSurvey. The twelve statements of the belief battery are mapped to the claim families of the CARDS taxonomy at family level, with two consensus-affirming statements serving as reverse-keyed anchors that are excluded from the Climate Misconception Index and analysed as accuracy probes. The battery operationalises the families asymmetrically as fielded, with two items for C1, one for C2, three for C3, and two each for C4 and C5, and the family scores are interpreted accordingly. The three argument-evaluation scenarios are mapped to the FLICC framework at branch level, one each for the logical-fallacies, fake-experts and conspiracy-theories branches, with the first scenario deliberately pairing a flawed argument with a conclusion congenial to climate-concerned respondents; for all three scenarios the technically correct response is a low reliability rating. The full mapping, including response scales, item functions and keying, is provided in the accompanying table.

Item	Export column(s)	As-fielded wording (EN master)	Response scale (as fielded)	Framework / layer	Mapping and function	Keying
Q1	c0	How concerned are you about climate change?	5-point concern (Not at all … Extremely) + Don't know/Prefer not to say	Cross-cutting construct	Climate concern	—
Q2	c1	How often do you come across information about climate change (in news, on social media, in conversations, anywhere)?	5-point frequency (Never … Very often (every day or almost every day))	Cross-cutting construct	Issue salience / exposure frequency	—
Q3	c2	Compared with two years ago, how easy or difficult is it for you to distinguish true from false information about climate change?	5-point change (Much easier today … Much more difficult today) + Don't know	Cross-cutting construct	Perceived discernibility of climate information	—

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Q4 stem	—	The following statements have been made about climate change. Please indicate how much you agree or disagree with each one. It is not a matter of what the real (right or wrong) answers might be – we are interested in what you personally think.	(battery stem)	CARDS (Coan et al. 2021), family level	Belief battery: 10 misconception items + 2 reverse-keyed anchors	—
Q4a	c3	Cold winters and recent snowstorms show that global warming is not really happening.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C1 (it's not happening)	Cold-weather trend denial	Misconception (+)
Q4b	c4	Sea-level rise has been exaggerated by the media and by scientists.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C1 (it's not happening)	Impact denial via exaggeration claim	Misconception (+)
Q4c	c5	The climate has always changed naturally; current changes are not mainly caused by humans.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C2 (it's not us)	Natural-variability attribution (sole C2 indicator as fielded)	Misconception (+)
Q4d	c6	More CO_2 in the atmosphere is good because plants need it to grow.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C3 (it's not bad)	CO_2 fertilisation / greening benefit claim	Misconception (+)
Q4e	c7	A warmer climate will, on balance, bring more benefits than harm to my country.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C3 (it's not bad)	Net-benefit claim	Misconception (+)
Q4f	c8	Climate change will mostly affect future generations and other countries, not us.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C3 (it's not bad)	Psychological distancing of impacts	Misconception (+)

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Q4g	c9	Renewable energy sources such as wind and solar are too unreliable to replace fossil fuels.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C4 (solutions won't work)	Renewables-unreliability claim	Misconception (+)
Q4h	c10	Individual actions to reduce emissions are pointless because they don't make a real difference.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C4 (solutions won't work)	Individual-action futility claim	Misconception (+)
Q4i	c11	The claim that almost all climate scientists agree on human-caused climate change is exaggerated.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C5 (experts are unreliable)	Consensus denial	Misconception (+)
Q4j	c12	Climate models have been wrong so often that we cannot trust their predictions.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	CARDS C5 (experts are unreliable)	Model distrust	Misconception (+)
Q4k	c13	Burning fossil fuels such as oil, coal and gas releases CO_2 that warms the planet.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	Anchor (consensus science)	Causal-mechanism accuracy anchor	Reverse-keyed anchor (−); excluded from CMI
Q4l	c14	The large majority of climate scientists agree that recent climate change is mainly caused by human activity.	5-point agreement (Strongly disagree … Strongly agree) + Don't know/No opinion	Anchor (consensus science)	Perceived-consensus accuracy anchor	Reverse-keyed anchor (−); excluded from CMI
Q5	c15	"In February 2025, a record cold snap hit parts of Europe with heavy snowfall. This proves that extreme weather patterns are likely to happen more often due to climate change." How reliable do you find this argument?	0–10 perceived reliability (0 = not at all, 10 = completely reliable)	FLICC (Cook et al.), logical fallacies branch	Anecdote / hasty generalisation from a single weather event; flawed argument with a pro-consensus conclusion (congenial-conclusion probe)	Correct response = low rating

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Q6	c16	"A retired engineer with a popular YouTube channel argues that climate change is mostly caused by the sun, and that climate scientists are exaggerating. He has more than one million subscribers." How reliable do you find this argument?	0–10 perceived reliability (0 = not at all, 10 = completely reliable)	FLICC, fake experts branch	Fake expert, reinforced by appeal to popularity (subscriber count); contrarian conclusion	Correct response = low rating
Q7	c17	"Some people argue that scientists exaggerate climate change because they receive more research funding when they say it is dangerous." How reliable do you find this argument?	0–10 perceived reliability (0 = not at all, 10 = completely reliable)	FLICC, conspiracy theories branch	Vested-interest / funding conspiracy; contrarian conclusion	Correct response = low rating
Q8	c19–c36 (+c37 free text)	Where have you seen, read, or heard about climate change in the past 30 days? (Select all that apply.)	Binary (Yes/No per option); 16 named channels + Other + none-encountered option	Channel layer	30-day channel exposure repertoire	—
Q9	c39–c55	Which channels are your main sources of information? (choose max. 3)	Binary (Yes/No per option); 16 named channels + Other	Channel layer	Self-nominated main sources (max. 3)	—
Q10	c57–c63	In the past 12 months, have you encountered any of the following? (Select all that apply.)	Binary (Yes/No per option); 5 encounter types + none + not sure	AI-content layer	Encounters with (suspected) AI-generated climate content	—
Q11	c64	How confident are you that you could recognise content about climate change that has been generated by Artificial Intelligence (such as fake images, deepfake videos, or AI-written articles)?	5-point confidence (Not at all … Extremely)	AI-content layer	AI-detection self-efficacy	—

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Q12	c65	When you see climate-change information on social media, how often do you check the original source (if any) before believing it?	5-point frequency (Never … Always) + I don't use social media	Verification layer	Habitual source-checking	—
Q13	c66	Have you ever used an AI chatbot (such as ChatGPT, Gemini, Copilot, Grok, or MetaAI) to ask about climate change?	Yes / No / I am not sure	AI-content layer	Chatbot use for climate questions	—
Q13a	c67	How much did you trust the answer the chatbot gave you about climate change?	5-point trust + I don't remember (users only)	AI-content layer	Trust in the received chatbot answer (conditional item)	—
Q14	c68–c75	How much do you trust each of the following sources when it comes to information about climate change? (8 sources: climate scientists and research institutions; mainstream news media; national government and public institutions; environmental NGOs; social media influencers and content creators; AI chatbots; family, friends, and colleagues; political leaders and parties)	5-point trust (Do not trust at all … Trust completely) + Don't know	Trust layer	Source-trust battery	—
Q15	c76	How would you rate your own ability to judge whether something you read online about climate change is true or false?	5-point ability (Very poor … Very good)	Cross-cutting construct	Self-rated discernment ability	—

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Q16	c78–c85	In the past 30 days, have you done any of the following because of something you saw or read about climate change? (Select all that apply.)	Binary (Yes/No per option); 7 behaviours + none	Verification layer	Recent verification and response behaviours	—
Q17	c86	What is your country of residence?	Country list	Demographics	Country / sample assignment (5 partner countries + European layer)	—
Q18	c87	What is your age?	Age bands (18–24 … 65 or over; Prefer not to say)	Demographics	Age band (harmonised; see Annex B)	—
Q19	c88 (+c89 free text)	How do you describe your gender?	Man / Woman / Non-binary / Prefer to self-describe / Prefer not to say	Demographics	Gender	—
Q20	c90	What is the highest level of education you have completed?	ISCED 2011 levels 1–8 (8 categories)	Demographics (ISCED)	Educational attainment	—
Q21	c91	Where do you live?	Large city — densely populated area with more than 50,000 inhabitants / Smaller city, urban settlement or suburban area — intermediate-density area / Countryside or sparsely populated area / Prefer not to say	Demographics (DEGURBA-based)	Degree of urbanisation	—
Q22	c92	In politics, people sometimes describe themselves on a scale from "left" to "right". Where would you place yourself on a scale from 1 (left) to 10 (right)?	1–10 numeric (optional item)	Demographics	Political self-placement	—

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Q23	c93	In your own words: what is the most misleading claim about climate change you have seen recently? (Up to 250 characters. You can skip this question.)	Open text, max 250 characters	Qualitative layer	Open-text misinformation recall (coded per Annex codebook in T5.9 / coded corpus file)	—

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Annex E - Variable codebook

This annex documents every variable in the analytical dataset, comprising the coded survey variables, the coding conventions applied to them, and all derived variables used in the analysis. Three conventions apply throughout. "Don't know" and equivalent categories are never assigned scale values and are treated as missing on ordinal scales while being reported separately as substantive proportions. Composite and family scores are means of their coded constituent items, with the Climate Misconception Index computed only for respondents providing substantive responses to at least eight of its ten items. Derived repertoire, profile and count variables are constructed by deterministic rules from the binary multi-response indicators, as specified in the table. The exclusion and flagging variables implement the data-quality protocol of Section 4.4 and permit full reconstruction of the analytical sample from the raw export. The complete codebook is provided in the accompanying table and the coded qualitative corpus, with its sixteen-code scheme, accompanies this deliverable as a separate file.

Variable	Source column(s)	Label	Type / scale	Values and construction	Notes and conventions
country	c86	Analysis country grouping	Nominal	Greece, Portugal, Spain, Finland, Ukraine; all other EU residences → 'European layer'	Assignment rule; European layer (n=15) descriptive only, excluded from inferential cross-country comparisons
age	c87	Age band, harmonised	Ordinal (7 bands)	18-24, 25-34, 35-44, 45-54, 55-64, 65 or over, Prefer not to say	Variant labels from national renderings mapped deterministically: 25-33/25-35/25-34→25-34; 35-45→35-44; 45-55/45-53→45-54; 18-25→18-24 (16 cases)
gender	c88	Gender	Nominal	Man, Woman, Non-binary, Prefer to self-describe, Prefer not to say	Groups below n=30 not separately reported
edu3	c90	Education, collapsed	Ordinal (3 bands)	Low = ISCED 1-2; Medium = ISCED 3-4; High = ISCED 5-8	Collapse rule from 8 ISCED categories; low band below reporting threshold
deg3	c91	Degree of urbanisation, collapsed	Nominal (3 classes)	City (>50,000, densely populated), Town/suburb (intermediate), Rural (sparsely populated)	'Prefer not to say' → missing
polLR	c92	Left-right self-placement	Numeric 1-10	1 = left … 10 = right	Optional item; 8.9% missing; no imputation
concern_n	c0	Climate concern, coded	Ordinal 1-5	Not at all=1 … Extremely=5	'Don't know / Prefer not to say' → missing
freq_n	c1	Exposure frequency, coded	Ordinal 1-5	Never=1 … Very often=5	—
c3_n … c14_n	c3-c14	Belief battery, coded	Ordinal 1-5	Strongly disagree=1 … Strongly agree=5	'Don't know/No opinion' → missing on scale; analysed separately as % DK per item

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CMI	c3-c12 (coded)	Climate Misconception Index	Numeric 1-5	Mean of the 10 misconception items (c3_n-c12_n), higher = greater endorsement	Computed if ≥8 of 10 items substantive (95.2% of valid sample); anchors c13/c14 excluded; α=.889, ω=.892 (ML single-factor)
C1_score … C5_score	per Annex A mapping	CARDS family scores	Numeric 1-5	Mean of constituent coded items per family (C1: c3,c4; C2: c5; C3: c6,c7,c8; C4: c9,c10; C5: c11,c12)	C2 is a single-indicator measure (reliability not assessable)
CMI12	c3-c14 (coded)	12-item robustness index	Numeric 1-5	Mean of 10 misconception items + anchors reverse-scored (6−x)	Robustness specification only (α=.866)
c15, c16, c17	c15-c17	Argument reliability ratings (Q5-Q7)	Numeric 0-10	As recorded	Item non-response 7.8-12.0%; correct response = low rating for all three scenarios
exposure indicators	c19-c36	30-day channel exposure	Binary per channel	Yes/No per named channel; c36 = none encountered	—
main-source indicators	c39-c55	Main sources (max 3)	Binary per channel	Yes/No per named channel	—
any_trad	c19-c21	Any traditional-channel exposure	Binary	Yes on any of TV, press, radio/podcasts	Derived
any_social	c22-c28, c31	Any social-platform exposure	Binary	Yes on any of Facebook, Instagram, TikTok, YouTube, X, LinkedIn, messaging apps, influencers	Derived
n_channels	c19-c35	Exposure repertoire breadth	Count 0-17	Number of exposure channels marked Yes	Derived
profile	c39-c55	Main-source profile	Nominal (4)	Traditional only; Mixed social+traditional; Social only; Other/none	From main-source indicators, social/traditional sets as above
AI-encounter indicators	c57-c63	AI-content encounters (12 months)	Binary per type	5 encounter types + none + not sure	any_ai_enc derived as Yes on any of c57-c61
conf_ai_n	c64	AI-detection confidence, coded	Ordinal 1-5	Not at all=1 … Extremely=5	—
check_n	c65	Source-checking frequency, coded	Ordinal 1-5	Never=1 … Always=5	'I don't use social media' → missing; reported separately (5.0%)
chatbot use	c66	Chatbot use for climate	Nominal	Yes / No / I am not sure	—
chatbot trust	c67	Trust in received chatbot answer	Ordinal 1-5 (users only)	Did not trust at all=1 … Trusted completely=5	Conditional on c66=Yes; 'I don't remember' → missing
c68_n … c75_n	c68-c75	Source-trust battery, coded	Ordinal 1-5	Do not trust at all=1 … Trust completely=5	'Don't know' → missing on scale
ability_n	c76	Self-rated discernment, coded	Ordinal 1-5	Very poor=1 … Very good=5	—
verification indicators	c78-c85	Verification behaviours (30 days)	Binary per behaviour	7 behaviours + none	—
verif_count	c78-c82	Active-verification breadth	Count 0-5	Number of the five active behaviours (checked source, fact-check site,	Derived; sharing-unchecked, ignored, none not counted as active verification

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				cross-checked, asked someone, reported)	
flag_straightline	c3–c14, c68–c75	Single-battery straight-lining flag	Binary	Identical response across one full battery only	Flagged, retained (n=24)
excluded	protocol	Exclusion indicator	Binary	Abandonment (<50% of 28 core items; n=12) or substantive straight-lining on both batteries (n=5)	Total excluded 17/669; sensitivity analysis reported in Section 4.4
open-text code	c93	Qualitative primary-theme code	Nominal (16 codes)	C1, C2, C3, C4, C4W, C5, CONSP, POL, AI, DOOM, BMIT, BMED, BRESP, CONTR, OVERATTR, GREEN, NOCODE	Single primary theme, most-salient-claim rule; full coded corpus published as annex file

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