NOTE

APRIL 2026

Climate disinformation

as a rising challenge for news media

A comparative analysis of Brazil, Spain, France and Poland

data for good

QUOTA CLIMAT

SCIENCE FEEDBACK

About

This report is produced by the NGOs QuotaClimat, Science Feedback and Data For Good, as part of a collaboration aimed at semi-automatically detecting climate misinformation in the audiovisual media. The project's ambition is to produce reliable, benchmark and open-source data on the presence of misinformation in the news media of the countries studied. The methodology is designed to be replicable, in collaboration with fact-checking organisations specialising in the national context under study. The analysis of data from Brazil, Spain, France and Poland was carried out by the organisations Lupa, Maldita, Science Feedback and Demagog respectively.

In France, the results are available on the Observatoire des Médias sur l'Écologie to enable users to interact with and explore the data.

This analysis focuses solely on disinformation regarding climate science and climate action, and does not cover all environmental issues, notably the crises relating to biodiversity or natural resources.

It covers news programmes on the following channels:
— Spain: RTVE La 1, RTVE 24h, Antena 3, Cuatro News, Telecinco News, La Sexta News
— France: TF1, France 2, France 3 Ile de France, M6, France 24, France Info TV, CNews, LCI, BFMTV, Arte, RMC, RTL, France Inter, France Culture, France Info Radio, RFI, SudRadio
— Poland: Fokus TV, Polsat, Polskie Radio, Radio Maryja, Radio Zet, TOKFM, TVN, TVP, TV Plus, TV Republika, TVS, TV Trwam, wPolsce24
— Brazil: Band, CNN Brasil, Jovem Pan, SBT, TV Brazil, TV Globo, TV Record

Acknowledgements

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— The LSE (London School of Economics and Political Science), which supports the work of the organisations Data For Good, Science Feedback and QuotaClimat in combating disinformation, as part of its "Journalism AI" call for proposals,
— The European Climate Foundation, which supports these organisations in these same initiatives,
— Climate Action Against Disinformation, which also supports them.
And all the partners active within the Media Observatory on Ecology.
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JournalismAi

European Climate Foundation

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Glossary

In academic literature, climate misinformation is generally defined as follows:

Climate disinformation is defined as a false statement that carries a high risk of misleading the public about facts established by the state of scientific knowledge on climate change and climate action concerning mitigation and adaptation measures as established by the IPCC.

Climate misinformation is distinguished by the speaker's lack of demonstrated intent to cause harm, and may therefore be considered an error or susceptibility to misleading narratives[1,2].

This report takes an operational approach, focusing primarily on:
— The false nature of the content,
— Its potential negative impact on audiences or public policy, rather than on the intent or awareness of producers and disseminators.

In a media context, reported statements and claims that are immediately challenged are not classified as misinformation.

In this context, an additional term is used to refine the analysis:

Disinformation narrative: among the misinformation cases that are detected, a recurring narrative emerges in a statistically significant way (> 8 occurrences). Repetition is considered a strong enough indicator to suggest the existence of an intent aimed at misleading public opinion[3].

Mainstream media: All media organizations that play a central position in the public sphere due to their large audience, institutional legitimacy, and ability to set the media and political agenda (agenda-setting). These are generally established media outlets, national television and radio stations, major daily and weekly newspapers, news agencies, that enjoy professional recognition and exert a lasting influence on the formation of public opinion and policy[4].

The "new climate denial": A new form of climate change denial that no longer directly disputes the reality of global warming or its anthropogenic origin, but undermines or delays climate action by questioning the feasibility, effectiveness, legitimacy, or socio-economic consequences of mitigation and adaptation measures.[5]

All notes can be found at the end of the report

Key Takeaways

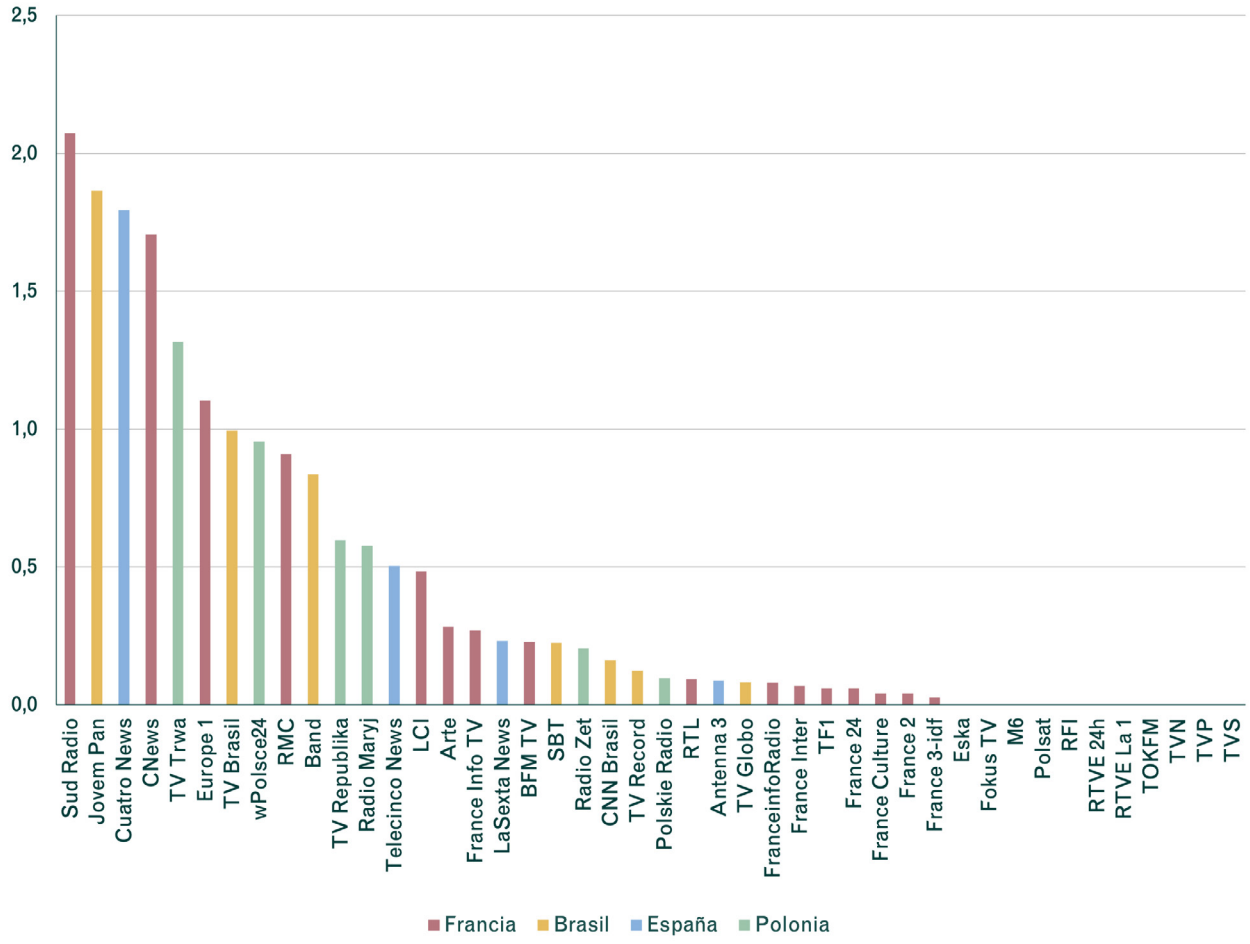
The analysis of 7 Brazilian broadcast media channels, 6 Spanish channels, 18 French channels and 13 Polish channels identified **815 cases of climate misinformation**. It reveals an uneven distribution of climate misinformation cases across the periods analysed: very high in France (665 cases), high in Poland (54 cases) and Brazil (76 cases), and relatively low in Spain (20 cases).

85% of cases were detected in private media (692 out of 815 cases).

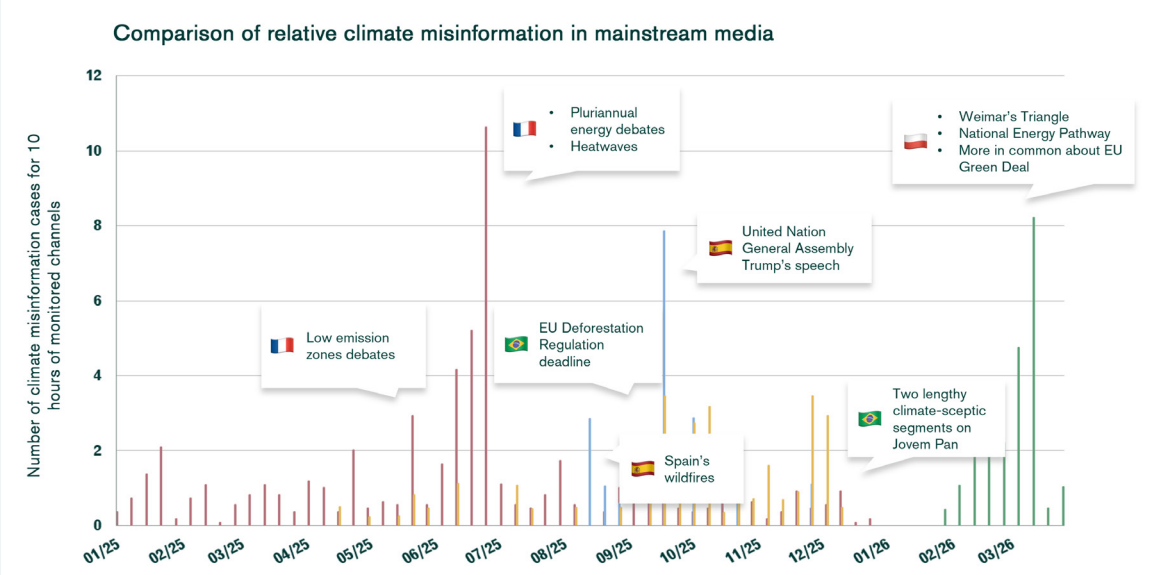
There is a negative correlation between climate reporting and climate disinformation: **the more extensively the media cover climate issues, the less disinformation they spread** - with the exception of three media outlets.

National exposure to climate disinformation is **largely driven by a few private channels**, in particular:
› In Brazil, Jovem Pan, TV Brazil, Band
› In Spain, Cuatro News, Telecinco News
› In France: Sud Radio, CNEWS, Europe 1, LCI
› In Poland: TV Trwam, wPolsce24, RMC, TV Republika, Radio Maryja

Number of cases per hour dedicated to climate change



Key Takeaways



Peaks in disinformation occur at four clearly identifiable moments: public debates on environmental policy, major international and European summits, extreme weather events, and public statements by influential figures (notably Donald Trump during the period observed).

Renewable energy features prominently in the most visible narratives in Europe. Disinformation narratives concerning it draw on four main elements:
— Sovereignty
— Anti-European Union sentiment
— Industrial and social decline
— Anti-elite sentiment

In France, more than half of the cases detected relate to renewable energy.
In Poland, climate disinformation is intertwined with strong anti-European Union sentiment, reinforcing it. Peaks in disinformation coincide with major European events and draw on a sense of industrial and social decline more heavily than in any of the other countries analysed.
In Brazil, climate disinformation is intertwined with pro-agribusiness rhetoric, promoting the merits of Brazilian agriculture and livestock farming. Denial of both the existence of climate change and its human origins also receives greater media coverage than in any other analysed context.
In Spain, there is a limited amount of climate misinformation cases within the news media analysed. This can be partly explained by the small number of rolling news channels and the regular presence of experts in debates on the environment. However, there is evidence of media permeability to the 'chemtrails' conspiracy theory, which stands in stark contrast to the other contexts analysed.

This report sets out four sets of recommendations:

1. Training journalists on emerging obstruction narratives
2. A more careful selection of panelists on television programs to ensure expert input
3. Daily and consistent coverage of environmental issues
4. The establishment of accountability frameworks for those spreading disinformation

I. Information as a strategic asset for the net-zero transition

It is now established that climate action, and environmental action in the broader sense, faces not only technical, institutional and financial barriers. It is also hindered, if not prevented, by the information infrastructure.

The information landscape is now '**liquid**'[6]. The boundaries between television, radio, the press, social media and language models are blurring, creating unprecedented porosity between professional, citizen-generated and artificial information production spaces.

The first consequence of the fluidity of information flows is the **gradual collapse of linearity**: information no longer follows a vertical flow, from journalist to reader. It circulates horizontally and becomes less **predictable**.

The second is **hybridisation**: a tweet now sits alongside a newspaper article in the same feed.

This blurring contributes to **confusion regarding the frameworks and obligations of citizens and journalists**. Freedom of expression becomes conflated with journalistic freedom, as if one were equivalent to the other.

Yet, on the one hand, the media and journalists are bound by laws, ethical frameworks and structural constraints (shareholding, business models, governance, legislation). On the other hand, content produced by individuals is not subject to the same professional standards.

Professional content is intermingled with so-called 'summary' content. It is amplified according to codes that appear random but have clearly defined objectives (maximising audience reach and associated profit), without being subject to the same requirements.

Professional information now coexists in the same spaces (search engines, social media, language models) as the general public's free expression. The absence of rules and criteria for distinguishing the two raises fears about the emergence and amplification online of false and misleading information that benefits from the credibility of professional information – a rise that is now well documented.

The flip side of rising online disinformation is much lesser known: namely, the infiltration of disinformation narratives into the traditional media landscape.

Although empirical data on this phenomenon remain limited, academic literature documents the effects of disinformation circulating through television and radio. It identifies several negative effects:

— **The setting of the agenda[7] by economic and political actors**, through self-serving framing, leading to the obstruction of action rather than its support
— **The creation of echo chambers among elites[8]**, promoting a shared agenda disconnected from expectations on the ground
— **The normalisation of misleading narratives** and the broadening of the acceptable range of discourse through "discursive contamination"[9]
— **The creation of a disconnect** between the negative effects of environmental crises and their portrayal in the media ("the unspoken norm of avoidance"[10] , which tends to downplay the situation), which can lead to paralysis and maladaptation
— **Distortion of solutions effectiveness** (through the appeal of a technological "silver bullet"[11]), and of the reputation of experts and actors involved in the transition (institutions, scientists, NGOs, experts, journalists)
— **Illusory amplification of fringe figures and pseudo-experts' voices**, through a distorted application of the adversarial principle[12]
— **Entrenchment of perceptual biases** among policymakers and the public (over-representation of dissenting voices, pluralistic ignorance bias reducing the perceived level of support for a measure, "chilling effect" leading to inaction due to fear of public reluctance)[13]
— **Alteration of purchasing behaviour and civic behaviour** (mobilisation, engagement, voting)[14]

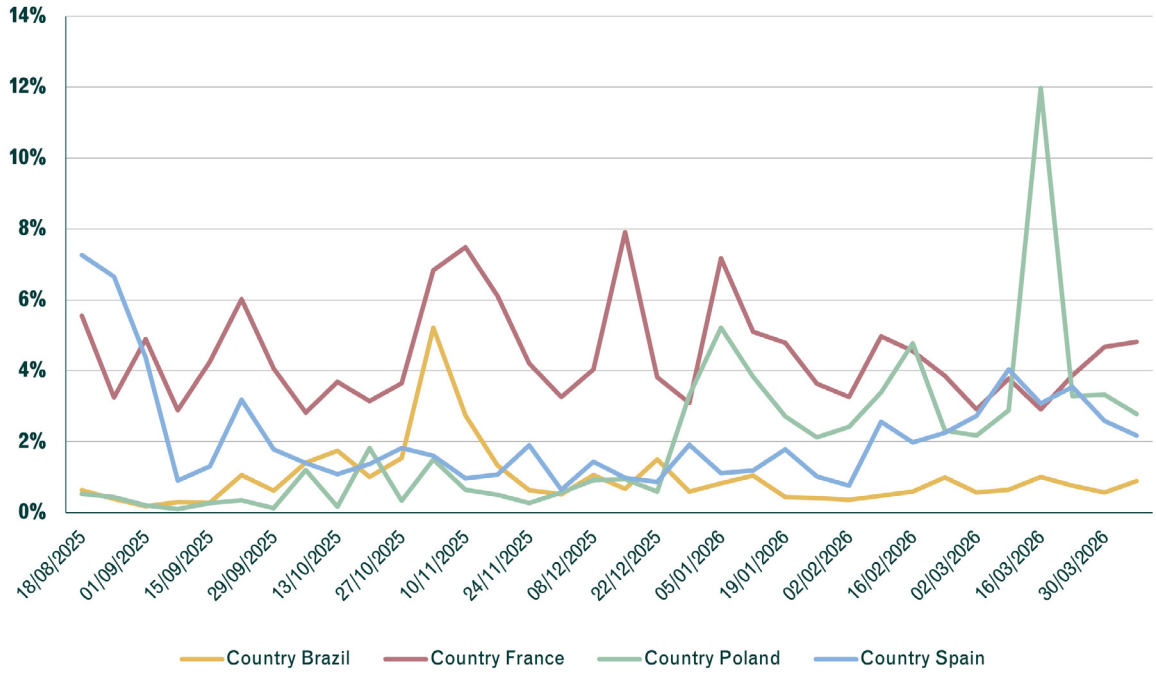
This report provides a preliminary assessment of the prevalence of climate disinformation narratives across several television and radio channels in Brazil, Spain, France and Poland. This assessment is intended as a warning: whilst traditional media "play a crucial role in the public's understanding, perception and willingness to act in the face of climate change"[15], they have not been spared by the rise of climate disinformation.

This review also helps to identify the tools available to journalists and public authorities to stem the phenomenon and protect journalism from an erosion of trust.

II. Findings
Disinformation narratives targeting net-zero public policies

Preamble
Media coverage of climate issues

Media coverage of climate issues by country



Media coverage of climate issues forms the basis for analysing the potential prevalence of misinformation. It enables exposure to disinformation narratives to be compared with overall exposure to information.

For the purposes of this study, **44 broadcasters** were analysed, broken down as follows: 7 Brazilian channels, 6 Spanish channels, 18 French channels and 13 Polish channels.

This cross-media analysis reveals significant disparities between countries. Over the period September 2025 to March 2026, coverage of climate issues accounted for:
— 4.8% of total monitored airtime in France
— 2.8% in Poland
— 2.2% in Spain
— 0.9% in Brazil

Distribution of environmental news is therefore less than half as high in Spain as in France, and a fifth as high in Brazil.

Furthermore, climate-related news in France and Poland appear more sensitive to on-going events than in Brazil or Spain.

These overall findings effectively shed light on the following points: **Exposure to climate cases of misinformation has a greater impact if climate information is less covered by the media in the broader sense – proportionally, it occupies a larger share of the media space allocated to climate issues.**

The amount of climate-related information available is, in fact, one aspect of informational integrity.

Uneven distribution of climate disinformation

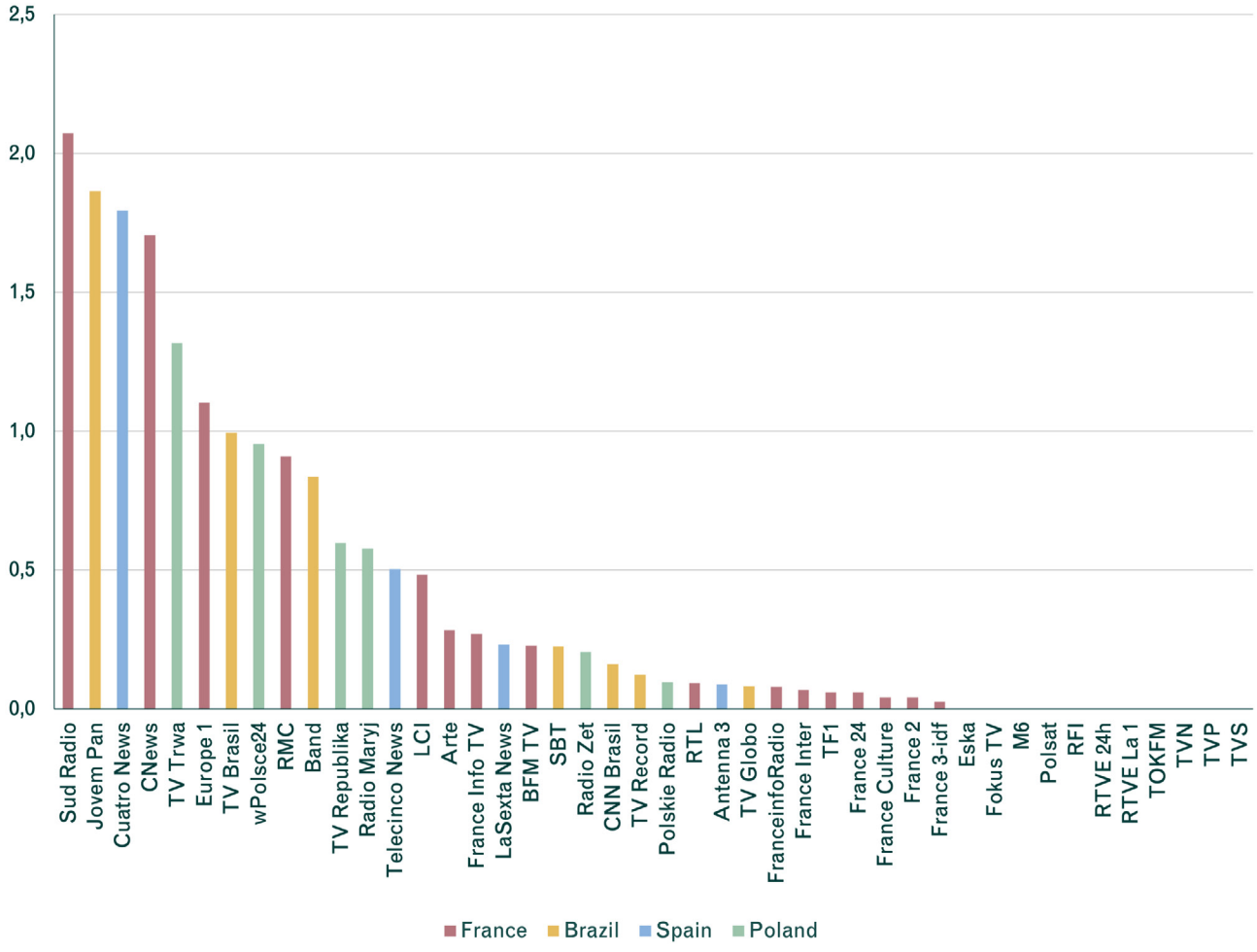
The detection of climate misinformation cases covers the following periods:
— March–December 2025 in Brazil
— August–December 2025 in Spain
— January–December 2025 in France
January–March 2026 in Poland

A total of 815 cases of misinformation were identified, including 76 in Brazil, 20 in Spain, 665 in France and 54 in Poland.

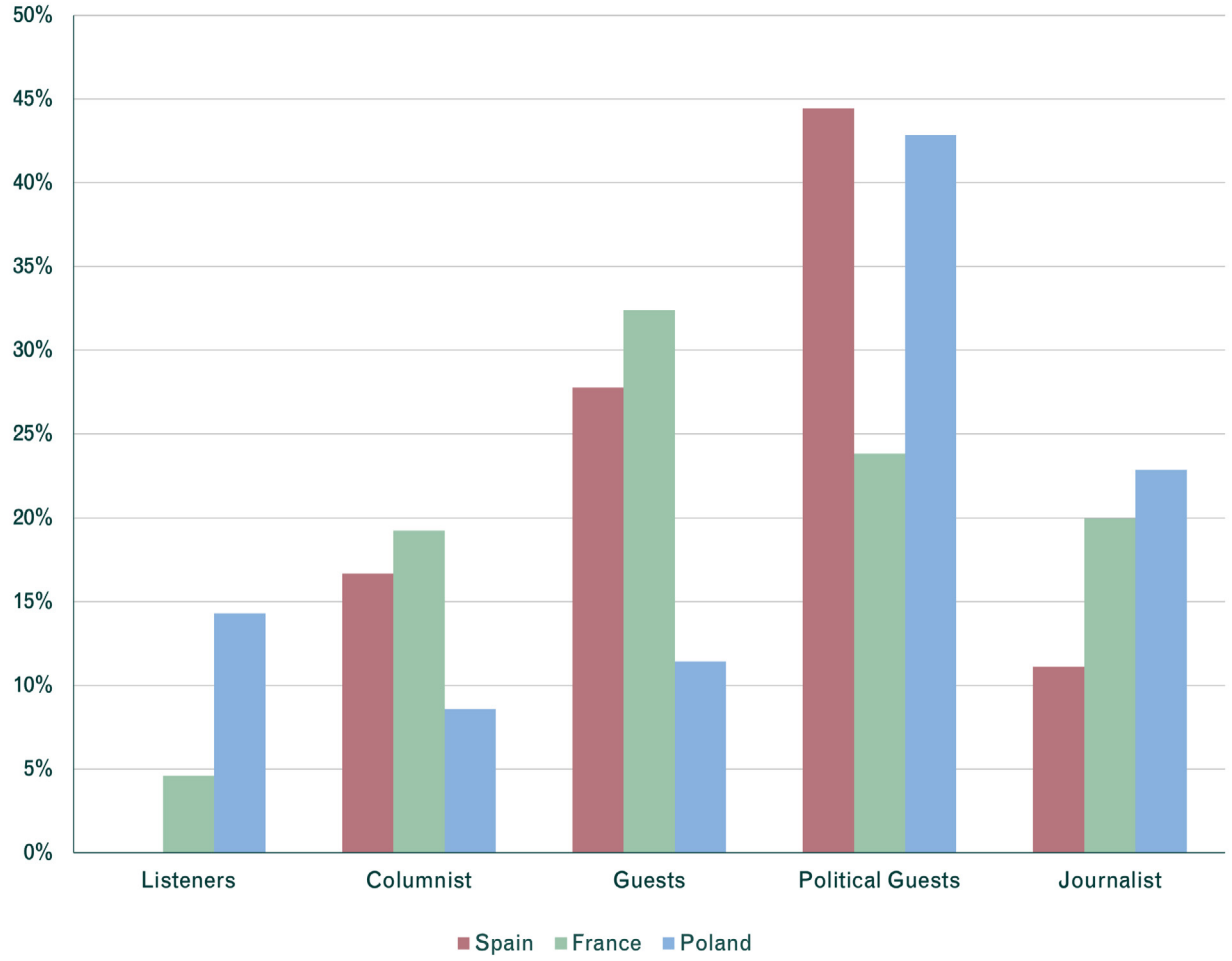
These results are presented in a way that highlights the contrast between the number of channels monitored, the airtime monitored per channel, and the duration of the period analysed.

Analysis of the number of cases detected in comparison with the airtime allocated to environmental issues reveals significant disparities between news media outlets and countries:
— **14 news media broadcast more than one case of misinformation** for every two hours of airtime dedicated to environmental issues: Sud Radio, Jovem Pan, Cuatro News, CNEWS, TV Trwam, Europe 1, TV Brazil, wPolsce24, RMC, Band, TV Republika, Radio Maryja, Telecinco NEWS and LCI.
— **Five of the 14 news media concerned are French**, four are Polish, three are Brazilian, and two are Spanish. In France and Poland, rolling news channels appear to be more exposed to misinformation cases than generalist channels.

Number of cases per hour dedicated to climate change



Type of speakers' split



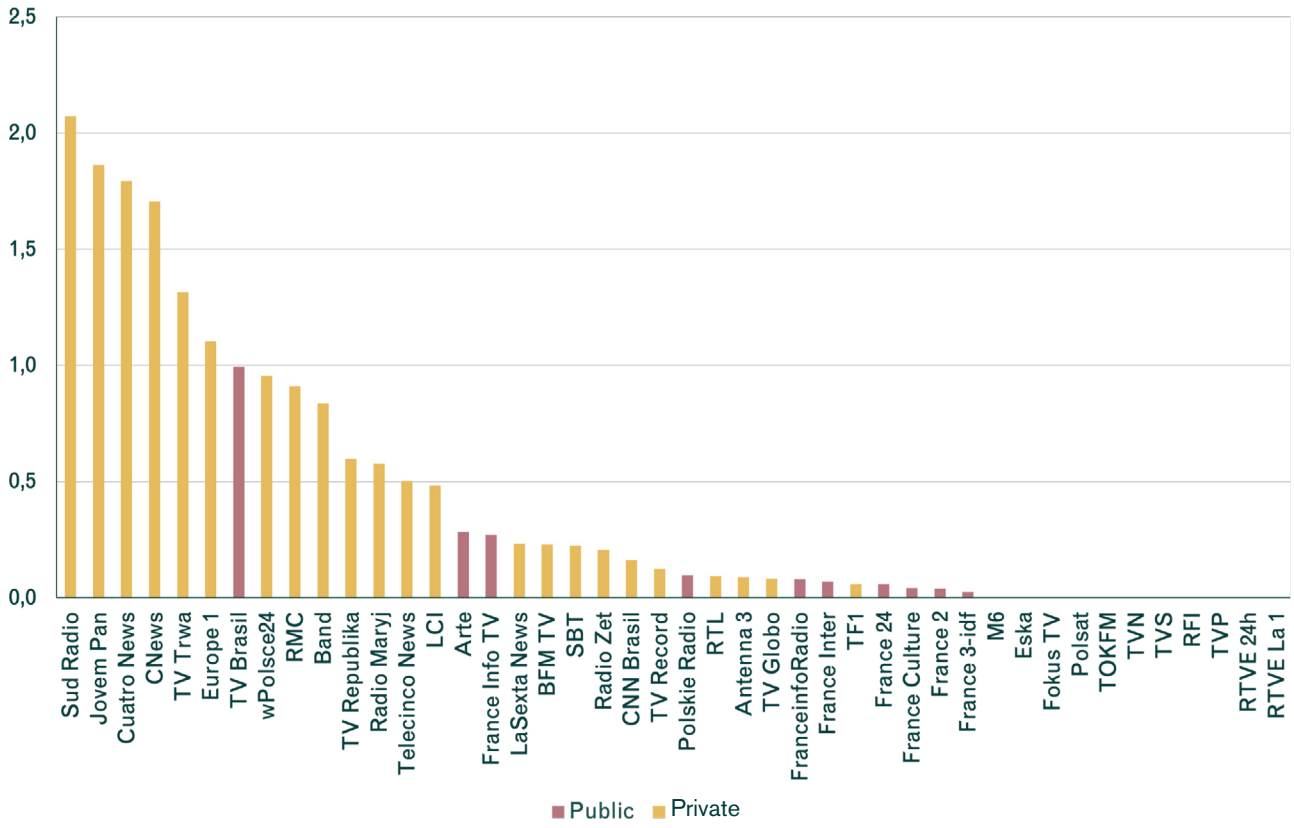
This observation can be explained by the way news is produced[16]: live television debates favour "fast-thinkers", controversy and sensational stories, dramatisation and the fragmentation of information in order to attract viewers. Rolling news programmes feature a large range of guests who change frequently throughout the day, increasing the likelihood both of inviting a figure who spreads misinformation and of being unable to verify their claims live on air.

The breakdown of speakers' identities varies across the countries analysed:

— In Spain, 44% of disinformation comes from political guests, 28% from guests, 17% from editorialists and 11% from journalists;
— In France, 32% of disinformation comes from guests, 24% from political guests, 20% from journalists, 19% from editorialists and 5% from the audience;
— In Poland, 43% of disinformation comes from political guests, 23% from journalists, 14% from the audience, 11% from guests and 9% from editorialists.

It should be noted that this level of detail is not available for the Brazilian data.

Number of cases per hour dedicated to climate change — Comparing public and private channels



Private channels also appear significantly more exposed to disinformation than public channels, across all countries:

— In Spain, all cases are detected in the private media
— In France, 83% of cases were detected in the private sector
— In Poland, 94% of cases are detected in the private sector
— In Brazil, 86% of cases are detected in the private sector. Only TV Brazil appears to be more exposed to climate disinformation, with one case recorded for every hour of airtime dedicated to climate issues

The difference in quality between public and private news is well documented: a focus on public service takes precedence over market forces; investigative and international reporting (which are more expensive to produce) are more developed; factual accuracy and complexity are given greater prominence than sensationalism and controversy; reduced dependence on advertisers encourages content that challenges private interests; pluralism is more widely respected[17].

A cross-media analysis of the number of cases detected per hour of airtime dedicated to the climate, and the proportion of cases reported by editorial staff (journalists and editorialists) results in the above categorisation (not available for Brazil).

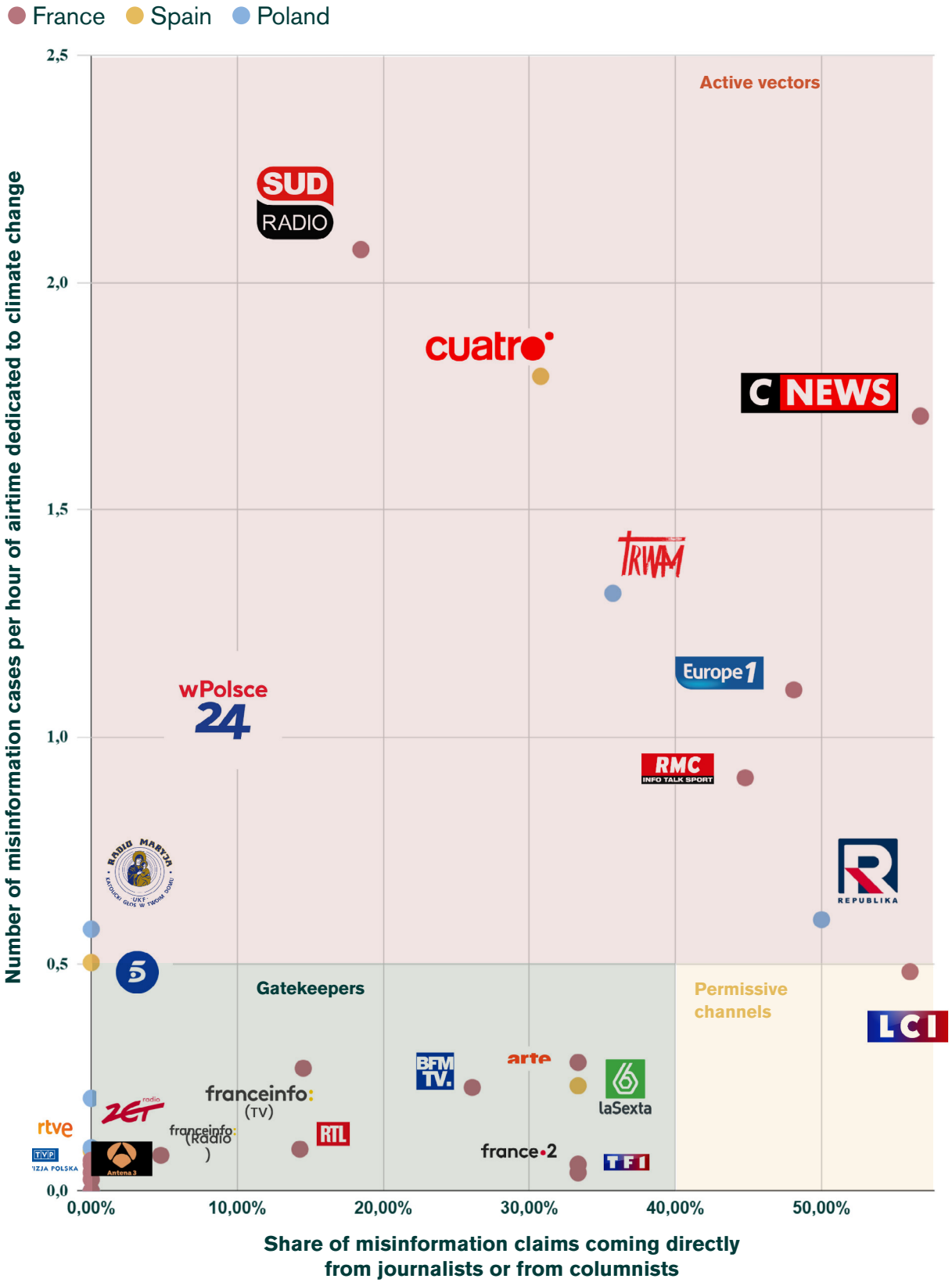
9 media outlets broadcast more than one misinformation case every two hours of airtime dedicated to environmental issues: Sud Radio, Cuatro News, CNEWS, TV Trwam, Europe 1, wPolsce24, RMC, TV Republika, Radio Maryja, Telecinco NEWS and LCI.

Two of these, CNEWS (192 cases) and TV Republika (6 cases), stand out for the number of cases attributed to a journalist or commentator, which accounts for over 50% of the total detected.
The correlation between the volume of information and the prevalence of disinformation is negative. In other words, **the more information there is on climate change, the less misinformation cases there are on climate change.** There are three exceptions to this conclusion: Sud Radio, TV Brazil and Trwam.

Conversely, the opposite is not true: some media outlets are exposed to very little disinformation, despite their limited coverage of climate issues.

Mapping

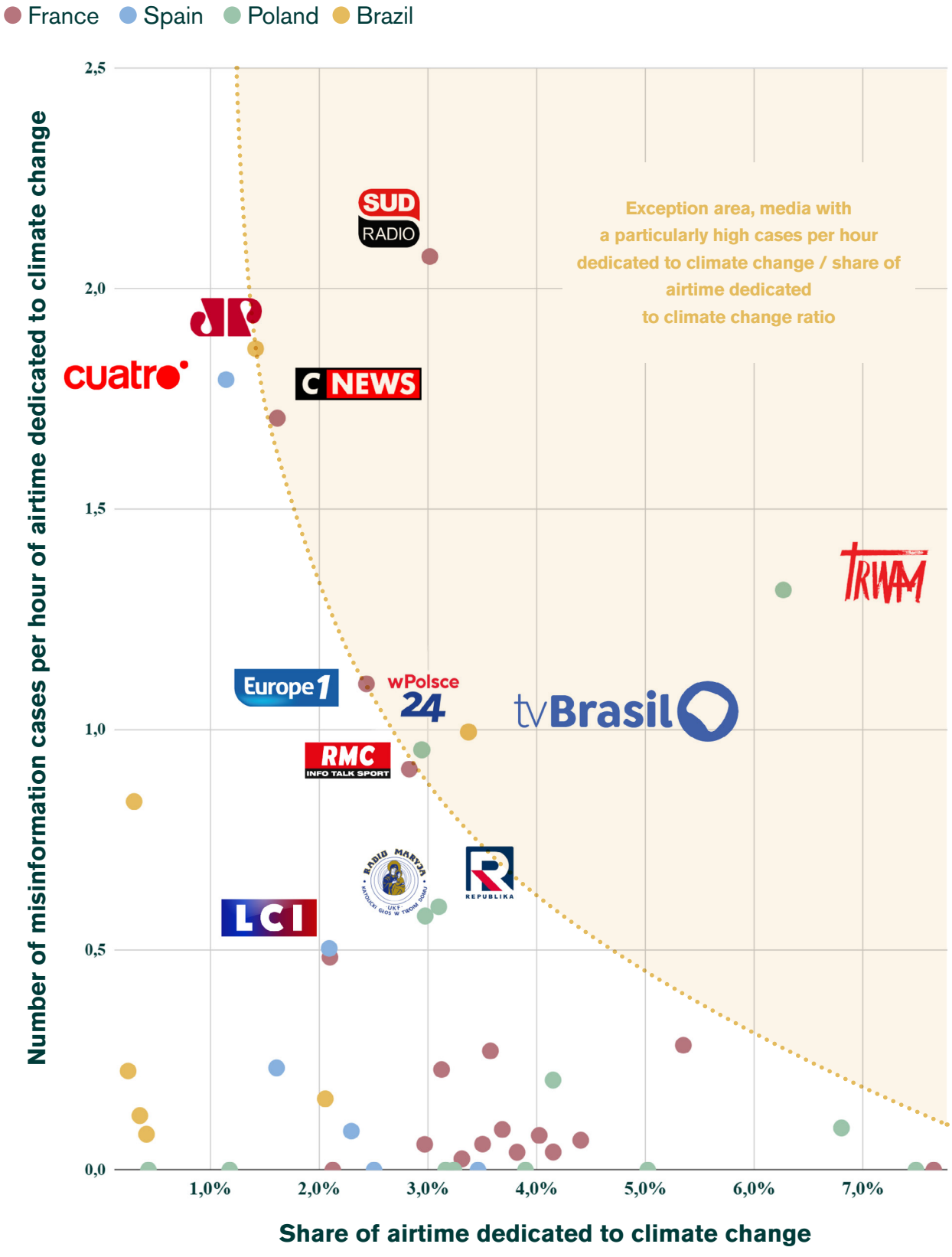
of the main television and radio channels
regarding the prevalence of climate misinformation cases



Projet Climate Safeguards: QuotaClimat, Data For Good, Science Feedback | French data: Observatoire des Médias sur l'Ecologie

Mapping

of the main television and radio channels
regarding the prevalence of climate misinformation cases



Climate Safeguards project: QuotaClimat, Data For Good, Science Feedback

Focus on **Brazil**

In Brazil, the number of cases detected in the media analysed is relatively high.

Three major peaks of disinformation emerge:
— Around the 23rd of September 2025, at the time of Donald Trump's speech to the United Nations General Assembly (9 cases)
— The weeks of the 6th and the 13th of October 2025 (13 cases), coinciding with the deadline for Brazilian soya and meat exporters to submit geolocation evidence, as part of the entry into force of the European Union's Deforestation Regulation, and in the run-up to COP30, held on the edge of the Amazon
— The weeks of the 1st and the 8th of December 2025 (16 cases), notably due to two lengthy climate-sceptic broadcasts on the Jovem Pan radio station

Donald Trump's speech sparked heated debates on national climate action.

Some comments relate to trust in science: one detected instance concerns the denial that climate change is caused by human activity (*"There is a scientific divergence that says: 'Ah, humans are responsible for climate change'. There is another serious strand of science – we even interviewed a meteorologist here who put forward this view – saying that we cannot say that for certain."*), whilst another case sees creationist religious rhetoric undermining the credibility of modern science.

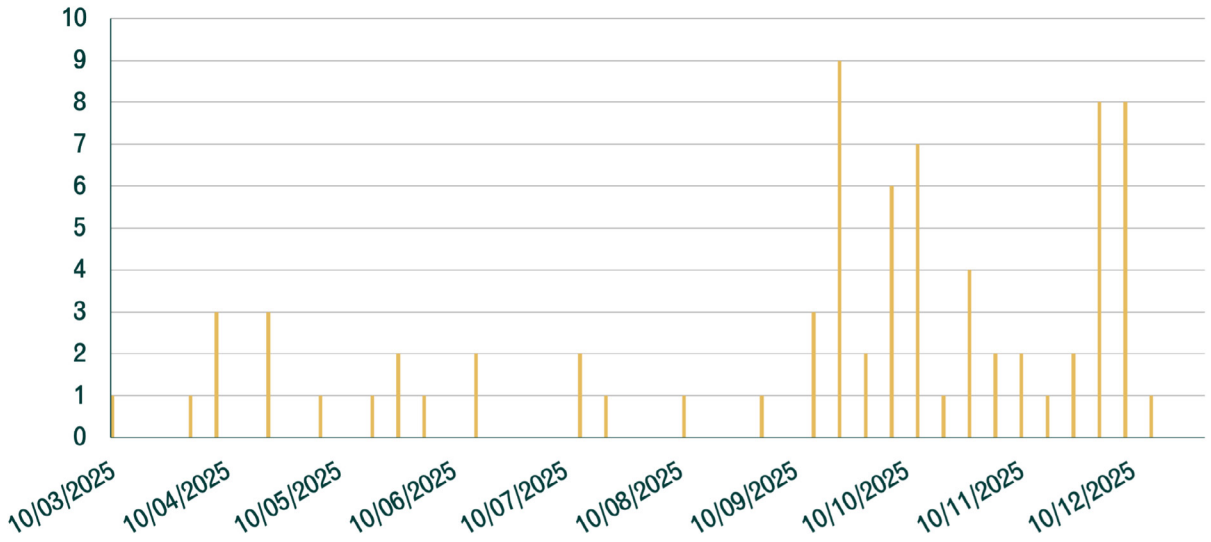
Other instances relate to decarbonisation solutions. Agribusiness, in particular, is portrayed as undergoing a major transformation and as part of the solution.

Ethanol-powered vehicles are portrayed as more efficient than electric cars, and the latter are described as a solution for Europe only (*"I'd like to remind everyone listening who cares about the environment: the electric car is the solution for Europeans, right?"*).

During the weeks of 6 and 13 October, the identified cases focused in particular on the environmental impact of livestock farming, as opposed to European environmental standards (*"There's one issue that particularly annoys me: we have a European competitor who is losing market share to us. If we've gone from 20 billion in exports in the year 2000 to 160 billion last year, someone has inevitably lost ground. And the one who's lost isn't happy; they're angry with us and want to drive us out of the market. So, they come up with false narratives."*).

Some cases also illustrate the stigmatisation of environmental NGOs (*"There are what I call the 'merchants of the apocalypse': these are NGOs that make money by scaring the public, by terrifying people"*).

Distribution over time of cases detected in Brazil



The end of the COP 30 coincides with a resurgence in detected cases. These cases are not linked to the COP, which does not "generate significant media attention in the analysed media" according to the fact-checking organisation Lupa.

They are linked to two interviews: on 1 December, Luiz Carlos Molion, a Brazilian physicist and meteorologist, appeared on the programme "Pânico" broadcast on Jovem Pan. He explained at length that global warming does not exist (*"This period of warming ended in 2005. Since then, the temperature has remained virtually stable and has even started to drop slightly now; we are set to experience this new cooling period, probably until 2034 or 2035."*).

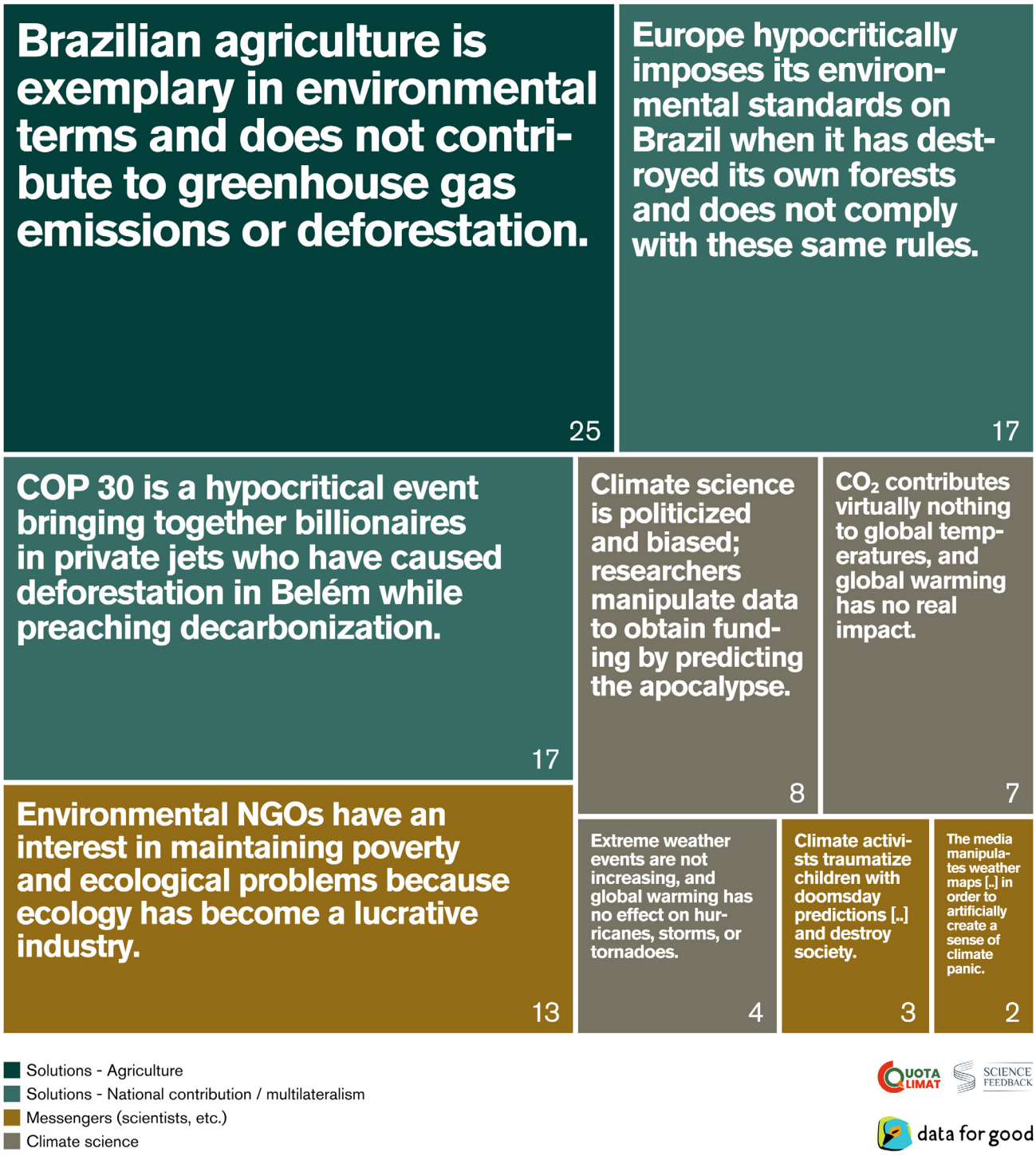
The same argument resurfaced on the same channel in December 2025, during an interview with journalist Leandro Narloch (*"But the problem is that CO_2 is the gas of life, isn't it? Life wouldn't exist without CO_2. The Amazon is the lung of life. But if it drops too low... when you look at the history of the Earth, when it drops too low or rises too high, we have mass extinctions, you see?"*). Whilst Luiz Carlos Molion's comments were somewhat unexpected, according to Lupa, those of Leandro Narloch were more predictable, given that he had published a book entitled "The Politically Incorrect Guide to the Environment"[18], which downplays the severity of climate change and its human origins.

The 9 main disinformation narratives detected are:

— Brazilian agriculture is exemplary from an environmental perspective and contributes neither to greenhouse gas emissions nor to deforestation (25 cases).
— Europe hypocritically imposes its environmental standards on Brazil, even though it has destroyed its own forests and does not adhere to these same rules (17 cases).
— COP 30 is a hypocritical event bringing together billionaires in private jets who have caused deforestation in Belém whilst preaching decarbonisation (17 cases).
— Environmental NGOs have vested interests in perpetuating poverty and environmental problems because environmentalism has become a lucrative industry (13 instances).
— Climate science is politicised and biased; researchers manipulate data to secure funding by predicting the apocalypse (8 instances).
— CO2 contributes virtually nothing to global temperatures, and global warming has no real impact (7 instances).
— Extreme weather events are not on the rise, and global warming has no effect on hurricanes, storms or tornadoes (4 instances).
— Climate activists are traumatising children with apocalyptic predictions that will prevent them from having children and destroy society (3 instances).
— The media manipulates weather maps by using red to indicate normal temperatures in order to artificially create a sense of climate panic (2 instances).

Main disinformation narratives.

Study conducted on television and radio news programs in Brazil, between March and December 2025.



Focus on Spain

In Spain, the number of cases detected in the analysed media outlets is structurally low.

Three peaks of disinformation occurred during the period analysed:
— Around the 20th August 2025 (4 cases), date of the peak of the historic wildfires in the north-west of the country
— Around the 23rd September 2025 (8 cases), date of Donald Trump's speech to the United Nations General Assembly
— Around the 10th October 2025 (3 cases), date of a highly publicised statement by Atlético Madrid footballer Marcos Llorente regarding the aerial dispersal of chemicals (chemtrails)

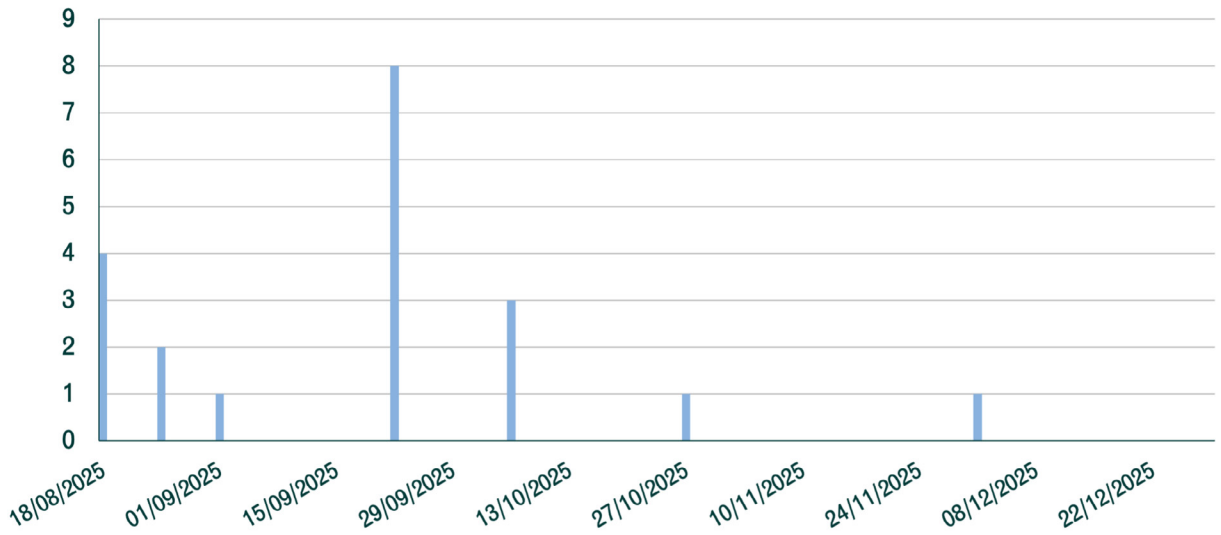
Regarding the August 2025 fires *"In August, Spain experienced the worst forest fire crisis of this century. In the mainstream media, the role of climate change in these fires was unclear, and some media outlets published misleading headlines, suggesting that 96% of the fires were of criminal origin, whereas historically, this figure stands at around 50%. This uproar fuelled misinformation on social media, where the fires were linked to property speculation, the installation of renewable energy sources, or the exploration for rare metals."*
— Maldita

On the 19th of August specifically, Alberto Núñez Feijóo (leader of the People's Party) claimed that 80% of the fires were deliberate. This figure, although technically misleading (as it mixes together arson with simple negligence such as a spark from a tractor), became a powerful argument for dismissing the climate issue. Most of the reported cases deny the link between wildfires and global warming, even though this link has been scientifically established[19].

Furthermore, renewable energy sources are portrayed as responsible for certain fires, the deliberate nature of which is said to be aimed at clearing space for new projects.

Among the quotes recorded:
— *"I support these 'psychologists' [an ironic term for environmentalists], I say it loud and clear: those who oppose solar panels and wind turbines, because they destroy our lungs – the trees. Trees are being felled to install them and nobody is fighting against it."*
— *"You're diluting responsibility so as not to find concrete solutions. Let me put it another way: with this same concept of climate emergency and a job well done, this wouldn't have happened. Pointing the finger at an 'ethereal monster' [the climate] is a way of shirking responsibility. Without denying climate change, which is very real, it is not the cause of these fires."*
— *"The People's Party says we are trying to inject ideology into the civil protection system."*

Distribution over time of cases detected in Spain



Regarding Donald Trump's speech at the United Nations General Assembly His speech was picked up by some Spanish media outlets, which debated the use of the term "hoax" to describe climate change and the rejection of renewable energy.

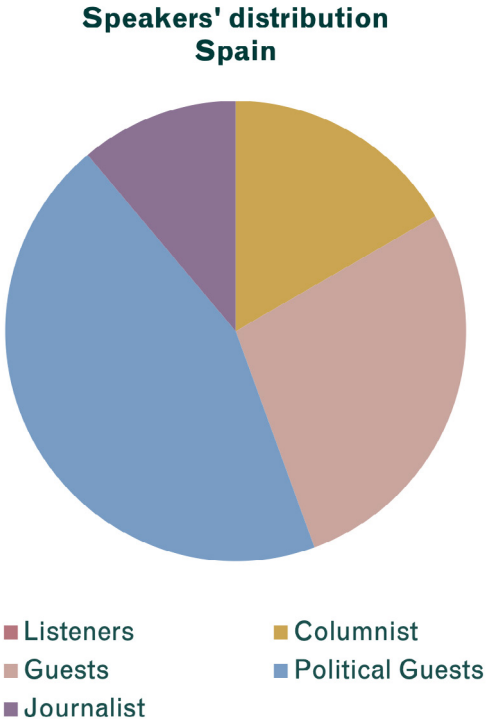
Regarding the cases concerning the footballer's statement On the 10th of October 2025, Marcos Llorente posted a series of Instagram stories claiming that contrails are not water vapour, but chemicals sprayed via additives in kerosene, without pilots being aware; the subject became a media sensation. This post came at a time when the media was dominated by Trump's statements at the UN a few weeks earlier. Llorente acted as an opinion broker, transforming a technical conspiracy theory into a topic of discussion about lifestyle and health.

Among the quotes recorded:

— *"It could be in the additives they put in the fuel. In fact, there's a man, Carlos Martínez Paradellrey, who works for the army - a very important figure, a pilot - whom you can look into; he says, of course, that in his view, what they're putting in the fuel are new-generation additives."*

— *"What's happening is that here, we're telling the pilots to wake up, because they don't realise the earth is flat, and they don't know what additives are being put in it. Perhaps the pilots need a little knock on the head here to wake them up."*

— *"Are the planes spraying us, or are these chemtrails caused by chemical or official means? Listen, right now I've got Wikipedia in front of me. I don't understand how there's still a debate when even Wikipedia itself mentions that, regarding global warming, there's going to be a new climate manipulation system already in place, where the main agent used is stratospheric aerosols."*



The four main disinformation narratives detected are:

— Chemtrails are toxic chemicals deliberately sprayed to manipulate the climate or poison the population (10 cases).

— Climate change is a global hoax invented to siphon off money and control populations (6 cases).

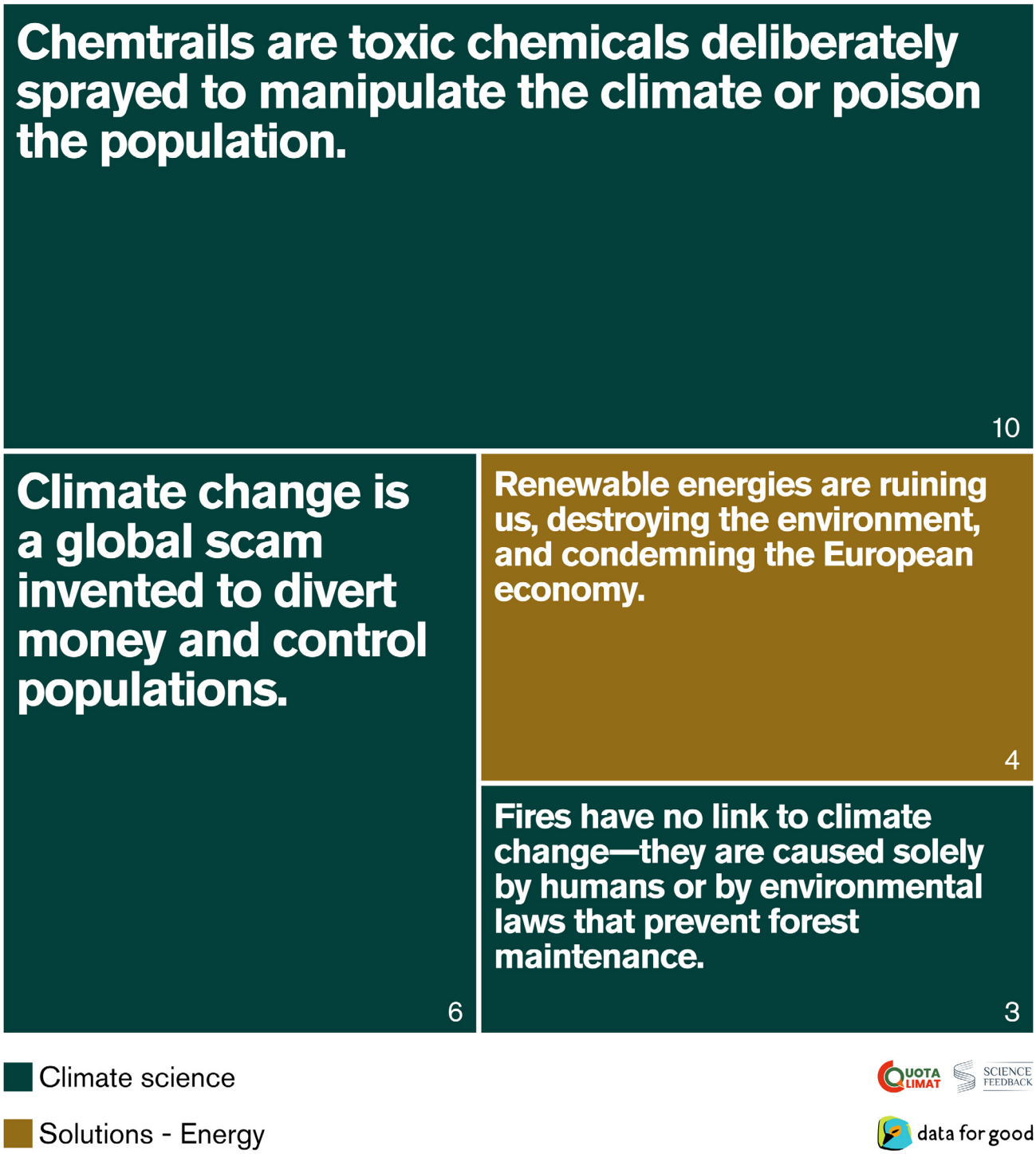
— Renewable energy is ruining us, destroying the environment and dooming the European economy (4 cases).

— Wildfires have no link to climate change - they are caused solely by humans or by environmental laws that prevent forest maintenance (3 cases).

Nearly half of the cases identified came from political guests, and only 11% from journalists. The Spanish media show relative resilience to disinformation, compared to the other countries studied.

Main disinformation narratives.

Study conducted on television and radio news programs in Spain, between August and December 2025.



Focus on France

In France, the number of cases detected in the media analysed is significant.

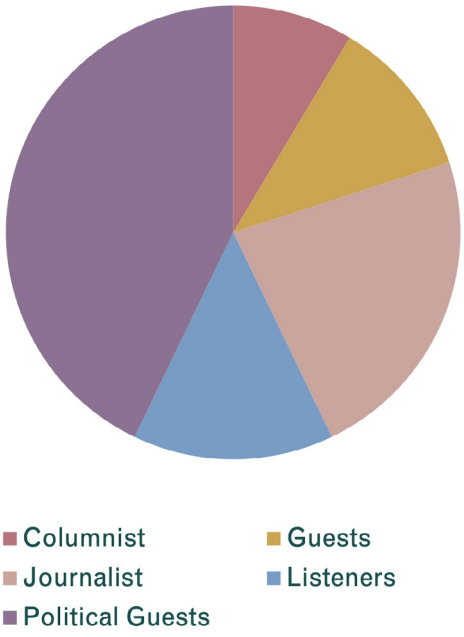
Among the 665 cases recorded in 2025, several peaks were identified:
— January 2025: Donald Trump's inauguration as President of the United States
— March 2025: Political debate surrounding France's energy roadmap (Pluriannual Energy Plan)
— Late May 2025: Vote in the French Parliament on Low Emission Zones
— Early June 2025: First summer heatwave
— End of June 2025: Second political debate on France's energy roadmap
— August 2025: Second summer heatwave
— October 2025: Political pressure to ban new combustion-engine vehicles in the European Union by 2035

These cases were grouped into 19 recurring disinformation narratives as part of a report published in October 2025[20], along with a detailed analysis (see following page).

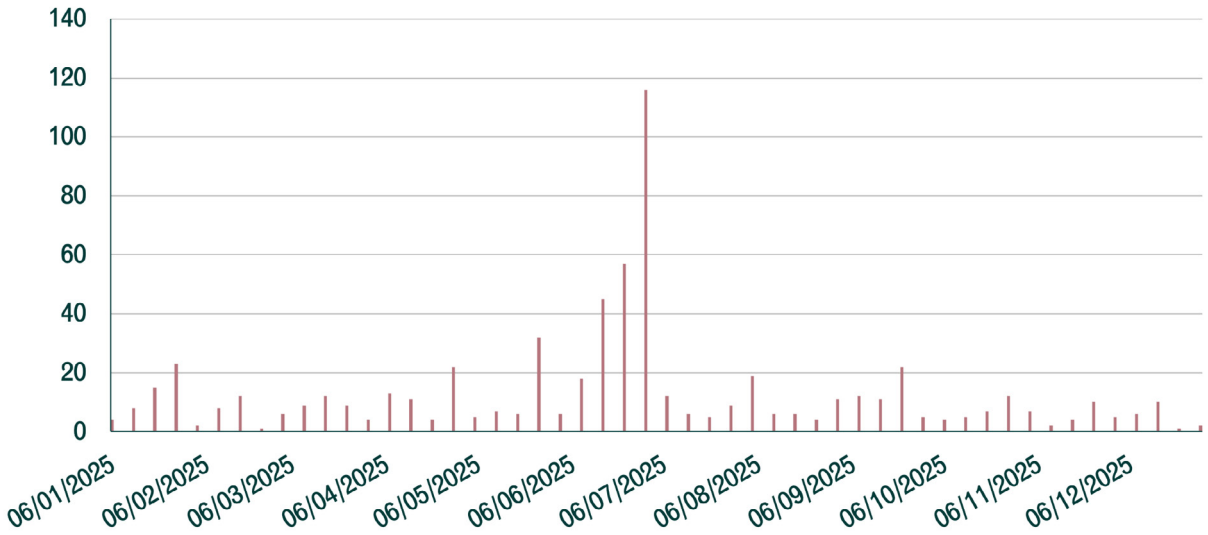
Whilst politicians remain the primary source of misinformation cases in news media, journalists are responsible, proportionally, for twice as many cases as in Spain.

Hence the French media system seems highly permeable to climate disinformation.

Speakers' distribution France

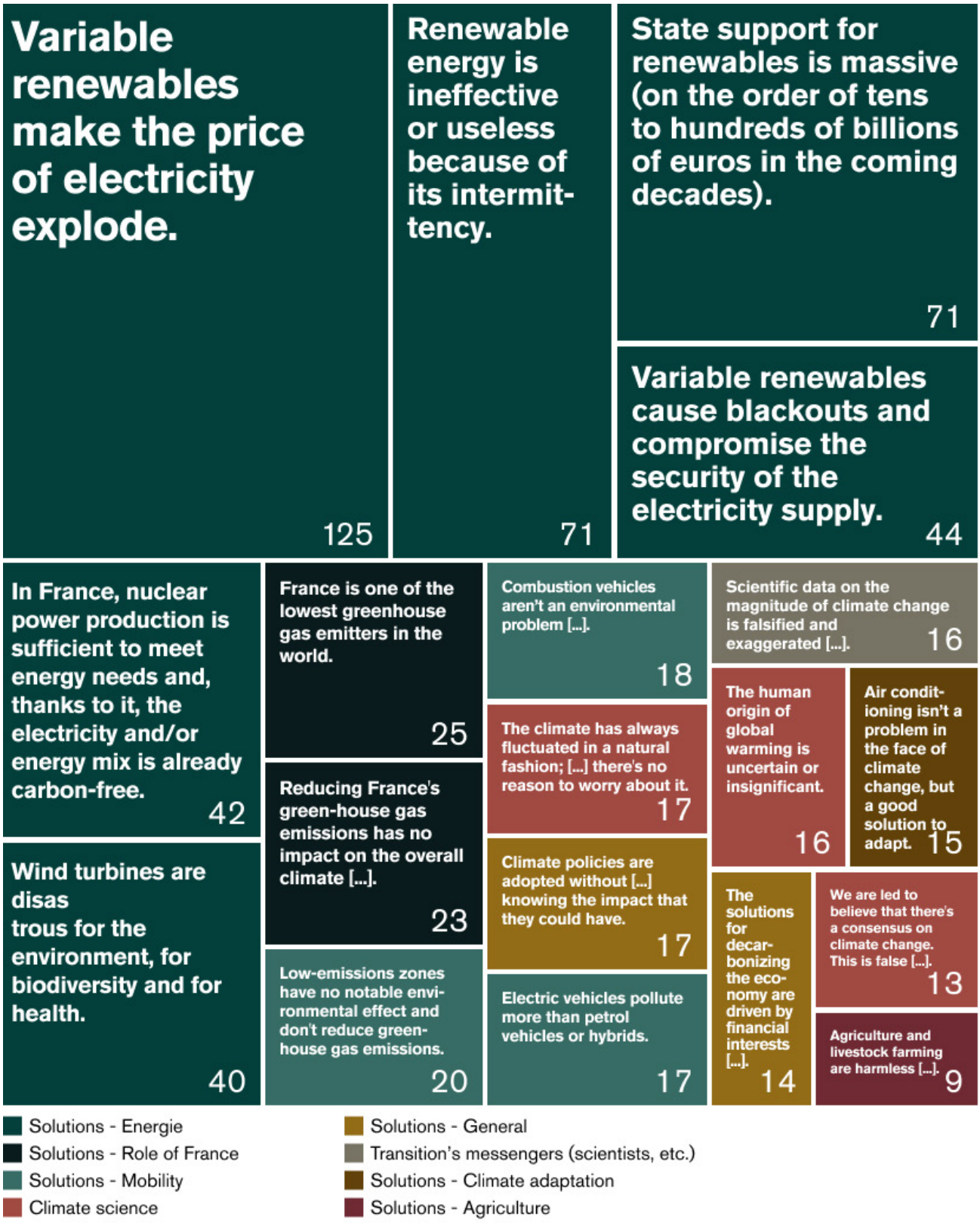


Distribution over time of cases detected in France



Main disinformation narratives

Study conducted on television and radio news programs in France, between January and August 2025



Focus on **Poland**

In Poland, the number of cases detected in the analysed media is relatively high.

A peak in misinformation cases occurred in March 2026, with 16 cases having been detected previously, between January and February 2026. Of the 45 cases detected in March 2026, 13 were detected on 9 March 2026 alone.

This date coincides with three events:

— The "Weimar Triangle" Summit in Gniezno (central-western Poland). On the 9th of March 2026, the environment ministers of Poland, France and Germany met in Gniezno to formalise enhanced cooperation on the energy transition. This meeting was perceived by sovereignist and conservative circles as evidence of Polish policy bowing to German interests. Some misinformation cases detected echo the view that environmentalism is a "masterpiece of German strategy" to weaken Polish industry (coal) in favour of Western technologies (renewable energy).

— The publication of the new national energy roadmap for 2026–2040, "Paliwa przejściowe" ("Transition Fuels"), issued by the Ministry of Climate and Environment. One of its key conclusions is the accelerated phase-out of coal: the report states that coal will account for no more than 25% of the energy mix by 2030. For defenders of the mining sector, this trajectory has reignited theories of "historic sabotage" of the mining industry by European policies. The report also identifies (imported) natural gas as the only permitted transition fuel to stabilise the grid before nuclear power comes online (scheduled for after 2033). For critics, this means replacing a local dependency (coal) with a costly foreign dependency. The main disinformation narrative surrounding this issue involves distorting the cost of this roadmap, whilst failing to mention the associated European subsidies.

— The campaign by the organisation "More in Common" on the European Green Deal, entitled "Climate policy with a human face". Although the organisation is apartisan and aims to strengthen social cohesion, the results of its study were immediately distorted by certain circles to fuel mistrust of European policy. One finding in particular was exploited: Poles supporting environmentalism in general, but overwhelmingly rejecting the EU Green Deal.

The surge in disinformation coincides with a framing that sets the energy transition in opposition to national economic sovereignty.

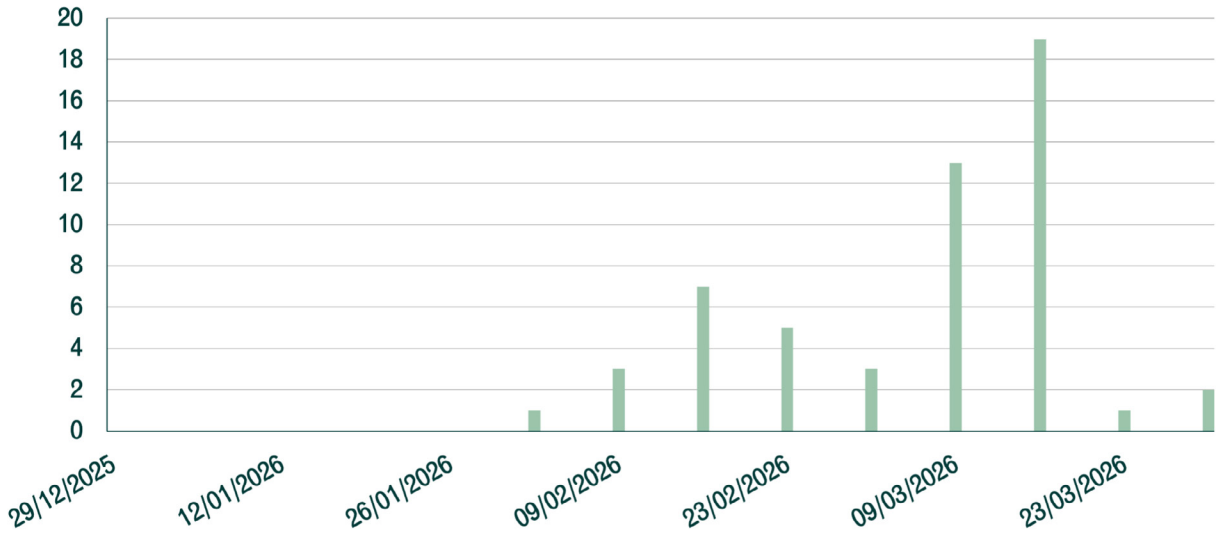
Among the quotes recorded:

— *"Most of the network charges and climate taxes end up in the pockets of Western countries, whilst Poland is being bled dry."*

— *"The energy transition is a German strategy, not a scientific necessity."*

— *"We were scared with stories of mining accidents in the 1990s to manipulate us, and today they're using the More in Common report to tell us we're anxious instead of saying we're clear-sighted."*

Distribution over time of cases detected in Poland



The following week, 16 cases of misinformation were recorded. This second wave coincided with the European Council meeting in Brussels on the 18th, 19th and 20th of March 2026.

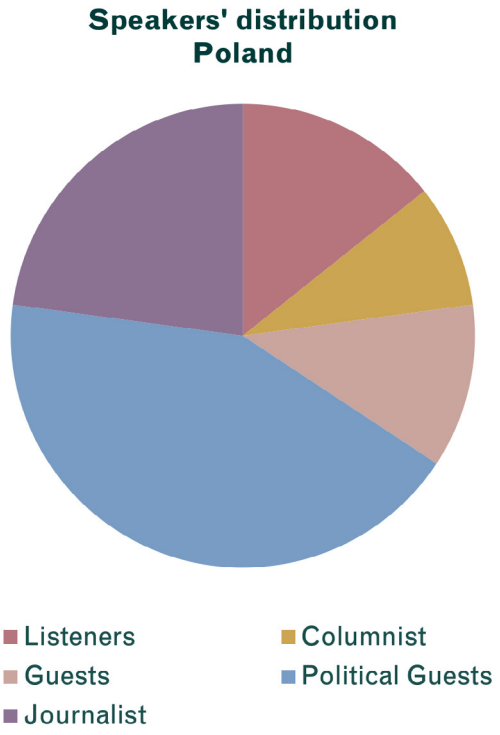
This second Europe-wide event saw the same anti-Europe narratives repeated and amplified, linking them to the carbon market. Among the quotes recorded:

— *"The ETS is not an environmental policy; it is a hidden tax, a 'plundering' of companies to line the pockets of a 'gang of corrupt Brussels commissioners'."*
— *"Coal costs 250 PLN per tonne, but the state taxes us 1,000 PLN for 'green madness'. Solar and wind power cost several times more than coal."*
— *"Climate policy is destroying competitiveness. Belgian, Austrian and German companies are going bankrupt or fleeing to countries without 'green madness'. Europe is deindustrialising itself for the sake of ideology."*

Demagog quoted: "In the Polish media, the issue that most frequently fuels climate debates is coal mining. The specific nature of the country's energy system significantly influences perceptions of EU climate policy and shapes attitudes towards renewable energy sources. The Polish mining industry serves, in a way, as a point of reference in any major discussion concerning topics such as the European Green Deal, the ETS system or the energy transition. It is very often presented as the only viable source of energy - both easily accessible and cheap — whilst carbon emissions are either ignored in these narratives or dismissed as an insignificant problem."

The main disinformation narratives identified are as follows:

— Decarbonisation is a plot to destroy Polish industry and wipe out the mining sector (25 cases).
— Coal is Poland's future and its only stable source of energy, unlike renewables, which would freeze the whole country (20 cases).
— The ETS is a tax scam that steals 50 billion zlotys a year from Poland and accounts for 50% of electricity prices (10 cases).
— CO_2 is not a pollutant but the 'gas of life' necessary for plants; emitting it is not polluting (7 cases).
— Renewable energy is inefficient, unstable and more expensive than coal, despite 200 billion euros in subsidies from Germany (6 cases).
— The Green Deal (Zielony Ład) is a climate scam, a financial Ponzi scheme that has nothing to do with the environment (4 cases).
— The EU is unfairly imposing its climate policies on Poland, which is only just recovering from communism (4 cases).
— Climate targets to reduce emissions by 90% by 2040 are impossible and are destroying the European economy (3 cases).



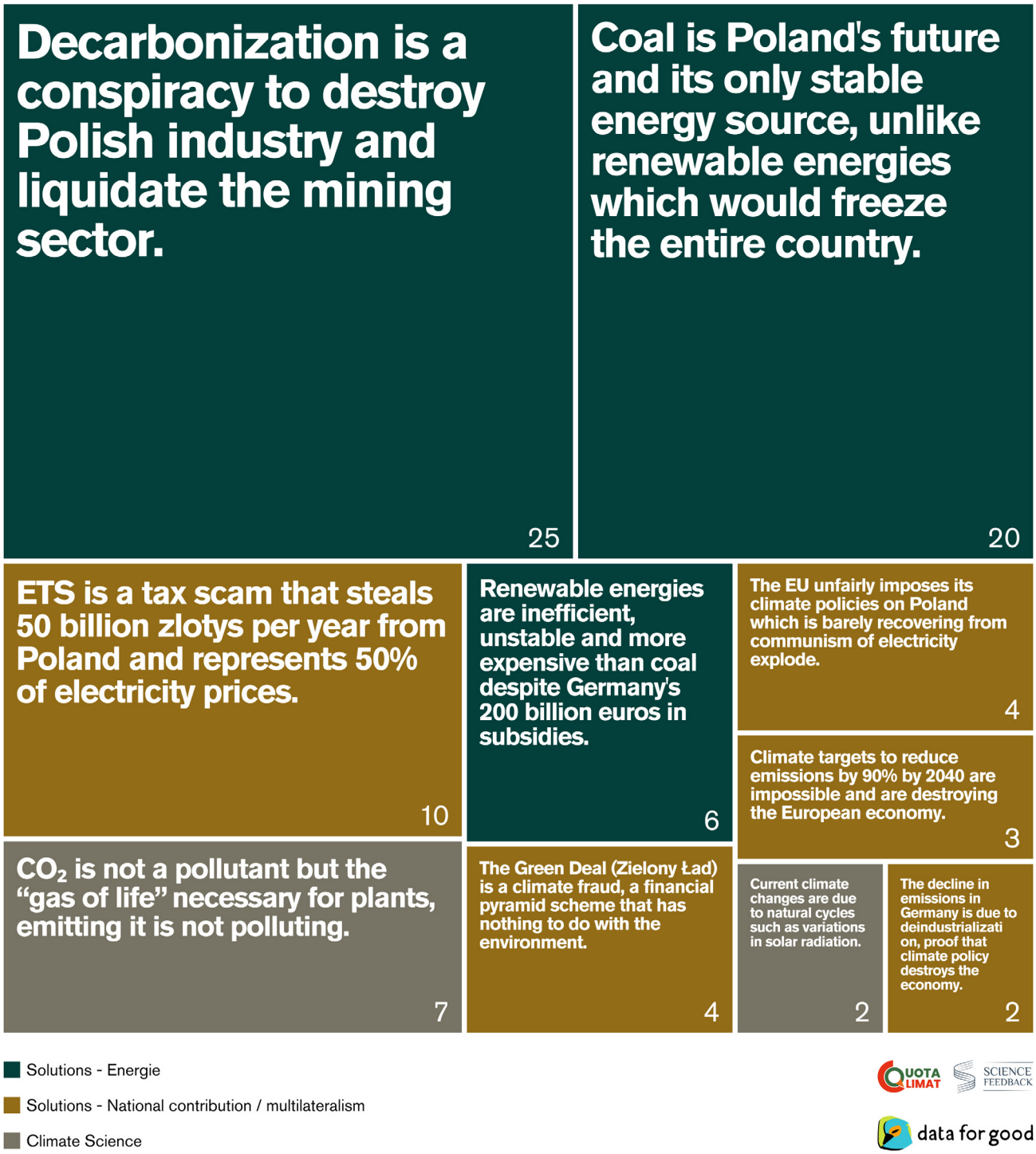
— Climate change is due to natural cycles such as variations in solar radiation (2 cases).
— The fall in emissions in Germany is due to deindustrialisation, proof that climate policy is destroying the economy (2 cases).

Whilst in Poland politicians remain, as in Spain and France, the primary source of misinformation in the media, journalists are responsible for more cases than in France, and twice as many cases as in Spain.

The Polish media system appears relatively permeable to climate disinformation.

Main disinformation narratives.

Study conducted on television and radio news programs in Poland, between January and March 2026.



III. Sectoral focus
Renewable energy as a focal point

This comparative study demonstrates that European mainstream media are highly permeable to attacks on climate action, more so than to conspiracy theories and so-called "climate scepticism". Such claims, however, seem to resonate more strongly in the Brazilian media.

This finding corroborates the findings of the recent report by the International Panel on the Information Environment: current forms of disinformation aim to "obstruct and delay action"[21] rather than deny the existence of the problem.

More than any other, the media debate appears highly permeable to anti-renewable energy narratives.

This permeability becomes particularly apparent at four key moments:

1. **When energy transition planning policies are debated.** On these occasions, the subject is debated head-on and the attacks take on a technical dimension (often relating to the functioning of the electricity grid and comparisons with alternatives) and a social dimension (often relating to the distribution of costs).
2. **At major international and European summits.** On these occasions, the subject is raised as a symbol, linked to pre-existing divides (Western Europe vs Eastern Europe, urban vs rural, multilateralism vs nationalism). It acts as a powerful catalyst for division, as it embodies a change perceived as a source of costs and injustices. However, the climate debate has become particularly polarised as policies perceived as costly have been implemented: wind turbines and solar panels represent the most visible aspect - as they are developed within everyday landscapes. They allow the conceptual to be linked to the tangible, and thus enable the emergence of a symbol around which to construct an 'us versus them' narrative.
3. **During climate-related disasters.** They create a state of emotional shock, a loss of bearings and information overload. These factors lend themselves to opportunism and the search for scapegoats. Wind turbines and solar panels, once again, provide a tangible element of the green transition and are therefore easy to exploit - unlike policies perceived as vague or abstract. Furthermore, disasters are costly (rising insurance and energy prices, destruction of crops). It is therefore possible to pit different categories of expenditure against one another and to shift the cost of disaster management onto the cost of the energy transition. Finally, they offer an opportunity to amplify misleading narratives due to the intense focus on the event and everything related to it.
4. **In the wake of spontaneous events.** Certain interviews or actions by public figures have the capacity to crystallise narratives that were previously diffuse. They can become vehicles for opposition to the net-zero transition, by mobilising discourses that relate to the interests of those seizing the opportunity (anti-elite for the far right, anti-regulation for liberals, anti-transition for conservatives).

Anti-renewable energy narratives thrive on the same arguments and symbols.

— **Sovereignty**. This argument manifests itself at two levels: the loss of control over the local landscape and dependence on foreign powers. In both cases, renewable energy is portrayed as an external intrusion dictated by urban or foreign decision-making centres. The technology itself is merely a symbol of a break with attachment to place, and of a form of "energy colonialism"[22] .

— **Opposition to the European Union**. It is often portrayed as the "mastermind" behind a punitive transition, imposing standards disconnected from the realities on the ground. European energy and climate directives are used, amongst other things, by populist movements to illustrate a loss of national legislative competence. Far-right groups, in particular, use renewable energy as a symbol of forced European integration and the cosmopolitanism of the Brussels elite[23] .

— **Industrial and social decline.** Anti-renewable energy narratives often link them to the disappearance of traditional industries (coal, nuclear, combustion-engine vehicles) and rising energy prices. Certain peri-urban

areas, “those places that don’t count”[24], perceive global policies, such as the energy transition, as further threats to their way of life.

— **Anti-elite sentiment.** This is a key factor in many cases: the idea that the benefits of the transition are reaped by the elites - often urban - who are shielded from its downsides, whilst the costs are borne by vulnerable populations, including those in rural areas. The wind turbine is used as a symbol of an “out-of-touch” elite imposing its aesthetic and moral values. The aim is to lead the “left-behind” to reject climate policies in reaction against an elite that has ignored their economic distress.

These arguments are distributed fairly evenly across the countries analysed, with the exception of Poland, where climate disinformation is more deeply imbued with anti-European Union sentiment and a sense of industrial and social decline.

Analysis of opposition narratives shows that they are not simply the result of a lack of technical knowledge, but are rooted in deep-seated identity, geographical and socio-economic divides. They respond to a sense of procedural injustice (certain views are not taken into account) and distributive injustice (some are paying for others).

Because disinformation narratives are fuelled by intrinsic truths, they cannot be countered by facts alone. Transition narratives must also address the determinants of support: justice and distribution. These narratives can be embodied in political programmes, but also in media coverage highlighting the current benefits of transition policies. Information is not merely factual - it can also be aspirational.

IV. Towards media accountability

An analysis of the penetration of climate disinformation narratives in the Brazilian, Spanish, French and Polish broadcast media reveals a structural vulnerability. Disinformation is no longer limited to the denial of science, but directly attacks climate action by exploiting the associated costs. Whilst much of the transition is a matter of legitimate debate, it is the duty of journalists to put the factual elements into context, so as to allow opinions to be freely expressed.

This analysis reveals that the broadcast media's countervailing power is crumbling in the face of the rise of climate disinformation. Their role as 'gatekeepers' is giving way to a broad platform that risks amplifying the performative effect of disinformation - that is, allowing it to influence decision-making.

Four possible solutions are therefore proposed to address this.

1 — Training for journalists
Deconstructing the new narratives of obstruction

Initial and continuing training for journalists, along with the incentives and disincentives that support it (common training framework, self-regulation, regulation, public funding), must incorporate a new dimension: an understanding of the mechanisms of obstruction.

Whilst journalists should be familiar with the fundamentals of climate physics, training in the most common forms of climate disinformation is essential. Two aspects should be highlighted:

— Anticipating narratives on solutions: Renewable energies, first and foremost, and decarbonisation technologies to a large extent, have become the focal points of disinformation. This is easily explained: they embody the visible and costly side of the transition. Training modules must enable newsrooms to identify classic fallacies (e.g., exaggeration of the intermittency of renewables and associated harms) and to encourage comparison with the status quo (e.g., the costs and harms associated with fossil fuels).

— Mastering the technical and economic dimension: Climate disinformation is shifting towards citizens' wallets. Academic literature highlights that "discursive contamination" is particularly successful when it pits ecology against purchasing power. Training must include modules on the cost of inaction and the redistributive mechanisms of European policies to avoid, through a lack of context, merely relaying punitive visions of the transition.

2 — Panel composition
Escaping the "contradictory trap"

One of the key findings of the analysis is that disinformation frequently originates from guests on live television programmes. This leads to two recommendations:

— Prioritising legitimacy: It is urgent to encourage newsrooms to adopt guest selection protocols based on genuine expertise. Without barring anyone from speaking in the media, these protocols allow the expertise of contributors to be situated within a broader context, and make it easy to highlight the marginal nature of their viewpoint where appropriate.

— Editorial support for live broadcasts: To counter 'regulars' / 'know-it-alls' / 'fast-thinkers' who use controversy to saturate the media landscape, studios must be equipped with real-time fact-checking mechanisms. The presence of mediators, experts or specialist journalists on set, capable of placing a statement in its scientific context, appears essential in certain circumstances — particularly during political interviews in election periods.

3 — Covering the environment over the long term
Moving away from controversy

Misinformation thrives during "peaks" linked to breaking news (disasters, international summits, statements by public figures), capitalising on the public's limited background knowledge of the topics covered. However, this study demonstrates that the more a media outlet covers environmental issues over the long term, the less it is exposed to the risk of misinformation. Two recommendations follow from this:

— Moving beyond avoidance: Setting aside dedicated coverage time and promoting cross-cutting coverage of environmental issues (across health, politics, economics, geopolitics and other sections) ensures a minimum level of coverage and prevents transition issues from being treated solely through an event-driven lens.

— Document processes, not just crises: By focusing solely on shocks (extreme weather events), the news media leave the field open to opportunism. Structural coverage allows us to explain planning, demonstrate long-term benefits and establish the facts before the emotion of a crisis takes hold.

4 — Deter
Hold broadcasters accountable

Unchallenged misinformation broadcasted live contravenes several media obligations. The Munich Charter stipulates that journalists must "tell the truth", and several national regulatory frameworks safeguard the accuracy and honesty of information in news programmes, so as to uphold the fundamental freedoms that stem from them notably freedom of opinion and expression.

To strengthen respect for the integrity of environmental information in the news media, two recommendations are essential:

— Enforce and strengthen audiovisual regulation: Independent national regulatory authorities must incorporate the obligation of rigour on environmental issues into the agreements with the broadcasters they regulate, and ensure compliance. The repetition of misleading narratives must be treated as a breach of the duty of accuracy in reporting, as demonstrated by the first court ruling in France in 2025 against CNEWS[25] . Furthermore, the enforcement of regulation must involve a precise measurement of the phenomenon, through the creation of dedicated observatories.

— Systematise the right of factual reply: To counter the anchoring effect of false information and associated perceptions, the news media must commit to broadcasting corrections following sequences unintentionally aired in their programmes.

Methodology

A unique alliance of organisations to detect climate disinformation on television and radio

This report is produced by the NGOs QuotaClimat, Science Feedback and Data For Good, as part of a collaboration aimed at semi-automatically detecting climate misinformation in the audiovisual media, through algorithmic pre-detection and manual validation. The project's ambition is to produce reliable, benchmark and open-source data on the presence of misinformation in the news media of the countries studied. The methodology is designed to be replicable, in collaboration with fact-checking organisations specialising in the national context under study. The analysis of data from Brazil, Spain, France and Poland was carried out by the organisations Lupa, Maldita, Science Feedback and Demagog respectively.

In France, the results are available on the Observatoire des Médias sur l'Écologie ([26]) to enable users to interact with and explore the data.

This analysis focuses solely on disinformation regarding climate science and climate action, and does not cover all environmental issues, notably the crises relating to biodiversity or natural resources.

It covers news programmes on the following channels:
Spain: RTVE La 1, RTVE 24h, Antena 3, Cuatro News, Telecinco News, La Sexta News
France: TF1, France 2, France 3 Ile de France, M6, France 24, France Info TV, CNews, LCI, BFMTV, Arte, RMC, RTL, France Inter, France Culture, France Info Radio, RFI, SudRadio
Poland: Fokus TV, Polsat, Polskie Radio, Radio Maryja, Radio Zet, TOKFM, TVN, TVP, TV Plus, TV Republika, TVS, TV Trwam, wPolsce24
Brazil: Band, CNN Brasil, Jovem Pan, SBT, TV Brasil, TV Globo, TV Record

The full scope is available in Appendix 1.

In academic literature, climate disinformation is generally defined as follows:
— **Climate disinformation** is defined as false or misleading discourse that carries a high risk of misleading the public regarding facts established by the current state of scientific knowledge on climate change and climate action concerning mitigation and adaptation measures as set out by the IPCC.
— **Climate misinformation** is distinguished by the speaker's lack of demonstrated intent to cause harm, and may therefore stem from error or from exposure to misleading narratives[27,28] .

This report adopts an operational approach, focusing primarily on:
— The falsity of the content,
—Its potential negative impact on the public or public policy, rather than on the intent or awareness of producers and disseminators.

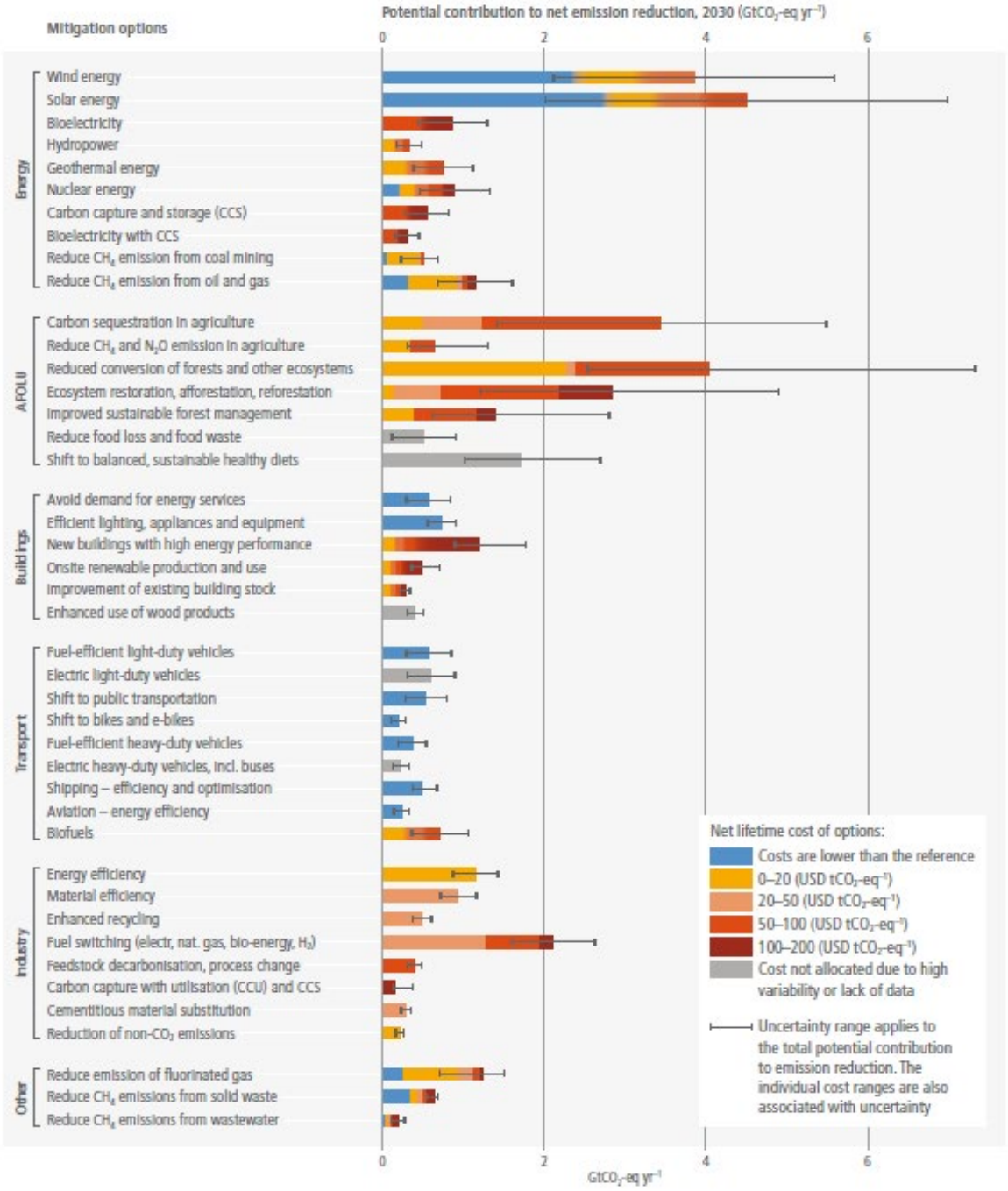
In this context, two additional terms are used to refine the analysis:
— **False claim**: an unsubstantiated claim that is either scientifically contradicted, manipulative by omission, or based on invalidated theories (see below).
— **Disinformation narrative**: among the cases of misinformation detected, a recurring narrative emerges as significant if more than a significant number of occurrences (8 in France, 4 for other countries) are detected. Repetition is considered a sufficiently strong indicator of the probable existence of a certain intent to mislead public opinion[29] .

Definition: climate disinformation

Topics falling within the scope of climate misinformation include, in particular, scientific knowledge on climate change and its human origins, as well as misinformation and disinformation regarding solutions enabling the climate transition.

All the solutions examined by the IPCC's Working Group III fall within the scope of our study (see graph opposite[30]). This broad definition of climate misinformation/disinformation allows us to incorporate the concept of 'new climate denial' (misinformation/disinformation concerning climate action) as recommended by the scientific literature on the subject[31] .

Summary of Mitigation Solutions — IPCC Sixth Assessment Report



Characterising misinformation

The characterisation of misinformation is in line with international standards provided by the International Fact-Checking Network[32] and the European Fact-Checking Standards Network[33]. These two networks promote standards recognised as the highest in the field of fact-checking while upholding the principles of freedom of expression

The veracity of a piece of information is determined using the scale developed by Science Feedback[34]:

Cases where the credibility of a statement is **"Very high"**	Little to no inaccuracies, fairly represents the state of scientific knowledge, contains appropriate references or links. The article provides insights to the reader about relevant science, mechanisms and implications, as well as limitations and important unknowns surrounding the evidence.
Cases where the credibility of a statement is **"High"**	The article does not contain major scientific inaccuracies and its conclusion follows from the evidence provided. While more detail would have been useful, readers are still accurately informed of the science.
Cases where the credibility of a statement is **"Neutral"**	The article contains no significant errors, but not enough insight either to inform the reader. (Ex: Article does not misstate findings from observational study but does not point out experimental research is needed to confirm findings; article doesn't point out that unpublished research findings aren't peer-reviewed…)
Cases where the credibility of a statement is **"Low"**	A statement is considered to have "low" credibility when it is not supported by an adequate reference or when the available evidence does not corroborate it (labeled as **"Unfounded"**). If a claim contains an element of truth but leads the reader to misinterpret the facts, for example by omitting fundamental contextual elements, it will be labeled as **"Misleading"**
Cases where the credibility of a claim is **"Very low"**	A claim is considered to have "very low" credibility when it is clearly false, for example, if it states a fact that directly contradicts available scientific data (labeled as **"Inaccurate"**), or if it provides an explanation or theory whose predictions have been invalidated (labeled as **"Erroneous"**).

The classification of a segment as disinformation corresponds to the categories of claims with very low credibility (Inaccurate or Erroneous), or low credibility (Misleading), where the claim has a high potential to mislead the public regarding established facts. These categories do not apply to mere inaccuracies or debates over interpretation: they refer to unsubstantiated claims that are either scientifically contradicted, manipulative by omission, or based on invalidated theories. A segment classified as misinformation may contain several different false claims.

The classification is also based on the ethical practices of fact-checking[45], which include:

Importance and public interest	The statement must be relevant and have an impact on public opinion, policy, health, or finance.
Virality and reach	It should be widely shared on social media, reported by the media, or disseminated by influential figures.
Potential for harm	The statement must pose real risks or dangers to the population (e.g., discouraging efforts to mitigate climate change).
Falsifiability and verifiability	The statement must be specific and verifiable using credible data or scientific consensus.
Authority and influence of the source	Statements from public figures, officials, or major media outlets are prioritized.
Clarity and context	The statement must be sufficiently clear for analysis and not taken out of context or derived from satire.
Recurrence and persistence	False statements that reappear regularly in public debate are more likely to be fact-checked.

Furthermore, it should be noted that reported statements, such as those from a climate-sceptic political speech, are not classified as misinformation. Finally, statements contradicted within the observed sequence are also not taken into account.

Identification of speakers

In order to examine the identified cases in detail, the fact-checkers then set about identifying, for each claim, the speaker who made it.

To limit selection bias and ensure methodological rigour, the following categories were selected:

Journalists	News professionals who report and analyze current events.
Columnists	Regular contributors who give their opinions, interpret or comment on topics.
Political guests	Official political leaders or representatives.
Non-political guests	Individuals invited occasionally to share their expertise or personal experience.
Listeners	Members of the public who react, ask questions, or share their experiences.

Automated construction of disinformation narratives

In order to distinguish isolated cases from disinformation strategies, **this study focused on developing a method for statistically grouping false or misleading claims into narratives.** It should be noted that a sequence (segment) of misinformation may contain several false claims, and thus contribute to several disinformation narratives.

The method used to distinguish between individual cases and narratives lies halfway between automated analysis and manual verification – the aim being to identify patterns of recurrence. The grouping of data points into categories is known as clustering.

Several clustering tests were carried out, notably the frugal 'K-Means' approach, which focuses on the semantic proximity between instances of disinformation. This semantic proximity was also used when testing different embeddings (all-MiniLM-L6-v2, camemBERT, Qwen3-0.6B)[35].

Whilst this approach was effective at grouping together cases dealing with the same subject (renewable energy, electric mobility, etc.), it did not allow for the identification of similar angles within these themes (renewable energy has led to a doubling of energy prices, etc.).

Consequently, following these testing phases, this study ultimately opted to use an LLM to transform the clustering task into a classification task[36] . This use of the LLM is based on a residual number of tokens, compared to the initial scope of the project.

The process follows three steps:
1) For batches of 15 cases of disinformation, generate potentially relevant categories via an LLM;
2) Group together any redundant categories from the set of identified categories;
3) Classify all cases of disinformation within the finalised list.

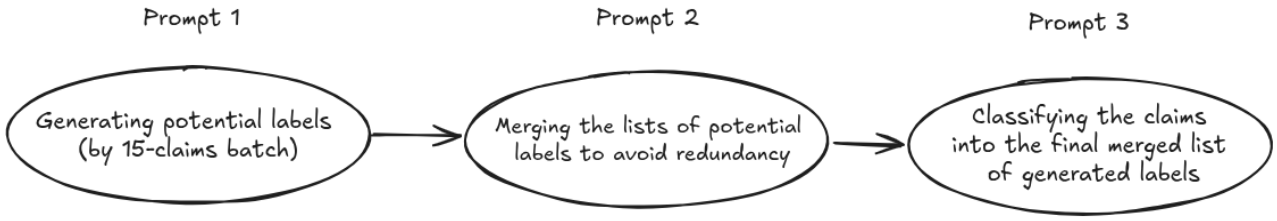
Note: the third step, which involves classifying claims within the broader disinformation narratives, could, in future, be carried out using a more efficient approach such as K-Nearest Neighbours.

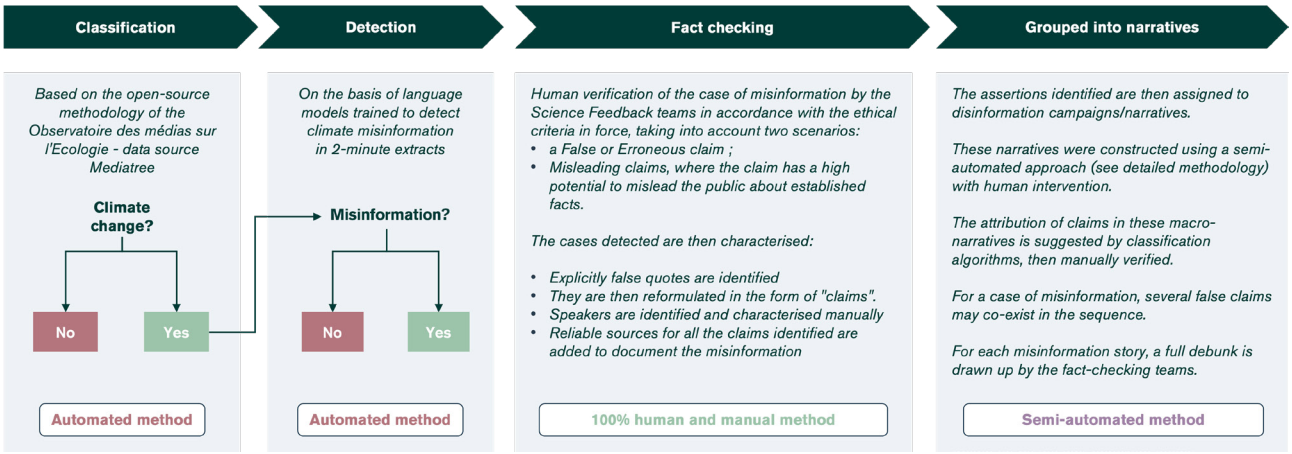
By following this process, adapting the prompts to our specific use case and providing a few examples of how a macro-narrative should be formulated, the analysis yields the desired grouping. This also provides an initial labelling that facilitates the subsequent steps.
This semi-automatic clustering serves as a working basis, and all clusters are then verified, corrected, improved and renamed manually by scientific verifiers.

Adapting the clustering process to an international scope

As the comprehensive approach used in France for clustering was not feasible due to budgetary constraints, a simplified approach was employed. To this end, cases of climate misinformation by country were fed into an LLM (Claude Sonnet 4.6) to cluster the various narratives.

The narratives were then reformulated to comply with the nomenclature standards used in France.





Complete protocol for the detection and characterisation of climate disinformation

For the entire analysis protocol, an extract is defined as a sequence of two consecutive minutes (for example: 18:00 – 18:02). A segment dealing with climate change is defined as containing at least one keyword relating to climate change, according to the open-source methodology developed by the Observatoire des Médias sur l'Écologie[37] .

Each segment dealing with climate change is then run through a disinformation detection model, which assesses whether a segment is at risk of containing disinformation or not.

Once cases have been identified by the model as "at risk of climate misinformation", annotators view the entire sequence and classify the case:

Confirmed misinformation or not
Speakers identified
Sources and justifications for verifying the cases

Finally, these cases are assigned to disinformation narratives to facilitate analysis and the drafting of more comprehensive debunking articles by specialist fact-checkers.

Model selection and training

Although a relatively comprehensive benchmark was carried out throughout the project, the balance between impact and efficiency led the teams to the following technical choice:

— The final model is a gpt-4o-mini-2024-07-18
— The French model is fine-tuned using an SFT ([38]) approach, with human labelling carried out by our fact-checkers between 2024 and 2025
— For Spain and Poland, the model is fine-tuned using an SFT approach on French claims translated into the corresponding language.
— The Brazilian model also applies a few-shot learning approach to facilitate preliminary detection in the absence of an annotated dataset[39]

All of this work (see Open Source) is available online[40].

The model used is fine-tuned on 150 annotated transcripts from the 2024 period, selected at random from samples of the television channels within the scope. In this dataset, 67 segments contained misinformation, whilst 83 did not.

Inter-annotator bias and measurement stability

In order to assess the stability of the fact-checking and thus of the data annotation, a double-check was carried out. Thus, on 200 random samples from those labelled by the first annotator as "confirmed misinformation", a second annotation was performed.

Cohen's Kappa coefficient, defined as follows, where Po is the agreement between annotators, and Pe is the agreement between annotators annotating at random according to the proportions of the annotated classes (in this case, misinformation or not).

The Cohen's Kappa coefficient obtained is 0.9, a score considered almost perfect according to the Landis & Koch scale.

$$\kappa = \frac{(Po - Pe)}{(1 - Pe)}$$

These annotations are therefore considered reliable.

Precision, recall and risk of underestimation in detection

The entire climate misinformation detection project is carried out using an artificial intelligence layer designed to automatically detect climate misinformation. It has been designed to minimise its use.

The results of the model enable fact-checkers to focus their efforts on cases at risk of containing misinformation. As these results are merely an aid to fact-checkers, achieving an accuracy close to 100% was never an objective for the technical teams involved in training the model.

At the time of publication of the results, the model trained in France to detect climate misinformation achieved an accuracy of 40%, with a recall of around 80% (see methodological box below). In the interests of comprehensiveness, the trade-off between precision and recall has generally been made in favour of recall, even if this means slightly increasing the workload involved in annotation and fact-checking.

Spain and Poland currently have an accuracy rate of around 15%, making fact-checking work slightly too time-consuming. If tools for detecting disinformation are to be deployed on a larger scale, the models will need to be retrained using the cases detected within the scope of the analysis.

It should also be noted that the "relatively low" accuracy also depends heavily on the narratives and topics addressed. Whilst the model is particularly robust when it comes to misinformation regarding the scientific consensus on the existence of climate change, it requires further fine-tuning when it comes to claims relating to climate action.

Within the scope of this study, there are three sources of underestimation of climate misinformation:
— The first building block of the entire climate misinformation detection protocol is based on the classification of segments into Climate / Non-Climate by the Media Observatory on Ecology. Whilst this classification is fairly comprehensive for France[41], its comprehensiveness for the Brazilian context is lower[42].
— The 80% recall rate means that at least 20% of climate misinformation is missed by the models.
— The scope is limited to news programmes, and in the case of Brazil, to a specific set of relevant programmes. It is therefore highly likely that climate misinformation is also present in other programmes not observed in this study.

Methodological note

Accuracy: measures how often our positive predictions are correct. An accuracy of 40% means that out of 10 cases detected by the model, 4 are actually climate misinformation.

Recall: measures how well we manage to identify all genuinely documented cases. A recall of 80% means that out of 10 actual cases of misinformation in the wild, we manage to identify 8.

Finally, a point regarding the potential[43] drift of the detection model must be raised. If we take a step back, automated climate misinformation detection models can work for three complementary reasons:
— False claims may already be present in the training data of large language models: IPCC reports and the scientific consensus on the causes of climate change, for example, form an integral part of the training data for modern LLMs, due to their presence in online literature, such as on Wikipedia[44].
— False claims are made with a tone, phrasing or semantics that prompts the model to classify the segment as at risk of misinformation: a typical case of misleading statements, fallacies or rhetorical manipulation.
— Detected narratives have been incorporated into the training data.

This third component requires phases of model retraining to ensure that the production model is enriched with new narratives that may emerge in public debates. This approach is inseparable from the monitoring and human expertise required for public and media debate.

Notes and appendix

Notes

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Appendix 1: Scope of analysis

Country	Channel	Programs
BRAZIL	Band	Band 08:00, Band 09:30, Band 11:00, Band 12:30, Band 22:15
BRAZIL	CNN Brasil	CNN Brazil 17:00, CNN Brazil 18:45, CNN Brazil 19:30, CNN Brazil 20:00
BRAZIL	Jovem Pan	Jovem Pan 04:30, Jovem Pan 12:00, Jovem Pan 16:00
BRAZIL	SBT	SBT 07:00, SBT 07:30
BRAZIL	TV Brasil	TV Brazil 12:45, TV Brazil 19:00
BRAZIL	TV Globo	TV Globo 04:00, TV Globo 06:00, TV Globo 06:45, TV Globo 08:30, TV Globo 11:45, TV Globo 13:25, TV Globo 19:10, TV Globo 19:25, TV Globo 20:30
BRAZIL	TV Record	TV Record 05:00, TV Record 07:00, TV Record 09:00, TV Record 13:00
FRANCE	Arte	28 minutes, JT
FRANCE	BFM TV	Information en continu
FRANCE	CNews	Information en continu
FRANCE	Europe 1	Bonjour, Europe 1 13h, Europe 1 Matin, Europe 1 Matin Week-end, L'heure des pros, Midi Week-end, Pascal Praud et vous, Punchline, Soir, Soir Week-end
FRANCE	France 2	13h15 le dimanche, 13h15 le samedi, 20h30 le dimanche, 20h30 le samedi, Envoyé spécial, JT 13h, JT 20h + météo, Le 6h Info, Télématin
FRANCE	France 24	Information en continu
FRANCE	France 3-idf	Dimanche en politique, Ici Matin, JT 12h, JT 19h + météo, Nous les européens
FRANCE	France Culture	Journal de 12h30, Journal de 18h, Les matins
FRANCE	FranceinfoRadio	Information en continu
FRANCE	France Info TV	Information en continu
FRANCE	France Inter	Le 13/14, Le 19/20, Le 5/7, Le 6/9, Le 7/10, Le journal de 13h du WE
FRANCE	LCI	Information en continu
FRANCE	M6	1245 le mag, 1 jour un doc, 66 minutes, 66 minutes samedi, Capital / Zone interdite, JT 1245, JT 1945 + météo
FRANCE	RFI	Journal - 10h, Journal - 11h, Journal - 12h, Journal - 13h, Journal - 14h, Journal - 15h, Journal - 16h, Journal - 17h, Journal - 18h, Journal - 19h, Journal - 20h, Journal - 21h, Journal - 22h, Journal - 6h, Journal - 7h, Journal - 8h, Journal - 9h
FRANCE	RMC	Apolline Matin, Estelle Midi, La Matinale Week-end, Les grandes gueules
FRANCE	RTL	Focus Dimanche, Journal, RTL Bonsoir, RTL Dimanche soir, RTL Matin, RTL Midi, RTL Petit Matin
FRANCE	Sud Radio	Le Grand Matin, Le Grand Matin Week-end, Mettez-vous d'accord, Sud Radio dans tous ses états
FRANCE	TF1	Bonjour ! La Matinale, Grands reportages, JT 13h, JT 20h + météo, Reportage Découverte, Sept à huit, Sept à huit Life
POLAND	Eska	Informacje, Informacje 06:00, Informacje 07:00, Informacje 08:00, Informacje 09:00, Informacje 10:00, Informacje 11:00, Informacje 12:00, Informacje 13:00, Informacje 14:00, Informacje 15:00, Informacje 16:00
POLAND	Fokus TV	Pod lupa
POLAND	Polsat	Wydarzenia

POLAND	Polskie Radio	Informacje, Informacje 00:00, Informacje 00:30, Informacje 01:00, Informacje 01:30, Informacje 02:00, Informacje 02:30, Informacje 03:00, Informacje 03:30, Informacje 04:00, Informacje 04:30, Informacje 05:00, Informacje 05:30, Informacje 06:00, Informacje 06:30, Informacje 07:00, Informacje 07:30, Informacje 08:00, Informacje 08:30, Informacje 09:00, Informacje 09:30, Informacje 10:00, Informacje 10:30, Informacje 11:00, Informacje 11:30, Informacje 12:00, Informacje 12:30, Informacje 13:00, Informacje 13:30, Informacje 14:00, Informacje 14:30, Informacje 15:00, Informacje 15:30, Informacje 16:00, Informacje 16:30, Informacje 17:00, Informacje 17:30, Informacje 18:00, Informacje 18:30, Informacje 19:00, Informacje 19:30, Informacje 20:00, Informacje 20:30, Informacje 21:00, Informacje 21:30, Informacje 22:00, Informacje 22:30, Informacje 23:00
POLAND	Radio Maryja	Aktualnosci Dnia 04:10, Aktualnosci Dnia 13:10, Aktualnosci Dnia 16:00, Felei-ton Sprobuj pomyslec, Rozmowy niedokonczone: Polityka w Polsce i wobec Polski, Serwis Informacjny 06:03, Serwis Informacjny 08:00, Serwis Informacjny 10:00, Serwis Informacjny 11:00, Serwis Informacjny 12:03, Serwis Informacjny 13:00, Serwis Informacjny 14:00, Serwis Informacjny 17:00, Serwis Informacjny 20:00, Serwis Informacjny 23:00
POLAND	Radio Zet	Radio Zet News, Radio Zet News 00:00, Radio Zet News 01:00, Radio Zet News 02:00, Radio Zet News 03:00, Radio Zet News 04:00, Radio Zet News 05:00, Radio Zet News 06:00, Radio Zet News 07:00, Radio Zet News 08:00, Radio Zet News 09:00, Radio Zet News 10:00, Radio Zet News 11:00, Radio Zet News 12:00, Radio Zet News 13:00, Radio Zet News 14:00, Radio Zet News 15:00, Radio Zet News 16:00, Radio Zet News 17:00, Radio Zet News 18:00, Radio Zet News 19:00, Radio Zet News 20:00, Radio Zet News 21:00, Radio Zet News 22:00
POLAND	TOKFM	TOK 360, TOK 360 16:00, TOK 360 16:35
POLAND	TVN	Fatky
POLAND	TVP	i9:30
POLAND	TV Plus	Taki jest swiat
POLAND	TV Republika	Agro Info, Dzisiaj, Express Republiki, Republika Dzien 12:30, Republika Dzien 13:30, Republika Dzien 14:00, Republika Dzien 14:55, Republika Dzien 15:00, Republika Dzien 16:00, Republika Dzien 18:00
POLAND	TVS	Dzisiaj w regionie
POLAND	TV Trwam	Informacje Dnia 00:10, Informacje Dnia 03:00, Informacje Dnia 04:20, Informacje Dnia 08:00, Informacje Dnia 10:00, Informacje Dnia 12:03, Informacje Dnia 16:00, Informacje Dnia 18:05, Informacje Dnia 20:00, Informacje Dnia 22:20
POLAND	wPolsce24	Kontra, Minela 20:05 (Magdalena Ogorek), Minela 20:05 (Marek Pyza), Ostra Szpila, Piatka Pereiri, Piatka Pochwata, Rapport Wiadomosci 12:00, Rapport Wiadomosci 15:00, Tele-Ekspres 01:30, Tele-Ekspres 16:45, Wiadomosci 00:00, Wiadomosci 07:00, Wiadomosci 08:00, Wiadomosci 09:00, Wiadomosci 19:30, Wiadomosci 23:45, Wiadomosci Agro, Wiadomosci Flash 07:00, Wiadomosci Flash 08:00, Wia-domosci Flash 09:00, Wiadomosci Flash 13:55, Wiadomosci Gospodarka, Wiado-mosci Poranne
SPAIN	Antenna 3	Noticia de la manana, Noticias, Noticias 15:00
SPAIN	Cuatro News	En Boca de Todos, Noticias Cuatro, Noticias Cuatro 14:00
SPAIN	LaSexta News	Al Rojo Vivo, La Sexta Noticias, La Sexta Noticias 14:00
SPAIN	RTVE 24h	Information 24 horas, Information 24 horas 14:00
SPAIN	RTVE La 1	Telediaro, Telediaro 06:00, Telediaro 15:00, Telediaro fin de semana
SPAIN	Telecinco News	El Matinal, El Matinal 07:00, El Matinal 15:00

Appendix 2: List of sources used for the debunks

Country	Source used
BRAZIL	IPCC. "Ar6 wg1 20210809 pr." IPCC. August 9, 2021. Accessed April 15, 2026. https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/.
BRAZIL	IPCC. "Report." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/syr/.
BRAZIL	IPCC. "Summary for policymakers." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/syr/summary-for-policymakers/.
BRAZIL	IPCC. "Chapter 11." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/wg1/chapter/chapter-11/.
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BRAZIL	IPCC. "Chapter 6." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/wg1/chapter/chapter-6/.
BRAZIL	IPCC. "Summary for policymakers." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/wg1/chapter/summary-for-policymakers/.
BRAZIL	IPCC. "Ipcc ar6 wgi faq chapter 11." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/wg1/downloads/faqs/IPCC_AR6_WGI_FAQ_Chapter_11.pdf.
BRAZIL	IPCC. "Ipcc ar6 wgi chapter12." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter12.pdf#page=90.
BRAZIL	IPCC. "Report." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/report/ar6/wg3/.
BRAZIL	IPCC. "Sr15." IPCC. Accessed April 15, 2026. https://www.ipcc.ch/sr15/.
BRAZIL	"Trump pagamentos tarifaco." G1 Globo. November 9, 2025. Accessed April 15, 2026. https://g1.globo.com/economia/noticia/2025/11/09/trump-pagamentos-tarifaco.ghtml.
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BRAZIL	"Producao de carne bovina no brasil emite mais do que o dobro da meta de gases do efeito estufa." G1 Globo. April 17, 2025. Accessed April 15, 2026. https://g1.globo.com/meio-ambiente/noticia/2025/04/17/producao-de-carne-bovina-no-brasil-emite-mais-do-que-o-dobro-da-meta-de-gases-do-efeito-estufa.ghtml.
BRAZIL	"Vetos licenciamento ambiental pontos." G1 Globo. November 27, 2025. Accessed April 15, 2026. https://g1.globo.com/meio-ambiente/noticia/2025/11/27/vetos-licenciamento-ambiental-pontos.ghtml.
BRAZIL	"Com seca severa no rio xingu usina de belo monte opera com 2 das 18 turbinas no pa entenda." G1 Globo. October 2, 2024. Accessed April 15, 2026. https://g1.globo.com/pa/para/noticia/2024/10/02/com-seca-severa-no-rio-xingu-usina-de-belo-monte-opera-com-2-das-18-turbinas-no-pa-entenda.ghtml.
BRAZIL	"Entenda polemica de jardins artificiais que imitam arvores na cidade sede da cop 30." G1 Globo. April 1, 2025. Accessed April 15, 2026. https://g1.globo.com/pa/para/noticia/2025/04/01/entenda-polemica-de-jardins-artificiais-que-imitam-arvores-na-cidade-sede-da-cop-30.ghtml.
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BRAZIL	"Guaiba ultrapassa cota de inundacao em porto alegre." G1 Globo. May 2, 2024. Accessed April 15, 2026. https://g1.globo.com/rs/rio-grande-do-sul/noticia/2024/05/02/guaiba-ultrapassa-cota-de-inundacao-em-porto-alegre.ghtml.
BRAZIL	NASA. "Arctic sea ice minimum extent." NASA Science. Accessed April 15, 2026. https://science.nasa.gov/earth/explore/earth-indicators/arctic-sea-ice-minimum-extent/.
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BRAZIL	Governo Federal do Brasil. "Cecav orientacoes compensacao espeleologica 2020." Gov.br. Accessed April 15, 2026. https://www.gov.br/icmbio/pt-br/assuntos/centros-de-pesquisa/cavernas/orientacoes-e-procedimentos/compensacao-espeleologica-1/cecav_orientacoes_compensacao_espeleologica_2020.pdf.
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