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Media Portrayals of Net Zero: Stakeholders’ Perspectives and Climate Solutions Framing

Environmental Communication

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Abstract

As global net zero commitments sit at odds with weak climate policy response, little is known about how the media’s news coverage communicates the idea of “net zero” to diverse audiences. This study examines how media portrays stakeholder interests and climate solutions through a mixed-methods analysis of 12,626 news articles published between 2010-2022. We find that despite exponential growth in net zero coverage following the Paris Agreement, overall sentiment remains relatively stable, masked by an undercurrent of diverging stakeholder perspectives. This fragmentation manifests through distinct framing patterns where industry and finance stakeholders receive positive coverage when associated with technological solutions, while policy interventions face more critical and negative framing. Our analysis further demonstrates how pivotal global events, particularly the Paris Agreement and Covid-19 pandemic, might have reoriented media narratives toward technological rather than policy-focused climate solutions, though the two are complementary. For environmental communicators and policymakers, our research offers evidence-based insights for developing targeted communication strategies that acknowledge diverse stakeholder portrayals while building dialogue on collective climate action.

Keywords: net zero, decarbonization, news media, climate policy, sentiment

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1. INTRODUCTION

Achieving “net zero,” defined as a balance between greenhouse gas emissions released and removed by technological and natural sinks (Fankhauser et al., 2022), has become a cornerstone of global climate action (IEA, 2021; IPCC, 2023). In recent years, the term has also permeated corporate discourse, as seen in corporate disclosures and media debates (Fuoli & Beelitz, 2025). Yet, public-facing information on net zero remains subject to divisive rhetoric, often framed through concerns about economic costs, consumer choice, and employment implications—narratives that are amplified by climate misinformation (de Nadal, 2024; Lamb et al., 2020; Kulin & Rhodes, 2026; Lloyd & Rhodes, 2026).

Nearly 150 countries have implemented or announced net zero pledges in the last decade, covering close to 77% of global emissions (Climate Action Tracker, 2025). Media coverage of net zero has grown exponentially since 2015 (Fuoli & Beelitz, 2025), but systematic analysis of how stakeholder perspectives are portrayed in this coverage remains limited (Lloyd & Rhodes, 2026), especially through the lens of ‘actionable’ solutions rather than climate misinformation. While prior studies examine broad climate change and climate policy media framing, key gaps persist in understanding: (1) how net zero discourse differs from broader climate policy coverage, (2) how sentiments vary across stakeholder groups, and (3) how media coverage shifts around major global events such as the Paris Agreement and the Covid-19 pandemic, if at all.

To address these gaps, we conduct a mixed-methods analysis of 12,626 news articles between 2010-2022, linking stakeholder- and solution-specific sentiments to insights from agenda-setting, prospect, and distributive conflict theories, as well as literatures on sustainability transitions. Stakeholders in the study are defined as key actors or groups with significant interests in net zero transitions, including industry, investors, policymakers and citizens.

Two major inflection points anchor our analysis: the 2015 Paris Agreement, which mainstreamed net zero commitments (Pearman et al., 2021; Christiansen, 2023), and the 2020 Covid-19 pandemic, which redirected recovery investments toward technological solutions (Andrew et al., 2022). While the IPCC (2018) 1.5°C report captured the urgency of climate action (i.e., “what” must be achieved), the Paris and Covid-19 contexts mark the consolidation of “net zero” as a governing narrative around implementation (i.e., “how” to achieve net zero), representing important events in our analysis.

Understanding how net zero is framed in the media is essential for designing effective climate policies that garner widespread public support (Comfort & Park, 2018). News coverage not only shapes what audiences think about but also how they think about it, influencing attitudes toward climate policy, technological pathways, and subsequent political outcomes (Guenther et al., 2024; Harcourt et al., 2020; Mutz & Soss, 1997; Painter & Gavin, 2016; Wlezien, 2024). Agenda-setting theory (McCombs & Shaw, 1972), prospect theory (Kahneman & Tversky, 1979), distributive conflict theory (Aklin & Mildenerger, 2020; Horstmann & Scharf, 2008) and framing theory (Entman, 1993), suggest that both the prominence and valence of media narratives determine

whose interests are emphasized and which policies or other solutions gain traction. Positive framing can accelerate decarbonization by emphasizing opportunity and feasibility, while negative framing can reinforce perceptions of cost and delay (Cox, 2010; Dasandi et al., 2022; Feldman, 2016). Moreover, the discourse coalition approach (Hajer, 1995) helps explain how shared storylines emerge in public debates and why particular actor–solution alignments recur in media discourse.

Our analysis focuses specifically on how media portrays ‘actionable’ net zero pathways across four key stakeholder groups, i.e. industry, investors, policymakers, and citizens, and two solution domains: technological (e.g., renewables, hydrogen) and policy-oriented (e.g., standards, carbon pricing). In doing so, we address a major research gap by emphasizing solution-focused portrayals rather than delay-centered narratives that have received broader coverage (Lamb et al., 2020; Painter et al., 2023; Hayes et al., 2025). Our overarching question is “how has public discourse on net zero evolved in news media since 2010?”

We find that media attention to net zero has expanded sharply since the Paris Agreement, reflecting potentially growing salience in public discourse. However, sentiment has become increasingly fragmented: while industry and financial stakeholders often frame net zero positively when tied to technological innovations, they exhibit more negative tone toward policy mechanisms such as carbon pricing. Major international events may have steered media portrayals toward technological rather than policy-focused solutions, potentially delaying government policy responses needed to scale-up zero-emission technologies (IPCC, 2023).

This study contributes to contemporary debates within the environmental communication literature, highlighting how evolving media narratives reflect underlying political economy dynamics that shape net zero transitions. We suggest that tailored communication strategies emphasizing positive frames (e.g., technological co-benefits for industry audiences) may mitigate sentiment fragmentation identified in our analysis.

2. LITERATURE

2.1 Theoretical Lenses

Achieving net zero requires coordinated action from diverse stakeholders, whose support for low-carbon solutions determines the feasibility of these pathways (Geels et al., 2016; Zakeri et al., 2022). Opposition from vested interests and institutional inertia can slow a low-carbon transition (Lazarus et al., 2015; Pellegrini & Arsel, 2022; Waller et al., 2020), making it vital to understand how news media portrays stakeholder views to address these barriers to net zero.

News media plays a central role in shaping public opinion, influencing stakeholder attitudes and setting policy agendas through repeated coverage of climate-related issues (Feldman, 2016; McCombs & Shaw, 1972; Page et al., 1987; Weingart, 1998). Drawing on agenda-setting theory and framing literature in communication research, media coverage not only determines which

issues gain prominence but also shapes how these issues, such as net zero pathways, are perceived by diverse audiences, including the public and policymakers (Entman, 1993; Mutz & Soss, 1997; Wang et al., 2023; Wlezien, 2024). In this sense, agenda-setting helps explain the salience of net zero in public debate, while framing helps explain how particular pathways, risks, and solutions are presented and understood. Long-term exposure to specific framing and narratives can cultivate certain beliefs and attitudes (Page et al., 1987), while shifts in coverage can alter the perceptual environment and indirectly influence policy change (Mutz & Soss, 1997).

Complementing this perspective, prospect theory suggests that stakeholders weigh potential gains (e.g., long-term cost savings from renewables) against losses (e.g., sunk costs in fossil fuel infrastructure) asymmetrically, often favoring risk-averse decisions that prioritize familiar actions over disruptive shifts (Kahneman & Tversky, 1979). Distributive conflict theory (Aklin & Mildenberger, 2020) further illuminates these dynamics, implying that net zero transitions may create potential winners (e.g., zero-emission technology innovators) and losers (e.g., fossil fuel-dependent industries) in the reallocation of resources and power, which in turn can drive divergent media portrayals across stakeholder groups (Geels et al., 2017; Sovacool et al., 2022). Finally, insights from discourse coalition theory (Hajer, 1995) can help explain why certain stakeholders repeatedly cluster around similar narratives and solution pathways, with finance and industry actors often associated with market-driven, innovation- and technology-oriented frames, and policy actors more frequently linked to regulation, planning, and fairness.

Yet, empirical research remains scarce on how news media covers stakeholder positions and their evolution in response to significant events (Hansen, 2018; Strauß et al., 2023), particularly when viewed through the lenses of agenda-setting, prospect theory, and distributive conflict theory. Existing research often focuses on climate communication broadly (Hestres, 2014; Hopke & Hestres, 2018; Painter et al., 2023), without dissecting net zero-specific framing by stakeholder group. Our study fills this gap by linking media sentiment analysis to these theoretical insights, using them to guide keyword searches and interpretation of results. In doing so, the study contributes to understanding how diverse political-economic contexts shape media representations of net zero debates and provides insights for policymakers to design more effective emission-reducing and communication strategies.

2.2 Sentiment and Fragmentation in News Media

By framing what is perceived to be real and important, news media can serve to legitimize or delegitimize social or environmental issues and movements (Nisbet, 2009). In doing so, media coverage not only increases public awareness but also mobilizes public support for an issue, influences policy and decision making, and affects social change (Arlt et al., 2011; Hestres, 2014; Nisbet, 2009). Moreover, news media coverage can prove to be a proxy for stakeholder opinion, though stated preference methodologies (e.g., surveys, interviews, and focus groups) and historical data (e.g., lobbying registrations and social activism activities) may provide a more rigorous assessment of stakeholder views (Sovacool et al., 2018). Nevertheless, news media portrayals of

actors and solutions is one of many valuable sources of information and influence that can accelerate or delay behavioural and policy change.

Specifically, divisive or distorted media coverage can fuel confusion, apathy, and climate topic fragmentation among the general public (Druckman et al., 2021; Feldman, 2016). For instance, significant societal and political progress on climate change depends, in part, on public opinion and pressure of government officials (Feldman, 2016; Ockwell et al., 2009). Media portrayals of ambitious climate action, showcasing successes and public support, can incentivize governments to adopt bolder policies to maintain public trust and legitimacy (Dasandi et al., 2022). Conversely, persistent negative framing focused on the economic costs or feasibility challenges can discourage governments from pursuing ambitious goals. Moreover, many of the most divisive topics in public discourse are based on legitimate policy questions of costs and optimal technology pathways (Lamb et al., 2020; Scheufele, 2014), which media can use to directly affect the level of knowledge and trust (Oschatz et al., 2019). Thus, how news media covers and portrays climate action has major consequences for public engagement, support for decarbonization policies, and the ambition of climate action among governments, corporations, and communities (Brulle, 2010; Feldman, 2016). We thus examine how media discourse on net zero has changed in both prevalence and fragmentation in recent years.

2.3 Diverse Stakeholders Portrayals in Net Zero Media Discourse

Transitions toward net zero depend on the engagement of multiple stakeholders, including the financial sector, industry, government actors, and civil society (Geels et al., 2016). Because the long-term success of climate policy hinges on sustained public and stakeholder support (Ebner et al., 2025; Jaccard, 2020), this study does not examine climate policy design characteristics and their direct effects on political acceptability. Instead, we focus on how news media portrays stakeholder positions as one input shaping political acceptability of ambitious climate policy. In media coverage, these stakeholders function not as direct sources of discourse but as subjects of portrayal. That is, we analyze how news outlets represent or associate specific stakeholders with certain ideas or solutions related to net zero. Such portrayals provide insight into how legitimacy and credibility are constructed in public communication around decarbonization responses (Verbrugge et al., 2017).

Stakeholder portrayals strongly shape and often distort media representations of climate change and climate solutions. Boykoff and Boykoff (2004) show that journalistic “balance” can amplify a small group of skeptics, creating informational bias that industry groups exploit by training scientists to inject public doubt. Nisbet (2009) similarly finds that conservative think tanks frame climate change as uncertain and harmful, while science-based imagery of looming and irreversible climate change threats reinforces partisan divides. Nisbet (2009) argues that effective communication requires tailoring frames to audience values, from moral appeals for religious communities to economic narratives for labor groups. At a structural level, Schäfer and Schlichting (2014) reveal that research on climate media remains Western-centric, marginalizing Global South

perspectives—those most affected yet least represented in both scholarship and public discourse. These insights enrich understanding of overall climate change coverage but lack finer detail on how different stakeholder groups are portrayed, which could inform more effective climate communication and policy interventions.

One central stakeholder group is the financial sector (Savin & van den Bergh, 2021). Traditionally ambivalent toward climate action, financial markets are evolving to acknowledge their significance, integrating environmental considerations into investment decisions and governance practices (Dordi et al., 2022). Industry-led initiatives like the Task Force on Climate-Related Financial Disclosures (TCFD) and the Global Financial Alliance for Net Zero (GFANZ) exemplify this evolution. However, backlash against environmental, social and governance (ESG) practices highlights ongoing tensions within the financial sector (St Clare, 2023).

Industry actors also play a critical role in the development and deployment of low-carbon innovation (Bataille, 2020). Their support is crucial for progress, yet vested economic and political interests can fuel resistance to change (Geels et al., 2017). The decarbonization of energy-intensive industries like chemicals and construction is essential, but threatens industries' established practices (Sovacool et al., 2022). A comparative case study of climate policy implementation in the UK and Germany by Gransauil et al. (2023) shows how the support of business and labor groups plays a vital role, both in incentivizing low-carbon solutions and facilitating the transition away from incumbent industries.

Governments stand as another crucial stakeholder group, wielding significant authority and responsibility in shaping discourse and driving action towards net zero goals (Gudde et al., 2021). By establishing regulatory frameworks and steering economic activity through various policy instruments, government policy can influence the choices of businesses and individuals (Gransauil et al., 2023; Jaccard, 2020). For example, governments can direct funds, price pollution, set sector-specific low-carbon performance standards, and promote public awareness, impacting the pace and scale of transitions towards net zero.

Finally, social movements and collective action cannot be overlooked (Hess, 2014; Sovacool et al., 2022). Citizen action in the form of mass mobilization of labour and grassroots social movements can be an effective bottom-up leverage point for net zero transitions, through calls for increasingly ambitious climate policy or through pressures on capital markets and industries. The rise in environmental justice organizations like Extinction Rebellion and Fridays for the Future speak to an increasingly mainstream call for decarbonization. Conversely, the rise of populism and conservative politics have, in some instances, stifled progressive climate action (Fiorino, 2022; Hess, 2014; Kulin et al., 2021). Irrespective of their immediate impact on policy, social movements can influence national dialogue, shape climate policy, and change the way other citizens perceive climate change and decarbonization (Sovacool, 2022). We thus examine how media discourse differs by stakeholder group, due to the attributed interests of each group and their perspectives on net zero pathways.

2.4 Technological and Policy Solutions

Achieving net zero will depend on a confluence of interlinked actions from policy change that incentivizes technological innovation to shifting personal behaviours and cultural norms. Socio-technical theories of sustainability transitions present a lens by which to analyze this multi-dimensional nature of net zero transitions. In line with Geels et al. (2017), systems transitions arise from three mutually reinforcing processes: increasing momentum of niche innovations, weakening of existing systems, and the strengthening of exogenous pressures that lead to cultural change. This underscores that whole-system transitions involve not only technological substitutions, but also social and business model innovations, changing relations between sub-regimes, and evolving issue framings that alter problem perceptions and political attention (Sovacool et al., 2020). Complementing this, O'Brien's (2018) three spheres of sustainability transformation framework—practical (technologies and behaviors), political (systems and structures), and personal (worldviews and beliefs)—positions stakeholders as active participants of change rather than passive observers, whose personal-sphere beliefs critically interact with practical and political dimensions to enable or constrain net zero pathways. Understanding these stakeholder perspectives as portrayed in media thus reveals leverage points for achieving net zero, justifying our focus on sentiment analysis on 'personal sphere' discourses as they relate to practical technological and policy solutions in shaping transition pathways.

Among the more compelling solutions to decarbonization are technological innovations in alternative low-carbon forms of energy generation and use, such as photovoltaics and wind (Qazi et al., 2019). Relatedly, investments in carbon sequestration and nature-based solutions can play a mitigating effect to offset emissions in the atmosphere (Bertram & Merk, 2020). Equally critical to the transition, however, is the weakening of incumbent systems of production, primarily affiliated with carbon intensive and hard-to-abate sectors like transportation, chemicals, and construction (Lazarus et al., 2015). Finally, effective and acceptable policies are key leverage points in both accelerating low-carbon innovation and discouraging emissions intensive production (Heyen & Wicki, 2024; Huberty & Zysman, 2010; Rogge & Schleich, 2018). While there has been an increase in climate policies globally, visible policies, such as carbon pricing and some salient regulations, are subject to controversy in public discourse (Lamb et al., 2020; Levi, 2021).

It should be noted that policy and technological solutions do not stand alone but rather play a mutually reinforcing role in actualizing a net zero transition. Incentive-based policies like subsidies and tax credits can mobilize social and business support, which in turn improves resilience against political setbacks (Geels et al., 2017). We thus examine how different stakeholder interests, through technological and policy solutions, are exhibited in news media.

2.5 International Event Interventions

The timing of climate interventions can influence public support and the kind of future being pursued (Heyen & Wicki, 2024; Hopke & Hestres, 2018; O’Leary et al., 2024). Stakeholder support can change over time, depending on both long-term trends like climate change and economic shifts, as well as critical historical events such as major economic recessions or social and environmental disruptions. The 2009 recession, for example, strengthened public support for climate action and climate-related directives, through increased fiscal stimulus funding for climate solutions (Harrison, 2013; Jaccard, 2012). Similar high-profile international events over the past decade may have also shifted public perceptions on net zero (Liu et al., 2011). Two such events during our sample period are the Paris Agreement of 2015 (Höhne et al., 2021; van Soest et al., 2021) and the Covid-19 pandemic of 2020 (Andrew et al., 2022; Le Quéré et al., 2020; Ray et al., 2022; Sanniti, 2023).

Such critical events can act as powerful catalysts for shifting net zero discourse. Through mechanisms like agenda-setting and framing, these events can reshape the information landscape, influence public opinion, and eclipse previously dominant narratives around climate change and net zero (Lamb et al., 2020; Liu et al., 2011). Sovacool et al. (2018) suggest that crisis-induced media surges can propel niche energy technologies into the mainstream of transition discourse, yet note that this momentum often falters when not grounded in durable policy support once the sense of crisis fades. As a recent example, the Covid-19 pandemic’s focus on public health might have temporarily shifted media attention away from climate solutions, impacting public salience and urgency related to net zero goals. Such framing might endanger reluctance towards certain net zero solutions compared to narratives focusing on environmental benefits or long-term economic gains. Consequently, understanding the interplay between these events and agenda-setting is crucial for elucidating how shifts in discourse can influence public support for net zero interventions. Thus, we finally examine how high-profile international events shift discourse on net zero.

3. MATERIAL AND METHODS

We conduct a combination of quantitative sentiment, text mining, and statistical analysis to examine how discourse on net zero has evolved in news media. Such methods frequently appear in research on environmental communication (Becken et al., 2017; Pickering & Norman, 2020; Shen & Wang, 2023). However, previous studies have not examined stakeholder perspectives on net zero, nor have they engaged with news media as a source of public discourse.

3.1 Data Collection

The research examines excerpts of news articles exported from the Nexis Uni database, a repository of news publications. Our queries (delineated in Table 1) identify relevant news articles that explicitly reference “decarbonization” or “net zero” in the article headline or leading paragraph as well as “climate” or “carbon” within the body of the text. Because the NexisUni

algorithm treats hyphens as spaces, our query for “net zero” also retrieves “net-zero” and other spelling variations. While we note the difference between the terms “net zero” and “decarbonization” (see Section 4.1), we include both terms for comprehensiveness of the analysis as they are often used interchangeably in public discourse.

Table 1: NexisUni query and number of corresponding articles.

Query	Lexis Nexis Export	Excluding Duplicates
hlead(decarbon*) AND (climate OR carbon)	2,905	2,590
hlead(net zero*) AND (climate OR carbon)	12,076	10,157
Subtotal		12,747
Exclude general articles (Final Sample)		12,626

This table presents the search query used to identify relevant news articles. It includes two initial queries on decarbonization and net zero, and presents the number of documents exported and the number of unique documents (excluding duplicates) that remain. General articles (outside of the scope of net zero and decarbonization) are removed.

Articles are further scoped to the English language, published between January 1, 2010, to December 31, 2022, in major world news sources, as predetermined by Nexis Uni software. The resulting corpus contained a global sample of publications, though it was weighted towards UK and Commonwealth sources. Among the most frequent outlets in our final dataset were The Guardian (UK), The Daily Telegraph (UK), and the Australian Financial Review (Australia). Notably, major North American publications were less prevalent, potentially reflecting differing national media landscapes and political contexts for climate discourse. Our global media sample spans center-left/liberal outlets favoring ambitious climate action to center-right/conservative ones that prioritize economic interests, reflecting the topic’s natural political context variance. This sampling approach targets high-impact, agenda-setting discourse rather than a representative survey of public opinion, which is difficult to achieve via media analysis. Articles are also ‘grouped’ by Nexis Uni, in a process that merges several versions of the same news articles based on high levels of similarity. The total number of exported articles is 14,981.

Articles are subsequently imported to R for preprocessing using the *LexisNexisTools* package (Gruber, 2021). Highly similar articles are identified and excluded using Gruber’s (2018) methodology, based on a combination of word similarity and relative distance. Replicating similarity filter thresholds by Gruber (2018, 2021) and studies with similar filtering methods (Ordonez-Ponce et al., 2022), we select a threshold of 0.97 for the similarity measure and a 0.2 threshold for the relative distance measure. Further, following Ordonez-Ponce et al. (2022), we apply an exclusionary screening for what are deemed to be non-relevant articles--specifically, summative articles with headlines like “Key View,” “Market Summary” or “Eye on Equities.” The final sample resulted in 12,626 news articles.

Finally, we note that analyses of entire articles, especially those of varied lengths, can impose significant noise to a sentiment analysis. Metadata on article lengths exported from Nexis Uni, indicates that the average length of an article in the sample is 828.7 words. Consequently, articles are split into sentence strings using the *sentimentr* package (Rinker, 2021), for all subsequent analyses. This narrower focus of examining sentences as opposed to the entire article allows for a more nuanced examination of the context in which arguments are framed. Data cleaning of sentences, such as stripping digits and punctuations and excluding search terms like “decarbonization,” “net zero,” “climate,” and “carbon” is conducted using the *tidytext* package (Silge & Robinson, 2016). Collectively, our corpus includes over 300,000 unique sentences, with an average length of 29.7 words and a standard deviation of 25.6.

3.2 Data Analysis

In our analysis, stakeholders serve as legitimizing agents: when certain actors (e.g., investors, business leaders) are mentioned alongside particular technological or policy solutions, this co-occurrence signals perceived credibility, feasibility, or economic viability. For example, frequent associations between investors and hydrogen may frame financial backing as essential validation for emerging technologies. Thus, by identifying patterns of co-occurrence between stakeholders and solution types, we capture how the media attributes roles, responsibilities, and influence to these groups.

Our analysis employs a multi-pronged approach. First, a descriptive meta-analysis examines the growth of net zero discourse over time (e.g., article volume, news sources). Next, we conduct an inductive and deductive content analysis (Elo & Kyngäs, 2008) to identify key themes within the data. The inductive approach explores word frequency patterns, while the deductive approach focuses on pre-defined themes of interest. Deductive keywords and synonymous terms were identified based on relevant literature reviewed in Sections 2.1-2.5, instead of unsupervised inductive topic modeling or other Natural Language Processing techniques. This was done to operationalize our conceptual distinctions between stakeholder groups and technological versus policy solutions. Specifically, search terms were selected to operationalize the theoretical distinction between technological and policy pathways: technological solution terms were informed by socio-technical transitions literature (e.g., Geels et al., 2017; O’Brien, 2018), while policy solution terms reflected regulatory and pricing frames from environmental economics literature (e.g., Jaccard, 2020). Stakeholder categories were similarly derived to capture the four main actor groups identified in transition governance research: finance, industry, policy, and citizens. The list of terms used for our analysis is presented in Table 2 below.

Complementing our meta-analysis and content analysis above, we also conduct a sentiment analysis to evaluate the tone of discourse within news articles (Van De Kauter et al., 2015). Extending on calls by Geels et al. (2017), this research methodology can provide greater insights into the role of actors and actions in achieving a low-carbon transition, and indicate support for select management solutions and policies. This method can also complement technical feasibility

studies and model-based analyses by incorporating perspectives on social and economic acceptance, cultural discourses, and political pressures.

Table 2: Frequency of terms

Topic	Search Keywords	# Sentences
Stakeholders		
Industry	industr; business; corporat	35,401
Policy	polic; govern; tax; regulat	61,603
Finance	finan; invest; pension; asset manag; bank; lending; insurance; capital	43,214
Citizens	citizen; consum; household	10,379
Technological solutions		
Renewable energy	renewable energy; green energy; solar; wind; hydro; geothermal	20,371
Transportation	electric vehicle; zero emissions vehicle; ship; aviat	17,693
Hydrogen	hydrogen	9,026
CCUS	carbon capture; carbon sequest; carbon util; CCUS	4,540
Efficiency	energy efficien; energy conserv; energy sav	2,360
Nature-based	nature based; forest; soil; ocean	4,530
Policy solutions		
Carbon pricing	carbon pric; carbon tax; cap and trade	2,887
Targets	target; benchmark	22,081
Disclosure	report; disclos	12,593
Standard	standard; mandat; regulat	8,138
Subsidy	subsid	2,084

This table presents the list of “Search Keywords” used to group stakeholders, themes, and solutions. The “Topic” column provides a summary of each individual stakeholder, theme, and solution-type examined. The “# Sentences” column presents the number of sentences in which any of the search keywords appear.

Sentiment scores are used to evaluate fragmentation in net zero discourse and inductively identify the core topics that appear most frequently among sentences with positive and negative sentiment. The *sentimentr* package (version 2.9.0) is used to evaluate sentence-level sentiment in this study (Rinker, 2021). A score of zero indicates neutral sentiment. To ensure validity of the sentiment analysis, we additionally evaluated the data using the AFINN lexicon and found no significant differences in the overall sentiment scores when compared to *sentimentr*. Additionally, to verify internal validity, we manually verified a random subsample of 100 sentences, achieving 74% agreement. The overall sentiment distribution closely matched the automated results (within ~5% variance), with most discrepancies arising between neutral and negative classifications, confirming the robustness of the *sentimentr* tool for trend-level analysis.

Finally, we leverage deductive frequency counts of keywords from Table 2 to create contingency tables which are used to evaluate how discourse varies between stakeholder, solution type, and around significant events. These tables provide a clear visual representation of the co-occurrence

patterns between our categorical variables. To statistically test for non-random association between these observed co-occurrences, we employ the chi-square test of independence. This test explains which stakeholder groups discuss specific solution types more frequently and how discourse patterns shift surrounding key events at a statistically significant level of $\alpha=0.05$.

4. RESULTS

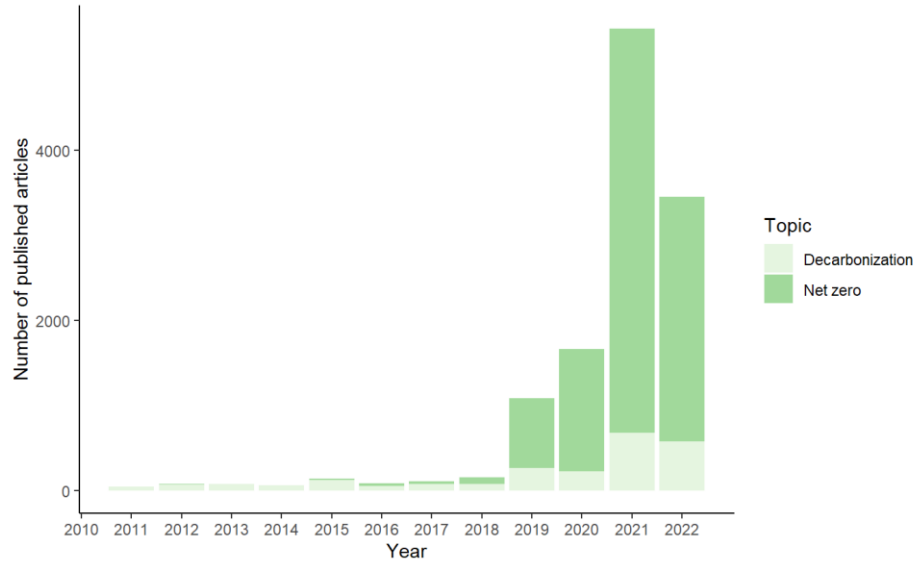
4.1 The Proliferation of Net Zero Discourse

Our analysis reveals a significant proliferation in media discourse on ‘net zero’ and ‘decarbonization,’ particularly from 2019 onwards. While reference date back to 2010, the volume of coverage remained low for much of the decade before beginning a steep upward trajectory. This growth features notable peaks in coverage aligned with major events, including a surge in June 2019 when the UK became the first major economy to pass net zero emissions law, and additional spikes in February 2020 and February 2021 following announcements by BP and Shell to achieve net zero by 2050 respectively. The single largest peak in coverage occurred during the 2021 United Nations Climate Change Conference (COP26). Although articles with net zero or decarbonization in the headline remain a small fraction of the broader sample of articles that reference climate or carbon in their body (over 3.4 million articles over the sample period), the year-over-year growth of net zero discourse is proportionally greater than that observed for climate and carbon discourse.

Figure 1a indicates that while discourse on decarbonization has grown over the past 12 years, the prevalence of discourse on net zero has eclipsed decarbonization over the last four years. Several factors may account for this. Firstly, decarbonization is a necessary but not sufficient condition for net zero, which requires both reducing and removing emissions in accordance with climate goals (Fankhauser et al., 2022; IPCC, 2023). Second, net zero targets have attracted more political and public attention due to the growing number of ambitious commitments made by climate-sincere jurisdictions and industries worldwide (Höhne et al., 2021). Third, net zero may be more effective in communication as it provides a clear and quantifiable target often associated with a specific timeline.

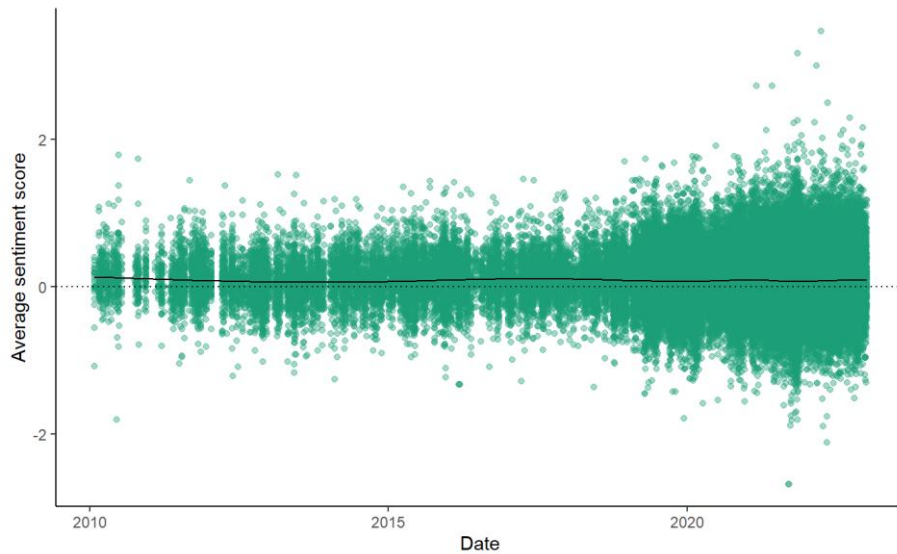
Turning to sentiment, Figure 1b paints a dynamic picture of perspectives on net zero. While the ‘jitter plot’ reveals an increasing presence of sentences expressing opposing views (positive and negative), the main trend line (average sentiment score) remains relatively stable across the past decade. This broader distribution of sentiment scores suggests that there are increasingly diverging narratives on net zero, in part due to an increase in articles with visibly conflicting positive and negative narratives, contributing to the spread observed in the figure. However, a closer look at the trend line and confidence intervals reveals that average sentiment and distribution on net zero has plateaued in recent years, with a mean sentiment of 0.08 and a standard deviation of 0.279. This slightly positive mean sentiment score, paired with a high standard deviation, shows that the discourse is in fact divided between techno-optimistic and policy-cost pessimistic narratives.

Figure 1a: Yearly trends in media coverage of net zero



News media articles on decarbonization and net zero are obtained from NexisUni. Articles are categorized by reference to decarbonization or net zero, as indicated by the legend. The y-axis represents the number of articles, and the x-axis represents time.

Figure 1b: Distribution of sentiment scores by sentence over time.



News media articles on decarbonization and net zero are obtained from NexisUni. Each point in the figure represents the average sentiment score of a sentence in the corpus and the black trend line of average sentiment over time. Sentiment scores are presented on the y-axis while time is presented on the x-axis.

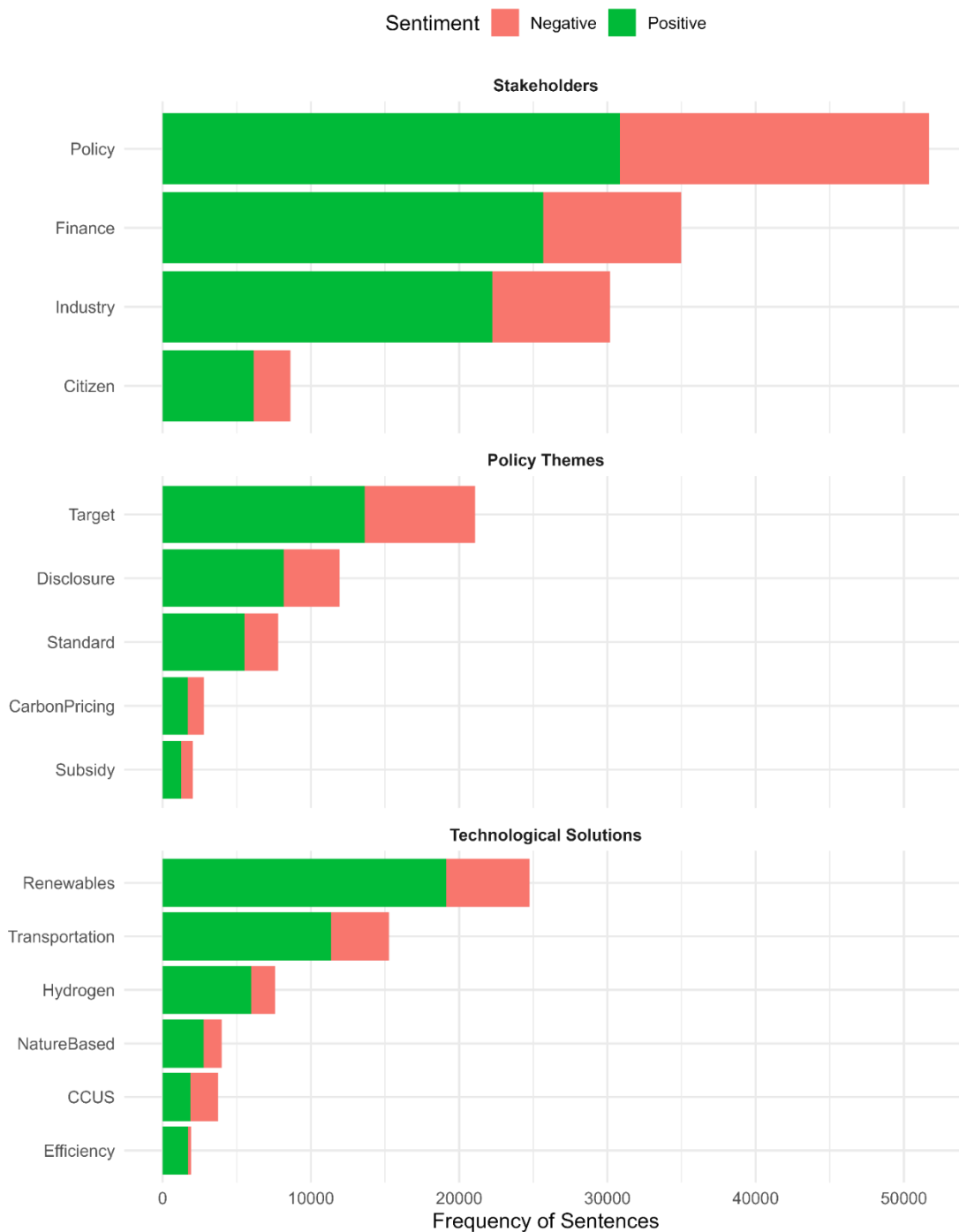
4.2 Top Keywords by Sentiment

To explore the content of the discourse, we conduct an inductive analysis to identify the most frequent two-word phrases (bigrams) in sentences with positive and negative sentiment. This reveals a discourse centered on energy sources, political figures, and emissions targets. Notably, the bigram “fossil fuel” is the most common keyword in both positive and negative sentences, indicating that the role of the incumbent industry in the transition is a primary and highly divisive topic of discussion. Similarly, “renewable energy” features prominently in both, though more often in a positive context. The analysis also highlights divergent framing of specific energy sources: “natural gas” appears frequently in positively-framed sentences, while “coal fired” and “nuclear power” are common in negatively-framed ones, suggesting a media narrative that positions gas as a potential bridge fuel. Interestingly, while general terms like “emissions targets” were common, specific and often controversial policy instruments like “carbon tax” are absent from the top keywords, suggesting they are not at the forefront of high-level media discourse on net zero.

4.3 Media Portrayal of Stakeholder Perspectives

Using the deductive keywords identified in Table 2 above, we conduct another sentiment analysis looking at how frequently select stakeholders appear in corpora of positive and negative sentences. Beginning with stakeholder type, as shown in the top panel of Figure 2, we find that while policy-oriented stakeholders are most prevalent in the sample, sentiment is generally more positive in sentences that reference finance- or industry-oriented stakeholders. Specifically, of the 51,587 sentences in our sample that reference policy or regulation, 40 percent of these references are in sentences with an average negative sentiment score, indicating that a sizable proportion of discourse on net zero that references policy is portrayed negatively. Comparably, finance- (74 percent in sentences with positive sentiment) and industry-oriented stakeholders (91 percent in sentences with positive sentiment) are referenced more favorably. While references to the role of finance, industry, and policy are commonplace in news discourse, reference to citizen action is limited (8,617 sentences, 71 percent in sentences with positive sentiment). This lack of reference to citizens (and equivalent keywords) in media articles discussing net zero is interesting as it has the potential to devalue the influence of activism and collective action as levers in the low-carbon transition (Cherry et al., 2021). Alternatively, the lack of citizen discourse coverage may imply that governments focus on supply-side actors who then transfer the cost of climate action onto consumers without visible public opposition, as has been the case of performance-based regulations such as renewable portfolio and low carbon fuel standards (Rhodes et al., 2021).

Figure 2: Media Sentiment Towards Net Zero Themes



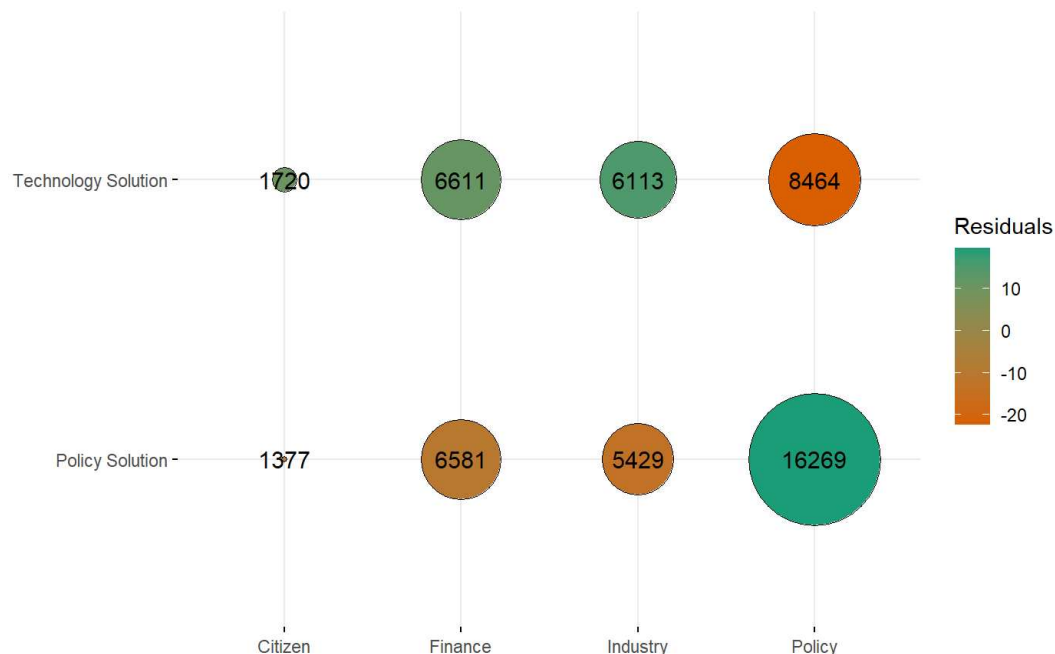
Sentence counts segmented by positive and negative sentiment. News media articles on decarbonization and net zero are obtained from NexisUni. Keywords are identified based on synonymous terms presented in Table 2. Green bars represent numbers of sentences with a positive sentiment while red bar represent number of sentences with a negative sentiment for each theme. The keywords are presented on the y-axis and the frequency of keywords that appear in at the sentence level is presented on the x-axis.

Finance and industry stakeholders may have a higher sentiment in news media on net zero because they are seen as key actors in driving the net zero transition, both by influencing the public discourse and by aligning their practices with climate goals. These stakeholders have more resources, expertise, and networks than policy and citizen stakeholders, and consequently, news media may speak more positively about them (Farrell, 2016).

4.4 Discourse on Technological and Policy Solutions

We turn next to the technological and policy solutions presented in Figure 3. On technological solutions, reference to renewable energy is most prevalent, appearing in 24,722 unique sentences, the majority of which (over 77 percent) has a positive sentiment. This is followed (in order by prevalence) by reference to transportation and hydrogen. Collectively, 57,171 sentences reference technological solutions and of these sentences, 74.8 percent of sentences that reference technological solutions have a positive sentiment. Comparably, reference to policy solutions are slightly less frequent (appearing in 45,554 sentences collectively) and slightly less positive (66.3 percent of sentences that reference policy solutions have a positive sentiment). Targets, disclosures, and standards are most common, while reference to carbon pricing and subsidies are lacking (appearing a mere 2,773 and 2,043 times respectively).

Figure 3: Contingency table by stakeholder and solution type



This contingency table presents the number of sentences that includes reference to a policy or technology solution and a select stakeholder. The size of the circles represent the number of sentences that reference both a solution and a stakeholder.

These findings suggest that news discourse leans quite heavily on fuel switching as an important and acceptable technological solution to net zero. However, there exists a critical disconnect

between this favourable coverage of technological solutions and the less prominent discourse around policy mechanisms needed to accelerate their adoption. This can have potentially diverging implications. While emerging research suggests that techno-optimism is associated with lower willingness to pursue climate change mitigation (Haslbeck et al., 2026), the preference for technological solutions may paradoxically benefit policy development. As Rhodes et al. (2021) demonstrate, performance-based regulations, which mandate technological outcomes without prescribing specific methods, can operate with “passive” public support precisely because they remain less visible in public discourse, yet supported for their technological solutionism. Specifically, flexible climate regulations incorporate market mechanisms that encourage rapid and cost-effective technological adoption while avoiding the public opposition often associated with more salient climate policies like carbon pricing.

Furthermore, we examine how frequently stakeholders appear in discourse around technology- or policy-based solutions. The contingency table in Figure 3 below presents the number of sentences that reference a select stakeholder and solution. Combining reference to stakeholders with reference to technological or policy solution, we find solutions are discussed in the context of stakeholders relatively equally (29,656 and 22,908 references to policy and technology solutions respectively). However, sentences that include reference to a finance or industry stakeholder more frequently reference technological solutions over policy solutions. We test this relationship statistically with a chi-square test of non-random association and find that there is some statistically significant variation ($p = 0.004$). The findings suggest that there is a significant association between stakeholder type and solution type. That is, the frequency distribution of stakeholders and solution is not random, but dependent. The Pearson residuals indicate that finance and industry stakeholders have positive associations with technology solutions while policy stakeholders have positive associations with policy solutions.

The findings reveal the diversity of stakeholder perspectives on climate change solutions, and how these perspectives may be shaped by their embedded roles and interests. Stakeholders from the finance and industry sectors, who may face economic losses or regulatory constraints from climate action, tend to emphasize technological solutions over policy solutions, whereas stakeholders from the policy sector, who may have more authority or responsibility to enact change, tend to emphasize policy solutions over technological solutions. These patterns align with insights from the prospect theory (Kahneman & Tversky, 1979), where industry and finance sectors are likely to favor gain-related technological solutions, with policy solutions evoking perceived losses for incumbents, simultaneously reinforcing agenda-setting effects that legitimize market-led over government-regulated pathways (McCombs & Shaw, 1972).

In summary, media discourse on technological versus policy-oriented solutions for net zero exhibit differences in sentiment and framing attributed to the perceived interests of stakeholders. However, both types of solutions are mutually reinforcing suggesting the need to better explain their complementarity in public discourse.

4.5 Associations Between Significant International Events on Net Zero Solutions

Finally, to further understand how discourse on solutions for net zero has evolved over time, we use an analysis of variance to measure changes over time before and after two high-profile international events: the Paris Agreement and the Covid-19 pandemic.

Among the most prominent high profile, international climate events in the last decade, the 2015 Paris Agreement brought net zero discourse to the mainstream. Just over three percent of articles discussing net zero and decarbonization were published before the Paris Agreement, potentially indicating a rapid interest of the media in this topic following this key event. A one-sample *t*-test (with zero as the null) shows that there is a statistically significant association between the frequency of solution-oriented words and the advent of the Paris Agreement ($p = 0.044$). Pearson residuals, presented in Table 3 below, indicate that discourse on transportation and hydrogen was relatively more frequently associated with discourse after the Paris agreement, while discourse on carbon pricing and subsidies were relatively less frequently associated with articles after the Paris agreement.

Table 3 also demonstrates the diverse potential associations of the Covid-19 pandemic with public discourse on energy and decarbonization. The event coincided with opportunities for governments and businesses to introduce incentives to stimulate a low-carbon economy within their recovery plans (Andrew et al., 2022). A one-sample *t*-test (with zero as the null) indicates that there is a statistically significant association between the frequency of solution-oriented words and the advent of the Covid-19 pandemic ($p = 0.017$). Pearson residuals indicate that discourse on hydrogen was relatively more frequent post-pandemic, while discourse on transportation and carbon pricing was more frequent pre-pandemic.

Table 3: Contingency table by event and solution type

Solution Type	Pre-Paris	Post-Paris	Pre-Covid	Post-Covid
Technological solutions				
Transportation	424 (-5.66)	16702 (1.04)	3524 (12.40)	13602 (-5.55)
Renewable Energy	1147 (7.43)	27148 (-1.36)	4634 (-1.34)	23661 (0.60)
Nature-based	107 (-3.02)	4287 (0.55)	798 (2.36)	3596 (-1.06)
Hydrogen	54 (-13.90)	8887 (2.55)	681 (-21.02)	8260 (9.41)
Efficiency	201 (15.73)	1939 (-2.89)	574 (11.45)	1566 (-5.13)
CCUS	185 (4.29)	3965 (-0.79)	654 (-1.49)	3496 (0.67)
Policy solutions				
Targets	879 (-3.25)	22404 (0.68)	4903 (6.47)	18384 (-3.15)
Subsidy	217 (12.95)	1979 (-2.71)	585 (7.96)	1611 (-3.88)
Standard	351 (-0.90)	8394 (0.19)	1392 (-7.00)	7353 (3.41)
Disclosure	461 (-4.03)	12740 (0.84)	2193 (-6.78)	11008 (3.30)
Carbon Pricing	219 (7.86)	2856 (-1.65)	622 (1.31)	2453 (-0.64)

This contingency table presents the number of sentences that includes reference to a policy or technology solution before and after the Paris Agreement in 2015 and Covid-19 pandemic in 2020. The numbers in the columns represent the number of sentences that reference a solution before or after the event and the numbers in brackets represent the chi-square residual.

After Paris and Covid, a greater emphasis has been placed on technological solutions like hydrogen and carbon sequestration, according to the analysis of variance. This emphasis on technological solutions to the low-carbon transition sets a precedent for greater voluntary action by industry and finance while reducing attention to policy interventions by governments. Industry actors' preference for technological solutions is unsurprising though, as it suggests market-driven solutions without the prescription of government policy, which can serve as a climate delay technique as noted in Lamb et al. (2020) and casually confirmed by Haslbeck et al. (2026). A few highly salient and poorly supported consumer-facing policies, like carbon pricing (Fairbrother et al., 2019; Rhodes et al., 2017), might have switched the discourse to technological solutionism further undermining the role of compulsory climate policies. Yet policy and technology solutions are complementary with policy responses being essential catalysts for zero-emission technology scale-up at the net zero target pace.

5. DISCUSSION

5.1. News Media Net Zero Discourse

This study provides novel insights into how news media discourse on net zero has evolved over the past decade, emphasizing stakeholder-specific portrayals of technological versus policy solutions and responses to significant international events. Our analysis of over 12,600 news articles reveals several implications for climate policy design and communication strategies amid increasingly divisive political contexts.

Our findings confirm that media discourse on net zero has significantly proliferated since the Paris Agreement in 2015, reflecting potentially heightened global attention towards ambitious climate targets. However, despite both an increase and fragmentation in coverage, overall sentiment remains relatively stable. While previous studies have noted rising public awareness (Arlt et al., 2011; Capstick et al., 2015; Hopke & Hestres, 2018; Oschatz et al., 2019), our study extends this literature by demonstrating how media portrayals diverge between stakeholders, especially on technological versus policy-oriented solutions.

Our analysis underscores differences in media portrayals of stakeholder groups—finance, industry, policymakers, and citizens—and their association with various net zero solutions. Finance and industry stakeholders are predominantly portrayed positively when associated with technological innovations, likely because they are perceived as critical actors in driving economic growth through low-carbon solutions (Dordi et al., 2023). This positive framing is particularly

consequential given that a small cohort of powerful financial actors holds significant leverage to accelerate or impede a low-carbon transition, making their favourable media portrayal a key factor in shaping transition pathways. This aligns with Nisbet's (2009) strategic framing framework: technology solutions are rendered through an economic opportunity frame, which is politically resonant and broadly appealing, while policy instruments are cast through a risk frame emphasizing uncertainties and burden. Schäfer and Schlichting's (2014) research further shows that episodic and conflict-driven framing dominates climate coverage, crowding out the systemic frames needed to sustain support for effective policy instruments.

Conversely, policy-oriented solutions receive more negative portrayals, reflecting concerns about economic burdens or political feasibility challenges (Feldman, 2016; Levi, 2021). Particularly, market-based instruments like carbon pricing often face negative framing due to high salience (cost visibility) and perceived economic costs which leads to its political unpopularity (Fairbrother et al., 2019; Rhodes et al., 2021). Our findings lend empirical weight to this concept, suggesting that the relative media invisibility of non-pricing policies like performance standards is a key mechanism enabling their political durability. By avoiding the spotlight, they also avoid the negative framing and public opposition frequently directed at more salient interventions. Prospect theory (Kahneman & Tversky, 1979) helps explain this asymmetry: media coverage foregrounds the visible, immediate costs of carbon pricing while rendering its long-term benefits as diffuse and uncertain, amplifying loss aversion. Distributional conflict theory reinforces this dynamic. Concentrated, well-organized interests bearing near-term costs generate and sustain negative narratives, while diffuse beneficiaries lack equivalent capacity to contest them (Aklin & Mildemberger, 2020; Horstmann & Scharf, 2008), embedding the negative framing of pricing instruments even as overall climate salience rises. A framing perspective suggests that media may actively structure these dynamics by portraying innovation- and technology-oriented solutions more positively, especially when associated with finance and industry actors, while policy-oriented solutions are framed more critically.

The lack of media coverage of citizen-related perspectives in net zero discourse (and equivalent keywords) may suggest that finance and industry stakeholders can take a leading role in responding to climate change by aligning their portfolios, operations, and strategies with net zero goals. This emphasis on supply-side actors reflects decades of limited success with citizen-focused behavioral change interventions. As Jaccard (2020) argues, attempts to encourage voluntary individual behavioral changes have yielded minimal emissions reductions over the past three decades. Instead, focusing on industry and finance stakeholders allows for transformational changes in technology choices rather than behavior choices, which are then transferred to consumers through market mechanisms. Investor coalitions, such as Climate Action 100+, increasingly put pressure on companies to take action on climate change, while over 3,800 organizations, including 1,500 financial institutions with \$217 trillion in assets, voluntarily followed the Task Force on Climate-related Financial Disclosures recommendations (Financial Stability Board, 2022). Through this approach, finance and industry can seize opportunities in new markets and technologies while

accelerating the net zero transition and creating value for themselves, all while sidestepping the resistance typically associated with direct behavioral interventions. The discourse coalition approach (Hajer, 1995) further helps explain why these actor-solution associations recur: stakeholder groups coalesce around shared storylines that privilege different transition pathways and stabilize them in public discourse.

From a societal transition's perspective, however, this emphasis warrants caution: Geels et al. (2017) highlights how incumbent regime actors shape discursive landscapes to favor incremental technological change over systemic transformation, while O'Brien (2018) warns that marginalizing citizen agency risks foreclosing the more transformative transition pathways that deep decarbonization ultimately requires.

Finally, the study demonstrates how major international events shape media framing of net zero solutions. Specifically, we find statistically significant shifts toward technological solutions following pivotal events such as the Paris Agreement and the Covid-19 pandemic. The Paris Agreement's emphasis on global ambition coincided with increased media coverage of transportation electrification and hydrogen solutions—technologies perceived as economically viable and politically palatable. Similarly, the Covid-19 pandemic intensified narratives around hydrogen investments as part of economic recovery strategies (Andrew et al., 2022). This shift toward technological narratives may reflect broader geopolitical trends augmented by post-pandemic economic crises that positioned affordability and justice concerns above climate action. Sovacool et al.'s (2022) research on accelerating sustainable energy transitions corroborates this pattern, demonstrating that crisis-driven media attention can rapidly elevate niche technologies into mainstream transition pathways, but also that such momentum, when decoupled from robust policy frameworks, may prove fragile once the crisis narrative recedes.

5.2 Limitations and Future Research

We acknowledge some methodological limitations that also present opportunities for future research. First, our analysis is based on English-language news articles from major world publications predominantly representing Global North perspectives. While this approach facilitates data collection and analysis, it potentially limits the generalizability of our findings to specific regions and media outlets. Future research could expand the scope of analysis to include more diverse and representative sources of news media from such regions when analyzing discourse on net zero. Regional differences may be of particular interest, in evaluating how perspectives vary, especially between developed and developing countries and in countries facing worsening effects of climate change (Brugger & Henry, 2021; Coenen et al., 2012).

Second, sentiment analysis methodologies inherently simplify complex narratives. This study relies on deductive content analysis search terms informed by past literature, which can introduce potential bias in interrater reliability during data selection and interpretation. Future research could employ advanced topic sentence modelling or other natural language processing techniques to capture nuanced stakeholder-specific sentiments. Extensions of this study could analyze shorter

event windows, employ continuous time representations around specific events, conduct in-depth qualitative content analysis of representative articles to unpack nuanced framing mechanisms and derive more granular policy recommendations, collect primary stated preference data and utilize experimental designs to quantitatively assess the impact of news media coverage on stakeholder perceptions (e.g., representative survey experiments to test the role of media coverage in shaping policy support), and analyze secondary data on the role of lobbying registrations and social activism events on climate policy implementations or reversals. Such analyses could provide a deeper understanding of evolving public perspectives on net zero and practical policy and communication implications for climate action.

Third, our study focuses primarily on news media discourse. Future research could comparatively analyze how different communication platforms, like social media platforms or televised news, shape public awareness and perspectives of net zero and associated policy and technology solutions (Hopke & Hestres, 2018).

Finally, future research might also investigate how evolving geopolitical developments, new crisis events, and rapidly evolving climate delay discourses (Lamb et al., 2020) influence regional variations in net zero discourse. Relatedly, this method can be used to selectively evaluate public support for various policy interventions, such as climate finance policies, policies that target supply-side energy production, and policy mixes (Rogge & Schleich, 2018). Such analyses would offer valuable insights into adaptive policymaking strategies tailored to specific regional contexts facing distinct political economy dynamics.

6. CONCLUSIONS AND POLICY IMPLICATIONS

This study provides insights into how news media communicates net zero transitions, highlighting implications for climate policymaking and communications. We find that despite rapidly increasing media coverage since the Paris Agreement in 2015, overall sentiment has remained stable yet increasingly fragmented. Our analysis reveals a positive association of industry and finance stakeholders with technological solutions, suggesting a potential alignment of climate goals with business interests. However, this trend is counterbalanced by the negative framing of policies such as carbon pricing and the overall relative underrepresentation of policy-oriented solutions and citizen perspectives in media discourse, pointing to a potential imbalance in the framing of net zero pathways or even a techno-optimistic climate delay discourse. Significant events, including the Paris Agreement and Covid-19, might have shifted media narratives, suggesting that such contexts and/or other geopolitical events may influence stakeholder portrayals and policy acceptability.

Our study offers three insights for policymakers navigating complex political environments. First, given the more positive media sentiment toward industry and finance stakeholders alongside technological solutions like renewables and hydrogen, policymakers could emphasize the economic opportunities of these innovations in public communications, while designing

complementary technology-supportive policies. This may help align preferences of most business and policy stakeholders, fostering constructive dialogue between these groups, as per O'Brien's (2018) suggestion to treat stakeholders as participants rather than observers of change.

Second, the relatively less positive sentiment toward policy solutions (e.g., standards, pricing) compared to technological ones indicates that supply-focused performance regulations, such as renewable portfolio standards or low-carbon fuel standards, may align better with favorable industry portrayals, as these policies promote low-carbon technology adoption while allowing market flexibility via credit trading (Rhodes et al., 2021; Jaccard, 2020). Such performance regulations rapidly reduce emissions while achieving 'passive' public and stakeholder support (i.e., these policies are generally unknown but, once defined, are widely accepted) thereby meeting objectives of both worlds-industry's and policymakers' - without compromising net zero aspirations.

Finally, the limited media coverage of citizens discourse of net zero point to an opportunity for policymakers to build broader engagement, ensuring transitions reflect diverse perspectives (Cherry et al., 2021). However, little public discourse on climate action may be opportunistic in times of economic and geopolitical crises. Climate-sincere governments may use this as a policy window to implement effective climate policies, such as supply-focused performance regulations and incentives for low-carbon technologies, while citizen attention is focused on the economy. In fact, a similar policy window emerged during the 2008-09 financial crisis in British Columbia, when a climate-sincere center-right government managed to implement a carbon tax and several performance regulations without public outcry (Fairbrother & Rhodes, 2023).

The study contributes to contemporary debates within environmental communication literature by elucidating how media sentiment toward net zero solutions vary across stakeholders. The varying discourse patterns can aid climate communicators in designing targeted framing strategies to overcome opposition and build stronger alignment across personal, political, and practical spheres of transformative change.

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