

The Portrayal of Environmental Concerns: An Ecolinguistic Analysis of Media Discourse

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Abstract

The global focus on environmental/climatic concerns and sustainability has intensified in recent years due to the growing recognition of the urgent need for action to mitigate and adapt to climate change. As one of the key goals of Saudi Vision 2030, the Saudi Green Initiative strives to mitigate the effects of climate change and improve biodiversity through multiple measures including promulgating awareness and responsibility in the general public. With this respect, undoubtedly media plays a crucial role in shaping public opinion and influencing policy decisions. Therefore, it is essential to investigate how environmental issues and sustainability are portrayed in media discourse in the Saudi context. This research intends to analyze media representations of environmental concerns specifically in English newspaper discourse using an eco-linguistic framework. For the said purpose, the corpus developed was based on content published in Arab News an English newspaper, and analyzed through Sketch Engine and LancsBox6.0 software. The key frames that emerged were evaluated and interpreted both statistically and qualitatively to ascertain the role of media in imparting and creating collective consciousness regarding the need for sustainable environmental actions. The study demonstrated that the newspaper discourse portrayed the climate concerns effectively by framing the climate as a change, crisis, fight, and collective social responsibility through discursive strategies such as frequent repetition of concepts, specific lexical choices like negative, strong expressive words as well as techniques of naming and making concrete references. Additionally, the writers suggested practical solutions and measures people and nations must need to take collectively to address the ever-growing climate challenges.

Keywords: ecolinguistics, media discourse, climate, sustainability, corpus analysis, frames

I. Introduction

1.1 Background

In recent decades, environmental concerns have become increasingly prominent on the global stage. The pressing challenges posed by climate change, deforestation, pollution, and the depletion of natural resources have sparked widespread public interest and debate in almost every sphere of life (George, Merrill & Schillebeeckx, 2021; Han & Ahn, 2020; Ogwu, 2019; Rosa, 2022). To impart widespread awareness and a sense of social urgency and responsibility in this regard, multiple platforms have been used such as seminars, conferences, academic and scientific research, and educational, economic, and social policies and programs, etc. Along with these platforms, the media has emerged as a vital medium for increasing awareness, shaping public opinion, and influencing policy decisions related to the environment and sustainability issues (Lester, 2020; Schärer & Schlichting, 2018).

“Media” as a plural form of “medium” commonly refers to all the communication channels or platforms to broadcast news, information, education, entertainment, and promotional messages through magazines, newspapers, TV, social apps, and internet, etc. More specifically media can be defined as “socially realized structures of communication, where structures include both technological forms and the associated protocols, and where communication is a cultural practice” (Lisa in Miconi & Serra, p. 3445, 2019). As elaborated in the given definitions, media is a socially rooted platform with the undeniable power to disseminate social agendas and shape people’s opinions and practices (Alalwan, 2018; Lester, 2020; Perse & Lambe, 2016). Newspapers, in this regard, have long served as a pivotal medium for playing the said role and with being digitalized in today’s world, their impact has become even more widespread.

The analysis of newspaper discourse during the past few decades has produced important insights into understanding how newspapers portray and establish a wide array of social concepts and issues related to the economy, sociocultural practices, political and governmental topics, entertainment, sports, as well as environment, and sustainability through its linguistic choices. A relatively new interdisciplinary field that combines language and ecology is termed “ecolinguistics”. Ecolinguistics is fundamentally based on the concept that language is an indispensable part of a larger environment that is “physical (a language’s users only exist in the physical environment), psychological (a language interacts with other languages in the minds of bilingual and multilingual speakers), and sociological (a language interacts with the society in which it functions as a communication medium) (Chen, p. 109, 2019). Thus, ecolinguistically

analyzing the newspaper discourse can offer an understanding of how the media discourse addresses environmental concerns and its related concepts.

1.2 Purpose of the Study

Given the crucial role of media discourse in constructing and framing environmental (referred to as climatic) concerns, ultimately influencing public perception and collective action, the current study seeks to uncover the linguistic patterns, and discursive strategies employed in the selected newspaper discourse to achieve its goals. Similarly, where exploring how media portrays climate-related issues, concerns, awareness, etc., is crucial, it is even more important to analyze how effectively media plays this role and what influence it may create in its readers. For the said purpose, the study intends to achieve the following objectives:

- a. to assess the framing of climate issues in the selected media discourse.
- b. to identify the dominant discursive patterns and linguistic strategies to represent climate concerns.
- c. to explore the influence of media discourse on public understanding and engagement with climate concerns.

2. Literature Review

The advent of the field of Eco-linguistics as an area of study dates 50 years back when Haugen referred to this phenomenon as "the study of the interactions between any given language and its environment" (1972, p. 325). However, the term "ecolinguistics" was coined and first used by Jean Baptiste Marcellesi a French sociolinguist, in (1975). After that numerous texts and earlier indications of linkages between language and environment, and historical precedents of this field are identified and uncovered, such as in the works of Hagege (1985) and Fill (1998). Over time, there has been a growing interest in highlighting environmental concerns through linguistic repertoire to undo and control the damage done to the environment by creating awareness and a sense of responsibility among the people.

The critical analysis of climate and environment representations of various discourses through an ecolinguistic framework is an evident example of the rising concerns of scholars, scientists, and researchers around the globe. A plethora of comparatively recent research on how environment and climate are integrated into streamlined educational content is one very apt example. Multiple studies (Mliless & Larouz, 2018; Mou, Y., & Norton & Hulme, 2019; Penz & Fill, 2022; Wu, 2023; Triyono, Sahayu, & Fath, 2023) have highlighted the fact that in comparison to the gravity of climate issues, there has been a serious lack of its representation in the educational content and discussions such as textbooks, seminars, etc.

Recently, studies analyzing 'green discourse' and climate emergency ecolinguistically have presented interesting insights into how international bodies and policymakers are playing their role in climate change awareness and addressing its adverse impacts. For instance, the role of the UN, climate activists, and political parties in climate preservation is undeniable, and specific studies have been conducted to critically assess their climate discourse. These studies (Abdurrahman, 2023; Chau et al., 2022; Wang, Zhai, & Zhao, 2019; Yuniawan, et al, 2017) have primarily identified the following key areas in the selected discourses: appeals to all the stakeholders to take responsibility for climate awareness; devise immediate remedial actions and plans; and implement these plans seriously.

Another major area of concern and research in the climate and environment field appears is the critical analysis of media discourse. The portrayal of environmental concerns in media discourse can play a crucial role in shaping public understanding, policy decisions, and collective action if done properly. Numerous studies around the world have undertaken media discourse analysis for the said purposes. For instance, Norton & Hulme (2019) conducted research on the representation of climate change in leading newspapers' editorials in the UK maintaining that the need for innovations in technology and energy as well as adaptation to "extreme weather events" (p.14) as highlighted in the selected corpus. Another interesting recent study generates a comparative analysis of climate activists' and politicians' discourse discovering that the latter's speech was devoid of climate change concerning human actors as compared to the discourse of their counterparts which laid heavy emphasis on the human factor (Cunningham, Foxcroft & Sauntson, 2020).

When it comes to the Saudi context, an observable dearth of studies with a perspective on ecolinguistics analysis of climate issues in media discourse emerges. Only a few studies, such as (Almaghlouth, 2022; Al-Jayyousi, 2023; Chau et al., 2022; Hameed, Jabeen & Mehar, 2022) have offered critical insights in this regard. Thus, it becomes inevitable to explore how and what role the newspaper media in Saudia is playing in the realization of Saudi Vision 2030 particularly the climate revolutions. This study addressed this existing gap and contributed to understanding the media discourse concerning environmental concerns within the ecolinguistic framework.

3. Research Methodology

3.1 Nature of the Study

This study is exploratory since its primary goals are to unearth new perspectives and a deeper understanding of the issue under consideration (Swedberg, 2020). To achieve the goals, quantitative and qualitative methods were used to gather, analyze, and interpret data. The mixed method approach supported understanding and exploration of the phenomenon in its entirety (Guest, 2013). This data collection and analysis involved systematic steps.

3.2 Corpus of the Study

Firstly, a comprehensive corpus of newspaper opinion texts was developed from Arab News, an English daily newspaper, founded in 1975 and serving as one of the flagship English newspapers in the Middle East. The corpus consisted of opinion articles published over a year from November 2022 to November 2023 to be exact. During the selected period, a total of 129 articles concerning climate concerns were

identified and extracted. The corpus was divided into two parts: the titles/headings of the articles; and the content of the articles. The two corpora were separately analyzed.

3.3 Processing of the Study Corpus

The collected and cleaned corpora went through a systematic analysis using the statistical software Sketch Engine and LancsBox.6.0 (Brezina et al., 2020) that are commonly employed for corpus-based linguistic analysis. The corpus of article headings was run through Sketch Engine to establish the thematic contextualization (framing) regarding how the environmental concerns and issues were represented, based on the word frequency. The Wordsketch derived from this corpus including 1334 tokens vividly presented the collocative construction of the key word ‘climate’. Similarly, LancsBox.6.0 was used to generate the Ngrams and concordances to statistically analyze how the framing of climate was constructed through dominant discursive patterns and lexical choices within the article texts corpus consisting of 119129 tokens.

3.4 Theoretical Framework Applied

The theoretical basis of this study emerges from Stibbe’s comprehensive ecolinguistic analysis framework he presented in his groundbreaking book “Ecolinguistics language, ecology and the stories we live by” (2015) by practically demonstrating how the texts can be systematically analyzed concerning ecolinguistic perspectives (Franklin, 2017). This framework consists of eight parameters of analysis: ideology, identity, framing, metaphor (as a type of framing), conviction, evaluation, erasure, and salience. As the current study primarily focused on how the climate issues are framed in the selected newspaper discourse, only the *framing* feature from the framework was applied. Framings as explained by Stibbe are “stories about a specific area of life that make use of small packets of general knowledge called frames” (2015, p.3), which means that the same area/concept can be perceived differently depending on how it is framed by the author(s) within its particular context. For instance, corruption framed as a system, plague, illegal act, injustice, etc. creates distinct images and perceptions in the minds of the listeners/readers. This framing framework consists of three categories as indicated in the table below:

Table 1. Stibbe’s Framing Model (2015)

Think	Talk	Act
↓	↓	↓
Frame	Language	Impact
The authors’ intentions	Representation of intention through particular language	The expected impact of framing on the readers

*Adapted from Abdurrahman (2023), p. 20.

4. Data Analysis

Every written discourse possesses its particular manipulation of the text formats and structures to create the intended impact on its readers. Newspaper discourse is no exception. There are several articles published on various topics and issues every day. So, how to make your article stand out among all these articles and have an impactful impression on the readers, becomes a pertinent point of concern for every writer.

Among various other factors such as the position and place of the article, headlines, and bylines are of prime importance for the multiple functions they play: abridging the news; grading the importance of stories; enhancing the visual design of the page; and enticing the lookers to become readers (Malette, 1980, cited in Bedřichová & Urbanová, 2006). And more recently, constructing various perspectives about one particular point or issue through headlines/bylines referred to as ‘framing’ has been discussed and explored extensively (Afzal & Harun; 2020; D’Angelo, 2017; Liu et al, 2019). The frames generated in the headlines are further elaborated and intensified through specific linguistic choices in the article content. Thus, the analysis was developed in two phases: the identification of framing themes in the headlines, and the reinforcement and extension of these themes in the article texts.

4.1 Framing Themes Identification in the Headlines Content

To identify the particular frames constructed regarding climate concerns, the Wordsketch within the Sketch Engine statistical tool was employed. The corpus included 1334 tokens and outlined the most frequently used collocations for the keyword ‘climate’. The keyword itself occurred 72 times in the selected corpus. The following figure illustrates the collocative construction.



Figure 1. Framing of ‘Climate’ in Newspaper Headlines

Note: Own data

Based on the collocative words emerging in the figure above, the following framings were identified, categorized, and grouped into different themes.

Table 2. Framing of ‘Climate’ in Newspaper Headlines

Think ↓ Frame	Frequency
1. Climate change	41
2. Climate change fight	8
3. Climate action	4
4. Climate crisis	4
5. Adapt to/climate adaptation	4
6. Climate Fight	4
7. Get/serious about climate	4
8. Action on climate	2

Note: Own data

As illustrated in the figure and table above, most of the writers have highlighted the climate issue in different yet commonly shared frames. The eight most frequently used linguistic expressions can be identified and reordered into these subsequent thematic frames:

- climate change
- climate crisis
- climate fight
- climate action as a collective responsibility

Within these five frames identified, the most extensive collocation with the keyword ‘climate’ emerges as ‘climate change’- which features this frame as a centralized frame or the nucleus of the discussion in the headline corpus. The premeditated linguistic choices indicate that the writers intended to highlight explicitly the gravity of climate change as a crisis that needs to be fought against collectively.

4.2 Framing of Identified Themes in the Articles’ Content

This analysis phase exemplified and elaborated on how the thematic frames identified in the headings corpus were further explicated by the writers in the articles’ content under the second part of Stibbe’s (2015) framing model- ‘Talk-language’. For the said purpose, LancsBox.6.0 was used to generate the Ngrams and concordances to examine the framing of climate in each thematic frame through dominant discursive patterns and lexical choices. This corpus consisted of 119129 tokens.

4.2.1 Climate Framed as ‘Change’

Table 3. Framing of Climate as Change- Ngrams

Linguistic expressions	Frequency
1. effects of climate change	57
2. impacts of climate change	49
3. caused by climate change	15
4. due to climate change	12
5. extreme weather events	12

Note: Own data

Framing in newspaper discourse is always enacted through certain cautiously purpose-tailored use of linguistic choices (Hamborg et al., 2019). The repetition of particular expressions or lexical items reinforces the importance of the intended idea in readers' minds. The keyword ‘climate’ was recurrently used with ‘change’ both in the headings and articles’ corpus framing ‘change’ as an indispensable part of the concept of ‘climate’. There were numerous trigger words employed in the corpus to establish the severity of climate change and its widespread consequences such as:

- climate change as a result of *human-made (crisis), gas emissions, food production system, human rigidity, deforestation, industrial discharge*
- climate change as a threat: *global warming, alarming stories and reports on climate change, extreme weather events, extreme temperatures, nature degradation, threat to humanity*

The above examples of linguistic expressions extracted from the corpus, frame climate change as a human-caused phenomenon that is impacting the planet drastically as a result of unguarded actions such as toxifying seawater with “industrial discharge, pharmaceutical waste, pesticides and sewage” (Karasik, 2023). Also, reaching the current climate state is regarded as a result of the selfish and narcissistic approach of the developed countries, as stated and warned by Chebaro (2023) in his article, “In a more interconnected and globalized, yet increasingly cynical, world, in which various protagonists believe in shielding their own and turning a blind eye to the misery of others, the trouble soon will come to a region or place close to you”. So, the neutral term ‘climate’- meaning a weather condition no longer remains neutral but rather is conceptualized as ‘climate change’ which is a threat to the world and humanity. The readers are explicitly and implicitly familiarized with the co-occurrence of the two separate concepts ‘climate’ and ‘change’ as essentially one through the repetition of triggering linguistic choices as “a stand-alone mechanism of news framing effects over time” (Lecheler et al, 2015).

4.2.2 Climate Framed as ‘Crisis’

‘Climate’ as a crisis is the next prominent framing emerging from the corpus. The article writers have used multiple trigger words/expressions that represent climate as a joint global calamity and threat. The following table demonstrates the frequency of the related expressions.

Table 4. Framing of Climate as Crisis- Ngrams

Linguistic expressions	Frequency
1. loss and damage (fund)	33
2. extreme weather events	12
3. degree Celsius above pre-industrial	11
4. of the climate crisis	8
5. impacted by climate change	6
6. tons of carbon oxide	6
7. caused by global warming	5
8. damage caused by climate	5
9. freshwater resources are depleted	5

Note: Own data

Almost every article produced on climate has compellingly exemplified climate change as an unleashed catastrophe by manipulating the “small packets of general knowledge” (Stibbe, 2015, p. 4) the readers have concerning the issue. The use of particularly strong expressive words/expressions fixates climate change in readers’ minds as a world calamity.

- Climate as a crisis for humans: *an issue of injustice, risking human existence, emotional and scary scenes, brewing devastation, health crisis, universal threat, water scarcity, untimely deaths, long-term costs, strain on the healthcare system, adverse effects, intensify and exacerbate existing issues*
- Climate as a crisis for planet/environment: *universal threat, destroying the ecosystem, water scarcity, less or more frequent and intense rainfalls, record-breaking temperatures and unprecedented calamities, fast-escalating environment issues, droughts, erosion measurements, harms wildlife, more wildfires, adverse effects, catastrophic climate change, environmental disaster,*

intensify and exacerbate existing issues, effect on the entire planet, changing ocean temperatures, destroying marine life, environmental emergency, planet on fire, swaths of destruction

The writers have broadly categorized climate crisis in two spheres i.e. human-related impacts and environment-related impacts. The use of strong expressive words is very evident in the above examples extracted from the data. Further, it can be identified that climate is presented in various distinct frames in both categories. For example, climate is framed as not only an environmental concern but an issue of injustice, and cause of human suffering and deaths, etc., in the first category. Similarly, in both categories, the climate crisis is framed as something living that is spreading its evil shadow not only on humans but all living organisms and resultantly the whole planet through negative words like *devastation, threat, calamities, disasters, catastrophes, deaths, intense*, etc. The use of such expressions is psychologically proven to “...get more attention, arouse more emotions, have more influence on recipient behavior, and are stored better and longer in memory” (Liebrecht, Hustinx & Mulken, 2019, p. 172). Manipulating climate crisis through such words as “planet on fire” (Al-Ghwel, 2023) evokes readers’ realizations and emotions concerning the gravity and magnitude of the explicated issue.

4.2.3 Climate Framed as a Fight

The analysis of the articles' data highlights that not only climate is presented as a change and crisis, but it is also framed metaphorically as one grave battle to be fought seriously and urgently.

Table 5. Framing of Climate as a Fight- Ngrams

Linguistic expressions	Frequency
1. fight against climate change	23
2. to combat climate change	10
3. to tackle climate change	14
4. climate change fight	8
5. to deal with	6
6. needs to be done	5
7. step up to the	5

Note: Own data

As illustrated in the above table, climate is presented as a constant ‘fight’ humans need to face. For instance, a prominent commonly shared feature of the articles’ discourse is the continuous referral of climate actions to words such as “war, fight, combat, battle”, etc. which frames climate issues as something essentially evil, harmful, and a constant threat until ‘tackled and dealt’ with seriously. Such expressions are also referred to as ‘war metaphors’ and are very pervasively applied against poverty, diseases, corruption, drugs, crimes, etc. because “there is well-defined schematic knowledge for a prototypical war” in the global speech community. Speakers and writers deliberately use such words as they “naturally bring on fear and anxiety because the stakes are high and there are tremendous risks, for instance, loss of lives, loss of resources, and feelings of despair” (Flusberg et al., 2018, p. 4). For the same reason, the writers when referring to climate have used plenty of such expressions frequently, for instance, “to fight this menace” (Nayar, 2023a), “to combat climate change” (Rafizadeh, 2023a), “fight for its survival”, “build resilience against the growing threat” (Kamugisha, 2023) are just a few examples of framing the climate as a fight and threat. Such framing intensifies the severity of the issue under discussion and makes readers aware of its threats and provokes them to take responsibility and do something about that.

4.2.4 Framing of Climate Action as a Collective Responsibility

The last part of Stibbe’s (2015) framing framework is ‘the impact on the readers’ that makes readers enact their expected and perceived in response to intentionally and purposefully created frames. Concerning climate, the data analysis establishes that the climate issue was framed as a collective social responsibility as it is caused by humans and now they are responsible for averting the situation. The following table illustrates the frequently used names and expressions to make the world accountable for the situation and to lay the responsibilities on them. Also, there were solutions presented to elaborate on how to tackle the gravity of the issue.

Table 6. Framing of Climate Action as a Collective Responsibility- Ngrams

Linguistic expressions	Frequency
1. Middle East and North (Africa)	43
2. Framework Convention on Climate	32
3. UN Climate Conference	28
4. Panel on Climate Change	12
5. reduce greenhouse gas emissions	12
6. to address climate change	12
7. carbon capture storage	11
8. Middle East Green Initiative	9
9. the US and China	7
10. action on climate change	6

11. to a green economy	6
12. transition from fossil fuels	6
13. richly endowed with renewable	5

Note: Own data

As statistically represented in the table above, the writers have referred to and assessed the world's efforts in tackling climate issues. Also, there have been various solutions and ways mentioned to lessen the adversities of the climate change impacts with concrete examples. Following are a few expressions extracted from the articles' corpus for exemplification purposes:

- Climate challenge- a social responsibility: *collective responsibility, societies to take responsibility, global efforts, regional and global, social awareness throughout societies, world has to face together, we must face, nations are responsible*
- National and international climate discussions: *Middle East and North Africa Climate Week, UN Framework Convention on Climate Change, UN Conference on Climate Change, two-day Iraq Climate Conference, Intergovernmental Panel on Climate Change, Middle East Green initiative, COP25, COP26 climate summit, COP27, the 27th annual UN Conference on Climate Change, COP28, G20 meeting of environment ministers, Paris Agreement, Plastic Free July, International Day for Biological Diversity*
- Action and adaption: *reduce greenhouse gas emissions, renewable energy sources, building climate resilience, biodiversity and sustainable livelihood and farming, unified sense of purpose, localize or diversify (food) supply chains, preserving forests and natural reserves, increasing funding for climate change adaptation, promotion of green economies, addressing the water-energy-food nexus, transition to green economy*

The discourse of the selected articles frames the climate challenges as a social responsibility quite effectively and critically assesses the world's response to these challenges. It is recurrently highlighted that climate change is a global dilemma, caused by collective negligence and hence, needs to be faced with collectively. The neglecting attitude of the industrial and developed countries maintaining "not in my backyard" policies, (Nayar, 2023b) should no longer exist. Similarly, the efforts, gatherings, and forums of international bodies are made subject of many articles, and the outcomes of such forums are examined. The writers have argued that we must accept the "...harsh reality that our entire human family has so far failed to effectively deal with the difficult challenge of fast-escalating climate change" (Schneider, 2023). Many of the international forums either fail to develop any tangible policies or their policies are not implemented later as Hammond (2023) quotes Virginijus Sinkevicius, EU Environment Commissioner, "We simply are nowhere" and "the glass is ... certainly empty when we look at G20 commitments to address climate change". However, it is not all gloomy as the tangible efforts exerted like the Saudi Green Initiative, and China's carbon neutrality measures (Zhaohui, 2022) have been exemplified as substantial steps. As the corpus was derived from the Saudi-based newspaper, the kingdom's actions, and measures in the light of Vision 2030 in addressing climate issues nationally and internationally are highlighted as "Thanks to Saudi Arabia's Vision 2030, the Kingdom has significantly expanded its renewable energy program, putting it on top globally when it comes to clean energy (Rafizadeh, 2023b).

Besides presenting a vivid picture of the climate crisis as a collective social responsibility, the corpus analysis displays the possible actions and measurements the world may take to address this calamity. Such as moving towards renewable energy sources, preventing industrial chemical waste, spending more funds on green initiatives, and ensuring equal distribution of resources by abating "narrow national interests" (Hammond, 2023) mindsets, etc. If it is a collective social responsibility then the contribution and inclusion of no human power can be neglected e.g. the role of the youth and women in climate change war. Inclusion of environment-related content into formal education streamline and effective channeling of youth climate-saving efforts is essential as "Young individuals are some of the strongest changemakers we have in the climate change fight" (Willemsen, 2023). Similarly, the role of women in climate change has been neglected even though they make up almost 50% of the world's population. In fact, "Women are not passive victims of climate change, but active community leaders in developing solutions, and mobilizing their community..." (Akeel, 2023), thus, making it pivotal to benefit from their contributions in dealing with the climate crisis effectively.

4. Conclusion

Climate change and its drastic effects are undeniably the greatest threat the planet Earth is facing currently. To address this global crisis effectively, it is fundamental that the gravity of the situation is highlighted in every possible forum. Assuming the influential impact media has these days, the current study analyzed critically the role English newspaper discourse, particularly within Saudi, is playing in addressing the issue at hand under Stibbe's (2015) framework of 'Framing' technique. It was found that the climate issue has been presented quite frequently and extensively in the selected newspaper as there were 129 articles published during one year period. The 'climate' was framed in diverse concepts such as 'change, crisis, fight, and collective social responsibility. As framing certain social issues in various ways can make the readers conceptualize them more effectively (D'Angelo, 2017), the writers successfully bound climate with its broader alarming impacts e.g. change, crisis, fight and ultimately declaring it as a collective responsibility. This conceptualization was practiced through the discursive strategies such as frequent repetition of intended frames, lexical choices such as negative expressive words, naming and making references, etc., "as it affects the reader's attitude and addresses his/her feelings" (Abdurrahman, 2023. P. 28). Importantly, the writers have not only framed climate change as an immediate crisis, "World has run out of time" (Nayar, 2023c), but have also offered tangible measures and solutions too like investing in renewable energy, green economies, sustainable technology, decarbonization, and benefiting from youth and women power, etc. To sum up, this study demonstrates that through the effective use of

linguistic patterns environmental concerns are not only efficaciously framed but the readers are evoked to take individual and collective responsibility to address and prevent the climate crisis from becoming more severe than it already is.

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Appendix A

List of Frequency words-Article Corpus

N-gram	Frequency	N-gram	Frequency
1 effects of climate change	34	101 a third of the	6
2 when it comes to	31	102 Dhahi National Oil Company	6
3 is one of the	26	103 of greenhouse gas emissions	6
4 one of the most	24	104 One of the most	6
5 the effects of climate	23	105 of the Global South	6
6 Middle East and North	21	106 of the most important	6
7 East and North Africa	20	107 on national security and	6
8 impacts of climate change	20	108 action on climate change	6
9 percent of the world's	19	109 part of the world	6
10 the Middle East and	19	110 regions when it comes	6
11 in the Middle East	18	111 for climate change and	6
12 parts of the world	17	112 Saudi Arabia and the	6
13 loss and damage fund	17	113 security and political stability	6
14 the loss and damage	16	114 second half of the	6
15 Framework Convention on Climate	16	115 an impact on national	6
16 UN Framework Convention on	16	116 such as water scarcity	6
17 Convention on Climate Change	16	117 from fossil fuels to	6
18 caused by climate change	15	118 China and Saudi Arabia	6
19 rest of the world	14	119 greenhouse gas emissions and	6
20 fight against climate change	14	120 Africa is one of	6
21 the UN Framework Convention	14	121 the World Meteorological Organization	6
22 UN Climate Change Conference	14	122 have an impact on	6
23 UN Secretary-General Antonio Guterres	13	123 the climate crisis is	6
24 due to climate change	12	124 if we are to	6
25 of extreme weather events	12	125 the second half of	6
26 of the world's population	12	126 the fact that the	6
27 the rest of the	12	127 the goals of the	6
28 the war in Ukraine	12	128 impacted by climate change	6
29 reduce greenhouse gas emissions	12	129 impact on national security	6
30 Intergovernmental Panel on Climate	12	130 important to point out	6
31 Panel on Climate Change	12	131 the past few years	6
32 to address climate change	12	132 the scale of the	6
33 degrees Celsius above pre-industrial	11	133 as part of the	6
34 carbon capture and storage	11	134 as carbon capture and	6
35 the impacts of climate	11	135 the years to come	6
36 by the end of	11	136 to a green economy	6
37 to reduce greenhouse gas	10	137 to deal with the	6
38 Celsius above pre-industrial levels	10	138 at the forefront of	6
39 the end of the	10	139 tons of carbon dioxide	6
40 as a result of	10	140 vulnerable regions when it	6
41 to combat climate change	10	141 in the face of	6
42 to climate change and	10	142 transition from fossil fuels	6
43 it is important to	9	143 was one of the	6
44 Russia's invasion of Ukraine	9	144 US President Joe Biden	6
45 to point out that	9	145 is due to the	6

46 of climate change on	9	146 in the years to	6
47 other parts of the	9	147 is important to point	6
48 This is due to	9	148 it is also richly	5
49 the fight against climate	9	149 its abundance of oil	5
50 Middle East Green Initiative	9	150 known for its abundance	5
51 global greenhouse gas emissions	9	151 its greenhouse gas emissions	5
52 to the effects of	9	152 caused by global warming	5
53 to tackle climate change	9	153 a clear signal of	5
54 greenhouse gas emissions by	9	154 more than half of	5
55 comes to climate change	8	155 more than a third	5
56 When it comes to	8	156 lack of agricultural resources	5
57 of the climate crisis	8	157 most vulnerable to climate	5
58 that the world is	8	158 needs to be done	5
59 it comes to climate	8	159 climate change and global	5
60 of the most vulnerable	8	160 clear signal of its	5
61 one of the largest	8	161 a loss and damage	5
62 reducing greenhouse gas emissions	8	162 November's UN Climate Change	5
63 impact of climate change	8	163 of climate change in	5
64 governments around the world	8	164 of carbon dioxide emissions	5
65 the Middle East Green	8	165 of global greenhouse gas	5
66 in an effort to	8	166 climate change on the	5
67 the impact of climate	8	167 climate change is a	5
68 as well as the	8	168 of plant and animal	5
69 of climate change and	8	169 of loss and damage	5
70 with the aim of	8	170 of the Paris Agreement	5
71 it comes to the	7	171 damage caused by climate	5
72 change is no longer	7	172 a time when the	5
73 climate change and the	7	173 a negative impact on	5
74 contributed the least to	7	174 North Africa is one	5
75 countries in the region	7	175 one of the biggest	5
76 of the fact that	7	176 one of the world's	5
77 according to the World	7	177 demand frequently being higher	5
78 for the Middle East	7	178 extent that freshwater resources	5
79 one of the key	7	179 end of the century	5
80 over the past few	7	180 plans to build NEOM	5
81 such as carbon capture	7	181 first city without roads	5
82 regions in the world	7	182 also richly endowed with	5
83 the US and China	7	183 all over the world	5
84 that climate change is	7	184 affected by climate change	5
85 the Intergovernmental Panel on	7	185 richly endowed with renewable	5
86 half of the world's	7	186 step up to the	5
87 the most vulnerable regions	7	187 some of the most	5
88 to the extent that	7	188 for the world to	5
89 climate change and its	7	189 for its abundance of	5
90 Conference of the Parties	7	190 tackling the climate crisis	5
91 will need to be	7	191 tens of millions of	5
92 can not afford to	6	192 freshwater resources are depleted	5