

# Climate Change in Indonesian National Online Media Coverage: Agenda Setting and Sentiment Analysis

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## ABSTRACT

This study aims to analyze how Indonesia's national online media covers the issue of climate change. Media coverage of climate change is a fairly important issue in Indonesia to analyze how the media makes the issue of climate change a media agenda and, at the same time, monitor how the government's commitment to the issue of climate change both in terms of policy, prevention, and handling. The method used is a descriptive quantitative content analysis method using a sentiment analysis approach. This study analyzed 3608 titles of news articles published in five Indonesian national online media, namely Antaranews, Detik.com, and Republika.co, Tempo.co, and Tribunnews.com during the five years 2019-2023. The study results show that the frequency of the coverage of climate change issues is most widely reported by Antaranews at 51% and is dominated by positive sentiments as a media company owned by the Indonesian government. In contrast to non-government-owned media, namely Detik.com, Republika, Tempo.co, and Tribunnews.com, the issue of climate change is also on the media agenda, although more than Antara news. This media agenda setting is close to the media framing of climate change issue policies, not merely the amount of coverage but climate change is highlighted on the focus of how weak the handling of the impacts of climate change is.

Keywords: Climate change; Online Media News; Indonesia

## ABSTRAK

Penelitian ini bertujuan untuk menganalisis bagaimana media online nasional Indonesia memberitakan isu perubahan iklim. Liputan media tentang perubahan iklim merupakan isu yang cukup penting di Indonesia untuk menganalisis bagaimana media menjadikan isu perubahan iklim sebagai agenda media dan sekaligus memantau bagaimana komitmen pemerintah atas isu perubahan iklim baik dari sisi kebijakan, pencegahan dan penanganan. Adapun metode yang digunakan adalah metode analisis isi kuantitatif deskriptif dengan menggunakan pendekatan analisis sentiment. Penelitian ini menganalisis 3608 judul artikel berita yang diterbitkan di lima media online nasional Indonesia yaitu antaranews, Detik.com, Republika.co, Tempo.co dan Tribunnews.com selama 5 tahun periode tahun 2019-2023. Hasil studi menunjukkan frekuensi liputan isu perubahan iklim yang paling banyak memberitakan adalah antaranews sebesar 51% dan didominasi oleh sentimen positif sebagai perusahaan media milik pemerintah Indonesia. Berbeda dengan media yang bukan milik pemerintah yaitu Detik.com, Republika, Tempo.co dan Tribunnews.com, isu perubahan iklim juga menjadi agenda media meskipun tidak sebanyak antaranews. Agenda setting media ini erat dengan framing media atas kebijakan isu perubahan iklim, tidak semata-mata jumlah liputan namun perubahan iklim ditonjolkan pada fokus bagaimana lemahnya penanganan dampak dari perubahan iklim.

Keywords: Perubahan Iklim; Media Online; Indonesia

## INTRODUCTION

Over time, the issue of climate change has become critical. There have been many attempts to adopt policies and various strategies to save the earth. Climate change has become an international emergency threatening many lives in the last three decades. One of the impacts felt was an increase in global temperature of 2.7 degrees Celsius, which caused massive damage to the face of the earth and resulted in many natural disasters. The climate disaster that is currently occurring has been felt by millions of people, and some have even had to flee because of the disaster conditions that are being exacerbated by climate change. Strategic steps must be taken to halve greenhouse gas emissions and phase out coal to achieve zero emissions (ICCTF, 2021).

With all its impacts, climate change can damage the quality of human life both socially and economically. This condition will hinder the achievement of the development vision that has been set both nationally and globally. The center of development in the SDGs is people and the planet. Humans only live on one planet, earth. Those who suffer most from the impacts of climate change are the poor groups, farmers, fishermen, and people living on remote islands.

Research conducted by the European Union related to climate change issues illustrates that climate predictions show that our environment and society could be significantly affected in the medium to long term. Impacts worldwide will be varied, posing serious challenges but sometimes also creating opportunities. They can span a wide range of sectors, including agriculture, water cycles, land cover and vegetation, ecosystems, marine environments, health, and so on. The impacts of climate change not only concern the natural environment but also people's livelihoods and will challenge our socio-economic systems and structures (European Union, 2013). Following up on the issue of climate change, a series of conferences continue to be held at the world level on an ongoing basis. The most historic conference was COP3, which was held in Kyoto, Japan, as a milestone in the movement against climate change. At this conference, participants were required to reduce gas emissions through the Kyoto Protocol, namely emissions trading and clean development mechanisms. The Kyoto Protocol continues to be an agenda being monitored to overcome climate change, at least until COP13 in Bali, Indonesia (CNN, 2015).

As a country that has signed the SDGs, the Indonesian government continues to be committed to tackling climate change. In 2016, the Indonesian government ratified the Paris Agreement and the COP in Glasgow in 2012. This commitment is part of the 2020-2024 national development planning document and makes handling climate change one of the national priority agendas. Three important things will be done, namely forestry, energy, and waste management (Ministry of Finance, 2021). If we refer to the 17 SDGs goals, 12 goals have targets related to climate, especially those related to energy, forestry, food security, and education. All of these issues are important issues related to fundamental human rights. Therefore, development programs must include indicators related to climate change.

Therefore, related to the SDGs target, climate change mitigation is important. It is also important for the government to create production and transportation systems that are environmentally friendly and do not have an impact on increasing emissions as the biggest source of pollution and encouraging an increase in greenhouse gas effects. In addition, to reduce the greatest impact of climate change, inclusive development for all so that all have access to a decent life is a must. This SDGs approach seeks to protect society and individuals from the impacts of climate change, especially on community groups who are at high risk and vulnerable.

Amid this big problem regarding the impact of climate change, the Indonesian national media must take a role by reporting on issues about climate change at the world, national, and local levels. The media must make it an agenda that intense coverage of climate change is very important so that the public will be exposed to various problems regarding climate change, especially since the government has stipulated it in national development policy. Media coverage of climate change is also a tool for monitoring the government's commitment to SDGs achievements in overcoming the impacts of climate change and also commitment to international policies from conventions produced at climate change conferences.

With regard to various climate change issues, since 2000, in a Guest Editorial entitled Social Research on Climate Change: Where We Have Been, Where We Are, and Where We Might Go, stakeholders have competed against the war of public opinion in the mass media. These stakeholders recognize that climate is one of the highest-risk issues facing governments today. The social research presented in this special issue of Public Understanding of Science recognizes this possibility. In this

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scope, 16 researchers presented the results of various studies designed to examine the intersection between climate change science and social systems, especially those involving communication, public opinion, and public understanding (Craig W. Trumbo and James Shanahan, 2000). Regarding how the media pays attention to the issue of climate change, Anderson (2009) states that since the 1990s, the mass media has paid attention to the issue of climate change.

The impact of climate change is of concern to many countries because the impact of climate change will affect many countries, especially in relation to increasing earth temperatures. All countries must commit to preventing the earth's temperature from increasing by a maximum of 2.5 degrees. In facing climate change, mass media must also commit to campaigning, educating the public, and making climate change a part of the public agenda. Until now, the issue of climate change has not become an important issue in society. This fact is demonstrated by the low level of public understanding of the issue of climate change, the impact of climate change, and the low level of public behavior that leads to reducing the risk of the impact of climate change. Even at the government level, serious efforts to reduce the impact of climate change and mitigation to prevent climate change have not yet become commitments. Therefore, the media is expected to become one of the pillars of educating the public about the impacts of climate change.

The media has a moral responsibility to educate the public by positioning it as an agent of change regarding climate change, which has become a global issue. To carry out this role, online media must make the issue of climate change an agenda in their media. Regarding this media agenda, if we refer to Mc Combs (2002), the power of the news media to set a country's agenda to focus public attention on several main public issues, is a very large and well-documented influence. Not only do people obtain factual information about public affairs from the news media, but readers and viewers also learn how much importance is attached to a topic based on the emphasis placed on it in the news. For example, if the newspaper is about the salience of the topic in the daily news – the headline on page one, other front page views, big headlines and if television clues about salience – the opening story in the news broadcast, the length of time devoted to the story, etc. In other words, the news media can set the agenda for public attention on a small group of issues that shape public opinion.

Media is an important pillar in providing information and education about climate change issues. The development of mass media, especially online media, is very rapid, and media and environmental issues/climate change. Referring to Dunwoody (2007) and Stamm et al. (2000), in Anderson (2009) it is explained that the media plays an important role in framing scientific, economic, social, and political dimensions through voicing some points of view while suppressing others, and legitimizing certain truth claims as being true, reasonable, and credible. While the media has played a key role in framing climate change, its effects are complex and dynamic, and there is no direct link between information campaigns and behavior change. The portrayed of climate change in the news media has a significant impact on individual and collective actions to reduce it through news production, media consumption, and involvement (Swain, 2022).

This research uses agenda-setting theory from McCombs and Shaw. We discuss how media agenda-setting is related to the issue of climate change and whether the issue of climate change is an important for national media amidst conditions where the impact of climate change is increasingly being felt. Looking at its historical origins, McCombs and Shaw (1972) hypothesized an agenda-setting function of mass media coverage of various aspects of political campaigns in which different media emphases, over time, communicate to the public a rough ranking (agenda) of important issues.

Based on various policies, actions, and impacts on climate change, climate change is one of the most pressing problems today. In relation to climate change, most people receive information about climate change from mainstream newspapers and broadcast media, and this information must be as accurate and complete as possible. As for many other topics, governments are an important reference point for media coverage of climate change, as they are the main actors in international climate negotiations and national climate policies (Julia, 2016). Media coverage of climate change plays an important role in shaping public opinion about the climate crisis, which is becoming increasingly worrying over time. In his book *Who Speaks for the Climate? Making Sense of Media Reporting on Climate Change* (Maxwell Boykoff) explains that media representations about climate change issues are not produced, negotiated, and disseminated in a balanced manner with unequal access and resources. Research conducted by Reuben Rose-Redwood and Paige Bannet from the University of Victoria on how documentary films build narratives about climate change shows that climate change prioritizes rich countries with unbalanced content. They found that poor countries are rarely included in films as countries affected by climate change (The Conversation, 2021).

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With regard to the impact of climate change currently occurring, a study of the role of the media in reporting about climate change is very significant, namely, what role the media plays in influencing personal, national, and international action to overcome climate change and how much the media contributes through its media coverage, how much the media covers climate change, how the issue of climate change is conveyed, and who the sources are quoted, including how this coverage will influence public opinion about the impacts of climate change. Boykoff (2013) asserts that mass media coverage has proven to be a major contributor – among a number of factors – that has shaped and influenced science and policy discourse as well as public understanding and action. Mass media representation practices have widely influenced the translation between science and policy and have shaped perceptions about various environmental, technological, and risk issues (Boykoff, 2013; Vikström et al, 2023).

Furthermore, regarding agenda-setting in online media, Sarah Pralle (2009) states that media consumption helps develop climate change awareness. This can provide insight into how media can center on information and educate others. Media technology has developed very quickly. Over the past two decades, the internet has become a hub for online news and information. The birth of Google redefined the way people search for information. People can stay updated on an issue and stay current on the topic simply by opening their browser or smartphone app to search for the latest updates. Santana (2005) explains that the most visible characteristic of online journalism is the ease for publishers and the public to make changes in publishing and access times. Online publishers can publish or access articles to view now or later.

According to McCombs and Valenzuela (2007), agenda-setting allows news columns to choose which news stories are reported. Agenda setting here refers to the idea that the media can influence what the audience thinks and how important the topics presented are to the audience. The narratives or issues chosen to report on are based on what will attract the public's attention most. Gatekeepers are those who choose which content will be broadcast. Additionally, this could be the only outlet they get their news from, resulting in a monopolistic effect.

Specifically related to the media's agenda-setting and climate change, Pralle (2009) explains that the media must stand out and make an impression on the audience. Pralle suggests several strategies to implement when discussing climate change in the media so that it appears more frequently at the forefront (2009). Although it is not known which strategy is the most effective, it should be noted that a large number of these solutions can be applied to best suit the resulting situation. Every environmental situation is different and unique to itself. Strategies to help media consumption about climate change understand how the media helps convey environmental beliefs and knowledge.

## METHODS

This research uses quantitative media content analysis. Quantitative media content analysis is coding communication symbols, which is carried out systematically and can be replicated by providing numerical values according to valid measurement indicators. To describe communication, we conclude the meaning or the communication context, both the production and consumption of the text (Riffe, 2014). As a method, the strength of quantitative content analysis of manifest content (visible text) is First, with this technique, the messages are separate and separate from the communicator and recipient. With a strong theoretical framework, researchers can conclude from content evidence without accessing the communicator. Second, the content of media texts has a life beyond its production and consumption. Longitudinal studies are possible using archival materials that may outlive the communicator/audience or the events described in the communication content. Third, quantifying large amounts of information or data is logistically impossible for close qualitative analysis.

The characteristics of quantitative media content analysis include. First, the content analysis (quantitative) only focuses on explicit material. Researchers only code (mark) what they see (in the form of writing and images in print media or the internet), or what they hear (in the form of sound on the radio), or what they see and hear (television, video). Second, content analysis research must be carried out objectively. This means that the researcher's subjectivity bias must be eliminated. New objective requirements can be carried out by researchers if analytical categories are available that are clearly and operationally defined so that other researchers can follow them with high reliability. Third, it is systematic. All relevant statements or message contents are examined using the same

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procedures. For example, if the research unit used is per paragraph, all research materials are analyzed using the analysis unit per paragraph. Fourth, it is quantitative, which relates to the nature of the data to be obtained and analyzed. Quantitative analysis prioritizes accuracy in identifying the contents of statements, such as calculations and repeated mentions of certain words, concepts, and themes (Eriyanto, 2015).

The research objects are five national online media, namely *antaranews.com*, *Detik.com*, *Republika*, *Tempo.co*, and *Tribunnews.com*. The reason for selecting these five media is that these four media are among the top 10 online media in Indonesia based on the Indonesian Online Media Association. Apart from that, these four media are national media with a wide readership. This means that what is on the media agenda will be consumed by the reading public, including climate change issues, which are becoming an important issue at the international level. *Tribunnews.com* is a very existing print media in Indonesia and has been in the top spot with the most views several times. While *tempo.co* is a national media that is very critical of the government, *detik.co* is a pioneer of national online media in Indonesia with a fairly wide readership. The steps for analyzing media messages about climate change consist of (1) Entering the keyword "Climate Change," (2) Scrapping text data, (3) carrying out data reduction and cleaning (4) analyzing and interpreting the data that has been collected.



**Figure 1.** Scrapping and Data Analysis Process

To understand how each online media covers the issue of climate change. The dataset in this research was taken from news titles from several media using the web scrapping method. News headline data was pulled using the keyword "Climate Change" in the search feature for each media. The scrapping application used is *webscraper.io*. After collecting the dataset, each news title was labeled and divided into categories with positive, neutral, and negative sentiment. To facilitate the data analysis and preprocessing process, this research used the Python programming language.

## RESULTS AND DISCUSSION

The development of internet technology has encouraged the development of news sites (news portals) and has become the basis for the transformation of print media into online news portals. The emergence of this online-based news portal is in line with the development of digital technology. The online media population in Indonesia also continues to grow along with the development of internet users in Indonesia. This also influences the development of print media in Indonesia, most of which have transformed into internet-based online news portals. The characteristics of online media as a news portal are, firstly, unlimited space. Online journalism allows unlimited pages. Space is not a problem. Articles and news can be as complete and long as possible, without limits. Second -audience control- in online journalism allows readers to choose news/information more freely. Next, non-linearity: in online journalism, each story stands alone, so readers do not have to read them sequentially. Fourth, storage and retrieval: Online journalism allows news to be "eternal", stored, and easily accessible again anytime and anywhere. Then Immediacy. Online journalism means information can be conveyed briefly, quickly, and directly. Sixth, Multimedia Capability. Online journalism allows news to be presented in text, sound, images, video and other components simultaneously. Lastly is Interactivity. Online journalism allows direct interaction between editors and readers through comment columns and social media sharing.

Based on comparisons using *Alexa.com*, a website that since 1996 has been collecting databases on internet sites worldwide, including statistical data, it is known that *sec.com*, *kompas.com*, *vivanews.com*, *okezone.com* and *tempo.co* are currently the five news portal sites with Indonesia's highest reach and page views (Arifin, 2013). Until 2022, Indonesia will have the most media in the world. Data from the Press Council shows that the number of online media in Indonesia is 43,300 online media. However, only a small portion are registered with the Press Council. The presence of digital platforms reduces the power of traditional media and can potentially increase the capacity of various types of actors to shape agendas (Gilardi et al., 2021). Media convergence is a process that

involves media, forms of communication, and communication networks. Therefore, media convergence blurs the distinction between one-way media and interactive media.

News title data is pulled using the keyword “Climate Change” in the search feature for each media. The total number of news items is 3608 news articles with the following details:

**Table 1.** Number of News with Climate Change Issues

Media	Number of Articles
Antaranews	2553
Detik.com	781
Republika.co	80
Tempo.co	96
Tribunnews.com	98
Total News	3608

Referring to Table 1 above, Antaranews is the media with the largest number of articles containing news containing the issue of climate change, with a total of 2553 articles. Based on the concept of media agenda setting, the number of reports (highlighting an issue) in a media describes the role of the media in selecting an event or issue in society to become the media agenda. To explain how the agenda-setting process works, referring to Rogers and Dearing (1988) as follows:

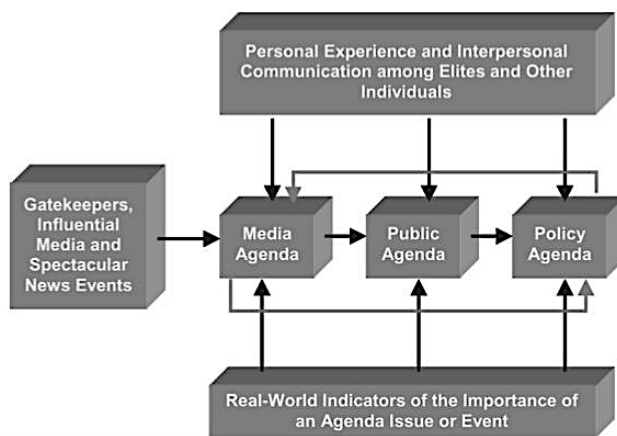


Figure 2. Agenda Setting Process at Work Rogers and Dearing (1988)

The process of forming a media agenda is influenced by several factors, including the personal experience of journalists covering the news and editorial decisions, whether the media considers an issue important or not, so it will become a media agenda. The key to agenda setting lies in the role of the media as gatekeepers of various events or social realities, which determine the media agenda. The media forms public perception of an event by providing a portion of each issue or event through selection and highlighting the issue of the event in media coverage. Differences in the portion and intensity of media presentation will influence the image of an issue in the eyes of the public. In this case, the mass media has a role as a gatekeeper by choosing, selecting, and highlighting an event that is considered necessary by the media. So, the size of media coverage of an issue, including, in this case, the issue of climate change, is the media agenda. This media agenda, either directly or indirectly, will influence the public agenda, although the magnitude depends on many factors. Likewise, the media agenda will influence the government or policy agenda; conversely, the government’s agenda will also influence the media’s agenda.

Effective agenda-setting can be achieved by embodying these useful tactics in a defined story. When successful, it takes into account the effects resulting from the information stated in the story. Successful communication is the essence of agenda setting. This study shows how to share information successfully so that the media consumed positively impacts the audience. Although the impact does not dictate how to persuade others about climate change specifically, it does show how agenda-setting can be used effectively to persuade and promote information so that people can make choices about the causes of climate change. (Crawford, Breheny, Mansvelt, & Hill, 2019). Media that

depicts successful media agenda-setting tactics can influence everyone who consumes this climate change media. Agenda-setting provides a way to organize the information to be absorbed but can provide much-needed persuasive properties. When done correctly, it can produce an influenced belief system derived from facts and values (Pralle, 2009).

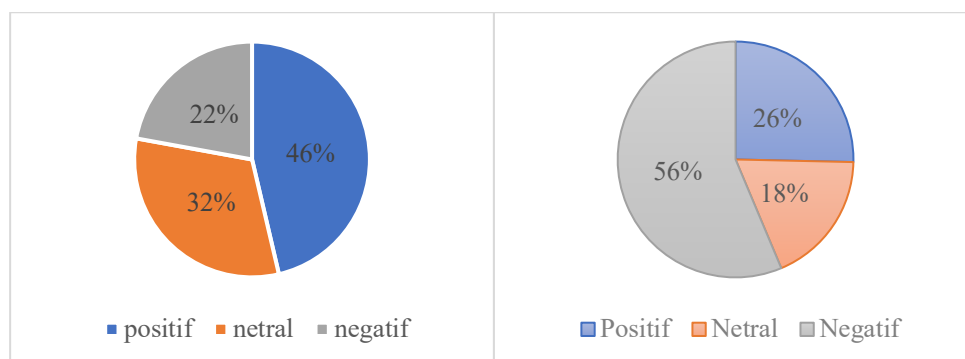
### Reporting Climate Change Issues in Indonesian Online Media

Based on the data cleaning and integration results, all news articles are then categorized into sentiment labels consisting of three sentiment categories: positive, neutral, and negative. The categorization in labeling these sentiments refers to the categorization formulated by McQuail (1992). From the results of the analysis using Python, sentiment data for each media was obtained as follows:

**Table 2.** National Online Media Sentiment Category

Media	Sentiment Category		
	Positive	Neutral	Negative
Antaraneews	1183	805	565
Detik.com	198	143	440
Republika.co	25	24	31
Tempo.co	29	24	43
Tribunnews.com	41	27	30
Total Sentiment	1476	1026	1106

Table 2 above shows that Antaraneews published 1183 news articles on climate change with positive sentiment, while 565 news articles had negative sentiment and 805 news articles had neutral sentiment. In relation to the context of news with climate change content, Antaraneews plays a positive role in supporting efforts to prevent climate change. This is different from private media such as Detik.com, Republika, Tempo.co, and Tribunnews.com, which are dominated by reporting with negative sentiment.

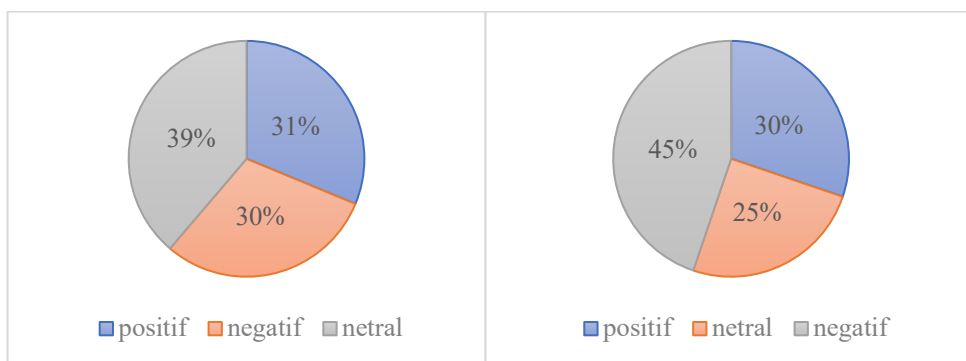


**Figure 3.** Sentiment on Reporting on Climate Change Issues betweennews.com and Detik.com

The data above shows Antaraneews’ partiality as part of the state-owned media. The Antara News Portal, which is part of the Public Company, the Antara National News Agency, is a “red plate” mass media organization, the same as TVRI and RRI. Antaraneews has a special assignment, namely to disseminate information that can educate and educate the public in order to improve the life of the nation and state, implemented in accordance with Government Regulation (PP) Number 40 of 2007 (Primayanti, 2015).

In contrast to antarnews.com, which is dominated by positive news, Detik.com contains more news about climate change issues with negative sentiment. Several factors cause Detik.com’s reporting to be dominated by negative sentiment. First, it can be seen from the dimension of impartiality, namely the partiality and level of neutrality of the news presented by Detik.com. The second is related to the process of creating news on Detik.com. The amount of news that comes to Detik.com can reach hundreds to thousands of articles a day (Bakhtiar et al., 2019). This results in the level of validation and checking, especially on the news containing climate change issues, being biased. Finally, reporting on climate change issues on Detik.com was dominated by negative sentiment.

Detik.com is one of Indonesia’s largest online media portals, which has been part of the Chairul Tanjung Media conglomerate group since 2011 (Tapsell, 2014). At the beginning of its emergence, Detik.com was considered too brave to innovate because, in 1998, the internet was very expensive, and it was unimaginable that the development of the digital world would be this fast. Even at the beginning of its birth, it was predicted that Detik.com would not be able to survive for long. Detik.com’s reporting is very broad in presenting news ranging from hard news, which must be immediately reported to the public, to trivial news.(Handiyani & Hermawan, 2017). Detikcom has become a symbol of new economic development, which has become a booming business (Arifin, 2013). In reporting on the issue of climate change, the framing carried out by Detik.com is dominated by negative sentiment. Like Detik.com, reporting on climate change issues in Republika is also dominated by negative sentiment. Republika Online is a pioneer of Indonesia’s first online news portal media, followed by Tempo and Kompas in 1995 (Utaminingtyas, 2017).



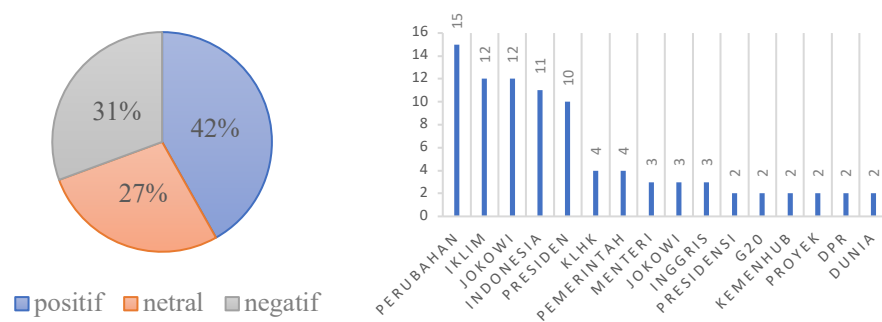
**Figure 4.** Sentiment on Reporting Climate Change Issues Republika and Tempo.co

The reporting on climate change issues broadcast by Tempo.co is more dominant in negative sentiment. The characteristics of Tempo.com as mainstream media are also the same as Republika, which tends to be critical. This then encouraged Tempo.co to be more vocal in reporting climate change issues on their online media portal, in line with its parent company, namely PT. Tempo Inti Media, the vision of Tempo.co, is to become a reference media to increase public freedom to think and express opinions and build a civilization that respects intelligence and differences (Maghvira, 2017).

Tempo.co is a form of media convergence from Tempo Media Group, which dominates national news, especially in long-form news and news magazines (Dedees & Noviani, 2020). Tempo.co is one of the media that has a large number of active viewers in Indonesia to get the latest news information (Setiawan, 2020). In 2016, Tempo.co won an award in the media hackathon competition organized by the Global Editors Network Association in Vienna, Austria (Zulaikha, 2019). In fact, from 2009 to 2010, Tempo.co experienced quite significant developments. Tempo.co, as an online news portal, has a different character from Tempo Magazine and Tempo Newspaper. The difference lies in the reporting model. In magazines and newspapers, Tempo tends to present straightforward, in-depth, and comprehensive news. Meanwhile, the Tempo.co news portal displays short, incomplete news, continues with the next story, and is not in-depth like magazines and newspapers (Dedees, 2014).

In contrast to Tiga Detik, Republika and Tempo.co, Tribunnews’ reporting on climate change issues is dominated by positive sentiment. Nevertheless, the number of news articles containing climate change issues is fewer than antarnews.com. Tribunnews.com is one of the most popular online news portals in Indonesia. Tribunnews.com is managed by PT Tribun Digital Online and is part of the Kompas Gramedia Regional Newspaper Division (Group of Regional Newspaper). Tribunnews.com is the parent of more than 20 Tribun Network regional news sites(Hutami & Sjaforah, 2019). The trend in news packaging that occurs in the Tribunnews.com media is that many use clickbait techniques to attract readers’ attention(Mardiyah, 2018).





**Figure 5.** Sentiments and Keywords in Reporting Climate Change Issues Tribunews.com

*Agenda Setting* Tribunews.com’s reporting on climate change is dominated by positive sentiment, thus providing a positioning that this media is pro towards efforts to prevent climate change. This can be seen in several keywords that appear most frequently in each news category topic with positive sentiment. Tribunews.com is considered the online news portal that uses the clickbait approach most in its news. The clickbait news phenomenon on Tribunews.com deviates from the journalistic code of ethics regarding news accuracy (Mardiyah, 2018). However, Tribunews.com’s reporting on climate change issues did not find many news titles that used a clickbait approach—news articles with positive, negative, or neutral sentiments.

The tendency of reporting by highlighting issues or forms of sentiment (positive, negative, or neutral) as a media agenda is part of the media agenda-setting process to influence the public agenda and the government’s agenda. It is hoped that negative framing regarding the issue of climate change, which is also becoming a global concern, will become a public agenda so that it becomes the government’s attention to formulate policies and take preventative steps. The impact of climate change is already being felt by the community, especially vulnerable groups, so continuous reporting of its impact will become a tool for educating the public so that it becomes the public agenda that will directly or indirectly influence government policy.

This research shows that communication media research is interested in studying media effects. In the early days, mass media was conceptualized as having a strong effect, with prevailing thinking centered on concepts such as bullet theory and syringe theory. Media can produce more than just behavioral effects: they can influence attitudes, perceptions, and even cognition. Furthermore, many conceptualizations of communication theory examining media effects have emerged. One of the most prominent is the agenda-setting theory proposed by McCombs and Shaw in 1972 (Zhou et al., 2016). The basis of agenda setting is reviewing the impact of the media agenda on the public agenda regarding the prominence of issues, political figures, and other objects of attention (McCombs et al., 2014). McCombs further explained that the influence of the news media’s agenda-setting is not limited to the initial step of focusing public attention on a particular topic. Media also influences the next steps in the communication process, our understanding, and our perspective on topics in the news. To borrow Walter Lippmann’s expression, “the pictures in our heads,” the agenda of issues or other objects presented by the news media influences the pictures in our heads. The agenda of attributes presented for each issue, public figure, or other object influences the images that we hold.

Although the influence of the media agenda can be substantial, it alone does not determine the public agenda. The information and signals about the salience of objects and attributes provided by the news media are far from the sole determinants of the public agenda. This substantial influence of the news media cannot overturn or negate the basic democratic assumption that citizens have sufficient discretion to determine the course of their nation, state, and local communities. In particular, people are quite capable of determining the basic relevance – to themselves and the larger public arena – of the topics and attributes put forward by the news media. The media sets the agenda only when citizens consider their news to be relevant.

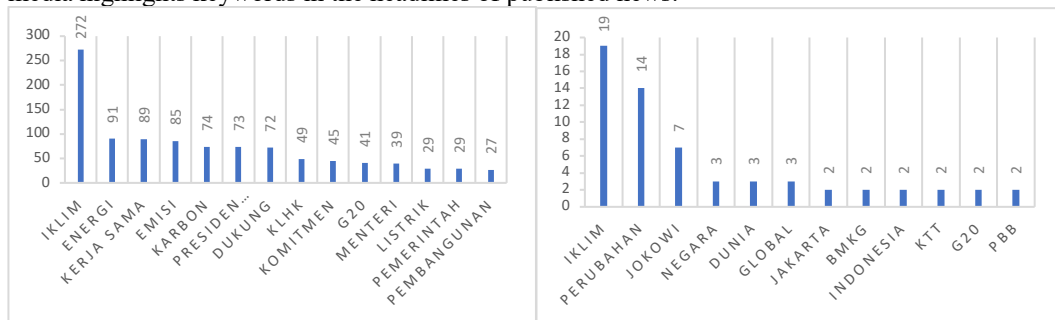
The media can strongly influence audiences’ issue priorities. However, classic agenda-setting experiments were carried out several decades ago before major changes in the media occurred. The new paradigm in agenda-setting research must question the initial assumptions that news is unique and has agenda-setting power, that issues are independent, and that the effects are uniform (Santia et al., 2021). An agenda-setting perspective can help us understand the current politics of climate policy by identifying the factors that influence change issues on the public and government agenda (Pralle,

2009). In addition, agenda-setting that attracts media attention can influence public and political attention related to climate policy (Wonneberger & Vliegthart, 2021).

Current agenda-setting theory discusses classical and contemporary media studies, especially digital media. The theoretical contours of agenda setting continue to evolve with the emergence and proliferation of new communication technologies such as the Internet and social media (Boulianne et al, 2020; Chen, et al, 2023; Conway, Kenski, & Wang, 2015; Lee et al, 2020; Rashi & McCombs, 2015; Rogstad, 2016; Yun et al., 2016). Digital media platforms can reduce the gatekeeping power of traditional media and potentially increase the capacity of various types of actors to shape their respective agendas (Gilardi et al., 2021).

**Climate Change and Media Agenda Setting**

Communication research is very interested in the study of media effects. In the early days, mass media was conceptualized as having a strong effect, with prevailing thinking centered on bullet theory and syringe theory. Media can produce more than just behavioral effects: they can influence attitudes, perceptions, and even cognition. Furthermore, many conceptualizations of communication theory examining media effects have emerged. One of the most prominent is the agenda-setting theory proposed by McCombs and Shaw in 1972 (Zhou et al., 2016). The basis of agenda setting is reviewing the impact of the media agenda on the public agenda regarding the prominence of issues, political figures, and other objects of attention (McCombs et al., 2014). As can be seen from how each media highlights keywords in the headlines of published news:



**Figure 6.** Comparison of Keywords on the topic of Climate Change Reporting Antaranews and Tempo.co

Antaranews, as a state-owned media, disseminates Climate Change information based on agenda setting, aiming to educate the public through positive sentiment. Meanwhile, Tempo.co carries out the function of watchdog journalism, which is implemented in three dimensions: intensity of the scrutiny, the journalistic voice, and the source of the news event (Alyatalthaf & Putri, 2022). This then becomes the factor why Tempo.co is more dominant in using negative sentiment in reporting on the issue of Climate Change. The media can strongly influence audiences’ issue priorities. However, classic agenda-setting experiments were carried out several decades ago before major changes in the media occurred. The new paradigm in agenda-setting research must question the initial assumptions that news is unique and has agenda-setting power, that issues are independent, and that the effects are uniform (Santia et al., 2021). An agenda-setting perspective can help us understand the current politics of climate policy by identifying the factors that influence change issues on the public and government agenda (Pralle, 2009). In addition, agenda-setting that attracts media attention can also influence public and political attention related to climate policy (Wonneberger & Vliegthart, 2021).

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Based on various policies, actions, and impacts on climate change, climate change is one of today’s most pressing problems. Regarding climate change most people receive information about climate change from newspapers as mainstream. Broadcast media also plays an important role so that the information conveyed is as accurate and complete as possible. As for other topics, governments

are an essential reference point for media coverage of climate change, as they are the main actors in international climate negotiations and national climate policies (Julia, 2016).

Media coverage of climate change plays an important role in shaping public opinion about the climate crisis, which is increasingly worrying over time. In his book *Who Speaks for the Climate? Making Sense of Media Reporting on Climate Change* (Maxwell Boykoff) explains that media representations about climate change issues are not produced, negotiated, and disseminated in a balanced manner with unequal access and resources. Research conducted by Reuben Rose-Redwood Paige Bannet from the University of Victoria on how documentary films build narratives about climate change shows that climate change prioritizes rich countries with unbalanced content; namely, poor countries are rarely included in films as countries affected by climate change (The Conversation, 2021). With regard to climate change's impact, a study of the media's role in reporting climate change is very significant. How and what the role of the media in influencing personal, national, and international action to address climate change and how much the media contribute through its media coverage, how much the media cover climate change, how the issue of climate change is conveyed, and who the sources are quoted, including how the coverage this will influence public opinion about the impacts of climate change.

Boykoff (2013) further explained that climate and mass media first came together in climate change coverage in the 1930s. In the *New York Times*, it was written, "The earth inevitably changes its aspect and climate. How the change has gradually taken place and what the results have been considered..." (New York Times 1932, 4). Media coverage of human contributions to climate change emerged more prominently in the 1950s. For example, the *Saturday Evening Post* published a story by Abarbanel and McClusky, entitled 'Is the World Getting Warmer?', exploring the relationship between changes in atmospheric temperature and shifts in agriculture and sea level rise (Abarbanel and McClusky 1950). In 1956, Waldemar Kaempffert wrote for the *New York Times*, "Today more carbon dioxide is produced by human technological processes than by volcanoes, geysers, and hot springs. Every human century increases the carbon dioxide content in the atmosphere by 30 percent – that is, at a rate of 1.1°C in a century. It is perhaps a coincidence that the world's average temperature since 1900 has risen at about this rate. However, the possibility that humans had a hand in the resurrection cannot be ignored." (Kaempffert 1956, p.191). However, in the following three decades, mass media coverage of climate change remains rare. These pieces about humans' role in climate change provide a rare example of media coverage of climate science, as well as clarity on anthropogenic climate change.

The impact of climate change, which has been felt significantly in society in almost all aspects of life, means that the media has an important role to play on the agenda by reporting intensively about various events regarding climate change in terms of government policy (international, national and local), the prevention efforts that have been carried out by all parties, and the various impacts of climate change. Even though in the midst of the rapid development of online media, the media agenda is not necessarily the public agenda. The media must still be concerned about providing a large portion of coverage and playing the role of watchdog so that the issue of environmental change remains on the public agenda and an important government agenda.

## CONCLUSION

The trend in reporting climate change issues on each online media portal in Indonesia is quite diverse. There is a dichotomy, especially in differences in ideology and alignment between the media that are the subjects of this research. *Antaranews.com* as a state-owned media prioritizes positive sentiment in reporting on climate change issues. This is also done by *Tribunnews.com*. Meanwhile, reporting on climate change issues by *Detik.com*, *Republika*, and *Tempo.co* is dominated by negative sentiment. However, there are different points of view regarding reporting climate change issues in each media. The dominant discourse that emerges still favors efforts to prevent climate change. This is certainly necessary because the media has an important role as a watchdog or guard in providing information.

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