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Meteorological Dominance and Short-Term Responses: Discourse Network Analysis on the 2025 Cilacap Landslide in Online Media

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Abstract - The 2025 Cilacap landslide occurred in a region with an expired disaster risk assessment document. This study aims to analyze the discourse network structure in online media reports on the 2025 Cilacap landslide using discourse network analysis (DNA) to reveal how actors collaborate in narratives about causes and solutions and their implications for the public agenda and mitigation policies. The analysis unit used 37 news articles from online media verified by the Press Council on November 13-28, 2025, and analyzed using DNA 3.0.11 and Visone 2.28.2. The data were annotated by actors, organizations, and concepts, divided into cause data (65 statements from 27 articles) and solution data (16 statements from 10 articles), and then calculated for centrality (degree, betweenness, closeness). Results show that high-intensity rainfall achieved the highest degree centrality (16.129 %) among causal factors and was supported by a strong coalition of national agencies (BNPB, BMKG, Geological Agency). Anthropogenic and governance-related factors appeared but remained peripheral (centrality < 3 %). In the solution network, temporary shelters (huntara) and BNPB were most central (betweenness centrality 37.931% and 62.069%, respectively). At the same time, long-term measures (reforestation, spatial planning, technology-based early warning systems) were mentioned but isolated (betweenness centrality 0%). The study reveals a media discourse heavily reliant on official national sources, leading to meteorological explanations and short-term emergency responses that overshadow structural mitigation narratives. This study is limited to textual analysis of news reports; future research may complement it with interviews or production-side analysis.

Keywords: Agenda setting; Discourse network analysis; Disaster discourse; Disaster mitigation; Cilacap landslide

Introduction

The landslide phenomenon in Indonesia, particularly in the Cilacap region in 2025, reflects the increasing complexity of hydrometeorological disaster risks triggered by climate change, environmental degradation, and unsustainable land use (Aeni & Anwar, 2025; Heo et al., 2024; Tirsyayu et al., 2025). This landslide affected one sub-district, damaged 16 houses, killed 16 people, left seven people missing, and displaced 106 people (BNPB, 2025).

This situation not only reflects ecological realities but also shapes risk perception, public response, and the legitimacy of government policies, particularly in disaster mitigation (Houston et al., 2019; Lovari et al., 2025). The BNPB report reveals a fundamental problem in disaster preparedness in Central Java: the outdated nature of key documents that underpin mitigation planning. Of the total number of districts/cities in Central Java Province, there are six regions, namely Cilacap, Purworejo, Wonogiri, Grobogan, Temanggung, and Semarang City, whose disaster risk assessments have expired and no longer reflect the current hazard and vulnerability conditions (Utami, 2025). Landslide disaster risk assessments must align with spatial planning as a reference for regional development and expansion (Aji et al., 2024).

Disaster mitigation plays an important role as a basis for the government in formulating long-term and annual disaster management plans. Structural policy elements in mitigation cannot be separated from the regional development planning process, because the success of disaster management is largely determined by the extent to which mitigation is placed as the foundation of policy of policy (Ruchban et al., 2024). The discussion on disaster mitigation has been debated by Indonesian researchers previously. Zulfa et al. (2022) proposed structural priorities (such as retaining walls) and non-structural priorities (such as vulnerability mapping) to minimize geological threats.

The argument is reinforced by Fauzir & Asyura (2025), who propose mapping vulnerable zones to reduce the impact of urbanization, while breaking away from the view that only natural factors are at play by emphasizing the integration of adaptive policies. On the other hand, researchers debate the contribution of non-structural mitigation, such as Alqulby et al. (2025), which proves that disaster literacy effectively builds resilient communities through Systematic Literature Review (SLR), as well as Muflih et al. (2025) and Utami et al. (2025), which show an increase in resilience of up to 78-86% with the implementation of the Early Warning System (EWS), evacuation simulations, and the Disaster Resilient Village program by BPBD.

In addition to structural and non-structural mitigation, studies on media construction of landslide disaster reality are also important. The media are not only a channel of information but also shapes the meaning, perception, and public awareness of landslide disaster risks and mitigation efforts (Irwan et al., 2025). Research conducted by (Rosemary et al., 2023) analyzed disaster reporting in Aceh and Palu and found more negative coverage, with a greater focus on the number of victims, material losses, and the government's inability to respond. Disaster preparedness was framed within a religious perspective and did not emphasize scientific knowledge or better ways to respond to future disasters. Meanwhile, the study by Fabriar et al. (2023) constructs disasters as the government's fault, blaming the government for failing to take preventive measures, highlighting aspects that tend to influence news coverage with a negative frame.

Recent research shows that media coverage of disaster issues is increasingly linked to the politics of representation and the formation of discourse coalitions (Albrecht, 2022; Hasfi & Fisher, 2025; Khawaja et al., 2025). The media not only functions as a channel of information, but also as an ideological arena where actors compete to define narratives and legitimize policies (Hameleers & Yekta, 2025; Mir et al., 2023). A similar perspective emerges in Indonesia research, where environmental issues are often framed in moral, technocratic, or political terms, leading to differences in public perceptions of the urgency of mitigation (Rochyadi-reetz, 2025).

This gap is the main basis for this study, which seeks to fill the void left by previous Indonesia studies. Most previous studies, such as Alqulby et al. (2025), Fauzir & Asyura (2025), Muflih et al. (2025), Utami et al. (2025), and Zulfa et al., 2022), tend to focus their analysis on the technical and implementative aspects of structural and non-structural mitigation without connecting the discourse on disasters that develops in the media. Previous research has not explained how the public develops knowledge and understanding of an issue to generate recommendations for solving the problem, particularly in the context of disasters.

This study differs from previous studies in that it focuses on the coverage of the 2025 landslide disaster in Cilacap in online media using discourse network analysis (DNA). This study attempts to map how the media shapes the discourse on the causes and solutions to the 2025 Cilacap landslide disaster in the context of mitigation policies in Indonesia. In the reporting process, online media often present various actors and institutions with diverse perspectives, so the discourse structure that emerges can influence how the public understands risks and assesses the effectiveness of disaster mitigation. An unbalanced discourse configuration can place certain issues at the center of attention while

marginalizing other factors, potentially influencing the direction of public discussion and the legitimacy of disaster mitigation policies.

Therefore, it is necessary to map the patterns of relationships between actors and concepts to understand how the discourse on causes and solutions is constructed, reproduced, and disseminated through online media, and how the structure of these networks can influence decision-making in disaster mitigation. Based on this, this study seeks to answer the following research questions:

RQ1: What is the structure of the discourse network, dominant issues, and actor coalitions related to the causes of the 2025 Cilacap landslide in online media?

RQ2: What is the structure of the discourse network, dominant issues, and actor coalitions related to solutions for the 2025 Cilacap landslide in online media?

Theoretical Framework

Agenda Setting Theory

The media plays an important role in influencing public perception of social and political issues by determining which topics are considered important. McCombs & Shaw(1972) state that the media not only conveys information but can also turn the news agenda into the public agenda. The media does not always decide "what to think", but focuses more on "what the audience should think". The application of agenda-setting theory is relevant in this study because it can explain how the media not only conveys information but also highlights issues considered important related to the Cilacap landslide to the public and disaster policymakers.

Scopelliti & Ceron (2026) emphasize that agenda setting is no longer influenced solely by mainstream media but also by political actors who exert reciprocal influence on policy decisions. The study Houston et al. (2019) shows that the media plays an important role in shaping public perception of risk and preparedness for disasters. The way the media sets the agenda in disaster reporting can provide important insights for risk communication strategies and mitigation policies.

Media Discourse and Disasters

Media discourse shapes how social reality is framed through language, narratives, and representations of actors. The media chooses certain aspects of an issue to highlight, thereby influencing public interpretation (Zhang, 2025). Media framing can reinforce narratives about certain disasters, for example, blaming nature, highlighting the government's heroic response, or ignoring the structural roots of vulnerability (Khawaja et al., 2025). The framing of an issue can determine who gains legitimacy in public discourse and how political interests are contested.

The construction of media discourse on the causes and solutions of disasters shapes the public agenda and influences policy responses to environmental issues (Alvandaru & Shofiya, 2025). Research by Hulst et al. (2025) shows that an interpretive approach to discourse, framing, and narrative is essential to understanding how public policy is formed through symbolic and political interactions in the media.

In this study, exploring media discourse on the 2025 landslide in Cilacap is important to understand how narratives of causes and solutions are constructed, the coalition of actors in the discourse, and the extent to which the discourse contributes to disaster mitigation policies in Indonesia. Discourse analysis of landslides examines how media narratives explain their causes, providing the public with an understanding of the root causes of disasters.

This study also presents the coalition of actors competing in the discourse on the causes and solutions to landslides. This coalition can determine the dominance of certain perspectives through discourse construction, thereby strengthening or weakening disaster mitigation efforts.

Discourse Network Analysis (DNA)

Discourse Network Analysis (DNA) is a method that combines qualitative content analysis with social network analysis to identify and measure patterns of interaction between actors and statements in a political or policy discourse. DNA enables the mapping of discourse coalitions, which are groups of actors who share similar beliefs and arguments in a debate, as well as observing the dynamics and changes of these coalitions over time (Leifeld, 2020).

The Advocacy Coalition Framework (ACF) is used to understand how advocacy coalitions consisting of actors with similar policy beliefs interact and influence the policy change process, with

DNA as a tool to measure the strength of the coalition's discourse (Meave, 2024). This DNA approach can be used effectively to analyze various discourses, particularly political and environmental ones (Leipold et al., 2019). DNA research conducted by Hasfi & Fisher (2025) on the political discourse surrounding the 2019 Jakarta floods found that the media agenda was divided between dominant groups, clustered into two themes: "normalization" or "naturalization".

In this study, DNA is important to use because it can uncover the structure of relationships among actors and concepts in the media discourse on the Cilacap landslide, enabling patterns of coalition, dominance, and narrative connectivity to be mapped more systematically and measurably (Eriyanto, 2022; Leifeld, 2020). Unlike other studies that focus more on framing, DNA can identify how actors form coalitions in constructing narratives about the causes and solutions to disasters, while also measuring the influence of actors through network centrality.

This approach not only shows how issues are built but also the key actors who control the flow of discourse and how certain narratives become dominant or marginal in the public sphere (Hasfi & Fisher, 2025). DNA can enrich discourse analysis of the Cilacap landslide by providing a visual and structural picture of discourse dynamics and actors in a measurable way that cannot be fully captured by framing analysis or other textual analyses.

Material and Methodology

This study uses DNA software (dna-3.0.11) as the primary tool for mapping relationships among actors, concepts, and narratives in news reports. This tool integrates network analysis with qualitative content analysis, enabling researchers to examine how various actors construct, agree on, or reject ideas in a policy issue or public debate (Leifeld, 2020). DNA works by performing multi-level annotation of text, primarily by tagging the actors and the concepts or arguments they use.

The annotation results are then converted into network data that can be exported to other network analysis software for further analysis. This study utilizes Visone software (visone-2.28.2) to process, visualize, and interpret the networks exported from DNA. Visone is a social network analysis application developed specifically for visual and analytical exploration in the social sciences (Baur, 2008). This software provides various layout algorithms for intuitively displaying network structures, including visualizations based on degree centrality, betweenness centrality, and closeness centrality, as well as depictions of coalition patterns in networks (Eriyanto, 2022). The main advantage of Visone lies in its integration of visualization and analysis, making it easier for researchers to read the relationships between actors and identify centers of discursive power (Baqi, 2025; Samatan et al., 2024).

This study conducted several stages for data analysis. *Firstly*, collecting news articles about the Cilacap landslide as the object of analysis for the research. The data included 37 news articles reporting on the 2025 Cilacap landslide disaster in online media verified by the press council, including kompas.id and tempo.co, kompas.com, detik.com, tribunnews.com, cnnindonesia.com, cnbcindonesia.com, mediaindonesia.com, and republika.co.id . The collection of articles began with a search for news using the keywords "Cilacap landslide 2025" on Google Search Engine from November 13, 2025, to November 28, 2025, which yielded 300 articles.

After that, articles were selected based on the criteria of containing narratives of the causes and solutions to the Cilacap landslide 2025. Additionally, the articles must include at least one news source that provides statements on the causes or solutions to the 2025 Cilacap landslide. Screening articles according to the criteria yielded 37 articles as the research analysis units. *Secondly*, conducting a content analysis of selected news articles according to the criteria and obtaining two groups of article data: the causes and solutions to the 2025 Cilacap landslide. Each data group identified three elements: discourse on the causes or solutions to landslides in Cilacap, actors who made statements related to the discourse, and the actors' institutions, to be entered into the DNA software.

The data group on the causes of the 2025 Cilacap landslide comprised 27 articles containing 65 statements, produced by 17 actors from 12 institutions, while the data group on the solutions to the 2025 Cilacap landslide comprised 10 articles containing 16 statements, produced by seven actors from 6 institutions. *Thirdly*, each data group was input into the DNA software, after which the data was exported to Visone software to view the visualization between actor collation and discourse using degree centrality, closeness centrality, and betweenness centrality measures (see Figure 1). Degree centrality, commonly referred to as popularity, measures how dominant an actor is in providing statements within a network.

Degree centrality is measured by the number of relationships (links/edges) an actor has with other actors. Closeness centrality describes how close an actor is to others. This closeness refers to how easy or difficult it is for different actors in the network to reach an actor. Betweenness centrality is a measure of an actor's position as a connector between other actors in the network. Actors with high betweenness centrality are the best connectors between different actors.

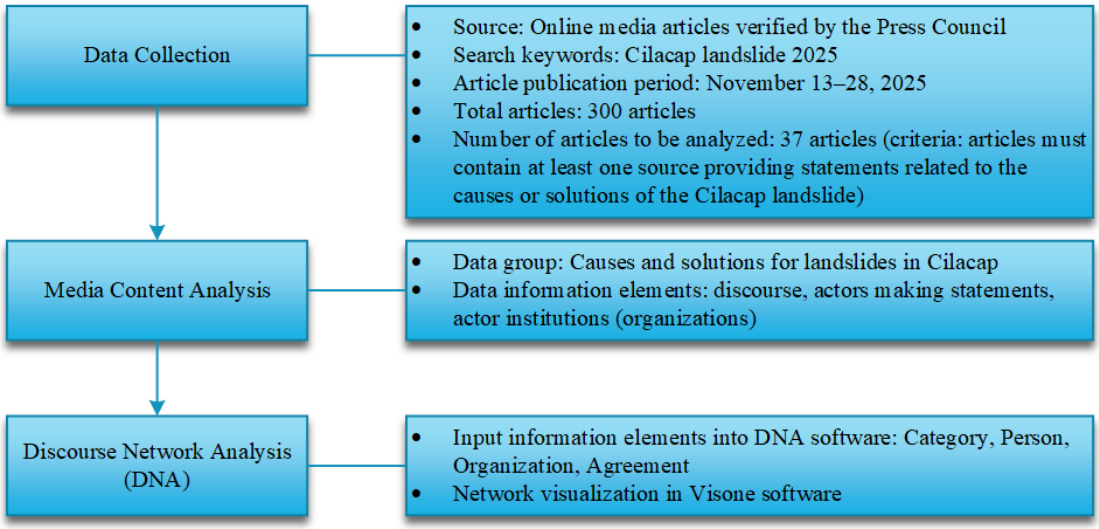


Figure 1. Flowchart of data collection, content analysis, and DNA visualization
Source : Results of Researcher Analysis, 2025

Results and Discussion

The research results will be presented in graphs from the coding of data statements in the DNA application and visualized using the Visone application. The graphs will show the relationship between two data elements, namely discourse and actors. The discussion is divided into several sections, beginning with the results of the DNA analysis of the causes of the 2025 Cilacap landslide, as shown in Figure 2 and supported by data in Tables 1 and 2. The results of the DNA analysis related to the discourse on solutions to the 2025 Cilacap landslide are presented in Figure 3, with supporting data in Tables 3 and 4. Tables 1- 4 contain information on degree centrality, closeness centrality, betweenness centrality, and statement frequency. This quantitative data reinforces Figures 2 and 3 and reveals the dynamics of the relationship between discourse and actors.

Causes of Landslides: Meteorological Dominance

The discourse network analysis in Figure 2 shows the formation of two large clusters representing how the media and key actors explain the causes of disasters. Cluster 1 centers on the concept of high-intensity rainfall, with green lines connecting to almost all actors. This cluster can shape public opinion that views extreme rainfall as the main cause of landslides. When natural factors become the center of the discourse, institutional responsibility for mitigation, environmental governance, and disaster education tends to lose momentum in public debate.

Cluster 2 formed a coalition of non-ministerial government agencies (LPNK), namely the Meteorology, Climatology and Geophysics Agency (BMKG), the National Disaster Management Agency (BNPB), and the Geological Agency of the Ministry of Energy and Mineral Resources (ESDM), to link the concept of landslide causes. The BMKG explains that landslides are caused by meteorological factors, namely high air humidity and the Madden-Julian Oscillation (MJO).

This intraseasonal atmospheric wave affects rainfall patterns, winds, and cloud growth globally. The Geological Agency considers geological factors, such as soil structure with thick, loose weathering and steep slopes, as causes of landslides. Although BNPB occasionally mentioned human-related factors (land damage, lack of early warning systems, and expired risk assessment documents), these statements remained peripheral and were rarely elaborated in the news.

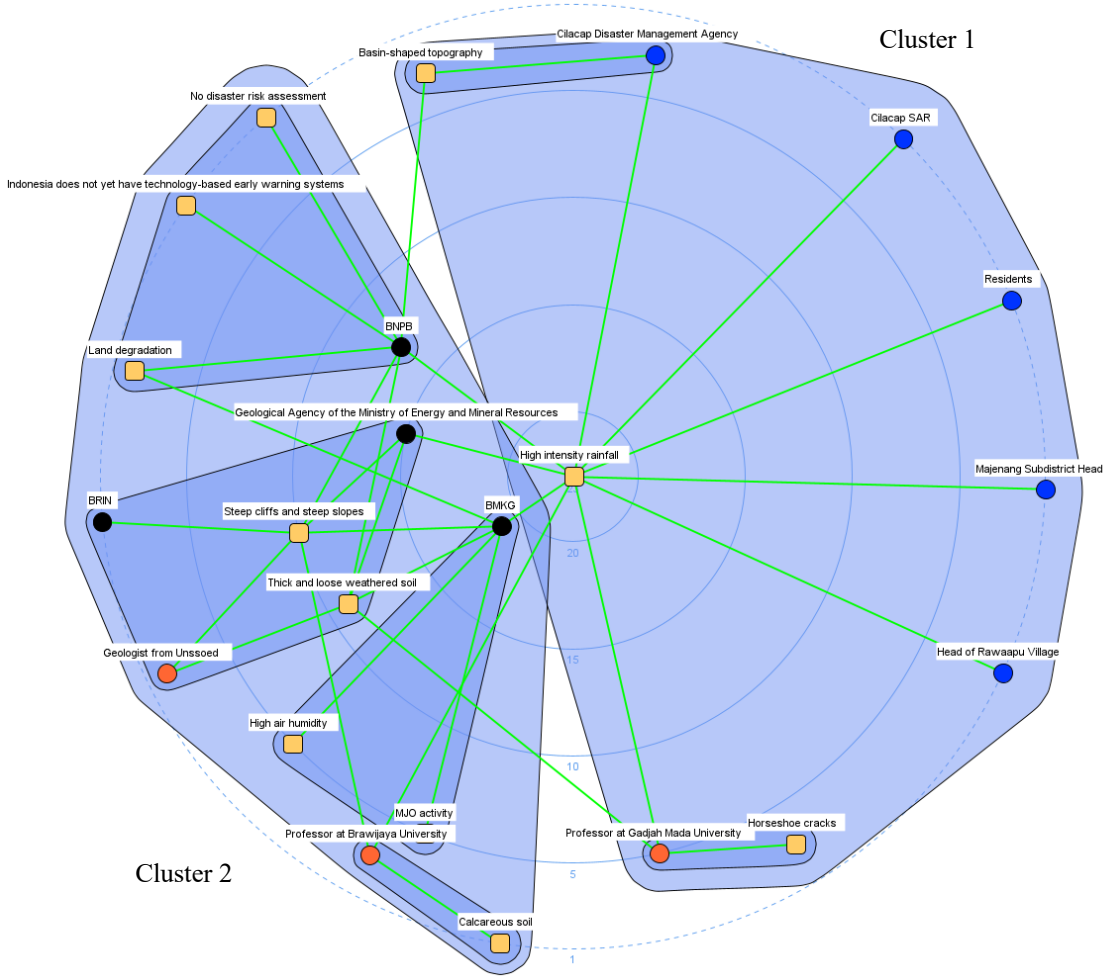


Figure 2. Network of actors and discourse on the causes of the 2025 Cilacap landslide
Source: Analysis results using Visone software

Table 1 explains the concept of "high-intensity rain" as the dominant cause of the Cilacap landslide, as measured by degree centrality (16.129%) and the frequency of statements (23). This concept also connects other ideas, as indicated by a betweenness centrality of 31.701%. This finding makes high-intensity rainfall the narrative axis that guides the public in understanding landslides as a weather-related impact.

This dominance is also reinforced by supporting geological concepts, namely steep slope inclination (betweenness centrality: 11.722%, degree centrality: 9.677%, frequency: 10 times) and thick, loose weathered soil (betweenness centrality: 6.581%, degree centrality: 8.065%, frequency: 11 times). Meanwhile, structural factors such as land degradation, lack of disaster risk assessments, or absence of technology-based early warning systems have low centrality values (betweenness centrality less than 1% and degree centrality less than 3.3%). This finding indicates that issues of environmental governance and disaster mitigation policies are rarely included in mainstream media discourse.

Table 1. *Node centrality* concept of the causes of the 2025 Cilacap landslide

Concept	Betweenness (%)	Closeness (%)	Degree (%)	Frequency
High intensity rainfall	31,701	6,547	16,129	23
Steep cliffs and steep slopes	11,722	5,123	9,677	10
Thick and loose weathered soil	6,581	0.223	8,065	11
Land degradation	0.509	4,209	3,226	2
Basin-shaped topography	0.470	3,928	3,226	3

Indonesia does not yet have technology-based early warning systems	0	3,801	1,613	1
No disaster risk assessment	0	3,801	1,613	1
MJO activity	0	3,671	1,613	5
High air humidity	0	3,671	1,613	5
Calcareous soil	0	3,567	1,613	1
Horseshoe cracks	0	3,273	1,613	3

Source: Analysis results using Visone software

Table 2. Node centrality of actor statements related to the causes of the 2025 Cilacap landslide

Concept and Actor	Betweenness (%)	Closeness (%)	Degree (%)	Frequency
BNPB	18,145	5,748	11.29	13
BMKG	14.43	5,481	9,677	19
Professor at UB	6,459	0.223	4,839	3
Geological Agency of the Ministry of Energy and Mineral Resources	2,005	0.223	4,839	15
Professor at Gadjah Mada University	6,022	4,621	4,839	5
Cilacap Disaster Management Agency	1,204	4,285	3,226	3
Majenang Subdistrict Head	0	1,135	1,613	1
Head of Rawaapu Village	0	1,135	1,613	1
Cilacap SAR	0	1,135	1,613	1
Residents	0	1,135	1,613	1
Geologist from Unssoed	0.223	3,864	3,226	2
BRIN	0	3,518	1,613	1

Source: Analysis results using Visone software

Based on the node centrality of actor statements in Table 2, government agencies such as BNPB, BMKG, and the Geological Agency of ESDM formed a coalition of technical authorities that dominated the news coverage. BNPB recorded the highest betweenness centrality of 18.145% with a degree centrality of 11.29% and a statement frequency of 13 times, followed by BMKG with a betweenness centrality of 14.43%, a degree centrality of 9.677%, and a statement frequency of 19 times. The Geological Agency of the Ministry of Energy and Mineral Resources also played an important role despite having lower centrality (betweenness centrality: 2.005%; degree centrality: 4.839%; 15 statements).

These three institutions emerged as the main interpreters of the disaster's causes, reinforcing a scientific and technical explanatory framework aligned with the dominant discourse on high-intensity rainfall. In contrast, local actors such as the Cilacap Regional Disaster Management Agency (BPBD), the Majenang sub-district head, village heads, the Cilacap Search and Rescue Agency (SAR), and residents only recorded minimal centrality values with degree centrality between 1.613% and 3.226% and betweenness centrality of less than 2%. This peripheral position indicates that local knowledge, residents' experiences, and local governments' perspectives are not the main sources in the construction of narratives about landslide causes.

This pattern shows that media discourse emphasizes meteorological factors reinforced by national authorities, rather than focusing on landslides caused by the absence of technology-based early warning systems and land degradation. The dominance of extreme rainfall as the most influential node obscures the roles of structural factors such as land-use change, weak spatial oversight, and minimal

regional preparedness. The hegemony of weather narratives at the causal stage limits the discourse on solutions focused on emergency preparedness, while the issue of long-term mitigation based on environmental damage control risks becoming marginalized.

Meanwhile, statements from dominant national institutions undermine the strategic position of local communities and governments in public narratives. Although experts from the Geological Agency and a university professor were quoted, their contributions were limited and did not challenge the dominant meteorological framing. As a result, critical discussions on microgeological factors, local soil dynamics, disaster history, or risk factors not recorded in the national early warning system become less prominent. This condition risks placing experts in a subordinate position in the discourse, potentially leading to the underestimation of the results of independent scientific studies in the formulation of long-term regional mitigation policies.

From the perspective of agenda-setting theory, the pattern of reporting that massively highlights the concept of "high intensity rain" shows how the media not only directs public attention to certain issues but also frames how these issues should be understood (McCombs & Shaw, 1972). When ‘high-intensity rainfall’ is the most central node in the discourse network, the media essentially shifts the concept of disaster from the social realm to a meteorological issue that appears to be natural. The public is thus encouraged to see extreme weather as the primary and most ‘rational’ cause.

In contrast, other factors related to spatial management, physical-social vulnerability, environmental degradation, or the absence of structural mitigation are blurred or even rendered irrelevant. This news coverage pattern shows how the media can shift the landscape of public perception simply by placing certain attributes at the center of the narrative, thereby narrowing the reality of disasters compared to the empirical complexity in the field.

Within the framework of discourse networks developed by Leifeld (2020), narrative configurations are formed by powerful coalitions of actors from central government institutions such as BNPB, BMKG, and the Geological Agency, which have greater institutional political power and influence than other actors. This coalition serves as the dominant producer of knowledge, controlling the flow of information and redefining the meaning of disasters. When these actors consistently convey technical explanations, while also occupying a central position in the discourse network, they indirectly close the space for alternative narratives that highlight aspects such as land conversion, ecological degradation, development inequality, weak spatial enforcement, and environmental policy failures.

Alternative narratives are lost not because they are unimportant, but because they are marginalized due to their lack of equivalent institutional channels to enter the mainstream of news coverage. This finding shows that the discourse configuration of landslide causes not only describes disasters as purely natural phenomena, but also has public policy implications. The discourse that has formed not only reflects the reality of the disaster but also shapes public policy, which is responsive, technical, and short-term oriented.

Government Agencies Dominate the Narrative of Short-Term Disaster Management

The discourse network in Figure 3 shows a relatively centralized configuration, with BNPB as the dominant actor shaping the narrative of landslide management solutions in Cilacap. The position of BNPB at the center of the network, linked to various mitigation concepts such as the construction of temporary shelters (huntara), early warning systems, spatial planning, raising public awareness, and environmental rehabilitation, indicates that this agency is the main source of reference for the media in defining disaster response.

This prominent government actor reflects national authority and shapes the public agenda for disaster management and recovery measures. Local actors such as the Majenang Subdistrict Head and the Cilacap Regent appear to be in a peripheral position, with relatively limited discourse involvement, so that their contributions in defining the direction of solutions have not developed into a strong or influential narrative. Similarly, other actors such as the UB Professor, the Governor of Central Java, and the Ministry of Public Works only appeared as supporters of a single issue, namely mapping disaster-prone areas, reviewing development, or creating drainage systems, which fragmented their positions within the discourse network.

This fragmentation stems from the absence of a mutually reinforcing discursive coalition, so none of these actors' voices was strong enough to counter the dominance of the solution narrative constructed by BNPB.

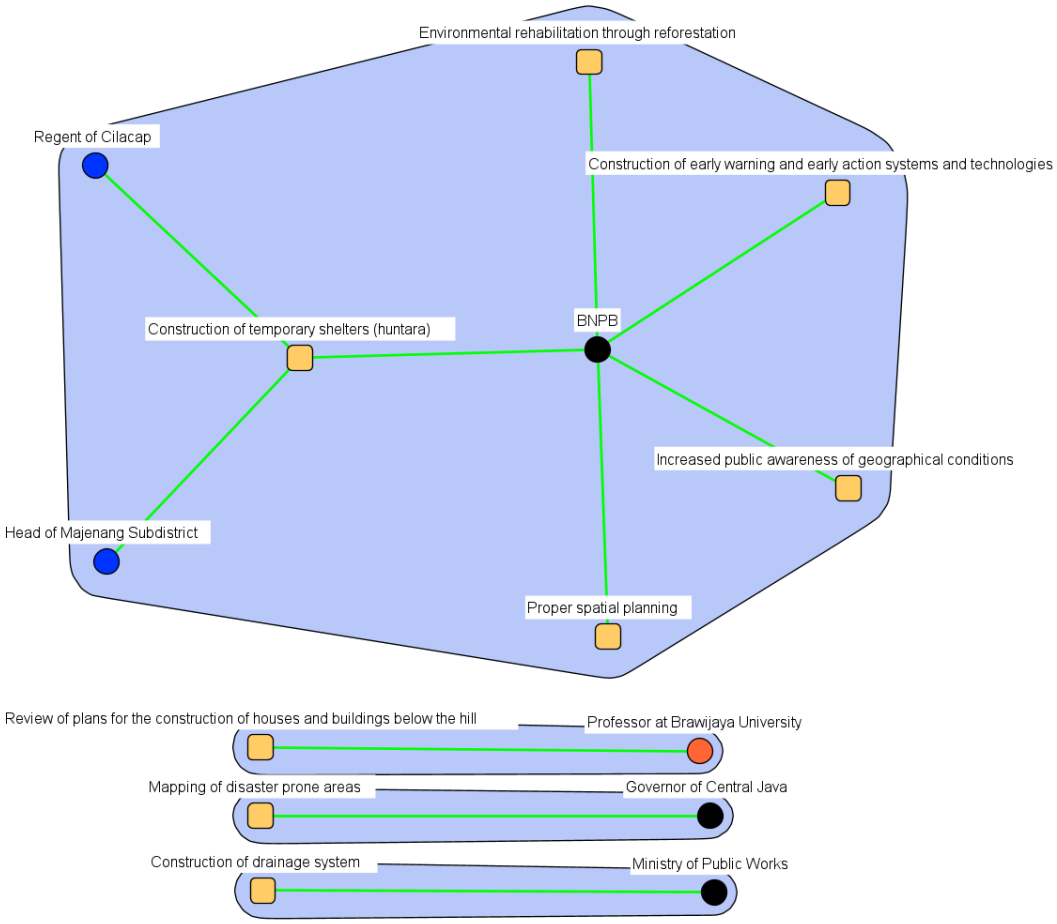


Figure 3. Network of actors and discourse on solutions for the 2025 Cilacap landslide
Source: Analysis results using Visone software

The concept of temporary housing (huntara) as a short-term solution demonstrates a pragmatic and rapid emergency response. On the one hand, temporary shelters (huntara) became the most connected solution node, reflecting the media's preference for immediate, visible responses. It must be noted that statements about solutions were far fewer (only 16 from 10 articles) than those about causes (65), limiting the robustness of the solution network. The connection between Huntara and local actors, such as the Majenang subdistrict head, also shows that this solution is understood as an action that can be implemented immediately, without technical obstacles, and as a form of local government responsibility in providing alternative housing.

However, the dominance of the narrative of temporary shelters as the main solution also raises discursive issues: the discourse on long-term mitigation, which touches on structural dimensions such as spatial planning, environmental rehabilitation, the development of technology-based early warning systems, and the creation of drainage systems, is less prominent in public conversation.

Based on Table 3, the landslide solution with the highest betweenness centrality is the construction of temporary housing (37.931%), proposed by three actors: BNPB, the Regent of Cilacap, and the Head of Majenang Subdistrict. Other long-term landslide solutions (the development of technology-based early warning systems, spatial planning, raising public awareness, reforestation, reviewing hillside development, mapping disaster-prone areas, and improving drainage systems) have a betweenness centrality score of 0%, indicating they are less integrated into the media narrative. Long-term solutions do not play a strategic role in the discourse network. The dominant concept of temporary housing (huntara) reflects the media's tendency to frame landslides as a short-term humanitarian crisis that requires an immediate government response, at both the central and regional levels. Discourse on the causes of landslides is not often articulated in depth, as the focus is more on responsive measures than on investigating their root causes. Structural solutions still appear on the periphery of the network

but do not receive enough support to become a major mitigation agenda because they have low centrality.

Table 3. Node centrality of statements on solutions for the 2025 Cilacap landslide

Concept	Betweenness (%)	Closeness (%)	Degree (%)	Frequency
Construction of temporary shelters (huntara)	37,931	12,826	0.160417	4
Construction of early warning and early action systems and technologies	0	9,406	0.077	2
Proper spatial planning	0	9.406	0.077	1
Increased public awareness of geographical conditions	0	9,406	0.077	1
Environmental rehabilitation through reforestation	0	9,406	0.077	3
Mapping of disaster-prone areas	0	2,879	0.077	1
Review of plans for the construction of houses and buildings below the hill	0	2,879	0.077	1
Construction of drainage system	0	2,879	0.077	3

Source: Analysis results using Visone software

Table 4. Node centrality of the 2025 Cilacap landslide solution statement

Actor	Betweenness (%)	Closeness (%)	Degree (%)	Frequency
BNPB	62,069	15.676	0.267361	8
Regent of Cilacap	0	8,299	0.077	2
Head of Majenang Subdistrict	0	8,259	0.077	1
Governor of Central Java	0	2,879	0.077	1
Professor at UB	0	2,879	0.077	1
Ministry of Public Works	0	2,879	0.077	3

Source: Analysis results using Visone software

From the actors' perspective, BNPB emerged as the center of discourse on landslide solutions, with a betweenness centrality of 62.069% and eight news reports. In contrast, other actors, such as the Regent of Cilacap, the Head of Majenang Subdistrict, the Governor of Central Java, UB professors, and the Ministry of Public Works, made only 1-3 statements, had a degree centrality close to 0%, and a betweenness centrality of 0%. As a result, the solutions that emerge are more responsive and oriented towards emergency management than towards spatial and ecological transformation, because BNPB dominates the flow of information. This dominance indirectly closes the space for long-term solutions from other actors, such as local governments, academics, or technical ministries, who appear only as supporters of a single issue and are not influential enough to push for changes in disaster mitigation.

The discourse on the 2025 Cilacap landslide in online media, which highlights meteorological factors as the main cause of the disaster and the dominance of government agency quotes in every news report, indicates the media's failure to fulfill its strategic role in disaster mitigation. The limited number of statements on solutions (16 from 10 articles, versus 65 on causes) indicates that Indonesian online media gave significantly less attention to post-disaster solutions than to causal explanations. The media should not only convey factual information about disaster events, but also facilitate comprehensive public understanding of risks, root causes, and sustainable solutions (Shaw et al., 2021).

The pattern of reporting that relies too heavily on government agencies, especially the National Disaster Management Agency (BNPB), narrows the issues and makes them technocratic. The dominance of a single news source undermines the educational function of reporting and limits other perspectives (Houston et al., 2019). The lack of expert voices in the discourse on landslide causes limits the opportunity to highlight the scientific basis that explains the complexity of disaster risks. The causes of landslides are reduced to extreme rainfall alone. At the same time, other factors such as land degradation, the absence of technology-based early warning systems, and the importance of disaster risk assessments receive less than proportional coverage.

Regarding landslide solutions, the media widely reported the central government's narrative on the construction of temporary housing. This solution is responsive and does not address the root causes of vulnerability. As a result, the public perceives disaster mitigation as a short-term technical effort, rather than a long-term solution that requires spatial management, environmental rehabilitation, and community participation.

The heavy reliance of online media on official national sources contributed to a narrow, short-term framing of both causes and solutions. When the media failed to encourage public discussion of structural risks and ecosystem-based solutions, government policy tended to follow a pattern of rapid response that could not address the root causes of disasters. This configuration limits the possibility of structural transformation in disaster prevention policies, perpetuating a pattern of repetitive responses whenever similar disasters occur, and reinforcing the marginalization of the long-term mitigation agenda in the public sphere.

In the digital communication ecosystem, this finding has the potential to create an institutional echo chamber, as evidenced by the repetition of official narratives without critical correction from alternative actors (Durani et al., 2024). This condition can erode public trust in the long term if repetitive, responsive policies fail to prevent similar disasters. Fakhruddin et al. (2020) emphasize the importance of effective risk communication that involves multi-stakeholder participation, so that the public is not only a recipient of information but also part of the mitigation solution.

Conclusion

This study aims to understand how discourse mapping and actor coalitions regarding the causes and solutions to the 2025 Cilacap landslide disaster are presented in online media. The 2025 Cilacap landslide coverage in Indonesian online media demonstrates a clear pattern: meteorological factors and short-term emergency measures, backed by national government agencies, achieved high centrality and strong network connections, whereas governance failures (e.g., expired risk assessments), land-use issues, and long-term mitigation strategies remained peripheral and poorly connected. This structure reflects heavy media reliance on official national sources and contributes to the persistent marginalization of structural prevention narratives in public discourse. To counteract this pattern, journalists should actively seek diverse sources (local governments, academics, NGOs). At the same time, mitigation actors need to proactively supply media-friendly data and narratives on structural and long-term risk reduction."

Theoretically, this study emphasizes the importance of viewing disasters not only as physical events but as discursive constructions shaped by the interaction of actors and institutions in online media coverage. The DNA approach has proven relevant in understanding how the dominance of government actors can monopolize the discourse and limit the diversity of narratives that should emerge in the public sphere. In practical terms, the results of this study can serve as recommendations for the media to expand their coverage of sources (local actors, academics, and environmental communities) so that short-term technocratic perspectives do not dominate narratives. Local governments and disaster management agencies need to develop participatory, data-driven risk communication strategies so that long-term

solutions, such as spatial planning, environmental rehabilitation, and the development of early warning systems, can be incorporated into the media agenda.

This study has limitations: it analyzes news texts without triangulating data through interviews with journalists, policy makers, regional disaster documents, or direct field findings, so the context of discourse production and the institutional dynamics behind the selection of sources are not fully described. Subsequent research could adopt a critical discourse analysis (CDA) approach or incorporate structuration points into the concept of media political economy. This approach can be applied by conducting in-depth interviews with media editors and journalists to understand how discourse is formed in news production. Future studies may also incorporate audience-level variables, such as the frequency and duration of media consumption, to assess how dominant narratives influence public perception and trust.

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