

FRAMING CLIMATE CHANGE NEWS IN INDONESIAN ONLINE MEDIA: NVIVO BASED QUALITATIVE ANALYSIS

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Abstract:

This study aims to analyze the framing of news about climate change in Indonesian online media by identifying the types of framing, the actors, the news tone, and the temporal dimension used. This research uses a qualitative approach, supported by NVivo software. The data are news articles from several national online media th, selected purposively and then coded using a deductive-inductive coding approach. The study's findings are news related to climate change, framed within the disaster-within-a-disaster framework. Most economic narratives in the news feature government officials and experts, while the public is portrayed as the affected party. The tone of the news is generally optimistic and solution-oriented, and it emphasizes its impacts. These findings more clearly indicate that the media not only represent climate change as an environmental crisis but also as a development and strategic policy issue. This research is expected to enrich the study of enriched media in Indonesia. In addition, it can encourage Indonesian media research to strengthen the media's role as a source of information for adaptive policy responses to climate change.

Keyword: Climate Change; Media Framing; Online News Media; Qualitative Content Analysis

1. Introduction

Climate change is one of the global issues that affects the environment and human life. International efforts that have led from the establishment of the IPCC to the Paris Agreement confirm that collective action is needed to mitigate and adapt to climate change. As part of the global community, Indonesia actively participates in this agenda through its commitment to the Second Nationally Determined Contribution (SNDC). This document describes greenhouse gas emission reduction targets and national policy mitigation and adaptation directions, including explanations of climate-resilient and low-carbon development and control strategies to address the impacts of climate change (SNDC, 2025). In addition to developing mitigation and adaptation policies, it is important to understand how climate change can affect public perceptions and responses, as the success of national strategies depends heavily on public participation. Public understanding of this issue is key to supporting effective mitigation and adaptation strategies (Krkoška Lorencová et al., 2019). To shape public perception of climate change risks, the mass media plays a strategic role as a source of information.

In the digital era, online media is the main source of information for the public because it can reach a wide audience and distribute information quickly. The way the media represents climate change significantly impacts public perception and engagement with this issue by focusing on specific aspects, directing public attention, and shaping understanding and support for climate policy (Alawade & Obun-Andy, 2024; Ngumuya, 2024). Thus, the media not only conveys information but also can emphasize certain aspects, shape narratives, and influence public attitudes towards climate change, a process referred to as framing (Entman, 1993).

Previous research has examined the framing of climate change in Indonesian media. Isti'anah et al. (2025) identify that many media use scientific frameworks, examine global impacts, and examine the causes of phenomena when reporting on climate change and global warming. At the same time, Astuti et al. (2024) focus on the resonance of the climate crisis in online media. Other studies, such as Nur Rochimah et al. (2023), also emphasized that online media positions climate change on the national news agenda through sentiment analysis. However, most studies remain limited to print media or qualitative approaches, so systematic analysis of online media using software such as NVivo remains rare. Nvivo enables researchers to systematically organize, code, and analyze qualitative data to identify themes, patterns, and relationships within narratives (Allsop et al., 2022; Wong & Li Ping, 2008).

Based on this background, this study aims to analyze the *framing* of climate change news in Indonesian online media through a literature review coded in NVivo. This research is expected to provide

insight into the narrative and *framing* patterns used to shape public perception of climate change issues in Indonesia.

2. Research Method

2.1. Object, Time, and Place

The object of this research is online news articles on climate change published by national news portals in Indonesia. In selecting credible and relevant sources of information, online media should be evaluated using measurable indicators, such as readability, public trust, and ranking position. Based on 2025 data, the selection of Kompas, Kumparan, CNBC, and Tempo media has a strong empirical basis.

Kompas was listed among the online media with the highest level of public trust in Indonesia in the Digital News Report 2025, released by the Reuters Institute for the Study of Journalism, with around 62% of respondents expressing trust in Kompas as a news source. Meanwhile, based on the official release of the Indonesian Cyber Media Association (AMSI) in 2025 regarding the ranking of News & Media category sites in Indonesia, several media such as Kompas.com, Kumparan.com, CNBC Indonesia, and Tempo.co are recorded in the ranks of media with significant traffic and number of visitors nationally. The data refers to the digital traffic measurement that AMSI uses in its ranking report. Thus, the selection of Kompas, Kumparan, CNBC Indonesia, and Tempo can be justified based on public trust indicators and positions in the national traffic ranking in 2025.

This research focuses on how the issue of climate change is constructed and framed in online news. This study took news published in the January–December 2025 period to capture news variations and trends. The study specifically examined online news portals operating in Indonesia, given their wide audience reach and the media's influence on shaping public opinion.

2.2. Data Collection Techniques

In this study, data were collected through content analysis of online news articles relevant to climate change framing. This approach was chosen because content analysis can systematically identify patterns, themes, and relationships among texts, making it well-suited to examining the framing of news about climate change. A sample of 15 articles is considered adequate because the focus of this study is on the depth of theme patterns and narrative construction, not on statistical generalizations. Empirical research has also shown that many studies reach a point at which the addition of new data no longer yields new information, typically in the range of 9–17 units of analysis when populations are relatively homogeneous (Bouncken et al., 2025; Hennink & Kaiser, 2022). These four online portals were selected because they are national news sources with large audiences and actively report on climate change. The article is determined by looking at keywords related to "climate change", "climate change adaptation", and "climate change mitigation".

2.3. Data Analysis Techniques

The data analysis in this study was qualitative, using NVivo 15 to identify the depth of the text and the framing patterns of online news. The method used is content analysis, particularly thematic *coding*, which allows researchers to systematically and transparently compile patterns, themes, and relationships (Lungu, 2022). Table 1 shows the coding scheme based on the four parent code categories, with each child code description, supporting descriptions, and references.

Table 1. Operational Definition of Child Code in Analysis

Parent Code	Child Code	Description	Referensi
Actor	Community/Public	Public perspectives that shape opinion in the news	Gamson & Modigliani (1989); Grundmann & Scott, (2014)
Actor	Expert/Scientist	Credible sources for interpreting scientific issues	Boykoff & Boykoff (2004); Grundmann & Scott (2014)
Actor	Government	Key actors in climate-related policies	Boykoff & Boykoff, (2004); Grundmann & Scott (2014)
Time Dimension	Short Term	Direct impact or current events	Spence & Pidgeon (2010)
Time Dimension	Long-Term	Future impacts or delayed consequences	Carvalho (2007); Spence & Pidgeon (2010)
Framing	Disaster	Emphasizing physical threats or risks	Boykoff (2008)

Framing	Economy	Emphasizing costs, opportunities, or economic losses	Nisbet (2009a); Semetko & Valkenburg (2000)
Framing	Environment	Emphasizing degradation, conservation, or ecological aspects	Carvalho (2007)
Framing	Social	Impact on social behavior	Nisbet (2009a); Semetko & Valkenburg (2000)
The tone of the news	Crisist & Alarmist	Emphasizing risk and urgency	O'Neill & Nicholson-Cole (2009)
The tone of the news	Neutral	Presenting facts without emphasizing risks or solutions	Semetko & Valkenburg (2000)
The tone of the news	Optimist & Solutive	Emphasizing solutions or positive responses to issues	Nisbet (2009b)

Source: Author's Processing Results, 2026

The code is generated using a deductive-inductive combination, where the initial code is derived from the literature (deductive). The process of inductive coding allows for the emergence of additional categories, such as framing climate change as a disaster, that are formed based on repetitive narrative patterns in online media (Elo & Kyngäs, 2008). After coding is complete, the next step is to identify the pattern and summarize each code, in which the researcher analyzes the most dominant types of code across the categories of framing, actors, time dimensions, and news tone. Each code is summarized in a descriptive table that presents the key findings for each online portal. All coding results and frequencies of occurrence are then visualized in the NVivo tree map, which provides a comprehensive picture of the news' focus.

3. Result and Discussion

3.1. Research Results

The coding summary shows that the analyzed online media articles exhibit certain news framing themes. News framing is categorized into four main areas: climate change as a disaster issue, economic issues, environmental issues, and social issues. In this study, it was found that framing climate change as a disaster was the most dominant media framing. References that link climate change to extreme weather events, floods, landslides, and other catastrophic risks are most commonly used compared to other forms of framing. In addition, framing climate change as an economic issue is widely used, particularly in terms of economic losses, productivity risks, and financial stability. Meanwhile, framing climate change as an environmental and social issue is relatively less often used in the news. The distribution of news framing is shown in Table 2.

Table 2. News Framing Distribution

<i>Framing</i>	Number of References
Disaster	26
Economy	19
Environment	9
Social	9

Source: Author's Processing Results, 2026

The differences in framing tendencies across media are examined using a matrix coding query that links media variables to news framing. This was done to examine variations in how online media, namely Kompas, Tempo, CNBC Indonesia, and Kumparan, frame climate change news. The number of articles analyzed in each was different, reflecting the intensity of the news during the research period. The analysis shows that Kompas, with 5 articles analyzed, tends to frame climate change as a disaster and an economic issue, focusing on it as an extreme event and its welfare implications. Meanwhile, Tempo was analyzed across four articles, with the strongest tendency to frame disasters in economic and social terms. This media shows a crisis approach that is associated with the economy and society. On CNBC Indonesia and Kumparan, with three articles each, showing the framing of the dominant disaster-related news for CNBC media and the economic framing for Kumparan media. The framing distribution of climate change news by media is shown in Table 3.

Table 3. Framing the Distribution of Climate Change News by Media

Media	Disaster	Environment	Economy	Social
Kompas (5 Articles)	7	4	6	3
Tempo (4 Articles)	11	1	5	5
CNBC (3 Articles)	5	3	2	0
Kumparan (3 Articles)	3	2	5	1

Source: Author's Processing Results, 2026

In addition to framing, this study identifies the actors most often featured in news coverage of climate change. Actors are classified into 3 categories, namely the government, experts, and the community. The coding results show that expert quotes dominate climate change reporting. The government also frequently serves as a source of information on climate policies and targets. These two groups of actors are most often used as sources of information. In contrast, community involvement or that of civil society organizations is relatively limited. The distribution of actors cited in the news is shown in Table 4.

Table 4. Distribution of News Actor

Actor	Number of References
Community/Public	16
Expert/Scientist	23
Government	18

Source: Author's Processing Results, 2026

Analysis of the news shows that most articles use a solutive and optimistic tone in the context of policy recommendations and technological innovations. In addition, some articles also use an alarmistic tone, especially when discussing disaster risk and the climate crisis. Meanwhile, the neutral tone was relatively limited in this study. This tone is characterized by the use of data, research references, and policy language, without excessive emotional narratives. The distribution of news tone is presented in Table 5.

Table 5. Distribution of News Tone

Tone Type	Number of References
Crisis & Alarmist	13
Neutral	10
Optimistic & Solutive	17

Source: Author's Processing Results, 2026

In terms of time dimensions, climate news is divided between short-term and long-term orientations. The long-term dimension dominates this study's article, emphasizing structural risks, energy transitions, and the future resilience of social and economic systems. Meanwhile, the term "short-term" is also often used in the context of disasters or direct impacts currently occurring or that have just occurred. The distribution of news time dimensions is shown in Table 6.

Table 6. Distribution of News Time Dimension

Time Dimension	Number of References
Long-term	22
Short-term	15

Source: Author's Processing Results, 2026

To provide a comprehensive overview of each code's pattern, this study uses a hierarchy chart treemap that displays the proportions of all codes used. This visualization shows that the framing of climate change as a disaster dominates overall news coverage, followed by expert actors, the time dimension of long-term orientation, and an optimistic, soothing tone. A treemap of the entire code is presented in Figure 1.



Figure 1. Hierarchy Chart Treemap of the Entire News Code

Source: Author's Processing Results, 2026

3.2. Discussion

Mass media play an important role in shaping public understanding of climate change issues through the framing process, the selection of actors, the determination of news tone, and the orientation of the timing of impact shown. This pattern aligns with media framing theory, which holds that the media selects and highlights certain aspects of reality to shape problem definitions, cause-and-effect interpretations, moral judgments, and solution recommendations, thereby influencing how the public understands and assesses an issue (Entman, 1993). In the context of climate change, this process determines whether the issues discussed are environmental, disaster-related, economic, or social. Khanya (2024) explained that news coverage of climate change remains dominated by a framing that emphasizes danger and potential disasters. At the same time, this approach can raise public awareness without being balanced with a narrative that highlights solutions and mitigation efforts; such framing risks creating feelings of helplessness among the public. Other studies show that the media not only report ecological impacts, such as disasters, but also frame climate change, highlighting its economic consequences and the costs of climate policy (Vu et al., 2019).

In addition to framing issues, the media also selects actors who speak and are used as sources of the news. The selection of sources reveals the power relationship in the preparation of news, which directly affects news coverage in the public space (Denis McQuail, 2010). Experts tend to be associated with frameworks that emphasize problems and causes, while politicians or governments tend to be associated with frameworks that emphasize assessment and solutions (Trumbo, 1996). Climate change reporting tends to rely on authoritative sources, especially governments and experts, who have a major role in the public sphere (Anderson, 2009). Meanwhile, according to Irwansyah (2016), Indonesian media more often cite experts and the government as their main sources, while the involvement of local communities and organizations is very low. This shows the lack of space for the public, especially for groups directly affected by climate change, in mass media coverage.

The tone of the news also plays a strategic role in shaping public response to climate change. The way the media frames issues affects the level of attention, anxiety, and public involvement. Certain approaches, such as neutral or solutive, are more effective at attracting public attention than highlighting serious threats (Nisbet, 2009b). O'Neill & Nicholson-Cole (2009) explain that news messages that are too scary are not effective at encouraging public involvement and often make people feel helpless or disconnected. In contrast, a more neutral, solution-oriented approach tends to encourage rational

understanding and constructive policy discussions. This aligns with this study's findings, which show that Indonesian mass media tend to focus on optimistic, solution-oriented news.

The time dimension of climate-related news also affects how the media positions climate change as a long-term or short-term issue. The media generally emphasizes disasters and extreme events not because of the importance of the issue, but because of the journalistic norm that prioritizes the dramatization of events. This often leads to climate change being understood as an extraordinary series of events rather than a long-term, structural process (Boykoff & Boykoff, 2007). The media coverage of climate change tends to frame it as a separate series with a short-term focus, alongside natural disasters and extreme weather. This approach encourages the public to view climate change as a stand-alone, *incidental* event rather than a long-term, structural, and systemic process. As a result, the need for long-term policy solutions tends to be less visible in the media, as attention is focused on emergency response and direct impacts rather than sustainable adaptation and mitigation efforts (Comfort, 2005; Hart, 2011). However, the study is inversely proportional to the number of Indonesian news reports that tend to emphasize the long-term dimension of climate change, especially in relation to sustainable development, where this issue is included in long-term narratives (Isti'annah et al., 2025).

3.3. Relevance to Research Objectives

The analysis shows that these findings directly address the research objectives formulated in the introduction. In *framing* the news, the media portray climate change not only as a disaster-related issue but also as an economic issue. These findings show a shift *in framing* from a purely ecological narrative to an impact and risk-based narrative. Among the actors shown, the research indicates that the government and experts are the main sources of news. On the other hand, the community and local communities are relatively minimal and are generally positioned as affected parties. These findings directly address the research question of whether key actors are given space to speak on climate change-related news. This study empirically shows how the inequality of actor representation in online media. In addition, this study's results show that the news tone is dominated by optimism and solutions, with an emphasis on solutions for the energy transition, policy strengthening, technological innovation, and stakeholder collaboration. This pattern shows that the media is directing public attention to potential actions and solutions to climate change.

Furthermore, the news tends to be oriented towards the long term. Although short-term impact narratives are still raised in news contexts, media narratives tend to frame climate change as a long-term challenge. This positions these problems as requiring continuous planning.

4. Conclusion

This research shows that news coverage of climate change in Indonesia is largely framed through a combination of disaster and economic *frames*, with government actors and experts as the primary sources of information. The findings answer the study's purpose by showing that climate change is not only an environmental crisis but also a development and long-term stability issue, as reflected in news that is mostly optimistic and long-term in focus. The implications of this study confirm that the media plays an important role in shaping public understanding and the direction of policy discourse on climate change. However, this study's limitation is that it does not fully represent the national media. In addition, this study has not examined how public acceptance of news interpretation and its direct implications for the public policy formulation process. Therefore, further research is suggested to expand the range of media types and time periods, and to deepen the analysis of community representations and policies related to climate change reporting.

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