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# Battling the climate crisis: WAR and THREAT metaphors in Indonesian news media through a corpus-ecolinguistics lens

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## ABSTRACT

As a global issue that requires direct mitigation action, climate change has been examined through a linguistic lens, including metaphors. This study aims to examine how WAR and THREAT metaphors are used in Indonesian news discourse on climate change (2013–2022) and to uncover the ecological ideologies they construct. From the 771,867 words collected, we focused on the metaphorical collocates of the word 'climate' and examined the social actors involved. This study applied a corpus-assisted ecolinguistics framework to examine the data and employed the conceptual metaphor technique (CMT) to map the target-source domains of the metaphors. We also incorporated deep ecology philosophy to deepen the analysis. Our findings revealed that metaphors often promote a sense of urgency and global solidarity in addressing climate change, yet the discourse predominantly attributed agency to international organizations and global leaders, with minimal representation of public involvement. This study further disclosed that Indonesian media articulated an ambivalent ideology, constructed through the 'us' vs 'them' discourse by positioning climate change as an enemy that threatens 'us' or humans. Consequently, the public is portrayed as passive actors, while responsibility is shifted toward the global community.

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## Introduction

Climate change is a worldwide problem that affects both humans and non-human species, whose presence in the ecological balance cannot be ignored. The discussion surrounding climate change involves various aspects, including but not limited to the factors contributing to it, the consequences it brings, and the strategies employed to address and resolve the problem. Over the last twenty years, conversations about climate change have expanded outside the scientific field to topics in media, politics, and educational institutions (Niebert & Gropengiesser, 2013). In addition, there has been a rise in movements addressing the perils of climate change in several nations, including Indonesia. This surge in awareness was primarily triggered by the Paris Agreement of 2015, which specifically addresses the issue of climate change. The climate change movement in Indonesia reached its highest point in 2019 (Apresian, 2024). It was also marked by the establishment of Extinction Rebellion, the first social movement concerning the climate issue in Indonesia. It demands that the government declare a climate emergency and achieve a net-zero carbon emission by 2025.

Although the term 'climate change' is commonly used in discussions about environmental issues, the phrase 'global warming' is also widely recognized and closely associated with climatic problems. Both terms refer to climate phenomena that are directly linked to the concentration of greenhouse gases in the atmosphere (Lorenzoni & Pidgeon, 2006). Climate change is now widely acknowledged as a significant global issue and has attracted considerable attention from multiple perspectives (Van Der Hel et al., 2018).

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It influences both national and international political policies, as reflected in academic discourse and media coverage (Cashore & Bernstein, 2023). Moreover, climate change is often confused with weather change (Asplund, 2011), partly because it relies on long-term statistical data analysis, including patterns in weather variations. As a result, statistical reports about climate change may not always be easily understood by the public.

The term 'climate change' carries metaphorical significance, as the word 'climate' literally denotes long-term weather patterns in a specific region, while 'change' refers to alteration or transformation. However, within public discourse, the term is employed metaphorically to signify profound and systemic shifts in the relationship between humans and the natural environment, extending beyond mere fluctuations in weather conditions. Hence, it is imperative to select linguistic features that communicate the complex phenomena of climate change to more concrete and relatable concepts close to the public or readers. In addition, language also plays a significant role in shaping collective ideology or understanding about climate change, as evident in mass media, which represents a public discourse. Language is a tool to shape public opinions, understandings, and attitudes toward the environment in climate discourse (Bohr, 2020; Kramar, 2023). Hence, it is necessary to examine the role of language, in this case is metaphor, in shaping our environmental perceptions and policies toward the environment.

The use of metaphor serves as a significant tool for framing complicated environmental challenges, allowing for better comprehension and connection to these problems (Koteyko & Atanasova, 2016; Välvirronen & Hellsten, 2002). The intricate and conceptual matters surrounding climate change (target domain) are linked to recognizable encounters (source domain) to make the abstract climate change issues seem more tangible and, therefore, more comprehensible (Hidalgo-Downing & O'Dowd, 2023; Saeed, 2015). Metaphors convey scientific principles to provide more comprehensible concepts (Koteyko & Atanasova, 2016). The primary challenge in conveying climate change issues lies in raising awareness among audiences since climate change is frequently concealed in the discourse. Consequently, the impacts of climate change are not perceived directly by the public (Doyle, 2007). Hence, it is necessary to broadcast news about climate change in a language easily comprehensible by the public. In other words, metaphors are employed to enhance the understanding of climate change.

Metaphors can shape public comprehension of the world and potentially influence their actions. For instance, the use of bloodsucking metaphors by Britons to denigrate immigrant groups in the UK has led to increased hatred against immigrants (Musolf, 2017). This results in disparate treatment of immigrants. On the other hand, metaphors can promote unity and collaboration by highlighting the need for joint efforts in tackling an issue, exemplified by the WAR metaphor used in the context of the COVID-19 pandemic (Imani, 2021). WAR metaphors are often employed in diverse discourses, such as political, health and environmental, to convey abstract concepts. WAR metaphors are deemed more efficacious than others because they foster collaboration and unite the public (Imani, 2021). According to Charteris-Black (2004), WAR necessitates physical and cerebral prowess, acquiring or protecting land, conflict, and endeavors to stay alive. The underlying ideology behind utilizing WAR analogies is centered on the significance of unity, defense, and cooperation as essential factors for attaining success and ensuring existence.

Metaphors are also found in mass media since they have a significant influence on the way the public perceives the issues that are being reported (Woods et al., 2012). Some metaphors of environmental issues have been found in previous publications. British mass media employed religious domain metaphors to belittle the subject of climate change while discussing it. Environmentalists who focus on climate change are sometimes seen as intolerant fanatics, leading some to view the situation as exaggerated (Woods et al., 2012). Conversely, in the United States, environmental concerns, particularly forest fires, are regarded as significant matters that are depicted using MONSTER metaphors by the mass media. Utilizing MONSTER analogies results in an interpretation that characterizes forest fires as detrimental and capricious. Employing these metaphors leads readers to evaluate potential harm and contemplate appropriate actions to respond (Matlock et al., 2017).

In the Indonesian context, the most relevant study was found in the framing of climate change and global warming mass media (Isti'anah et al., 2025). The study found that Indonesian mass media, including national and international organizations, are the most salient agencies in climate mitigation. In addition, it also highlights the scientific theme in Indonesian mass media when broadcasting news about

climate change. The inclusion of the Indonesian governmental agency as the foregrounding actor is comprehensible due to the country's activities in the global climate summits. To summarize, since Indonesia took part in the ratification of the UNFCCC through Law No. 6 of 1994 concerning the Ratification of the United Nations Framework Convention on Climate Change, the country has been addressing climate change. Then, by ratifying the Paris Agreement through Law No. 16 of 2016, Indonesia further demonstrated its commitment. Indonesia is dedicated to supporting initiatives that can lower greenhouse gas emissions and prepare for the effects of climate change by ratifying both conventions. However, Indonesia's democratic decline has limited political mobilization, making climate justice challenging to frame at the grassroots levels (Tomsa, 2025). Awareness of climate change-related issues is low, and the movement is divided between moderate and radical activists.

Examining prior studies reveals a dearth of studies on using metaphors in discussions around climate change within the Indonesian setting. In addition, using the phrase 'climate change' in mass media can elicit emotional reactions in readers (Liu & Huang, 2022). Therefore, studying the usage of metaphors is crucial because metaphors in language and social interactions can mirror a society's attitude, conduct, beliefs, and perspective on life. In this sense, we argue that discussing climate change metaphors through a critical lens could be beneficial since we not only map the metaphor conceptualization. In addition, we involve ecological philosophy and a critical lens in interpreting the salient WAR and THREAT metaphors in Indonesia. Specifically, this study addresses 1) how are WAR and THREAT metaphors of climate change employed in Indonesian mass media? And 2) what ideology is identified based on an ecological viewpoint?

## Literature review

### Metaphors

This research is rooted in conceptual metaphors as vehicles to comprehend an abstract entity through a more concrete one (Lakoff & Johnson, 1980). The use of metaphor aims to concretize something abstract so that readers or interlocutors can understand the concept expressed by a writer or speaker. Mey (2017) adds that metaphor is a view of life because metaphors represent thoughts and experiences in everyday life, shaped by the environment. Mey's opinion is in line with Lakoff and Johnson (1980), who argue that metaphors are basically a part of ourselves and our thoughts in everyday life. Metaphors are a form of expression, reflection, and reinforcement of understanding certain aspects of life. Climate change has been received as a scientific term, characterized by words like *carbon*, *Celsius*, *methane*, *emission*, *energy*, *astronomy*, *renewable*, and *temperature* (Isti'anah et al., 2025). The public may not comprehend the scientific characteristics of climate change; thus, metaphors are employed to concretize the abstract and scientific terms.

The majority of metaphor creators are unaware that they are generating metaphors. This occurs because metaphors are frequently employed and have evolved into a framework of human cognition. Subsequently, metaphors are intentionally constructed to express a predetermined purpose (Pražmo, 2020). Metaphor creators may intentionally construct certain metaphors to influence and shape the interlocutor's cognition through their crafted expressions. Metaphors are employed to influence perceptions and affect the cognition of interlocutors. Consequently, it can be asserted that metaphors influence the mind (Steuter & Wills, 2009).

In studying metaphors, Lakoff and Johnson (1980) introduce the terms source domain and target domain. The source domain is the domain that is physical, concrete, conceptualized and recognizable. The target domain is the concept described (Lakoff & Johnson, 1980) or the domain understood through the source domain (Kövecses, 2010). The target domain is an abstract concept, while the source domain is concrete. Climate change is perceived as something abstract that needs to be explained with something concrete. For example, climate change is described as a 'threat' that will 'hit' the earth and result in 'loss' and 'death'. Through the use of this metaphor, readers are encouraged to 'fight', 'eliminate', and 'save' the earth from the threat of climate change language. This also illustrates that climate change is a THREAT, not only providing an understanding of climate change as catastrophic and dire, but also organizing threat-related activities. Readers are told that they can take various actions, such as 'fighting' or

'giving up'. These emotion-laden words convey very different messages and meanings to readers. To enrich studies of metaphor, the present work aims to identify the use of WAR and THREAT metaphors in climate discourse and examine whether metaphors work similarly or differently from past studies. Since metaphor is a cognitive vehicle, we argue that WAR and THREAT metaphors function similarly to different discourses. However, our ecological assessment shed new light on how WAR and THREAT metaphors characterize climate discourse in the public domain.

### ***Ecolinguistics and ecological discourse analysis***

Ecolinguistics is rooted in the role of language as a cognitive and social vehicle that influences the loss of language or linguistic diversity, social impacts due to infrastructure development, and other broader ecological destruction (Döring & Zunino, 2014). Language performs as a cultural instrument that shapes ecological relations and environmental attitudes (LeVasseur, 2017; Stibbe, 2014). Ecolinguistics has been perceived as an established theory that concerns the integral relationship between humans, the environment, and non-human species. Those three elements are dependent on each other and are parts of an ecosystem. Ecolinguistics has been differentiated into two approaches: Haugenian and Hallidayan. The first is interested in the biological environment, as evidenced by the studies of language diversity resulting from biodiversity. The Haugenian approach has been adopted in lexicons as the representation of biodiversity (Abida et al., 2023; Sanubarianto et al., 2025).

The latter approach has inspired the development of ecological discourse analysis (EDA), a recent ecolinguistic approach that is interested in any kind of discourse that may promote ecological harmony or degradation. EDA has been adopted to investigate how discourses surrounding us (re)produce a dominant ideology that maximizes anthropocentric needs, such as the discourse of advertising, infrastructure, and capital city relocation (Isti'anah et al., 2024; Suhandano et al., 2023, 2024). EDA is mutually influenced by the political, social, and historical contexts in socio-cultural ecology that cannot be separated from language, speakers, and social structures. This perspective believes that language constructs and is constructed by social structures comprising institutions, economic processes, and socio-cultural resources (Steffensen & Fill, 2014). EDA uses similar analytical approaches to CDA, but EDA further focuses on the relationship between humans and a broader ecological system on which life depends (Stibbe, 2014).

Ecolinguistics regards metaphor as a strategy to frame an area of life from an imaginable source domain different from the target domain (Stibbe, 2015). According to Ma and Stibbe (2022), metaphors are powerful cognitive tools that shape how individuals perceive and respond to reality. When environmental issues are framed through particular metaphorical lenses, they can encourage more sustainable attitudes and behaviors. In ecolinguistics, metaphor is identified from trigger words that bring the source frame to mind, usually in the form of a concrete object to conceptualize an abstract concept in our mind. For example is in the utterance 'defusing the global warming time bomb' (Stibbe, 2015, p. 66). The utterance takes 'climate change' as a target domain from the source domain 'time bomb'. Climate change is regarded as an abstract entity that is difficult to describe, so by borrowing the phrase 'time bomb', climate change is conceptualized as a phenomenon that will burst sometime in the future due to its surrounding triggering factors.

Ecolinguistics looks for stories that promote ecological equilibrium since it believes that language is a pivotal factor that shapes our understanding and behavior toward the environment. This study argues that mass media, as a form of public discourse, has an essential role in shaping public perception of climate change. Therefore, the linguistic structures and metaphors used in the discourse should be assessed to determine whether they articulate a beneficial, ambivalent, or destructive discourse. The judgment is made by adopting the deep ecology principle (Næss et al., 2008). Deep ecology locates nature as a resource for cultural flourishing, community health, and personal self-realization. The Earth is a great treasure that provides personal, cultural, ecological, and evolutionary diversity. Therefore, climate change should be located as a phenomenon whose existence is heavily influenced by humans and their anthropocentric activities.

### ***Previous studies of WAR metaphors***

To combat climate change, the WAR metaphor is employed to evoke strong feelings in order to confront the issue (Välvirronen & Hellsten, 2002) even though the WAR metaphor is not a new linguistic

phenomenon (Lahlou & Rahim, 2022). WAR metaphor has been employed by individuals who face new crises or problems that they had not experienced before (Blankshain et al., 2023). A situation is considered a THREAT when perceived as new, necessitating action to combat it. Fear is evoked by WAR metaphors, which push people to pay attention, alter their viewpoints, and face these significant concerns (Flusberg et al., 2017). In addition, the metaphor of WAR implies that there is an 'enemy' that must be defeated. There are two outcomes for resistance against this adversary: victory or defeat. If you prevail, it indicates that the resistance or strategy worked. On the other hand, a loss may signal a potentially more serious threat (Imani, 2021).

WAR metaphors play an important role in shaping public perceptions of climate change issues because they convey high emotions such as fear and aggression (Steinert, 2003). WAR is a struggle for survival (Charteris-Black, 2004), so the use of metaphors gives a more decisive and assertive tone in facing a challenge or problem (Imani, 2021). In addition, WAR creates a situation that requires the active participation of as many people as possible (Steinert, 2003) and requires unity in facing the enemy. WAR situations can also intensely create a sense of alertness and, therefore, have a more significant impact as a persuasive strategy to foster unity among the audience, especially those caused by fear of domination.

WAR metaphors have been employed in discussing climate change and have been contested to influence public opinions and political policy. WAR metaphors are employed to convey the urgency and severity of climate change by highlighting the immediate and significant threat that requires prompt and decisive actions (Asplund, 2011; Atanasova & Koteyko, 2017; Ciscato & Usuelli, 2022; Flusberg et al., 2017). A past study argues that the WAR metaphor describes actions to reduce carbon emissions. Employing WAR metaphors can increase the perceived urgency and risk, which motivates people to engage in conservation behaviors (Flusberg et al., 2017). In addition, WAR metaphors are also found in the political dimensions to emphasize the conflict and struggle in climate politics. WAR metaphors are used to fight powerful adversaries, such as the fossil fuel industry (Atanasova & Koteyko, 2017; Ciscato & Usuelli, 2022; Mangat & Dalby, 2018). In other words, WAR metaphors help identify clear enemies and goals to make climate change issues more tangible and immediate (Mangat & Dalby, 2018).

## Methodology

### *Approach: corpus-assisted ecolinguistics*

This study is categorized as corpus-assisted ecolinguistics since it uses corpus linguistics (CL) as a methodological tool to collect and analyze the data. CL has been utilized to collect and analyze texts by presenting empirical evidence of how linguistic features are used in context (Baker, 2012). This corpus-assisted ecolinguistics adopted in this study is heavily influenced by critical discourse analysis that locates language as a cognitive and social vehicle that is used to legitimize power, including mass media as a subject that shapes public opinions (Fajri et al., 2023, Al Fajri et al., 2024). Consequently, the dominant discourse broadcasted through news media determines public perception and behavior regarding climate change.

The theoretical framework, metaphor, is located under an ecological perspective that regards climate change as an environmental issue. The notion of environment is underlined as an entity that involves humans, non-human species and the environment as integral parts of an ecosystem (Skutnabb-Kangas, 2004). We involved the deep ecology principle in determining the ecological assessment of the employed metaphors. Deep ecology focuses on the ecosystem as a 'home' that consists of not only humans but also non-human species and the environment itself as parts of the ecosystem. Other than positioning the earth as a resource for humans' wealth, deep ecology underlines the role of the environment as the center for cultural and ecological flourishing (Næss et al., 2008). Hence, dichotomizing humans and nature is seen as destructive from the deep ecology principle. Based on the philosophy, the employment of metaphor in mass media is assessed to determine whether it promotes a beneficial, destructive, or ambivalent discourse. The discourse judgment is determined by an ecological principle that considers the role of language as an instrument that constructs our minds and behaviors towards the environment (Stibbe, 2015).



## Data collection

Data in metaphor studies can be collected in two approaches, top-down and bottom-up (Krennmayr, 2011). In the top-down approach, researchers have the metaphor ‘candidates’ to be searched in the data source. In the following step, researchers collect metaphors in the corpus based on the list of metaphor candidates. Conversely, the bottom-up approach starts by reading texts and tabulating vocabulary that is considered metaphors. In addition, the tabulation of metaphors is rechecked based on the comparison of literal and contextual meanings in the utterances. This study adopts the bottom-up metaphors since we do not exclusively select WAR or THREAT metaphors, but also detect other metaphorical expressions found in the corpus.

Data was collected from two Indonesian mainstream online newspapers, *Kompas.com* and *Detik.com*. They have the highest visitor numbers in Indonesia, with an average of over 100 million visits a month (Top News & Media Publishers Websites Ranking in Indonesia, 2023). The corpus was constructed by Bootcat software to automatically generate specialized corpora from web-based sources (Baroni & Bernardini, 2004). We identified the URLs of news articles with the following key search terms: ‘perubahan iklim’ (climate change), ‘krisis iklim’ (climate crisis), and ‘pemanasan global’ (global warming), published between January 2013 and December 2022. This ten-year timeframe was chosen to ensure the availability of a sufficiently large dataset, allowing for a more thorough and comprehensive linguistic analysis. After collecting the URLs, Bootcat also extracted the full text of the articles automatically. We used the following code to shorten the article source when displaying an example from the corpus: D or K/year/article number. The code ‘D’ refers to Detik and ‘K’ refers to Kompas. In sum, the total number of news articles collected was 1,509 news texts that contain a total of 771,867 words, as summarized in Table 1. The same data was analyzed in a past study with the focus on framing the mass media (Isti’annah et al., 2025). This study took a different trajectory by focusing on WAR and THREAT metaphors.

## Data analysis

This study follows the metaphor identification procedures developed by Vrije Universiteit Amsterdam or MIPVU (Steen et al., 2010). Other than focusing on a single lexical unit, this procedure takes into account the polywords, compounds, and phrasal verbs in identifying metaphors. It also pays attention to similes, analogies and non-literal comparisons; in other words, the MIPVU procedure examines multi-word expressions. By following the procedures of Group (2007), we used Sketch Engine in order to examine the use of WAR and THREAT metaphors. The analytical steps are as follows: 1) searching WAR and THREAT metaphors through the collocates of *iklim* ‘climate’, 2) comparing the contextual meaning of the lemmas within the same syntactic role, 3) mapping the source and target domains of the metaphors, 4) concluding the conceptualization of climate change and global warming through the analyzed metaphors, 5) examining the social actors of the WAR and THREAT metaphors through concordance analysis and 6) assessing the ecological nature of metaphors based on deep ecology by Næss et al. (2008).

We limited the five left and five right contexts (5L-5R) to identify the collocates of ‘climate’ and sorted the WAR and THREAT metaphors of the collocates found. The five window spans in the concordance lines search for collocational patterns within strings of up to 11 tokens in length, or five or six sides of the node. The window span approach identifies looser word association than n-gram and shows broader patterns and associations (Gablasova et al., 2017). We selected the collocates with >5.0 log Dice score since it indicates the degree of confidence of the word co-occurrence in the corpus (Thomas, 2017). The contextual analysis was based on the concordances containing metaphors to identify the source and target domains in a separate Excel file. The source and target domains are compared by examining the conceptual meanings of both domains.

**Table 1.** Corpus of ‘climate’ in Indonesian mass media.

News media	News texts	Words
<i>Kompas.com</i>	777	408,516
<i>Detik.com</i>	732	363,351
Total	1,509	771,867

## Results and discussion

### WAR and THREAT metaphors in Indonesian mass media

The investigation into the collocational relationship of the lexeme 'climate' has revealed the prevalence of WAR and THREAT metaphors in Indonesian mass media. WAR metaphors are notably more frequent, appearing 457 times, as opposed to THREAT metaphors, which appear 153 times. In general, those metaphors are used in Indonesian mass media to frame the following discourses: climate change as an enemy, the necessity for global unity in climate mitigation, the need for strong defense against climate change, and the notion of climate change as a battle between good and evil.

The analysis found that the verb *menghadapi* 'confront/encounter' and the noun *ancaman* 'threat' as the most frequent collocates. The most frequent metaphor *menghadapi* 'confront' suggests a direct action to face the climate crisis compared to the nominal *perang* 'war' metaphor. The Indonesian mass media foreground the action rather than the state of war. It also calls for cooperation and unity since 'confront' requires subjects and power. On the other hand, the THREAT metaphor is dominantly realized through the noun *ancaman* 'threat'. Climate crisis is identified as an agent that creates massive impacts that threaten the public. Some THREAT metaphors are also found in the same contexts as the WAR metaphors.

Findings also reveal that WAR metaphors highlight the urgency and explain the threats, tactics, and initiatives to combat climate change (Gui, 2023; Huang & Liu, 2025; Liu & Huang, 2022). The terms 'war' and its derivatives 'combat', 'against' and 'confront' are frequently used to describe the threats posed by climate change and conceptualize climate change as an 'enemy' (Imani, 2021). WAR metaphor also locates the Earth as a battlefield, which is not geographically restricted, and all nations can take part in this conflict, with state leaders leading the charge against the adversary. Charts 1 and 2 summarize the frequency of collocates of 'climate' which refer to WAR and THREAT metaphors.

The statistical information presented in Chart 1 shows that the verb *menghadapi* 'confront' stands out as being used frequently in the corpus (110 occurrences). The verbs *memerangi* 'combat', *melawan* 'fight', and *menangani* 'tackle' follow, all of which exhibit comparatively high frequency values between 40 and 60. Verbs like *bertahan* 'endure', *terancam* 'threatened' (passive), and *memperkuat* 'strengthen', on the other hand, exhibit noticeably lower frequencies, suggesting less frequent usage in the sample. Chart 2 also shows significant diversity in the frequency of usage among the lexical terms. With almost 100 occurrences, *ancaman* 'threat' is the most common term, indicating its use in situations of risk or danger. Following this are *wilayah* 'territory' and *tantangan* 'challenge', both of which have mid-to-high frequency values (around 50–60 occurrences each), suggesting their applicability in discussions involving geographical and antagonistic dynamics. While *perjuangan* 'crusade' and *perang* 'war' have the lowest frequencies in the sample, suggesting more limited or specialized use within the corpus. In addition, *pengendalian* 'control' also occurs reasonably frequently. Overall, the figure shows that *menghadapi* 'confront' is the

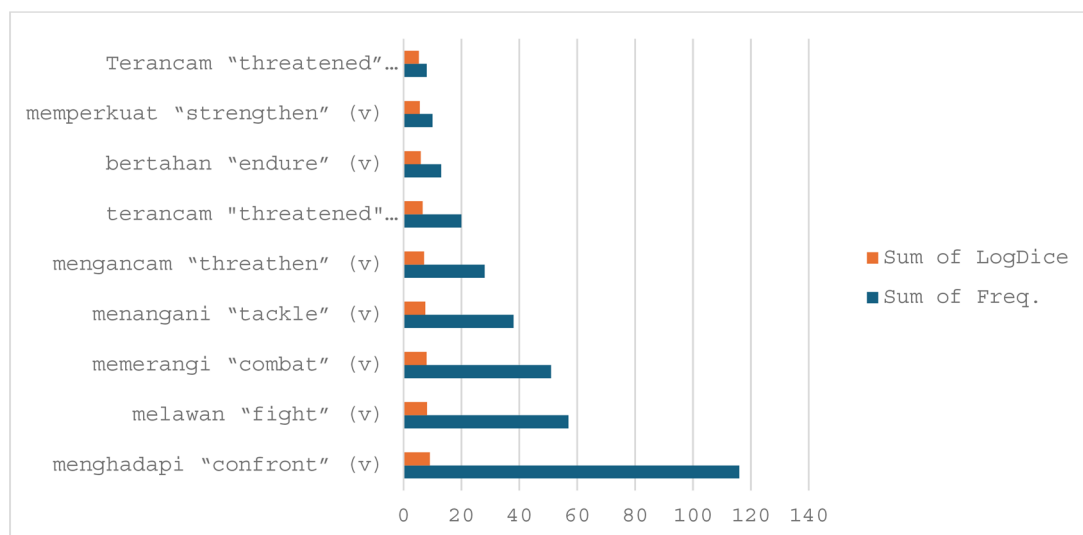


Chart 1. Verb metaphors of climate in Indonesian mass media.



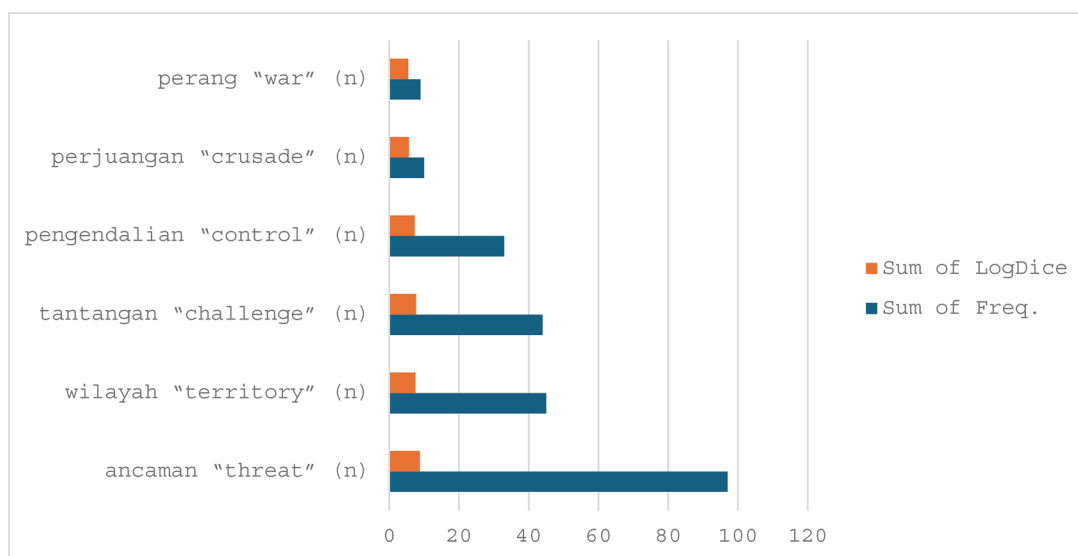


Chart 2. Noun metaphors of climate in Indonesian mass media.

most prevalent verb in the examined corpus in terms of both absolute frequency and relative association, providing a crucial lexical option in confrontational or engaging situations.

The underlying reason for using the metaphor of WAR for climate change is associated with the basic understanding of the Earth as a territory where living things live as a whole. In this matter, climate change is an enemy outside that unity. Climate change that attacks the Earth is considered an enemy that confronts the body of the Earth. Humans, as living things that have the ability to act, serve as soldiers who fight against the attacks of climate change, win the battle in the war zone, and defend the territory from falling into enemy hands. The detailed explanation of CLIMATE CHANGE IS WAR is as follows.

First, the metaphor of WAR illustrates that climate change is an enemy that will definitely attack all countries. Some notable evidence is found through concordance analysis, as shown in the following examples.

- 1) Menurut Sri Mulyani, perubahan iklim ini akan mempengaruhi semua makhluk di dunia. 'Sama seperti pandemi, **tidak ada satu negara** yang bisa escape atau bebas dari ancaman perubahan iklim ini,' ujarnya. (D/2021/001)

According to Sri Mulyani, this climate change will affect all creatures in the world. 'Just like a pandemic, **no country can escape** or be free from the threat of climate change,' she said.

- 2) Cengkeraman pandemi dan ancaman perubahan iklim yang **membayangi planet ini**, membuat beberapa pihak mempertanyakan motif pengiriman manusia ke luar angkasa. (D/2020/053)

The grip of the pandemic and the threat of climate change **looming over the planet** have some questioning the motives for sending humans into space.

Datum (1) refers to the Indonesian Minister of Finance and Economy, Sri Mulyani Indrawati. She asserts that *no country can escape* the threat of climate change. The use of negation *no*, which modifies the country, highlights the urgency of all countries in fighting climate change. It conceptualizes climate change as a global enemy, and since a government official utters this statement, it refers to a collective official agreement and cooperation in climate change mitigation. In datum (2), mass media also employs the phrase *looming over the planet* to underscore the impacts of climate change that always follow each aspect of the planet. Selecting *the planet* instead of *the countries* triggers the severe impacts that affect humans and the environment, including water, air, and non-human species. The other social actors involved in the THREAT metaphors are *research, all nations, poor and developing countries, some countries, world, COP, climate activists, all people, society, and earth*.

In addition, climate change is metaphorized with the haunting expression *haunt* (datum 3). Literally, the word *haunt* means 'causing fear (worry, anxiety, and so on); shadowing; disturbing; disturbing'. The use of the haunting metaphor shows that climate change is a frightening threat and is disturbing to its victims.

This discursive strategy articulates a narrative of 'us/people vs climate change' that locates 'us/people' as the victim (Currie & Clarke, 2022). The Indonesian government tends to dichotomize public and climate change as separate entities in the environmental issue. Since the Minister of Finance and Economy utters this statement, it also legitimizes the government's actions and regulations to mitigate climate change.

3) Menteri Keuangan Sri Mulyani Indrawati bahkan berkali-kali mewanti-wanti dampak yang begitu mengerikan dari perubahan iklim ini. Dia bilang, ancaman perubahan iklim ini **menghantui** Indonesia saat berumur 100 tahun di 2045. (D/2021/005)

Finance Minister Sri Mulyani Indrawati has even repeatedly warned of the terrible impacts of climate change. She said that the threat of climate change **will haunt** Indonesia when it is 100 years old in 2045.

Climate change is also conceptualized as an uncontrollable enemy. Using the expressions *uncontrolled* (adj) and *control* (n) shows that climate change cannot be predicted and can become wild. The expressions *controlled* (pass-verb) or *control* (n) also imply that we must accept climate change as an urgent phenomenon to overcome. Nonetheless, more severe impacts would impact the earth negatively. Below are some examples.

4) Ketika para ilmuwan memperingatkan bahwa pemanasan global hampir tidak terkendali, konferensi COP26 PBB bertujuan untuk **memerangi** perubahan iklim dengan target yang jauh lebih ambisius. (K/2021/052)

*As scientists warn that global warming is spiraling out of control, the UN's COP26 conference aims to **combat** climate change with far more ambitious targets.*

5) Sebagai informasi, Jejak.in merupakan platform digital yang menyediakan solusi aksi mitigasi dan **pengendalian** perubahan iklim berbasis teknologi Internet of Things (IoT) dan kecerdasan buatan (artificial intelligence/AI). (K/2022/001)

For information, Jejak.in is a digital platform that provides climate change mitigation and **control** action solutions based on Internet of Things (IoT) technology and artificial intelligence (AI).

The examples above underscore the necessity of mitigating climate change, which was initiated by the UN's COP26 conference. The global commitment promoted at the conference is emphasized through the purpose of combating climate change, which is to reach more ambitious targets. Scientists' warnings of the negative impacts of climate change are facilitated formally and institutionally through COP conferences. Hence, it highlights the serious actions to mitigate climate change. In addition, the Indonesian media also highlights the role of a website, jejak.in, in controlling climate change mitigation. The use of *control* is also categorized as a WAR metaphor since it provides an alternative strategy to combat climate change. It is also argued that *control* refers to shifting our hopes to be more realistic (George et al., 2016). The use of *control* in the WAR metaphor also shows the authorities' deeds in anticipating and preventing all difficulties in combating climate change (Steinert, 2003). Some other social actors involved in WAR metaphors are *world leaders, scientists, international cooperation, developing countries, and global society*.

Second, the WAR metaphor implies the urgency of fighting climate change so that all countries worldwide must unite and actively cooperate in fighting climate change. WAR metaphors aim to make people perceive more urgency and risk surrounding climate change and express a greater willingness to increase conservation behavior (Flusberg et al., 2017). Data (6) and (7) below show that climate change is an enemy that must be fought worldwide, with state leaders as the vanguard on the battlefield. International cooperation is needed (Datum 7) in fighting climate change. Handling climate change is a global responsibility, so using the metaphor of WAR can raise collective awareness in formulating alternative efforts to maintain the existence of the environment on a global scale.

6) Pimpinan di seluruh dunia harus serius **memerangi** perubahan iklim di dunia, termasuk Rusia harus segera menyadari perubahan iklim ini. (D/2019/096)

Leaders around the world must be serious about **combating** climate change in the world, including Russia must immediately realize this climate change.

7) Ia pun menyampaikan pentingnya kerja sama internasional dalam **melawan** ancaman perubahan iklim. (D/2020/085)

He also conveyed the importance of international cooperation in **fighting** the threat of climate change.

Datum (6) shows that climate change is a common enemy, including Russia, as reflected in the phrase *the world*. This strategy inclusively only refers to a particular country, but also includes all countries and even all humanity throughout the world. This expression is used to create a strong sense of unity and a feeling of shared conditions. Moreover, the use of the phrase *the importance of international cooperation* shows a call to cooperate actively and to foster international solidarity. Climate change is a common enemy, so countries must unite their strength because the enemy will definitely attack all countries, and it is frightening. Hence, if many forces unite, efforts to defeat the enemy in war are easier to do. Thus, the metaphor of WAR is used to foster unity and encourage active public cooperation (Flusberg et al., 2017; Imani, 2021; Steinert, 2003).

Third, in war, a strong defense is required. War is always related to the question of whether the people who are fighting are strong enough to survive because war involves defense against unwanted attacks; it requires sacrifice, devotion, sympathy, resistance, resilience from hardship and staying together until victory is achieved (Imani, 2021). In fact, in the context of Iraq, the use of the metaphor of war is associated with their historical context, where war is the Sacred Defense. War is associated with heroic actions, such as taking up arms and fighting on the battlefield. Fighting on the battlefield requires its fighters to survive until victory is achieved. Below are some examples of WAR metaphors that include non-human species.

8) *Makhluk hidup terancam punah. Berbagai spesies tumbuhan dan hewan berusaha bertahan **hidup melawan** perubahan iklim yang terjadi tanpa kontrol.* (K/2022/069)

Living things are threatened with extinction. Various species of plants and animals are trying to **survive against** climate change that is happening out of control.

9) *Studi yang diterbitkan di *Proceeding of the National Academy of Science* pada Mei 2016 lalu mengungkap bahwa faktor utama yang membantu ikan **bertahan melawan** perubahan iklim adalah biodiversitas lautan.* (K/2016/35)

A study published in the *Proceedings of the National Academy of Science* in May 2016 revealed that the main factor **helping fish survive** climate change is ocean biodiversity.

Data (8) and (9) show that various species are trying to survive in the face of climate change. The word *survive* refers to plant and fish species' efforts to face potential threats of climate change. Thus, the word *survive* refers to efforts to maintain a position in difficult, threatening, or challenging circumstances. The use of this expression becomes a perspective that leads to the framing of the spirit of never giving up as something necessary to protect the earth and depicts climate change as a serious and challenging threat. Such framing can foster a narrative about the urgency and awareness of becoming a fighter who never gives up and despairs against existing challenges and threats (Huang & Liu, 2025). War is always related to conflict between warring parties. In overcoming the conflict, the right strategy is required to survive the war or win the war. Strategy in war is not only related to the management of war tactics in the field but also related to the use and placement of resources, knowledge of one's own condition and the enemy's condition, anticipation of enemy actions, and how to survive (Flusberg et al., 2018).

Fourth, the war against climate change is depicted as a war between good and evil—humans as soldiers are the good side, and climate change as the enemy is the bad side. In addition, the use of the metaphor of war also divides the world into 'I or Us (good)' and 'Them or That (bad)' (Sheckler, 2022). The use of this dichotomy of good and evil has implications for the formation of motivation to fight evil and build solidarity and unity (Bhatia, 2007). The effort to fight the enemy is called a struggle. Below is an example.

10) *Hutan menciptakan mata pencaharian yang berkelanjutan bagi orang-orang yang terkena dampak deforestasi dan membantu **perjuangan bersama kita** melawan perubahan iklim, ' ujar Andrew Potheary seperti dilansir detikcom dari NCN.* (D/2022/19)

'Forests create sustainable livelihoods for people affected by deforestation and help **our collective struggle** against climate change,' said Andrew Potheary as reported by detikcom from NCN.

In datum (10), efforts to combat climate change are called struggles. Literally, the word *struggle* means 'efforts full of difficulties and dangers'. In general, the word *struggle* describes hard work filled

with danger and difficulty to achieve a tremendous or noble goal. In Indonesian, the word *struggle* has a positive connotation since it is identical to *enthusiasm*, *perseverance*, *discipline*, and *hard work* in achieving goals, although it cannot be denied that the word *struggle* also implies the difficulties and dangers that follow. The expression *struggle* has a persuasive and emotional tone to create a positive image in combating climate change. The use of war metaphors in describing climate change has a positive side, including simplifying the understanding of complex and abstract problems, informing the urgency of conditions, fostering unity, and motivating preventive and curative actions in dealing with climate change. However, the use of war metaphors also has a negative side, including causing fear or worry about the emergence of victims of the war being waged, and can cause negative stigma if the fight cannot be won. In contrast to the study by Woods et al. (2012) of religion metaphors in climate discourse, the present work uncovers that Indonesian mass media do not belittle subjects of climate change. The WAR and THREAT metaphors articulate urgency that requires varied subjects for the mitigation, including government, humans, and global cooperation. Even though some metaphors dichotomize humans and nature, the metaphors employed articulate the determination to fight for climate change.

### ***Ecological assessment of the WAR and THREAT metaphors in Indonesian mass media***

Indonesia is a country in the Global South with the highest proportion of forests, natural resources, and flora-fauna diversity, yet at the same time, it is also one of the largest producers of greenhouse gases that come from energy, transport, and deforestation (Garg et al., 2024). The majority of Indonesians depend on natural resources to fulfill their economic needs (Tisnanta et al., 2023). Nonetheless, the concept of climate change remains abstract to society. In this matter, mass media play a significant role in shaping public understanding, perception and behavior toward climate change. The use of metaphor as a cognitive vehicle that aims to conceptualize an abstract entity into a more concrete one becomes significant in public discourse.

Based on the deep ecology concept, the findings presented in the preceding part show us that Indonesian mass media voices an ambivalent discourse. Deep ecology argues that the superficial nature of climate change solutions, such as technological fixes and market-based mechanisms, does not address the root causes of ecological degradation (Devall, 2014). In addition, Næss et al. (2008) underscore the intrinsic value of nature and the urgency for a holistic worldview beyond anthropocentrism. In short, ambivalent discourse does not actively encourage people to preserve the ecosystem. On one hand, WAR and THREAT metaphors urge the necessity of climate change mitigation by highlighting global commitment and cooperation. The metaphors also underscore the immediate and significant threat of decisive actions, which resonates with past studies (Asplund, 2011; Atanasova & Koteyko, 2017; Ciscato & Uselli, 2022; Flusberg et al., 2017).

However, the social actors involved in the mitigation mostly refer to big subjects, such as *scientists*, *government*, *legislature*, *G20 members*, *world leaders*, *all countries*, *international cooperation*, *Jacinda Arden*, *Bill Gates*, *climate activists*, *studies*, *Greta Thunberg*, *Donald Trump*, *political elites*, *G20 summit delegates*, *Greenpeace*, and *COP*. Nonetheless, actors related to readers are found in lower frequencies than preceding actors and realized in categorization, such as *humans*, *global citizens*, *coastal societies*, *villages in Indonesia*, *American citizens*, and *society*. Therefore, the sense of urgency in climate mitigation still relies on the big subjects with the power and access to policy.

The ambivalence of WAR and THREAT metaphors is also identified through the human-nature dichotomy, emphasized by portraying climate change as an 'enemy'. The reproduction of 'us' vs 'them' in climate change mitigation (Sheckler, 2022) does not always call for unity and cooperation in fighting climate change. This linguistic choice conceals human behaviors and activities that worsen climate change, as evidenced by fossil fuel combustion, industrial processes, and agricultural activities (Grossman, 2024; Wolf et al., 2024; Wynes & Nicholas, 2017). Those anthropocentric activities are erased from the discourse and substituted by foregrounding climate change as an 'enemy' (them) that threatens humans (us). A more serious threat may happen if humans (us) fail to combat climate change. Therefore, the reproduction of the WAR metaphor is not beneficial for the ecosystem due to the separation of climate change and human beings.

Despite some destructive linguistic choices of WAR metaphors, Indonesian mass media includes some beneficial utterances in broadcasting news about climate change. For example, Indonesian media includes non-human species as the affected social actors, shown by *all insects, penguins, Komodo, whales, ecosystems, pole bears, biodiversity, and various species of plants and animals*. Those social actors referring to non-human species are included in Indonesian mass media to introduce their existence in the ecosystem. Even though their frequencies are lower compared to international organizations and countries, Indonesian media tries to persuade that climate change impacts not only humans but also the other members of our ecosystem, non-human species. Ecologically, this strategy is beneficial to promote the principle of deep ecology.

The other climate change metaphors, such as CURE, CARE, and BALANCE, also appear in Indonesian mass media, even though their frequency is much lower than the WAR and THREAT metaphors. The similarity between those CURE, WAR, and THREAT metaphors is the inclusion of big subjects as the main actors in mitigating the climate crisis. For example, the UN is portrayed as the subject that 'cures' the ozone layer and helps slow down climate change (D/2021/115). Conversely, the CARE metaphor is more ecological since the social actor refers to 'us' or humans in caring for and protecting the ecosystem (D/2021/153). The categorization is also evident in the CARE metaphor, which mentions the global youth's awareness of caring for the environment (K/2021/045). In addition, the BALANCE metaphor calls for an ecological lifestyle that is necessary for balancing the ecology and is not harmful to the earth (K/2021/010). Therefore, it can be said that the CARE and BALANCE metaphors are more ecological by involving readers or 'us' as an important subject in climate mitigation.

As a public discourse, mass media should be reoriented by constructing powerful environmental public communication to promote sustainable behaviors through balancing the message and providing an action perspective (De Vries, 2020). By providing actionable steps and simplifying sustainability concepts, mass media can build a more emotional appeal to readers. In addition, creating personal engagement with readers and conveying a concrete message are crucial to promoting ecological perceptions to readers (Allen, 2016). Another strategy for mass media communication is proposed through a storytelling format that increases message efficacy and empowers individuals to pursue positive environmental behaviors, such as using comic books (Zhou et al., 2022). The other recommendation for mass media communication is to provide practical examples and case studies, such as campaigns for food waste reduction (Chang et al., 2024).

The findings of this paper enrich the present discussion on climate change by involving big data and ecological principles in its interpretation. It can be summarized that the ambivalence of Indonesian mass media in broadcasting news about climate change is influenced by the dichotomy of humans and nature in the public discourse. Climate change mitigation is still centered institutionally through international organizations and countries that call for collective participation. Nonetheless, public involvement, as the participants who 'consume' the news broadcasts, remains lacking. Therefore, it can be concluded that Indonesian mass media do not actively involve readers as social actors essential in climate change mitigation. Our study affirms that metaphors, as a linguistic device, are a powerful tool in shaping public perception and communicating abstract concepts to more concrete ones. Hence, integrating the metaphor concept by Lakoff and Johnson (1980) in an ecological framework and corpus-based analysis by Stibbe (2015) and Poole (2022) helps us assess public discourse to promote ecological communication.

## Conclusion

This study addresses the metaphor of WAR and THREAT in Indonesian mass media in broadcasting news about climate change in the last ten years. By conducting corpus-based research, metaphorical expressions referring to WAR and THREAT can be identified from the collocates. Hence, it can be said that corpus-based study helps study metaphors in a corpus. From the detailed examination, WAR and THREAT metaphors are conceptualized to portray climate change as an enemy that requires global cooperation. Seen from the social actors involved, Indonesian mass media foregrounds international organizations and government officials as the heroes to combat climate change. In other words, the climate change discourse constructs the 'us' vs 'them' relationship, with climate change/nature as the enemy. The Indonesian mass media, as a public discourse, promotes an ambivalent discourse. It does not actively persuade readers about the subjects in climate change mitigation, but focuses on institutions and science as the

responsible subjects. Though social actors of non-human species are found in the corpus, their existence is less frequent than the global organizations.

Based on the adopted ecological principle, deep ecology, this study argues that Indonesian mass media articulates an ambivalent discourse. It dichotomizes humans and climate or environment through the repetition of metaphors of WAR and THREAT. Despite calling for cooperation that involves readers or humans, Indonesian mass media still capture climate change as a scientific phenomenon. The additional found CURE metaphor also supports the claim that climate change is the United Nations or global institutions' responsibility. Therefore, we suggest that Indonesian mass media involve more beneficial metaphors, such as CARE and BALANCE, that position readers as essential subjects in mitigating the climate crisis. In addition, using simple language that encourages more ecological actions and provides concrete actions can also be selected in the public discourse.

Given that this study has been limited to Indonesian mass media in the last ten years, future studies can enrich the discussion by involving larger corpora from the Global South countries' mass media. While this study provides valuable insights into the climate discourse, it is not without limitations. The data was restricted in two mainstream Indonesian newspapers. Hence, future studies can expand the analysis by involving larger corpora from other countries of the Global South. This study adopted the bottom-up approach in studying metaphors, so future studies can apply the top-down approach by starting from the metaphor candidates in the corpus. However, this study provides significant empirical evidence on how public discourse shapes our perception of climate change. Educational practitioners, such as lecturers and higher education students, can refer to the present work as preliminary research for further development. In the educational sphere, lecturers can design more critical and ecological materials that expose students to empirical climate change phenomena. In addition, non-governmental organizations can provide more opportunities for society in broadcasting news and stories about climate change. Publishing more studies and producing more ecological teaching-learning practices may trigger the government's policy in educational practices, which are seen as the most important weapon to fight the climate crisis.

## Authors contributions

CRedit: **Muhammad Hambali**: Conceptualization, Investigation, Validation; **Arina Istianah**: Conceptualization, Formal analysis, Software; **Novi Eka Susilowati**: Formal analysis, Investigation, Writing – original draft; **Muchamad Sholakhuddin Al Fajri**: Methodology, Software, Writing – review & editing.

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## Data availability statement

The data that support the findings of this study are available from the corresponding author, [MH], upon reasonable request.

## References

- Abida, F. I. N., Iye, R., & Juwariah, A. (2023). Ecological lexicon of East Java community: An ecolinguistic study. *Cogent Arts & Humanities*, 10(2), 2281070. <https://doi.org/10.1080/23311983.2023.2281070>
- Al Fajri, M. S., Abdul Rahim, H., & Rajandran, K. (2024). Portraying people with disability in Indonesian online news reports: A corpus-assisted discourse study. *Media Asia*, 51(4), 548–569. <https://doi.org/10.1080/01296612.2024.2310891>
- Allen, M. (2016). Understanding pro-environmental behavior: Models and messages. In M. Allen (Ed.), *Strategic Communication for Sustainable Organizations* (pp. 105–137). Springer International Publishing. [https://doi.org/10.1007/978-3-319-18005-2\\_4](https://doi.org/10.1007/978-3-319-18005-2_4)
- Apresian, S. R. (2024). The contestation of national adaptation policies in Indonesia. *Journal of Current Southeast Asian Affairs*, 44(1), 72–101. 18681034241290815. <https://doi.org/10.1177/18681034241290815>
- Asplund, T. (2011). Metaphors in climate discourse: An analysis of Swedish farm magazines. *Journal of Science Communication*, 10(04), A01. <https://doi.org/10.22323/2.10040201>
- Atanasova, D., & Koteyko, N. (2017). Metaphors in Guardian online and Mail online opinion-page content on climate change: War, religion, and politics. *Environmental Communication*, 11(4), 452–469. <https://doi.org/10.1080/17524032.2015.1024705>
- Baker, P. (Ed.). (2012). *Contemporary corpus linguistics*. (1st ed.). Continuum.
- Baroni, M., & Bernardini, S. (2004). (2004). BootCaT: Bootstrapping corpora and terms from the web. *Proceedings of the Fourth International Conference on Language Resources and Evaluation (LREC'04)*. LREC, Portugal. <http://www.lrec-conf.org/proceedings/lrec2004/pdf/509.pdf>
- Bhatia, A. (2007). Religious metaphor in the discourse of illusion: George W. Bush and Osama bin Laden 1. *World Englishes*, 26(4), 507–524. <https://doi.org/10.1111/j.1467-971X.2007.00525.x>
- Blankshain, J. D., Glick, D. M., & Lupton, D. L. (2023). War metaphors (what are they good For?): Militarized rhetoric and attitudes toward essential workers during the covid-19 pandemic. *American Politics Research*, 51(2), 161–173. <https://doi.org/10.1177/1532673X221125713>
- Bohr, J. (2020). Reporting on climate change: A computational analysis of U.S. newspapers and sources of bias, 1997–2017. *Global Environmental Change*, 61, 102038. <https://doi.org/10.1016/j.gloenvcha.2020.102038>
- Cashore, B., & Bernstein, S. (2023). Bringing the environment back in: Overcoming the tragedy of the diffusion of the commons metaphor. *Perspectives on Politics*, 21(2), 478–501. <https://doi.org/10.1017/S1537592721002553>
- Chang, W., Jiang, M., & Arshad, M. H. (2024). From posts to action: Leveraging social media to inspire food waste reduction in hospitality for a net zero future. *Sustainability*, 16(24), 11296. <https://doi.org/10.3390/su162411296>
- Charteris-Black, J. (2004). *Corpus approaches to critical metaphor analysis*. Palgrave Macmillan UK. <https://doi.org/10.1057/9780230000612>
- Ciscato, E., & Usuelli, M. (2022). Words count: The role of language in overcoming climate inertia. *Natural Resource Management and Policy*, 47, 27–42. [https://doi.org/10.1007/978-3-030-87564-0\\_3](https://doi.org/10.1007/978-3-030-87564-0_3)
- Currie, J. S. G., & Clarke, B. (2022). Fighting talk: The use of the conceptual metaphor. *Journal of Language and Politics*, 21(4), 589–612. Scopus <https://doi.org/10.1075/jlp.21052.cur>
- De Vries, G. (2020). Public communication as a tool to implement environmental policies. *Social Issues and Policy Review*, 14(1), 244–272. <https://doi.org/10.1111/sipr.12061>
- Devall, B. (2014). Deep ecology and radical environmentalism. In *American Environmentalism: The US Environmental Movement, 1970-1990* (pp. 51–62). Scopus.
- Döring, M., & Zunino, F. (2014). Nature cultures in old and new worlds. Steps towards an ecolinguistic perspective on framing a 'new' continent. *Language Sciences*, 41, 34–40. <https://doi.org/10.1016/j.langsci.2013.08.005>
- Doyle, J. (2007). Picturing the Clima(c)tic: Greenpeace and the representational politics of climate change communication. *Science as Culture*, 16(2), 129–150. <https://doi.org/10.1080/09505430701368938>
- Fajri, M. S. A., Rahim, H. A., & Rajandran, K. (2023). A corpus-assisted discourse study on the construction of 'obesity' in Indonesian news media. *Studies in English Language and Education*, 10(3), 1467–1484. <https://doi.org/10.24815/siele.v10i3.28822>
- Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2017). Metaphors for the war (or race) against climate change. *Environmental Communication*, 11(6), 769–783. <https://doi.org/10.1080/17524032.2017.1289111>
- Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2018). War metaphors in public discourse. *Metaphor and Symbol*, 33(1), 1–18. <https://doi.org/10.1080/10926488.2018.1407992>
- Gablasova, D., Brezina, V., & McEnery, T. (2017). Collocations in corpus-based language learning research: Identifying, comparing, and interpreting the evidence. *Language Learning*, 67(S1), 155–179. <https://doi.org/10.1111/lang.12225>
- Garg, A., Godfrey, A., & Eko, R. (2024). Kembali ke hutan (return to the forest): Using storytelling for youth engagement and climate action in Indonesia. In *Storytelling to Accelerate Climate Solutions* (pp. 67–86). Scopus. [https://doi.org/10.1007/978-3-031-54790-4\\_5](https://doi.org/10.1007/978-3-031-54790-4_5)

- George, D. R., Whitehouse, E. R., & Whitehouse, P. J. (2016). Asking More of our metaphors: narrative strategies to end the "War on Alzheimer's" and humanize cognitive aging. *The American Journal of Bioethics : AJOB*, 16(10), 22–24. <https://doi.org/10.1080/15265161.2016.1214307>
- Grossman, K. L. (2024). Anthropogenic climate change. In D. A. Gill, L. A. Ritchie, & N. M. Campbell (Eds.), *Encyclopedia of Technological Hazards and Disasters in the Social Sciences* (pp. 34–40). Edward Elgar Publishing. <https://doi.org/10.4337/9781800882201.ch06>
- Group, P. (2007). MIP: A Method for identifying metaphorically used words in discourse. *Metaphor and Symbol*, 22(1), 1–39. <https://doi.org/10.1080/10926480709336752>
- Gui, L. (2023). Media framing and public perception: the use of war metaphor in times of COVID-19. *Journal of Multicultural Discourses*, 18(2), 140–153. <https://doi.org/10.1080/17447143.2023.2292543>
- Hidalgo-Downing, L., & O'Dowd, N. A. (2023). Code red for humanity: Multimodal metaphor and metonymy in non-commercial advertisements on environmental awareness and activism. *Metaphor and Symbol*, 38(3), 231–253. <https://doi.org/10.1080/10926488.2022.2153336>
- Huang, J., & Liu, M. (2025). Between nationalism and globalism: Framing climate change risks in Chinese and American newspapers. *Corpus-Based Studies across Humanities*, 2(2), 311–332. <https://doi.org/10.1515/csh-2024-0028>
- Imani, A. (2021). What 'corona war' metaphor means in Iranian political discourse. *GEMA Online® Journal of Language Studies*, 21(4), 329–341. <https://doi.org/10.17576/gema-2021-2104-17>
- Isti'annah, A., Suhandano, S., & Fajri, M. S. A. (2025). Framing "climate change" and "global warming" in Indonesian mass media (2013-2022): Corpus-Assisted Ecolinguistics. *Kasetsart Journal of Social Sciences*, 46(1), 1–10. <https://doi.org/10.34044/j.kjss.2025.46.1.08>
- Isti'annah, A., Suhandano, S., & Winarti, D. (2024). Quantifying nature in tourism discourse: A corpus-ecolinguistic perspective. *Jurnal Arbitrer*, 11(2), 172–185. <https://doi.org/10.25077/ar.11.2.172-185.2024>
- Koteyko, N., & Atanasova, D. (2016). Metaphor and the representation of scientific issues: Climate change in print and online media. In *The Routledge Handbook of Metaphor and Language*. Routledge.
- Kramar, N. (2023). Construction of agency within climate change framing in media discourse: A corpus-based study. *Respectus Philologicus*, 43(48), 36–48. <https://doi.org/10.15388/RESPECTUS.2023.43.48.106>
- Krennmayr, T. (2011). Researching and applying metaphor in the real world – Edited by Graham Low, Zazie Todd, Alice Deignan and Lynne Cameron. *International Journal of Applied Linguistics*, 21(3), 411–416. <https://doi.org/10.1111/j.1473-4192.2011.00295.x>
- Kövecses, Z. (2010). *Metaphor: A practical introduction*. Oxford University Press.
- Lahlou, H., & Rahim, H. A. (2022). Conceptual metaphors in North African French-speaking news discourse about COVID-19. *Indonesian Journal of Applied Linguistics*, 11(3), 589–600. <https://doi.org/10.17509/ijal.v11i3.35949>
- Lakoff, G., & Johnson, M. L. (1980). *Metaphors we live by*. University of Chicago press.
- LeVasseur, T. (2017). Religion, language and ecology. *The Routledge Handbook of Ecolinguistics*. <https://doi.org/10.4324/9781315687391-29>
- Liu, M., & Huang, J. (2022). "Climate change" vs. "global warming": A corpus-assisted discourse analysis of two popular terms in The New York Times. *Journal of World Languages*, 8(1), 34–55. <https://doi.org/10.1515/jwl-2022-0004>
- Lorenzoni, I., & Pidgeon, N. F. (2006). Public views on climate change: European and USA perspectives. *Climatic Change*, 77(1-2), 73–95. <https://doi.org/10.1007/s10584-006-9072-z>
- Ma, C., & Stibbe, A. (2022). The search for new stories to live by: A summary of ten ecolinguistics lectures delivered by Arran Stibbe. *Journal of World Languages*, 8(1), 164–187. <https://doi.org/10.1515/jwl-2021-0031>
- Mangat, R., & Dalby, S. (2018). Climate and wartalk: Metaphors, imagination, transformation. *Elementa: Science of the Anthropocene*, 6, 1–10. <https://doi.org/10.1525/elementa.313>
- Matlock, T., Coe, C., & Westerling, A. L. (2017). Monster wildfires and metaphor in risk communication. *Metaphor and Symbol*, 32(4), 250–261. <https://doi.org/10.1080/10926488.2017.1384273>
- Mey, J. L. (2017). The pragmatics of metaphor. *The Routledge Handbook of Ecolinguistics*. Routledge.
- Musolff, A. (2017). Metaphor, irony and sarcasm in public discourse. *Journal of Pragmatics*, 109, 95–104. <https://doi.org/10.1016/j.pragma.2016.12.010>
- Næss, A., Drengson, A. R., & Devall, B. (2008). *Ecology of wisdom*. Counterpoint.
- Niebert, K., & Gropengiesser, H. (2013). Understanding and communicating climate change in metaphors. *Environmental Education Research*, 19(3), 282–302. <https://www.tandfonline.com/doi/abs/10.1080/13504622.2012.690855> <https://doi.org/10.1080/13504622.2012.690855>
- Poole, R. (2022). *Corpus-assisted ecolinguistics*. Bloomsbury Academic.
- Pražmo, E. (2020). *Foids are worse than animals*. A cognitive linguistics analysis of dehumanizing metaphors in online discourse. *Topics in Linguistics*, 21(2), 16–27. <https://doi.org/10.2478/topling-2020-0007>
- Saeed, J. I. (2015). *Semantics*. (4th ed.) Wiley-Blackwell.
- Sanubarianto, S. T., Wardhani, Y. F., Atmodjo, Mochammad T., Nugraha, D.G., Rahman, K., Talan, M. R., Hamdiah, Magfrotul, Efendi, Agik N., Arsyad, Abdul R., Winangsih, Rahmi, Badruzaman, Hilmanur, Mardiyono, Akmal Sukardi, (2025). Cogroforestry lexicon in Manggarai language: An effort to revitalize culture and empower indigenous peoples. *Cogent Arts & Humanities*, 12(1), 2444777. <https://doi.org/10.1080/23311983.2024.2444777>
- Sheckler, K. (2022). *Ursula K. Le Guin, consent, and metaphor*. Nomos Verlagsgesellschaft mbH & Co. KG. <https://doi.org/10.5771/9781666904888>

- Skutnabb-Kangas, T. (2004). On biolinguistic diversity: Linking language, culture and (traditional) ecological knowledge. <https://textarchive.ru/c-1894055-pall.html>
- Steen, G., Dorst, A. G., & Herrmann, J. B. (Eds.) (2010). *A method for linguistic metaphor identification: From MIP to MIPVU*. Benjamins.
- Steffensen, S. V., & Fill, A. (2014). Ecolinguistics: The state of the art and future horizons. *Language Sciences*, 41, 6–25. <https://doi.org/10.1016/j.langsci.2013.08.003>
- Steinert, H. (2003). The indispensable metaphor of war: On populist politics and the contradictions of the State's monopoly of force. *Theoretical Criminology*, 7(3), 265–291. <https://doi.org/10.1177/13624806030073002>
- Steuter, E., & Wills, D. (2009). *At war with metaphor: Media, propaganda, and racism in the war on terror*. Lexington Books.
- Stibbe, A. (2014). An ecolinguistic approach to critical discourse studies. *Critical Discourse Studies*, 11(1), 117–128. <https://doi.org/10.1080/17405904.2013.845789>
- Stibbe, A. (2015). *Ecolinguistics*. Routledge. <https://doi.org/10.4324/9781315718071>
- Suhandano, S., Firmonasari, A., & Isti'anah, A. (2024). Infrastructure discourse in Indonesian Media: An ecolinguistic perspective. *World of Media. Journal of Russian Media and Journalism Studies*, 3, 36–59. <https://doi.org/10.30547/worldofmedia.3.2024.3>
- Suhandano, S., Isti'anah, A., & Febrina, R, Gadjah Mada University. (2023). Contesting “growth” and “sustainability” in Indonesia's capital city relocation: A corpus ecolinguistic study. *RESEARCH RESULT Theoretical and Applied Linguistics*, 9(3), 65–83. <https://doi.org/10.18413/2313-8912-2023-9-3-0-5>
- Thomas, J. (2017). *Discovering English with sketch engine: A corpus-based approach to language exploration*. (2nd ed., updated). Versatile.
- Tisnanta, H. S., Putri, R. W., & Davey, O. (2023). *Realizing city resilience towards climate change and the correlation with sustainable development goals' framework in Indonesia (fulfilling a global demand)* [Paper presentation]. 2621(1). Scopus. <https://doi.org/10.1063/5.0142496>
- Tomsa, D. (2025). Environmental and climate justice activism in Indonesia. *Journal of Contemporary Asia*, 55, 1–20. <https://doi.org/10.1080/00472336.2025.2474003>
- Top News & Media Publishers Websites Ranking in Indonesia. (2023, August 1). Similarweb. <https://www.similarweb.com/top-websites/indonesia/news-and-media/>
- Välvirronen, E., & Hellsten, I. (2002). From “burning library” to “green medicine”: The role of metaphors in communicating biodiversity. *Science Communication*, 24(2), 229–245. <https://doi.org/10.1177/107554702237848>
- Van Der Hel, S., Hellsten, I., & Steen, G. (2018). Tipping points and climate change: Metaphor between science and the media. *Environmental Communication*, 12(5), 605–620. <https://doi.org/10.1080/17524032.2017.1410198>
- Wolf, M., Rüdele, K., & Ramsauer, C. (2024). Carbon footprint management in Austrian SMEs: Strategies, mitigation measures, challenges and case studies. <https://repo.uni-hannover.de/handle/123456789/17889>
- Woods, R., Fernández, A., & Coen, S. (2012). The use of religious metaphors by UK newspapers to describe and denigrate climate change. *Public Understanding of Science (Bristol, England)*, 21(3), 323–339. <https://doi.org/10.1177/0963662510385061>
- Wynes, S., & Nicholas, K. A. (2017). The climate mitigation gap: Education and government recommendations miss the most effective individual actions. *Environmental Research Letters*, 12(7), 074024. <https://doi.org/10.1088/1748-9326/aa7541>
- Zhou, W., Nakatsubo, F., Wu, J., & Liu, K. (2022). Digital ethnography of an online professional learning community based on WeChat for Chinese early childhood teachers. *Computers & Education*, 191, 104617. <https://doi.org/10.1016/j.compedu.2022.104617>