

The Experience Anchor: Climate Misinformation and Barriers to Sustainable Climate Action in Lithuania

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ABSTRACT:

Climate misinformation undermines public understanding and the political feasibility of climate action, posing a barrier to the Sustainable Development Goals. While research has mapped misinformation content and surveyed public attitudes, far less attention has been paid to how the experts who work against climate misinformation perceive the environment in which they operate. This exploratory study addresses that gap through eight semi-structured interviews with Lithuanian experts spanning academia, meteorology, science communication, professional fact-checking, municipal data infrastructure, and civil society advocacy, analysed using a hybrid inductive-deductive thematic analysis. Five cross-cutting themes emerged: the “experience anchor” that ties public belief to hyper-local sensation rather than to aggregated data; a structural speed asymmetry within the attention economy; the strategic exploitation of legitimate scientific uncertainty in place of outright denial; the segmentation of vulnerability along socio-economic and identity lines; and a tension between scientific authority and advocacy. The findings suggest that deficit-model communication is structurally disadvantaged and that equitable, locally grounded interventions are required. Given the single-country sample, the results are advanced as hypotheses for cross-national investigation.

Keywords: climate misinformation; science communication; disinformation; sustainable development; qualitative research; expert perceptions

1. Introduction

Climate misinformation continues to undermine public understanding of climate science and the political feasibility of climate action (Lewandowsky, 2021; Treen et al., 2020). Its persistence matters for sustainable development directly: the mitigation and adaptation measures that the Sustainable Development Goals require depend on a public that broadly trusts climate science and supports the policies built upon it. Where misinformation erodes that trust, it slows the collective action on which sustainability transitions rest. The character of the problem has also shifted. Outright denial of anthropogenic climate change is no longer the dominant rhetorical strategy; it has largely been displaced by a repertoire of more sophisticated tactics, sometimes termed “new climate denial” (Center for Countering Digital Hate [CCDH], 2024), in which the reality of warming is grudgingly conceded while its severity is minimised, the credibility of scientific institutions is contested, and the necessity or effectiveness of climate policy is denied (Capstick & Pidgeon, 2014; Coan et al., 2021).

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Scholarship on climate misinformation has advanced along two main lines. The first maps the content and infrastructure of misinformation and of the tools built to counter it, characterising narratives, actors, and platforms. The second surveys public audiences, measuring belief, scepticism, and susceptibility across populations. Both are valuable, yet both leave a perspective comparatively underexamined: that of the experts who work directly against climate misinformation. Researchers, meteorologists, science communicators, fact-checkers, data-infrastructure managers, and civil society advocates each encounter the misinformation environment from a distinct professional vantage point, and their situated accounts of how that environment behaves, and why standard responses succeed or fail, are a source of practical knowledge that population surveys and content analyses cannot supply.

This article reports an exploratory qualitative study of those expert perceptions. It draws on eight semi-structured interviews conducted in Lithuania with experts spanning the science-communication-policy interface, and asks a single guiding question: how do experts working in or adjacent to climate communication understand the climate misinformation environment, and what do their accounts imply for intervention? The contribution is conceptual rather than confirmatory. We identify five cross-cutting themes that recur across professional positions, and we develop in particular the theme with the strongest practical implications, the “experience anchor,” which describes how public belief is tied more firmly to hyper-local sensation than to aggregated scientific data. Because the study rests on a single national context and a small expert sample, its findings are offered as hypotheses for cross-national investigation rather than as generalisable conclusions. This study forms part of a larger research project on climate misinformation and complements a companion mapping of the digital tools built to counter it (Skaržauskienė & Mačiulienė, 2026) by turning instead to how experts experience the problem those tools are meant to address.

2. Conceptual background

Climate misinformation is increasingly understood not as a collection of discrete false claims but as a structural feature of a transformed information environment. The weakening of institutional gatekeeping and the rise of algorithmically curated social media have created conditions in which emotionally intense, contradictory, and novel content circulates faster and more widely than careful exposition (Lewandowsky et al., 2017; Treen et al., 2020). Within this environment the dominant rhetorical strategy has shifted. Where earlier contrarianism disputed the existence of anthropogenic warming, the contemporary repertoire more often concedes the phenomenon while obstructing the response, a shift documented both in the discourse-analytic literature and in computational classifications of contrarian claims (Coan et al., 2021; Supran & Oreskes, 2021).

This shift is captured most influentially in Lamb et al.’s (2020) typology of “discourses of climate delay,” which groups obstructive argumentation into strategies that redirect responsibility, promote non-transformative solutions, emphasise the downsides of action, or surrender to climate change. A defining feature of these discourses is that they frequently contain a kernel of truth, building on legitimate uncertainties or genuine trade-offs, which makes them harder to counter than outright fabrication and more

resistant to simple factual correction. This conceptual move, from denial to delay, is central to the present study, because several of the themes reported below describe precisely how experts encounter delay-type argumentation in practice rather than wholesale denial.

Scepticism is, moreover, heterogeneous. Capstick and Pidgeon (2014) distinguish epistemic scepticism, doubt about the science itself, from response scepticism, doubt about the efficacy or desirability of action, and it is the latter that increasingly characterises contemporary climate misinformation (Whitmarsh, 2011). Understanding why such content persists requires attention to the psychology of belief. Ecker *et al.* (2022) synthesise the cognitive, social, and affective drivers of misinformation belief and document the continued influence effect, whereby corrected misinformation continues to shape reasoning after retraction. Their review underlines a point that recurs throughout the present findings: supplying accurate information does not reliably displace misinformation, because belief is sustained by factors that simple correction leaves untouched.

A substantial body of evidence shows that personal experience shapes climate belief. Direct encounters with unusual heat, flooding, and extreme weather are associated with stronger climate concern and belief, frequently more strongly than the communication of statistical trends (Demski *et al.*, 2017; Egan & Mullin, 2012; Myers *et al.*, 2013; Spence *et al.*, 2011). The mechanisms are partly experiential and partly motivated, and the effect is neither uniform nor permanent, but the broad association between proximal experience and belief is well established. This literature has largely treated personal experience as an input to genuine belief formation, and therefore as an opportunity for communicators rather than as a vulnerability that adversaries might exploit, an emphasis the present study revisits.

A parallel strand concerns how misinformation can be resisted. Inoculation theory holds that pre-emptively exposing audiences to weakened forms of misleading arguments, together with refutations, confers resistance to later persuasion; experimental and field work has extended this logic to climate misinformation specifically and to the prebunking of recurrent narratives (Cook *et al.*, 2017; Roozenbeek & van der Linden, 2019; van der Linden *et al.*, 2017). Recent work has begun to address the scalability of the approach, showing that short technique-based inoculation can improve resilience to manipulation at the population level (Roozenbeek *et al.*, 2022), and reviews now treat prebunking and debunking as complementary tools with distinct strengths (Ecker *et al.*, 2022; van der Linden, 2024). A further consideration is the credibility of the messenger: determinants of climate belief include trust in scientific institutions and the perceived neutrality of those who speak for the science, and the boundary between scientific authority and political advocacy is a recurrent point of contention (Boykoff, 2011; Hornsey *et al.*, 2016).

These literatures bear directly on sustainable development. The Sustainable Development Goals, and the mitigation and adaptation measures they entail, depend on broad public trust in climate science and on the political feasibility of action. By eroding that trust and amplifying response scepticism, climate misinformation functions as a barrier to sustainability transitions rather than as a purely communicative nuisance, undermining the shared body of knowledge on which policy-relevant debate depends (Lamb *et al.*, 2020; Lewandowsky *et al.*, 2023; Treen *et al.*, 2020). Yet the literatures sketched here, on the changing forms of misinformation, the psychology of belief, the experiential basis of climate attitudes, inoculation, and messenger credibility, are typically

pursued separately and largely from the standpoint of publics rather than practitioners. The present study brings them into contact through the accounts of experts who must navigate all of them simultaneously, and its contribution lies in the interaction among proximal experience, the attention economy, the exploitation of uncertainty, differential vulnerability, and the authority-advocacy boundary.

3. Methods

The study adopts an exploratory, qualitative design based on semi-structured interviews. Semi-structured interviewing is well suited to research that seeks to surface participants' conceptual frameworks and professional practices, combining comparable coverage of core topics with the flexibility to follow each participant's reasoning (Kvale & Brinkmann, 2015; Patton, 2015). The aim is interpretive rather than confirmatory: to understand how experts make sense of the climate misinformation environment, not to test predefined hypotheses.

Eight interviews were completed in Lithuania between September 2025 and April 2026, in person or online. The sample frame was defined by professional engagement with climate misinformation rather than by lay exposure, and a purposive strategy, supplemented by snowball recommendations, was used to span distinct professional positions: two political scientists, one specialising in conspiracy theories and disinformation and one in online communities and digital-media dynamics, a geographic-information-systems and ecosystem-services researcher, a meteorologist and public-facing forecaster, a sociology-of-communication and climate-communication researcher, a municipal data and project manager, a professional fact-checker working within the European Fact-Checking Standards Network ecosystem, and a climate-focused civil society advocate. Inclusion required current or recent professional responsibility for producing, communicating, verifying, or managing climate-relevant information for public audiences; no participant was recruited on the basis of lay exposure alone. Interviews lasted between 45 and 90 minutes. The interview guide comprised seven thematic blocks covering background, the definition and salience of climate disinformation, its sources and audiences, professional response practices, the role of artificial intelligence, familiarity with spatial tooling, and unmet needs and proposed solutions.

Interviews were audio-recorded with consent, transcribed verbatim, and de-identified at source, with organisational and personal identifiers replaced by placeholders before transcripts left the research team. Analysis followed a hybrid inductive-deductive thematic analysis (Braun & Clarke, 2006, 2021) conducted in three passes: a deductive pass coding transcripts against the categories embedded in the interview guide; an inductive pass that refined and extended these with emergent sub-codes; and a clustering pass that grouped codes into higher-order themes. Coding was performed by the first author, with codes and candidate themes reviewed and challenged by the second and third authors in successive analysis meetings. Consistent with the reflexive thematic analysis tradition, saturation was not used as a criterion of adequacy (Braun & Clarke, 2021); instead, the coverage matrix served as the transparency instrument for thematic coverage, and themes are reported only where they recurred across multiple professional positions, with single-position observations flagged as such in the findings. A coverage matrix recorded, for each

code, the number of distinct interviews in which it appeared, allowing themes to be reported with attention to their breadth across the sample. The study received ethical approval from the Kaunas University of Technology Research Ethics Committee, and personal data were processed in compliance with the General Data Protection Regulation.

Three limitations bound the claims that follow and should be kept in view throughout. First, the sample is small ($n = 8$). Second, all interviews were conducted in a single national context and coded by a single team, so the analytical lens is shaped by Lithuanian and broader Central European research traditions. Third, this is the first round of a programme designed to extend to further national contexts. The themes reported below are consistent enough across the professional positions covered to be analytically informative, but they are advanced as exploratory propositions for cross-national testing rather than as established findings. The likely effects of these limitations deserve explicit statement. The small sample constrains transferability: the themes describe how this set of professionals perceives the Lithuanian environment, and they may not exhaust the perceptions present even within Lithuania, let alone in other national contexts. The professional diversity of the sample compensates in breadth for what it lacks in depth: because each position was occupied by one or two participants, convergence across dissimilar vantage points strengthens confidence that a theme reflects the shared environment rather than an occupational idiosyncrasy, but it cannot substitute for within-group replication, and themes voiced from a single position (noted where relevant in Section 4) remain correspondingly weaker. Researcher positionality also shapes the analysis: the authors work within the same national science-communication field as several participants, which aids interpretive access to local references but risks over-recognising familiar framings; the deductive first pass tied to the interview guide further predisposed the coding toward categories the team already considered salient, a tendency the inductive second pass was designed to counteract but cannot eliminate. Throughout the findings, participants are identified by anonymised codes (K01 to K08).

4. Findings

Five themes recurred across the eight interviews. They describe conceptual and structural features of the climate misinformation environment as experienced by experts working at the interface of science, communication, policy, civic media, and data infrastructure. The first theme is developed at greatest length because it carried the strongest and most consistent implications across the sample.

4.1. The experience anchor: personal reality versus aggregated data

The most consistent theme across the interviews, and the one with the clearest implications for both communication and intervention design, was that public belief in climate science is anchored more firmly in personal, hyper-local sensation than in aggregated scientific evidence. Participants described public receptivity to climate information as rising sharply when people encounter undeniable local consequences, and falling away when claims remain abstract. As one participant put it, *“once the situation worsens and people start to feel it on their own skin, and consequences for their own families, then they start to say, ‘Oh, I do not like this. We need to do something about it’”* (K01). The same participant argued

that locally legible issues function as more effective entry points than direct climate framing: there are ways into climate questions without “highbrow” abstraction, beginning instead with “very low things that people feel, see, and they agree with,” such as the invasive slugs now troubling Lithuanian farmers and gardeners, a problem nobody would dispute (K01).

That experiential proximity shapes climate belief is, in itself, an established finding. A substantial body of work has shown that personal experience of local temperature anomalies, unusual weather, and extreme events is associated with stronger climate concern and belief, often more powerfully than the communication of statistical trends (Demski et al., 2017; Egan & Mullin, 2012; Myers et al., 2013; Spence et al., 2011). The contribution of the present material is not to restate that association but to show how experts working against misinformation reinterpret it as a structural vulnerability, that is, as a surface that disinformation actively exploits, rather than merely as a lever that careful communicators might pull. The relation of this material to the existing literature can be stated precisely. It confirms the established association between proximal experience and climate belief (Demski et al., 2017; Egan & Mullin, 2012). It extends that literature by relocating the effect from the psychology of belief formation to the strategy of disinformation actors: where prior work treats experience as an input that communicators may harness, the expert accounts describe an adversary harnessing the same channel, which connects the experiential literature to work on the continued influence of misinformation and motivated cognition (Ecker et al., 2022). And it stands in tension with the predominant framing of experiential proximity as an asset for climate communication: if the local-experience channel is symmetric, available to corrodors of belief as much as to builders of it, then recommendations to lean on personal experience require a defensive complement that the communication literature has not yet specified.

Two consequences, both largely absent from the standard experiential-belief literature, emerged. The first is what participants described as a disconnect between modelled data and lived perception. When a model indicates precipitation while a citizen observes clear skies in their own village, the scientific output is not simply discounted; it risks being read as fabricated. One meteorologist made the spatial-resolution stakes explicit: *“in our study, we used 16 model grids for Lithuania. It would be very interesting to see a ‘layer’ that visualizes how false information about extreme phenomena spreads in specific regions”* (K04). On this account, coarse spatial resolution does not merely limit analytical precision; it widens the very gap between aggregated science and hyper-local experience in which distrust takes root.

The second consequence is the deliberate weaponisation of local weather fluctuation. Where the experiential literature treats personal experience largely as an input to genuine belief formation, participants described disinformation actors inverting it: isolated cold snaps, late frosts, or inaccurate short-term forecasts are presented as disproof of long-term warming. As one participant observed, *“we often see any period of stronger winter cold presented as ‘proof’ that global warming is not happening. Conversely, every inaccurate long-term forecast is exploited to claim that scientists ‘know nothing’”* (K04). The same experiential channel that can build belief is thus available, in adversarial hands, to corrode it.

Read together, these accounts reframe the proximal-experience effect as contested terrain rather than a one-directional asset. The implication participants drew was not that

communicators should supply more or louder data, but that the local scale is where both trust and its exploitation are decided, and that interventions must therefore operate at the resolution of lived experience rather than of national aggregates. This is advanced as an exploratory proposition that the cross-national rounds are intended to test.

4.2. The attention economy and the speed asymmetry

Five of the eight interviews described an information environment in which traditional institutional filters have weakened and social-media algorithms reward emotional intensity, contradiction, and dramatisation. One participant characterised the condition as a “*neomedieval*” age in which “gossip, accusations and all kinds of information, counter information, misinformation can be easily used, represented in small pieces, in misleading form” (K01). Another, drawing on research into online communities, described “subverted post-publics, where the traditional fact-based public space is fragmented and users eventually stop believing in anything” (K03).

The most operationally consequential element of this theme was a structural speed asymmetry between misinformation and response. A misleading claim can spread in seconds, whereas a fact-check or scientific explanation takes hours or days to produce and must then contend with the algorithm to reach the same audience. As the fact-checker put it, “*a misleading claim spreads in seconds; a fact-check takes hours or days to research, write, and publish, and then it has to fight the algorithm just to reach the same audience*” (K07). The same dynamic was reported from a meteorological vantage point: “we lack speed and resources; disinformation spreads instantly while scientific explanations take time” (K04).

Two practical responses recurred. The first was strategic disengagement, declining to like, comment on, or share misleading content so as not to signal its relevance to recommender systems (K05). The second was a shift in goal from rebuttal toward audience-side resilience, including the prebunking of recurrent narratives before they circulate, consistent with the inoculation literature (Cook et al., 2017; van der Linden et al., 2017). The asymmetry, in other words, was not treated as a problem to be out-argued but as a structural condition requiring different response logics, a point that returns in the discussion. Two caveats bound this theme. First, the material documents practitioner perception of the asymmetry, not the asymmetry itself; the perception is consistent with platform-level evidence that false content diffuses faster and farther than corrections (Vosoughi et al., 2018), but the present interviews cannot demonstrate that dynamic for Lithuanian information conditions. Second, the theme is empirically testable. Observable indicators would include the lag between the first circulation of a misleading climate claim and the publication of its correction; the ratio of the reach of the claim to the reach of the correction on the same platform; and, for the intervention comparison, pre-registered designs exposing matched Lithuanian samples to prebunking of recurrent delay narratives versus post-hoc correction, with belief accuracy, sharing intentions, and persistence at follow-up as outcomes. Whether prebunking or audience resilience outperforms reactive correction under Lithuanian conditions is, on this design, an answerable question rather than an assumption.

4.3. Strategic exploitation of scientific uncertainty

Four interviews emphasised that contemporary climate disinformation targets the legitimate uncertainty inherent in scientific forecasting rather than denying climate change outright. Two patterns were described in detail. The first is the cherry-picking of extremes, in which single scenarios are extracted from complex models and presented as definitive predictions. From within operational meteorology: *“I constantly encounter cherry-picking. For example, our research showed that seasonal precipitation forecasts are quite reliable, but temperature anomalies are harder to predict; disinformation spreaders use this by saying, ‘Look, they admit themselves they are wrong,’ while omitting the part about how forecasts are constantly being improved”* (K04).

The second pattern is the absence of what one participant called “clothed” data: scientists provide raw numerical results but often lack the resources, time, or training to package them in formats robust enough to withstand viral counter-claims. *“We provide the numbers, but we do not always know how to ‘clothe’ them in the raiment of bulletproof information”* (K04). The fact-checker reinforced the point: “contemporary climate misinformation is rarely outright fabrication. It is selective framing, amplification of edge cases, manufactured doubt, and the recycling of legitimate scientific uncertainty as if it were grounds for inaction” (K07). The implication participants drew is that simply exposing validated data is insufficient; the predictable forms of selective framing must be anticipated and pre-empted, an inoculation logic operationalised in practice as prebunking (Cook et al., 2017; Roozenbeek & van der Linden, 2019).

4.4. Segmented vulnerability and identity

Susceptibility to climate disinformation was described as unevenly distributed, and this was the most broadly shared theme in the sample, raised in six of the eight interviews (K01, K02, K03, K05, K07, K08). Participants foregrounded different segments. Older audiences in rural areas with lower scientific literacy were one: “older people are more vulnerable because their scientific literacy and capability to understand complex scientific facts are lower; people in rural areas also have fewer opportunities to discuss these topics” (K05). Occupational groups whose livelihoods are perceived to be threatened by climate policy were another, with farmers’ resistance to the European Green Deal cited as an example (K05). A third was online communities organised around oppositional identity, where climate denial clusters with other anti-institutional positions (K03).

A recurring observation was that scientific argumentation performs poorly with audiences whose social identity is built on opposition to mainstream institutions, because *“whatever a person might say gets dismissed because it is from the opposing party, from some official that represents an institution that cannot be trusted”* (K01). Strategies that rely on “more facts, more loudly” were judged ineffective in these segments; participants pointed instead to indirect entry points, the “islands of evidence that nobody disputes” noted in Section 4.1. The civil society advocate added an equity dimension that is consequential for sustainable development: vulnerability to disinformation tends to track the same socio-economic and identity lines as vulnerability to climate impacts themselves, so the two correlate and compound (K08). The evidentiary status of these claims should be kept distinct from their content. What the interviews establish is that experts in different professional positions perceive vulnerability as segmented along these lines; they do not establish the population-level prevalence of that vulnerability. As cited above, the claims about older and rural audiences and about farmers and the Green Deal rest on a single interview (K05), the

oppositional-identity dynamic on two (K01, K03), and the equity observation on one (K08). These attributions are professional observations from practitioners whose work exposes them to the relevant audiences, which gives them evidential weight as informed testimony, but population-level confirmation would require representative survey evidence that this study does not provide.

4.5. Authority, advocacy, and the stigmatisation of civil society

The final theme concerns the boundary between scientific authority and advocacy. One participant articulated a reputational concern: when scientists adopt a “passionate agenda,” their factual claims become easier to dismiss as ideological, because “*once you become an activist, there are counteract activists that question it*” (K01). A second participant framed the issue constitutively rather than reputationally: “the scientist’s job is not to change policy; the scientist’s job is to present scientific facts and truths using scientific methods. Going public is an entirely different domain” (K02). The two positions do not reduce to one another, but both imply that tools and communications occupying the science-policy boundary must reckon with how perceived neutrality and perceived inaction trade off against each other, a dynamic sharpened by documented campaigns to discredit science and scientists (Boykoff, 2011; Hornsey *et al.*, 2016; Lewandowsky *et al.*, 2023).

The civil society advocate extended this into an explicitly political register, situating disinformation within a broader contest over civic space and pointing to pre-summit crackdowns on independent groups around recent Conferences of the Parties. This part of the analysis rests on a single interview and is reported with corresponding caution, but it reframes the authority-advocacy concern at the level of the operating environment for organised civil society rather than the individual scientist, and suggests that interventions against misinformation must themselves avoid being read as partisan instruments (K08).

5. Discussion

Taken together, the five themes describe a climate misinformation environment that is poorly matched to the deficit model of communication, the assumption that supplying more accurate information will correct false belief. Each theme identifies a way in which more information, supplied in the usual manner, fails to land: it is anchored against hyper-local experience that may contradict it (4.1); it is outpaced by faster and more emotionally resonant content (4.2); it is selectively re-framed and its own uncertainties turned against it (4.3); it is dismissed by the audiences most exposed to misinformation precisely because of who is seen to supply it (4.4); and it is vulnerable to being recoded as advocacy and therefore as partisan (4.5). The convergence of independent professional vantage points on this conclusion is the study’s central observation. Its significance for this journal is that each failure mode is also a brake on sustainability: where misinformation depresses public belief and policy support, it slows precisely the mitigation and adaptation measures that the Sustainable Development Goals require, so the gap between accurate climate information and public acceptance is a sustainability problem and not only a communicative one.

The five themes can be read directly as barriers to sustainable climate action. The experience anchor (4.1) means that national or global climate data, the form in which sustainability targets are usually expressed, is the form least able to move local publics, so support for transition measures has to be built at the scale of lived experience. The speed asymmetry (4.2) means that obstructive narratives reach citizens faster than the evidence base for adaptation and mitigation, giving delay a structural head start. The exploitation of uncertainty (4.3) converts the legitimate error bars of climate projection, which adaptation planning depends on, into grounds for inaction, the central move of contemporary discourses of climate delay (Lamb et al., 2020; Supran & Oreskes, 2021). The segmentation of vulnerability (4.4) concentrates resistance in groups whose livelihoods the transition most affects, such as farmers facing green-transition measures, making misinformation a distributional obstacle to a just transition. And the authority-advocacy tension (4.5) erodes trust in the scientific institutions on which sustainability governance relies (Lewandowsky et al., 2023). Read this way, countering climate misinformation is not adjacent to sustainability policy but a precondition for it.

Several implications for sustainability policy and practice follow. First, the local scale matters more than its treatment as a presentational detail suggests. If belief and its exploitation are decided at the resolution of lived experience, then efforts to build public support for transition measures, including the spatial tools that several participants called for, should foreground locally recognisable phenomena and meet the proximal-experience effect on its own ground rather than countering it with the national aggregates in which sustainability targets are framed. Second, response logics should shift from rebuttal toward resilience: given the speed asymmetry, prebunking recurrent delay narratives and building audience-side resistance are likely to protect support for climate policy more durably than case-by-case correction (Cook et al., 2017; Roozenbeek & van der Linden, 2019; van der Linden, 2024). Third, sustainability communication should be differentiated by audience rather than uniform, since the segments whose cooperation a just transition most requires respond least well to direct factual confrontation.

The equity dimension deserves particular emphasis in a sustainable development context. The observation that vulnerability to disinformation and vulnerability to climate impacts track the same socio-economic and identity lines implies that misinformation is not only an epistemic problem but a distributional one: the communities least served by accurate, locally relevant climate information may also be those most exposed to climate harm. This aligns the design of counter-misinformation interventions with the leave-no-one-behind principle of the Sustainable Development Goals, and suggests that equity should be treated as a design criterion rather than an afterthought.

These implications are hypotheses, not conclusions. They rest on eight interviews in one country, analysed by one team, and several themes (notably the civic-space and equity observations) rest on single interviews within that sample. The contribution is to articulate, from the situated knowledge of experts, a coherent account of why standard responses underperform, and to specify propositions precise enough to be tested. The most distinctive of these, the reframing of the proximal-experience effect as an exploited vulnerability rather than a communicative lever, is also the most readily transferable to other national contexts, where the balance between experience as a builder and as a corroder of belief may differ with climate exposure, media systems, and political culture.

6. Conclusion

This exploratory study examined how experts working in and around climate communication perceive the climate misinformation environment, drawing on eight semi-structured interviews in Lithuania. Five cross-cutting themes emerged, of which the “experience anchor,” the tying of public belief to hyper-local sensation rather than to aggregated data, carried the strongest implications and constitutes the study’s principal contribution: experts reinterpret a well-established experiential-belief effect as a structural vulnerability that disinformation actively exploits. Across all five themes, the accounts converge on the structural disadvantage of deficit-model communication and on the need for locally grounded, resilience-oriented, and equity-aware responses that are consequential for sustainable development. Because the evidence rests on a single national context and a small sample, the findings are advanced as hypotheses for cross-national investigation. Subsequent rounds of fieldwork in further countries will test whether these themes, and especially the experience anchor, recur and how they are inflected by differing climatic, media, and political conditions. The propositions can be stated in testable form. H1: in national contexts with higher direct climatic exposure, the experience anchor operates more strongly as a builder of belief and offers less surface for exploitation than in low-exposure contexts such as Lithuania. H2: the speed asymmetry, measured as the lag and reach ratio between misleading claims and their corrections, is greater in media systems with weaker public-service broadcasting and lower fact-checking capacity. H3: prebunking recurrent delay narratives outperforms reactive correction on belief accuracy and policy support, with the advantage largest in audience segments defined by oppositional identity. Country selection for subsequent rounds will follow a most-different logic on three dimensions: climatic exposure (high versus low direct impact), media system (strong versus weak institutional gatekeeping), and political culture (consensual versus polarised climate politics), so that recurrence of the themes across dissimilar settings would indicate transferability. Outcomes will be measured through the indicators specified in Section 4.2 together with standard survey instruments for climate belief, institutional trust, and policy support, allowing intervention effectiveness to be compared across contexts.

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References

- Boykoff, M. T. (2011). *Who speaks for the climate? Making sense of media reporting on climate change*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511978586>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. Sage.

- Capstick, S. B., & Pidgeon, N. F. (2014). What is climate change scepticism? Examination of the concept using a mixed methods study of the UK public. *Global Environmental Change*, 24, 389–401. <https://doi.org/10.1016/j.gloenvcha.2013.08.012>
- Center for Countering Digital Hate. (2024). *The new climate denial: How social media platforms and content producers profit from misinformation about the climate crisis*. CCDH.
- Coan, T. G., Boussalis, C., Cook, J., & Nanko, M. O. (2021). Computer-assisted classification of contrarian claims about climate change. *Scientific Reports*, 11, 22320. <https://doi.org/10.1038/s41598-021-01714-4>
- Cook, J., Lewandowsky, S., & Ecker, U. K. H. (2017). Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PLOS ONE*, 12(5), e0175799. <https://doi.org/10.1371/journal.pone.0175799>
- Demski, C., Capstick, S., Pidgeon, N., Sposato, R. G., & Spence, A. (2017). Experience of extreme weather affects climate change mitigation and adaptation responses. *Climatic Change*, 140(2), 149–164. <https://doi.org/10.1007/s10584-016-1837-4>
- Ecker, U. K. H., Lewandowsky, S., Cook, J., Schmid, P., Fazio, L. K., Brashier, N., Kendeou, P., Vraga, E. K., & Amazeen, M. A. (2022). The psychological drivers of misinformation belief and its resistance to correction. *Nature Reviews Psychology*, 1(1), 13–29. <https://doi.org/10.1038/s44159-021-00006-y>
- Egan, P. J., & Mullin, M. (2012). Turning personal experience into political attitudes: The effect of local weather on Americans' perceptions about global warming. *The Journal of Politics*, 74(3), 796–809. <https://doi.org/10.1017/S0022381612000448>
- Hornsey, M. J., Harris, E. A., Bain, P. G., & Fielding, K. S. (2016). Meta-analyses of the determinants and outcomes of belief in climate change. *Nature Climate Change*, 6(6), 622–626. <https://doi.org/10.1038/nclimate2943>
- Kvale, S., & Brinkmann, S. (2015). *InterViews: Learning the craft of qualitative research interviewing* (3rd ed.). Sage.
- Lamb, W. F., Mattioli, G., Levi, S., Roberts, J. T., Capstick, S., Creutzig, F., Minx, J. C., Müller-Hansen, F., Culhane, T., & Steinberger, J. K. (2020). Discourses of climate delay. *Global Sustainability*, 3, e17. <https://doi.org/10.1017/sus.2020.13>
- Lewandowsky, S. (2021). Climate change disinformation and how to combat it. *Annual Review of Public Health*, 42, 1–21. <https://doi.org/10.1146/annurev-publhealth-090419-102409>
- Lewandowsky, S., Ecker, U. K. H., & Cook, J. (2017). Beyond misinformation: Understanding and coping with the “post-truth” era. *Journal of Applied Research in Memory and Cognition*, 6(4), 353–369. <https://doi.org/10.1016/j.jarmac.2017.07.008>
- Lewandowsky, S., Ecker, U. K. H., Cook, J., van der Linden, S., Roozenbeek, J., & Oreskes, N. (2023). Misinformation and the epistemic integrity of democracy. *Current Opinion in Psychology*, 54, 101711. <https://doi.org/10.1016/j.copsyc.2023.101711>
- Myers, T. A., Maibach, E. W., Roser-Renouf, C., Akerlof, K., & Leiserowitz, A. A. (2013). The relationship between personal experience and belief in the reality of global warming. *Nature Climate Change*, 3(4), 343–347. <https://doi.org/10.1038/nclimate1754>
- Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Sage.
- Roozenbeek, J., & van der Linden, S. (2019). Fake news game confers psychological resistance against online misinformation. *Palgrave Communications*, 5, 65. <https://doi.org/10.1057/s41599-019-0279-9>
- Roozenbeek, J., van der Linden, S., Goldberg, B., Rathje, S., & Lewandowsky, S. (2022). Psychological inoculation improves resilience against misinformation on social media. *Science Advances*, 8(34), eabo6254. <https://doi.org/10.1126/sciadv.abo6254>
- Skaržauskienė, A., & Mačiulienė, M. (2026). Whose climate truth? Mapping the defensive infrastructure of climate misinformation platforms [Manuscript in preparation]. Kaunas University of Technology.
- Spence, A., Poortinga, W., Butler, C., & Pidgeon, N. F. (2011). Perceptions of climate change and willingness to save energy related to flood experience. *Nature Climate Change*, 1(1), 46–49. <https://doi.org/10.1038/nclimate1059>
- Supran, G., & Oreskes, N. (2021). Rhetoric and frame analysis of ExxonMobil's climate change communications. *One Earth*, 4(5), 696–719. <https://doi.org/10.1016/j.oneear.2021.04.014>
- Treen, K. M. d'I., Williams, H. T. P., & O'Neill, S. J. (2020). Online misinformation about climate change. *WIREs Climate Change*, 11(5), e665. <https://doi.org/10.1002/wcc.665>
- van der Linden, S. (2024). Countering misinformation through psychological inoculation. *Advances in Experimental Social Psychology*, 69, 1–58. <https://doi.org/10.1016/bs.aesp.2023.11.001>

- van der Linden, S., Leiserowitz, A., Rosenthal, S., & Maibach, E. (2017). Inoculating the public against misinformation about climate change. *Global Challenges*, 1(2), 1600008. <https://doi.org/10.1002/gch2.201600008>
- Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science*, 359(6380), 1146–1151. <https://doi.org/10.1126/science.aap9559>
- Whitmarsh, L. (2011). Scepticism and uncertainty about climate change: Dimensions, determinants and change over time. *Global Environmental Change*, 21(2), 690–700. <https://doi.org/10.1016/j.gloenvcha.2011.01.016>