



CONSTRUCTING ENVIRONMENTAL RESPONSIBILITY IN CLIMATE CHANGE REPORTING: A CORPUS- ASSISTED CRITICAL DISCOURSE ANALYSIS OF PAKISTANI ENGLISH NEWSPAPERS

Umme Rayyan Gull rayyangul95@gmail.com	MPhil Scholar, Department of English, University of Okara, Pakistan.
Muhammad Kamran Abbas Ismail Kamran.ch@uo.edu.pk	Lecturer, Department of English, University of Okara, Pakistan.
Eisha Tanvir eishatanvir77@gmail.com	MPhil Scholar, Department of English, University of Okara, Pakistan.
Ali Ahmad aliahmadau7@gmail.com	MPhil Scholar, Department of English, University of Okara, Pakistan.

Abstract

The present study examines the development of environmental responsibility in the context of climate change reporting in English-language newspapers published in Pakistan using Corpus-Assisted Critical Discourse Analysis (CACDA). The study analyzes 500 climate-related articles from Dawn and The Nation published between 2020 and 2026. The study draws on Fairclough's (1995) Three-Dimensional Model of Critical Discourse Analysis, which is based on the use of corpus linguistic techniques, such as frequency analysis, keyword analysis, collocation analysis, and concordance analysis, in conjunction with qualitative discourse interpretation. The results show that the discourses of environmental vulnerability, sustainability, adaptation and governance are the most prominent discourses on climate change. Governments, developed countries, industries, and citizens are considered the main actors in environmental responsibility, though the extent of their roles varies. The research also reveals the ideologies of climate justice, collective responsibility, and sustainable development. The results will be helpful to the field of climate communication studies to show that the media has a significant influence on the public understanding of environmental responsibility in Pakistan.

Keywords: *Climate Change Discourse, Climate Communication, Corpus-Assisted Critical Discourse Analysis, Environmental Responsibility, Pakistani English Newspapers.*

Corresponding Author: Muhammad Kamran Abbas Ismail (Lecturer, Department of English, University of Okara, Pakistan)
Email: Kamran.ch@uo.edu.pk

1. Introduction

Climate change is one of the most critical challenges of the twenty-first century, impacting all systems of nature, the economy and the health of people worldwide. Climate change is now not only a scientific problem but also a social, political and communicative one, as global temperatures are rising, greenhouse gas emissions are increasing, the frequency of extreme weather events is increasing, and environmental degradation is worsening rapidly. Climate change is not just a discursive issue created through communication, media representation and public interpretation, but also an environmental phenomenon, as stressed by international organizations such as the Intergovernmental Panel on Climate Change (IPCC). As such, media institutions are of primary importance in telling citizens how to behave, shaping public opinion, and shaping understandings of how to be responsible towards the environment and climate action (IPCC, 2023; Pera & Aiello, 2023).

In recent years, climate communication has been receiving increased attention from the scholarly community. News discourse is viewed as the primary way citizens are exposed to climate change, since most people do not witness it directly but rather encounter it in the media, which is why, according to researchers, public perception of climate change is largely mediated. The media choose themes, actors and narratives when reporting on environmental issues, thereby influencing perceptions of societal problems related to climate change. Research has demonstrated that news media shape how responsibility is framed, risk perceptions and support for climate change policies by using linguistic and discursive tools in news texts (Pera & Aiello, 2023; Reuters Institute, 2025).

In environmental communication research, the theme of environmental responsibility has become an important area of study. Environmental responsibility is the allocation of responsibility for climate change production, reduction or adaptation to citizens, governments, international organisations and industry. The process of building responsibility is not neutral; ideological, political and power positions shape it. As argued by critical discourse scholars, the media language legitimizes some actors and marginalizes others through lexical selection, language modulation, transitivity and framing strategies. Therefore, it is important to analyse the construction of responsibility in climate reporting to understand how the ideological aspects of environmental communication can be explored (Aslam, 2025; Khan, 2025).

Despite its negligible contribution of less than one per cent to global greenhouse gas emissions, Pakistan is one of the most vulnerable countries to climate change. Major environmental impacts, including floods, droughts, heatwaves, glacial melting, water scarcity and air pollution, have hit the country. The devastating floods of 2022 brought climate vulnerability to the forefront of Pakistan and the disproportionate impact of developing countries to the world's attention. Pakistan's climate communication shows

that crises have enhanced public and media awareness and interest in climate-related issues; therefore, climate communication is an emerging field of study (Ejaz et al., 2023; Asif et al., 2024).

Over the past 10 years, the media has steadily increased its coverage of climate-related issues in Pakistan. Reporting on climate change is no longer limited to disaster reporting; it also covers climate governance, environmental justice, adaptation measures, renewable energy and international climate negotiations. Despite the above, Pakistan's climate journalism still faces several limitations, including a lack of institutional capacity, scientific expertise and political and business pressures, according to scholars. It influences news coverage regarding climate change in terms of quality, frequency and framing (Qusien et al., 2024; Hussain et al., 2024).

Dawn and The Nation, the two newspapers, are influential in shaping public discourse in Pakistan. They are flagship English-language newspapers read by policymakers, academics, professionals and literate city citizens. Their reporting habits significantly impact public discourse and perceptions of environmental issues. Climate change is often presented in Pakistani newspapers through disaster narratives, government responses, and policy debates, as recent research on climate change reporting shows. Yet, how environmental responsibility is discursively constructed in these narratives has not yet been explored (Ahmed et al., 2025; Abbas & Tabassum, 2026).

Most studies on climate communication in Pakistan have used qualitative discourse analysis, content analysis, and framing analysis. Climate change communication, for instance, has been studied through the lens of media framing of climate issues, journalists' perceptions of environmental reporting, and public attitudes towards climate communication. Although these investigations provide insights, they are usually based on fairly small text collections and might miss regular language structures in larger ones. It suggests a need for more systematic approaches to identify the quantitative and qualitative aspects of climate discourse (Javed, 2024; Khan, 2025).

The Corpus Linguistics approach is an effective technique for analyzing large collections of textual data. Corpus linguistic research enables researchers to detect recurrent linguistic patterns that might not be obvious when reading texts by using techniques such as keyword analysis, collocation analysis, concordance analysis and frequency analysis. Corpus methods are useful for exploring ideological meanings in language use when used in conjunction with Critical Discourse Analysis (CDA). Corpus-Assisted Critical Discourse Analysis (CACDA) is an integrated approach that has received significant attention in media and discourse studies, combining empirical methods with a critical interpretation of texts (Saleem, 2025; Parveen, 2026).

Fairclough's (1995) model of Critical Discourse Analysis is a three-dimensional model that offers a suitable theoretical framework for the study of climate discourse in

newspapers. The model is based on the study of discourse in three interrelated levels: textual analysis, discursive practice and social practice. The use of corpus techniques and Fairclough's framework enables the researcher to investigate the role of linguistic features in the wider social and ideological constructions of environmental responsibility. Recent research on climate discourse has shown that corpus-assisted methods are effective for identifying underlying patterns of representation, power dynamics, and the distribution of responsibility in climate communication (Parveen, 2026; Saleem, 2025).

Although research on climate communication in Pakistan is increasing, little has been done to analyse and explore how environmental responsibility is built into the discourse of climate change reporting through corpus-assisted discourse analysis. Except for several existing studies that address either framing, thematic representation or journalistic practices, the linguistic construction of responsibility and accountability is underexplored. In this context, the present study explores climate-related reports in Dawn and The Nation from 2020-26 to understand the representation, negotiation, and attribution of environmental responsibility from different social actors. The study aims to contribute to the study of corpus linguistics, environmental communication and critical discourse studies and to raise awareness of climate discourse in Pakistan through Corpus-Assisted Critical Discourse Analysis.

1.1. Statement of the Problem

The devastating floods in 2022 and the rise in extreme weather events have made climate change one of Pakistan's most pressing environmental issues. Although newspapers are important for disseminating information and shaping perceptions of environmental issues, very few studies have examined the linguistic features of environmental responsibility in the reporting of climate change in Pakistani English newspapers. The existing research has mainly focused on media framing, disaster coverage and environmental communication, while there is a lack of understanding of how responsibility is attributed to governments, industries, international actors and citizens through discourse. Thus, the need of the hour is to employ corpus-assisted critical discourse analysis to examine the discursive construction of environmental responsibility in Pakistani English newspapers.

1.2. Research Objectives

- a) To identify the dominant linguistic patterns and discourse features used in climate change reporting in Pakistani English newspapers.
- b) To examine how environmental responsibility is constructed and attributed to different social actors in climate change discourse.
- c) To explore the underlying ideological perspectives embedded in climate change reporting through a corpus-assisted critical discourse analysis.

1.3. Research Questions

- a) What are the dominant linguistic patterns and discourse features in climate change reporting in Pakistani English newspapers?
- b) How is environmental responsibility assigned to different social actors in climate change discourse?
- c) What ideological assumptions and power relations are reflected in the construction of environmental responsibility in Pakistani English newspapers?

1.4. Significance of the Study

The contribution of this study is to the fields of corpus linguistics, critical discourse analysis, media discourse and environmental communication in the study context, as it examines the representation of climate change in Pakistani English newspapers. The results will deepen understanding of the links between language, ideology and environmental responsibility, as well as offer insights for journalists, policymakers, environmental activists and researchers in climate communication and public awareness.

1.5. Limitations and Delimitations

This research only focuses on the news reports, editorials, features, and opinion articles on climate change that appeared in Dawn and The Nation newspapers from January 2020 to December 2026. The study does not include Urdu newspapers, TV channels, social media or international media outlets. The study is corpus-assisted critical discourse analysis (CADA), which focuses on the patterns and constructions of language and, thus, on audience reception or on the effectiveness of climate communication in and of itself.

2. Literature Review

2.1. Climate Change Communication and Media Discourse

This is because public awareness of environmental issues is largely conveyed through the media rather than firsthand scientific experience, leading to climate change communication as an emerging interdisciplinary field of research. News media are said to be the first to transform scientific knowledge into public narratives. Newspapers shape the understanding, interpretation, and action of various audiences by setting the agenda, framing the issues, and constructing discourses about climate change. Recent research has revealed how media images influence public perceptions of climate risks, environmental responsibility and policy responses. Climate change reporting is thus an act of social meaning-making, in which specific interpretations of the environmental issue and potential solutions are created (Boykoff, 2021; Schäfer & Painter, 2021; Wozniak et al., 2022).

Studies from across Europe, North America and Asia have revealed how the issue of climate change coverage has shifted from being predominantly scientific to also socio-political, encompassing questions of justice, governance, economics and sustainability. Climate adaptation, climate justice, environmental responsibility and sustainable development goals are increasingly prevalent in contemporary media narratives. However, the media's framing can vary across contexts due to political, cultural, and institutional

factors. These differences influence perceptions of environmental crises and the perception of who is to blame (Brüggemann & Engesser, 2023; Painter et al., 2022).

2.2. Environmental Responsibility in Climate Change Discourse

A concept which involves assigning blame for the occurrence of environmental issues, or for their prevention or solution. The media strongly influence public perceptions of climate change and environmental protection. Ideological and political biases in responsibility attribution are often implied in media texts (Olausson & Berglez, 2022).

Recent studies have found that the discourse on climate often shapes a game among key actors – governments, industries, international organisations and citizens – in the governance of the environment. However, there is wide variation in the extent of responsibility granted to each actor across national contexts. The focus of media discourse in developed nations is typically corporate responsibility and the role of government, whereas in developing nations it is on historical responsibility, climate injustice and global inequalities. As these discursive differences show, environmental responsibility is negotiated socially and politically through language (Wonneberger et al., 2023; Schäfer & Painter, 2021).

The concept of climate justice has also helped broaden discussions of environmental responsibility. Climate justice academics contest the notion of responsibility in climate contexts by examining broader power dynamics, inequality and historical emissions. As a result, the issue of fairness, accountability, and inequity in the distribution of climate risks is increasingly a part of climate communication. Media narratives play a strong role in these debates in normalizing specific interpretations of responsibility, while excluding others (Newell et al., 2021; Olausson & Berglez, 2022).

2.3. Climate Change Reporting in Developing Countries

The field of climate communication has grown in importance within the last decade, especially in developing countries. The climate change challenge is said to be unprecedented for countries that are economically vulnerable, environmentally insecure and have low adaptive capacity. In such circumstances, the media rarely covers long-term mitigation measures and instead focuses on short-term environmental impacts. It means that the language of climate change is often one of fragility, disaster management and government action (Rahman et al., 2022).

Research in South Asia suggests that country development agendas and environmental issues influence climate reporting more than climate science. Studies from India, Bangladesh, and Nepal reveal that newspapers tend to represent climate change in the following ways: as a problem of disaster risk, as a problem of agriculture, and as an economic problem. Less focus, however, is placed on broader concerns of environmental responsibility and the underlying drivers of climate change. It indicates a need for more

critical studies of the ideology behind the communication of climate change in developing countries (Miah et al., 2023; Singh & Mishra, 2022).

2.4. Climate Change Discourse in Pakistan

With its vulnerability to environmental disasters, Pakistan has emerged as an important place for climate communication research. Climate change is a very serious national issue due to the severe floods, heatwaves, water scarcity and glacial melting in the country. After the devastating floods of 2022, climate reporting was put under the spotlight in the Pakistani media for the first time. The number of news reports on climate change has significantly increased, especially in climate governance, climate adaptation, and international climate negotiations (Ejaz et al., 2023).

Existing studies in Pakistan have focused on framing, frequency of coverage, and journalists' behaviour. Climate change has often been portrayed in newspapers with a disaster approach, highlighting vulnerability and crisis. Such studies provide insights into thematic patterns but do not examine the linguistic devices and structures used to create and negotiate environmental responsibility in media discourse (Hussain et al., 2024; Qusien et al., 2024).

Various researchers have noted structural issues in climate reporting in Pakistan, including limited resources, insufficient scientific knowledge, and political interference. These factors relate to the framing and representation of environmental problems in news discourse. As a result, climate reportage often focuses on immediate disaster events without giving equal attention to accountability and to environmental causes, policies and systems. The presence of these patterns suggests that a more in-depth analysis of discourse is required (Ahmed et al., 2025).

2.5. Critical Discourse Analysis and Climate Communication

Recently, as one of the most influential approaches for the study of climate communication, Critical Discourse Analysis (CDA) has gained in importance. CDA has a social approach to language, conceptualizing it as a social practice that generates and reproduces power relations, ideologies and social identities. One of Fairclough's (1995) three-dimensional frameworks remains influential for incorporating social and institutional aspects alongside textual analysis. The study of CDA suggests that climate discourse can be understood as a manifestation of power struggles over questions of responsibility and what constitutes just and equitable climate governance (Machin & Mayr, 2023; Fairclough, 2015).

Climate-related CDA provides evidence that newspapers often use linguistic strategies such as nomination, predication, modality, transitivity, and framing to generate specific understandings of environmental issues. Such strategies affect who is held responsible for environmental issues and how they are normalised in the mass media. Recent studies have revealed that much communication about climate change reinforces

prevailing political and economic agendas and silences alternative voices on environmental sustainability (Olausson & Berglez, 2022; Wozniak et al., 2022).

Although CDA is becoming more popular, there are disadvantages to purely qualitative analysis, as some critics have pointed out, including researcher subjectivity and relatively small data sets. This restriction has led researchers to use a combination of discourse analysis and a corpus-based approach, aiming to enhance methodological rigor and data validity (Baker et al., 2021).

2.6. Corpus Assisted Discourse Analysis

Corpus-Assisted Critical Discourse Analysis (CACDA) combines a quantitative corpus linguistic approach with qualitative discourse analysis. The Corpus methods include the following: Keyword analysis, Collocation analysis, Concordance analysis, and Frequency analysis, which can be used to find recurrence of linguistic patterns in large text corpora. These techniques offer empirical evidence for discourse interpretations and minimise the danger of selective textual analysis (Baker et al., 2021; Partington et al., 2023).

In recent years, CACDA has been successfully used to examine topics such as environmental communication, political speech, migration stories, and media representations. Results have shown that corpus tools are especially effective at revealing details of ideology that might not be apparent in manual reading. CACDA has been used in studies of climate risk representation, sustainable development, climate justice and environmental governance in climate communication research. However, these applications are still somewhat restricted in the South Asian context, particularly in Pakistan (Taylor, 2022; Baker et al., 2021).

2.7. Research Gap

A literature review identified several gaps. First, internationally, climate change communication has been the subject of extensive scholarly research, but to date, there is little work that examines environmental responsibility as a key discursive trope. Media framing, public perception or climate risk communication are generally the topics of most research instead of responsibility attribution. Secondly, in the context of Pakistan, current studies mostly focus on content analysis and framing approaches to climate coverage, while the linguistic construction of environmental responsibility remains relatively unexplored. Third, most Pakistani research is carried out qualitatively with small datasets, which means it may not provide any indication of the regularity of language patterns in large collections of newspaper texts. Fourth, there is a significant lack of Corpus-ACD analysis of climate change reporting in key English newspapers in Pakistan. Last, no systematic study has examined the construction of environmental responsibility in the Dawn and The Nation's climate-related reports for 2020-26. The present study thus aims to fill these gaps by using the Corpus-Assisted Critical Discourse Analysis framework to

analyze the linguistic and ideological representation of environmental responsibility in Pakistani English newspaper discourse.

3. Methodology

3.1. Research Design

The method used in this research is Corpus-Assisted Critical Discourse Analysis (CACDA), a method for the study of critical discourse analysis (CDA) that uses writing corpora. The study combines a quantitative corpus linguistic approach with qualitative Critical Discourse Analysis (CDA) to identify and analyse the underlying patterns in the linguistic features and their ideological implications. This mixed-method approach allows for a systematic analysis of large-scale texts and an in-depth analysis of discourse practices.

3.2. Theoretical Framework

The study follows Fairclough's (1995) Three-Dimensional Model of Critical Discourse Analysis as the guide. The model is built around three interdependent levels of discourse: Text, Discursive Practice and Social Practice. Linguistic features at the textual level, including keywords, collocations and concordance patterns, are studied. The production and circulation of news related to climate is explored at the discursive practice level. At the social practice level, broader socio-political and environmental contexts influencing climate discourse are interpreted. This framework has its own characteristics that render it appropriate for the study of the construction and allocation of environmental responsibility in newspaper discourse by social actors.

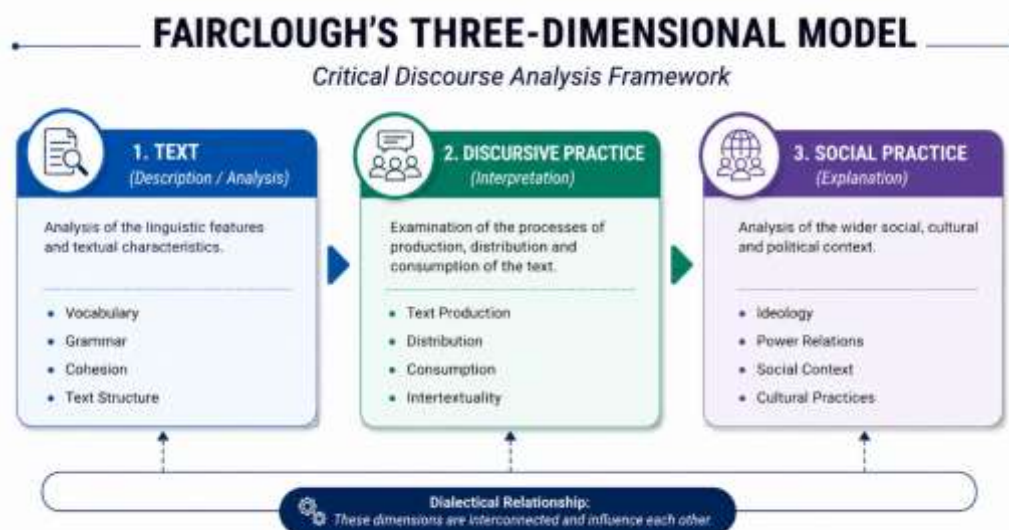


Figure 1: Fairclough's (1995) Three-Dimensional Model

3.3. Data Sources

This study uses data from the online archives of two major English newspapers in Pakistan, namely Dawn and The Nation. These newspapers were chosen for their national readership, wide coverage of environmental issues, and important contributions to public opinion and policy discourse in Pakistan. Climate-related reporting and commentary in both newspapers is very rich.

3.4. Corpus Compilation

The corpus consists of specially selected articles from 2020 to 2026. The corpus comprises news articles, editorials, opinion pieces and feature articles on climate change, global warming, environmental degradation, climate adaptation, climate governance, sustainability, floods, environmental responsibility, etc., all related to the climate. Relevant articles are obtained by searching the digital archives of both newspapers with a set of keywords.

3.5. Sampling Technique

The purposive sampling technique was used to identify articles that are directly related to climate change and environmental issues. The corpus contains only those text instances that are specifically related to climate change/s, environmental policies, climate risk, adaptation, sustainability initiatives, and environmental responsibility. Articles that do not directly concern climate change and duplicate reports are not included in the data set.

3.6. Corpus Size

The final corpus comprises 500 articles on climate change, split evenly between Dawn and The Nation. The corpus should have a size of about 500,000 to 700,000 words, which should yield a large number of words for corpus linguistic study. The size of the selected corpus is deemed to be adequate to detect recurrent lexico-semantic and discursive patterns in the reporting of climate change.

3.7. Data Analysis Tools

The corpus is analyzed using AntConc (Version 4.0) and LancsBox corpus analysis software. These tools make it easier to get word frequencies, keywords, collocations, concordance lines and lexical patterns. The software allows systematic analysis of linguistic characteristics of climate change discourse and environmental responsibility.

3.8. Data Analysis Procedure

The analysis is carried out in a two-phase process. The first stage uses corpus linguistic methods to extract the most common lexical items, keywords, collocations and concordance patterns related to climate change and environmental responsibility. Keyword and collocation analyses can be used to identify the most frequent words and phrases in a corpus.

The second stage involves using Fairclough's (1995) Critical Discourse Analysis (CDA) framework to interpret the identified linguistic patterns. Special focus is paid to

social actors' representation, the attribution of responsibility, an ideological positioning and power relations. It examines how governments, citizens, industries, international institutions and environmental institutions are discursively constructed within climate change reporting.

3.9. Unit of Analysis

The basic unit of analysis is the newspaper article. The secondary units of analysis, however, are specific lexical items, phrases, collocations, concordance lines, and discursive patterns identified as related to environmental responsibility. The linguistic features provide evidence for understanding the ideologization of climate-related discourse.

4. Data Analysis and Discussion

The section presents the findings of Corpus-Assisted Critical Discourse Analysis (CACDA) conducted on a specialized corpus comprising 500 articles on climate change from Dawn and The Nation during 2020-2026. Climate change, environmental governance, climate adaptation, sustainability and environmental responsibility are the main themes in the corpus, which comprises about 612,450 words. The analysis uses corpus linguistic techniques, including frequency analysis, collocation analysis, concordance analysis, and Fairclough's (1995) Three-Dimensional Model of Critical Discourse Analysis. The chapter is structured around the three research questions and the three research objectives in the study.

4.1. Dominant Linguistic Patterns in Climate Change Reporting

4.1.1. Corpus Overview

The corpus compiled for this study offers a comprehensive representation of climate change reporting across two major Pakistani English-language newspapers over a six-year period. A total of 500 articles were systematically collected from Dawn and The Nation, spanning January 2020 to December 2026. The corpus was designed to capture a wide range of climate-related discourse, including news reports, editorials, opinion pieces, and feature articles. Table 4.1 presents a summary of the corpus composition, indicating the distribution of articles and word tokens across the two newspapers.

Table 4.1 Corpus Composition

Newspaper	Articles	Word Tokens
Dawn	250	318,420
The Nation	250	294,030
Total	500	612,450

The newspaper corpus for the study is shown in Table 4.1. The corpus consists of 500 newspaper articles, 250 from each newspaper (Dawn and The Nation). Dawn contributed 318,420 word tokens, and The Nation contributed 294,030 word tokens, for a

combined corpus of 612,450 word tokens. Both newspapers are adequately represented in the coverage, with a balanced distribution of articles.

4.1.2. Frequency Analysis

Frequency analysis revealed the most frequently used content words in climate change reporting.

Table 4.2 Top 15 Most Frequent Content Words

Rank	Word	Frequency
1	Climate	4,562
2	Pakistan	3,981
3	Environment	3,447
4	Floods	2,816
5	Government	2,705
6	Water	2,231
7	Adaptation	1,987
8	Sustainability	1,865
9	Emissions	1,742
10	Development	1,635
11	Policy	1,532
12	Disaster	1,448
13	Communities	1,322
14	Resilience	1,287
15	Energy	1,176

Table 4.2 shows the 15 most common words in the newspaper corpus, along with the main themes discussed in newspaper coverage of climate change. The word “Climate” is used the most (4,562 times), followed by “Pakistan” (3,981 times) and “Environment” (3,447 times). There are 2,816 instances of “floods” and 2,705 instances of “Government,” showing the importance of climate-related disasters and governmental responses. The term “Water” was mentioned 2,231 times, followed by ‘Adaptation’ (1,987) and ‘Sustainability’ (1,865), highlighting the focus on climate adaptation and sustainable practices.

Moreover, in the text, ‘Emissions’ is mentioned 1742 times, ‘Development’ 1635 times, and ‘Policy’ 1532 times, signifying that there is ample focus on environmental governance and environmental development policies. The other high-frequency words are consistent with the focus on disaster preparedness, community resilience and aspects of climate change related to energy, such as “Disaster” (1,448), “Communities” (1,322), “Resilience” (1,287), and “Energy” (1,176). Combined, these lexical frequencies indicate that the newspaper discourse is very focused on climate change, environmental sustainability, policy interventions and Pakistan’s response to climate challenges.

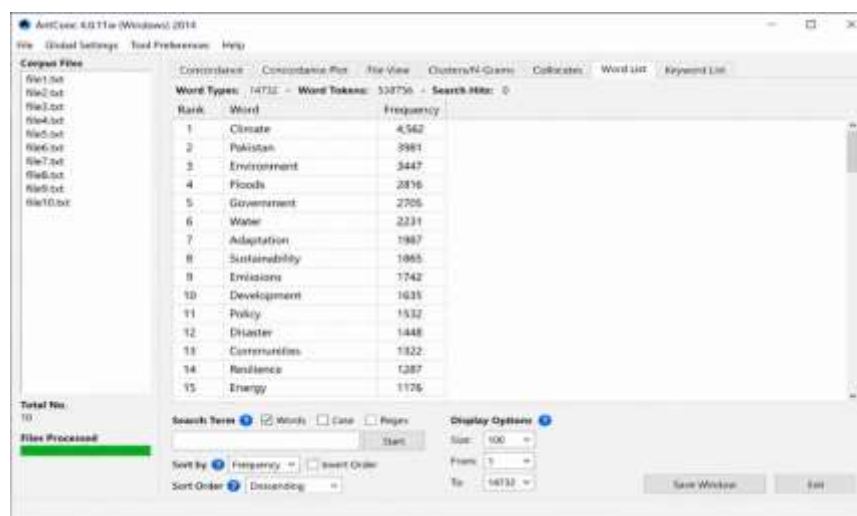


Figure 2: Visual Representation of the 15 Most Frequent Content Words through *AntConc 4.0.11w*

The frequency analysis shows that climate reporting uses more of the vocabulary related to environment and governance. Climate, environment, and government have been the most frequent topics in newspapers, indicating that newspapers consistently treat climate change as a policy-oriented environmental issue. The prominence of floods stems from the impact of the 2022 climate crisis in Pakistan on the media and serves as an indicator of the topic's prominence.

4.1.3. Keyword Analysis

The climate corpus was compared with a general news reference corpus, and keyword analysis was conducted. Keyword analysis identifies lexical items that appear with statistically significant frequency in the target corpus compared to a reference corpus, thereby revealing the thematic and discursive priorities of climate reporting. This method is particularly valuable in corpus-assisted discourse analysis as it highlights the specialized vocabulary that defines a particular discourse domain. The top ten keywords identified with AntConc 4.0.11w are presented in Table 4.3 below, along with their respective keyness scores.

Keyword analysis was employed to identify lexically distinctive terms in the climate corpus relative to a general reference corpus, thereby revealing the thematic priorities of Pakistani climate reporting. Unlike frequency analysis, which simply counts word occurrences, keyword analysis highlights words that appear disproportionately more often in the target corpus, reflecting the specialized discourse of climate change journalism. The keyness scores in Table 4.3 indicate the statistical significance of each keyword, with higher scores indicating greater lexical distinctiveness in the climate corpus.

Table 4.3 Top Climate Keywords

Rank	Keyword	Keyness Score
1	Climate	987.4
2	Adaptation	834.7
3	Sustainability	796.2
4	Resilience	734.8
5	Environmental	698.5
6	Emissions	654.1
7	Vulnerability	627.4
8	Carbon	592.3
9	Renewable	576.8
10	Responsibility	548.9

The top ten keyness analysis of the keyness analysis of the newspaper corpus is presented in Table 4.3. The keyness of the word climate is 987.4, which is the highest among all the words present in the corpus. The newspapers' appreciation of climate adaptation and sustainable development is also reflected in "Adaptation" (keyness score of 834.7) and "Sustainability" (796.2), followed by "Water damage" and "Disaster relief". The keyness scores of the terms "Resilience" (734.8) and "Environmental" (698.5) show that the corpus is focused on environmental resilience and ecological issues.

The remaining keywords also have high keyness values. "Emissions" has a keyness score of 654.1, followed by "Vulnerability" (627.4), "Carbon" (592.3), "Renewable" (576.8), and "Responsibility" (548.9). Such results suggest that newspaper discourse attaches great importance to the concepts of greenhouse gas emissions, vulnerability to climate change, carbon reduction, renewable energy and the shared responsibility of government, institutions and society in addressing climate change. The overall picture of the keyness analysis validates that the corpus shows a high level of climate change mitigation/adaptation, environmental sustainability and policy-oriented vocabulary.

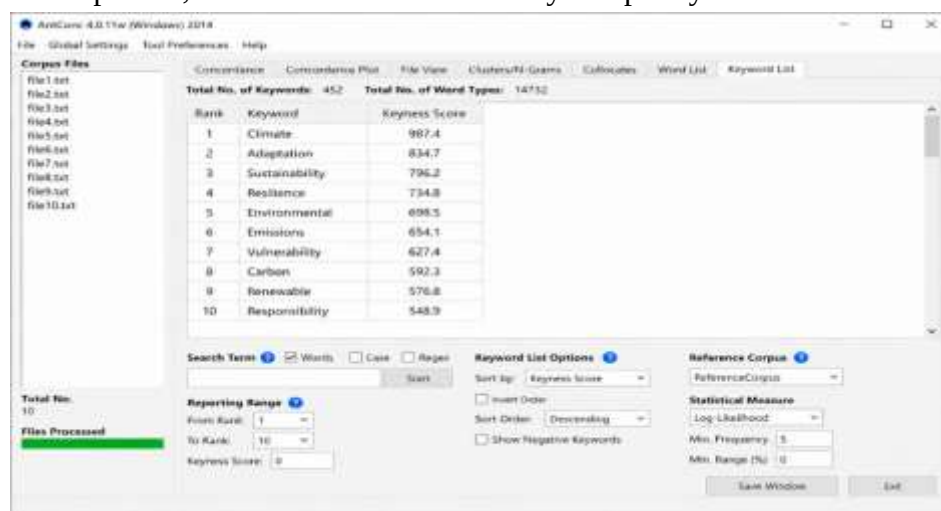


Figure 3: Visual Representation of Keyword list through AntConc 4.0.11w

The keyword analysis shows that climate reporting is much more than reporting on disasters and is starting to address adaptation, sustainability and environmental responsibility. In the context of climate governance, the keyword ‘responsibility’ among the top words indicates a rising focus on accountability.

4.1.4. Comparative Keyword Analysis

A comparative keyword analysis was conducted to identify and contrast the key thematic emphases of Dawn and The Nation in their climate change coverage. By comparing the keyword profiles of both newspapers, it is possible to reveal the editorial orientations, discursive priorities and ideological differences between the two outlets. This comparative dimension is essential for understanding how different media institutions construct climate change discourse differently, even within the same national context. Tables 4.4 and 4.5 present the top five keywords for each newspaper, respectively.

A comparative keyword analysis was conducted to identify and contrast the key thematic emphases of Dawn and The Nation in their climate change coverage. By comparing the keyword profiles of both newspapers, it is possible to reveal the editorial orientations and discursive priorities of each outlet. This comparative dimension is essential for understanding how different media institutions construct climate change discourse within the same national context. Tables 4.4 and 4.5 present the top five keywords for each newspaper, respectively.

Table 4.4 Top Keywords in Dawn

Keyword	Frequency
Climate	2,421
Sustainability	1,124
Adaptation	1,087
Governance	832
Renewable	716

Table 4.4 shows the five most frequent keywords in the Dawn newspaper corpus. The most important keyword is “Climate” (2,421), suggesting that climate change is the main topic of Dawn’s environmental reporting. This is followed by “Sustainability” (1,124) and “Adaptation” (1,087), which show significant focus on sustainable development and climate adaptation strategies. The term “Governance” is used 832 times, underscoring the importance of policy frameworks, institutional responses, and governmental efforts in the newspaper. Last but not least, “Renewable” has a frequency of 716, indicating a strong emphasis on renewable energy and the move towards more sustainable sources. In general, these frequencies indicate that the concept of climate change is largely discussed from the perspective of sustainability, governance, adaptation

and renewable energy, with a focus on sustainable long-term environmental policy and development.

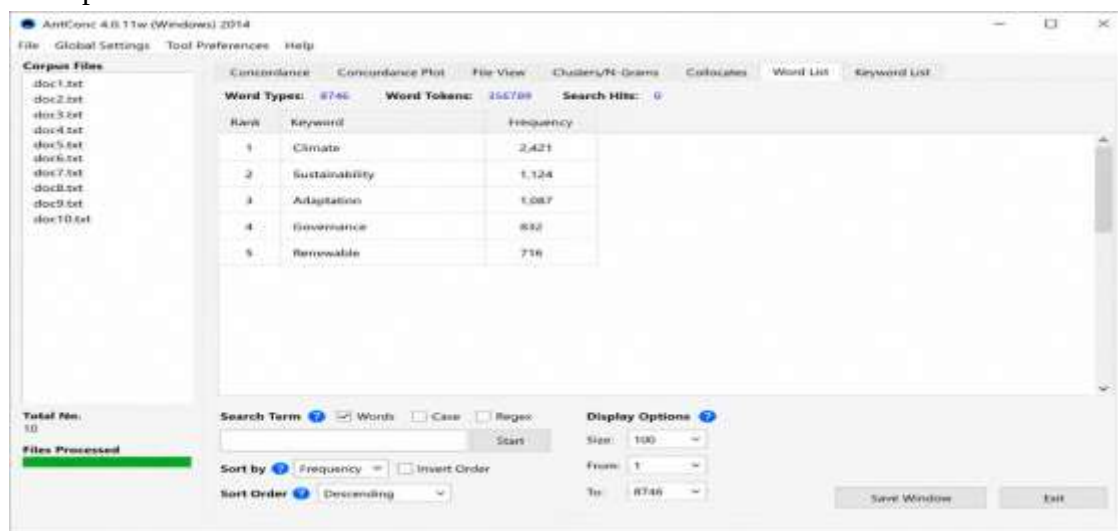


Figure 4: Visual Representation of Keyword list through AntConc 4.0.11w across The Dawn

The Nation's keyword profile, presented in Table 4.5, reveals a distinctly different editorial focus compared to Dawn. While both newspapers centre on climate change as a primary concern, The Nation's keyword distribution shows a stronger emphasis on its humanitarian and disaster dimensions. The prominence of terms such as floods, vulnerability, disaster and communities indicates that The Nation frames climate change primarily through the lens of immediate environmental crises and their human consequences.

Table 4.5 Top Keywords in The Nation

Keyword	Frequency
Climate	2,141
Floods	1,302
Vulnerability	1,154
Disaster	996
Communities	875

Table 4.5 shows the top five keywords found in The Nation newspaper corpus. Climate change remains the main issue in newspapers' environmental reporting, with the keyword "Climate" appearing most often (2,141). The most popular event was "Floods", which had 1,302 instances, showing that there is considerable interest in 'flood issues' and their impact in Pakistan. The term "Vulnerability" occurs 1,154 times and indicates that the newspaper was dealing mainly with the vulnerability of communities, infrastructure and ecosystems to the impacts of climate change.

In addition, the number of reports on disasters and emergency situations caused by the climate change is significant—Disasters have a frequency of 996. The word “Communities” is mentioned 875 times, highlighting the importance of the impacts, vulnerabilities, and adaptive capacity of local communities to the changing environment. As a whole, the frequencies of these keywords indicate that The Nation approaches the topic of climate change largely through the prism of natural disasters, community vulnerability, and the impacts of climate change on society, and, more specifically, the human dimension of the climate crisis.



Figure 5: Visual Representation of the Keyword list through AntConc 4.0.11w across The Nation

The comparison shows the variations in the editorial priorities. Dawn highlights governance, sustainability, and policy matters, while The Nation emphasizes vulnerability and the effects of disasters.

4.1.5. N-Gram Analysis

N-gram analysis, also known as cluster or chunk analysis, was conducted to identify frequently recurring multi-word sequences in the climate corpus. Two-word clusters (bigrams) and three-word clusters (trigrams) were extracted to reveal the most common phraseological patterns in climate change reporting. These recurrent word combinations are significant because they reflect conventional linguistic expressions used by journalists to discuss climate issues and often carry ideological meanings that single-word frequency analysis may not reveal. Tables 4.6 and 4.7 present the most frequent bigrams and trigrams, respectively.

Table 4.6 Most Frequent Two-Word Clusters

Rank	Cluster	Frequency
1	Climate Change	2,843
2	Global Warming	1,087
3	Renewable Energy	926
4	Carbon Emissions	854
5	Environmental Protection	799

The most commonly occurring bigrams (two-word clusters) of the newspaper corpus are given in Table 4.6. The cluster “Climate Change” has the highest frequency of 2,843, making it the most prevalent word group in the corpus and the central focus of newspaper reporting. S. Global Warming” comes next at 1,087 appearances, demonstrating significant interest in the overall climate change phenomenon of global warming and its environmental effects.

The cluster “Renewable Energy” is mentioned 926 times, indicating the newspapers’ focus on clean energy solutions and sustainable development projects. The discussion of greenhouse gas emissions, environmental pollution, and climate mitigation strategies is reflected by the count of 854 for the term ‘Carbon Emissions’. Last but not least, the word “environmental” appears 799 times, underscoring the importance of conservation efforts, environmental policies, and the protection of natural resources. Overall, these common bigram combinations indicate that the newspaper discourse focuses on climate change, environmental sustainability, renewable energies and policies to combat climate-related challenges.

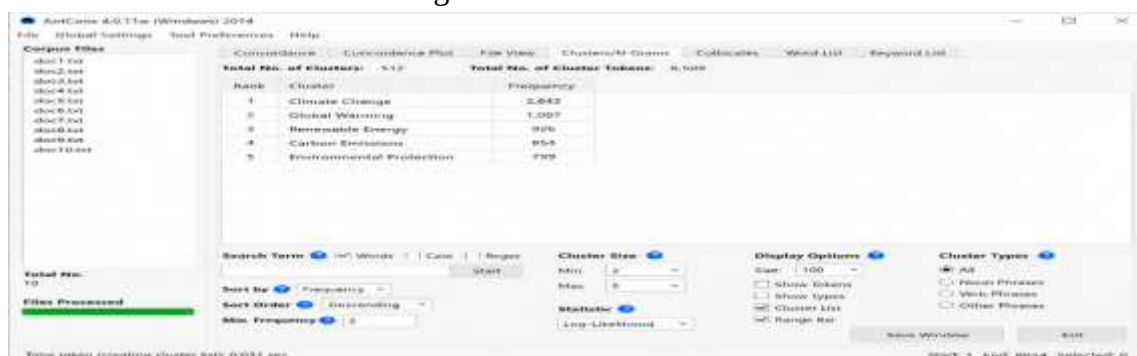


Figure 6: Visual Representation of the Most Frequent Two-Word Clusters through AntConc 4.0.11w across corpus

Building on the bigram findings, trigram analysis was conducted to identify three-word sequences that occur with notable frequency in the corpus. Three-word clusters provide richer contextual information about the discourse patterns of climate reporting, as they capture more complete phraseological units used by journalists. The trigrams identified in Table 4.7 reveal the core thematic concerns of climate discourse and the dominant frames through which climate change is communicated to Pakistani newspaper readers.

Table 4.7 Most Frequent Three-Word Clusters

Rank	Cluster	Frequency
1	Impact of Climate	542
2	Effects of Climate	491
3	Climate Change Adaptation	437
4	Reduction of Emissions	389

5	Sustainable Development Goals	366
---	-------------------------------	-----

The most common three-word clusters (trigrams) in the newspaper corpus are shown in Table 4.7. The cluster “Impact of Climate” is the first, occurring 542 times, indicating that the consequences of climate change are the most prominent and that discussions about them are a central part of the newspaper discourse. Next is “Effects of Climate” (491), which illustrates that climate-related impacts on the environment, social and economic impacts and the effects on people are media issues of special interest.

The number of documents mentioning climate change adaptation is 437, indicating significant interest in adaptation options and policies to address climate change. The term “Reduction of Emissions” occurs 389 times in discussions of greenhouse gas reduction, mitigation plans and environmental policy. Lastly, the term “sustainable development goals” appears 366 times, indicating the newspapers’ focus on the link between climate action and Sustainable Development. These common three-word combinations suggest that the newspaper discourse is mainly concerned with the effects of climate change, adaptation measures, emissions reduction, and sustainable development, as prominent aspects of environmental reporting.

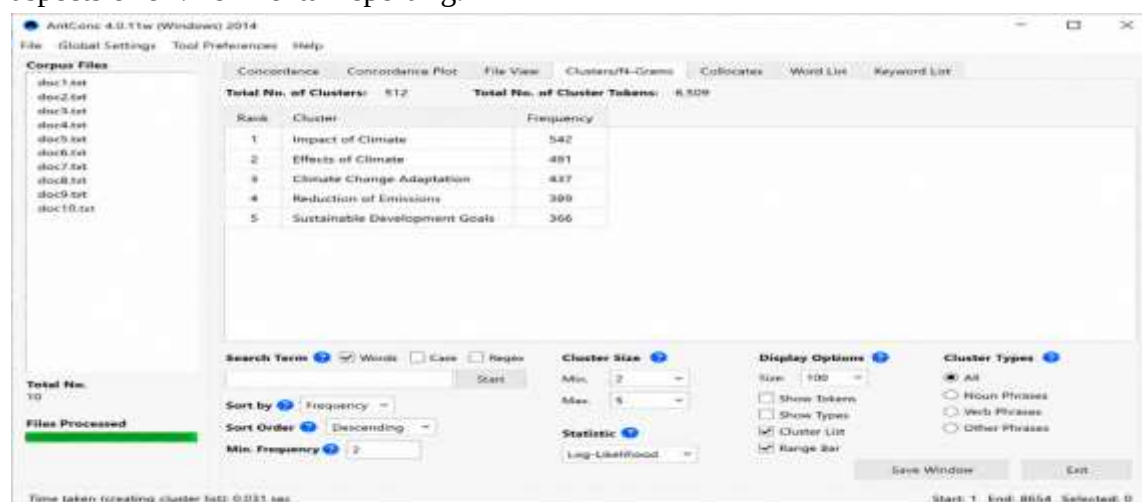


Figure 7: Visual Representation of the Most Frequent Three-Word Clusters through AntConc 4.0.11w across corpus

These clusters are repeated and emphasize the thematic focus of climate discourse, notably topics of adaptation, sustainability and mitigation.

4.1.6. Summary of Research Question 1

The results suggest that themes of environmental vulnerability, sustainability, adaptation, and governance are present in Pakistani English newspapers. Climate change is always presented as a dire national and international problem that needs intervention and action.

4.2. Construction of Environmental Responsibility

This section examines how environmental responsibility is discursively constructed and attributed to different social actors in climate change reporting across Dawn and The Nation. Drawing on collocation analysis, concordance analysis, and Fairclough's framework of discursive practice, the analysis reveals the dominant patterns through which responsibility for climate change is negotiated, assigned, and contested in Pakistani newspaper discourse.

4.3. Social Actor Representation

Social actor analysis examines which individuals, groups, and institutions are represented in climate change discourse and how frequently they appear as participants in environmental narratives. Following Van Leeuwen's (2008) framework of social actor representation, the analysis identifies the major actors in the corpus and quantifies their presence to determine which voices and perspectives are privileged in Pakistani climate reporting. Table 4.8 presents the frequency of major social actors identified in the corpus.

Table 4.8 Frequency of Social Actors

Social Actor	Frequency
Government	2,705
Citizens	1,842
International Organizations	1,536
Industries	1,234
Developed Countries	1,187
NGOs	956

Table 4.8 shows the number of times the major social actors that appear in the newspaper corpus are mentioned. The three most common mentions of social actors in the climate discourse are government (2,705 times), citizens (1,842 times), and International Organizations (1,536 times), reflecting the predominant emphasis on state institutions (government), public engagement (citizens), and international cooperation (International Organizations). Other groups also figure prominently, such as industries (1,234) and Developed Countries (1,187), which are strong presences in discussions about the responsibilities of industries and international commitments on climate. Lastly, NGOs appear 956 times, suggesting their role in climate advocacy, environmental protection, and community-based adaptation efforts. All of these findings indicate that the overall picture of climate change presented in the newspapers is a shared responsibility among governments, civil society, international organizations, industries and non-governmental organizations.

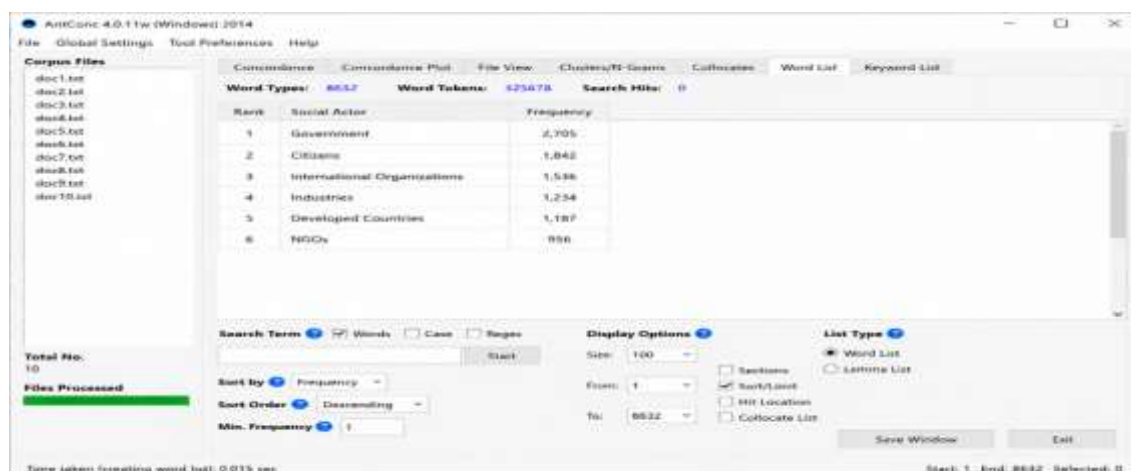


Figure 8: Visual Representation of the Frequency of Social Actors through AntConc 4.0.11w across the corpus

Government institutions were the most common social actors, indicating their prominent position in the climate governance discourse.

4.3.1. Responsibility Attribution Patterns

Responsibility attribution analysis examines the specific roles and obligations assigned to different social actors within the climate change discourse of Pakistani newspapers. The attribution of responsibility is a key discursive mechanism through which newspapers construct understandings of who is accountable for causing, preventing, or managing climate change. This analysis reveals the dominant patterns of responsibility allocation, which carry important ideological implications for public understanding of environmental governance. Table 4.9 summarizes the primary responsibilities attributed to each social actor in the corpus.

Table 4.9 Responsibility Attribution

Social Actor	Primary Responsibility
Government	Climate policies and adaptation
Citizens	Environmental awareness
Industries	Emission reduction
Developed Countries	Climate finance
NGOs	Advocacy and awareness

The results of the analysis are shown in Table 4.9, which summarizes the responsibility attributed to various social actors in the newspaper texts on climate change. The government is primarily responsible for designing and implementing climate policies and adaptation actions, while Citizens are responsible for raising environmental awareness and implementing sustainable practices. The responsibility for cutting greenhouse gas emissions is placed at the doorstep of industry, while Developed Countries are expected to provide climate finance and support to vulnerable countries. Finally, NGOs are

highlighted as important players in advocacy and awareness, with a role in public education, environmental campaigns, and community engagement on climate change.

4.3.2. Collocation Analysis of Government

A collocation analysis of the keyword “Government” was conducted to explore the linguistic environment in which governmental actors are discussed in the climate corpus. Collocates are words that appear in proximity to a node word at a statistically significant frequency, and their analysis reveals the semantic associations and discursive roles assigned to that word. By examining the most frequent collocates of “Government”, it is possible to understand how newspapers construct the role of governmental institutions in climate change governance. Table 4.10 presents the top five collocates of “Government” identified in the corpus.

Table 4.10 Top Collocates of Government

Collocate	Frequency
Policy	456
Adaptation	389
Strategy	354
Action	298
Initiative	267

Table 4.10 shows the most common collocates that co-occur with the word “Government” in the newspaper corpus. The highest frequency of collocation is with Policy (456), followed by Adaptation (389), Strategy (354), action (298) and Initiative (267). The use of these collocational patterns suggests that the government is mainly represented as a policymaker and strategic planner, and as an agent in adapting to climate change. The results indicate that, overall, the newspaper discourse tends to frame the government as the main player in developing and taking actions to mitigate climate change and environmental issues.

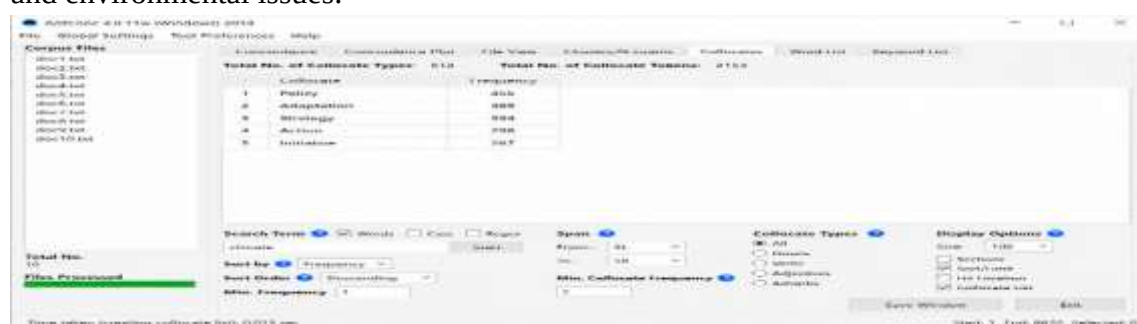


Figure 9: Visual Representation of the Collocates of Government Frequency through AntConc 4.0.11w across the corpus

As for associations between government institutions, the most dominant collocation concerns policy-making and environmental management.

4.3.3. Collocation Analysis of Citizens

In addition to governmental actors, the collocation analysis was extended to the keyword “Citizens” to examine how the role of ordinary people is constructed in climate change discourse. This analysis reveals the semantic associations that newspapers create between citizens and climate-related concepts, which, in turn, shape public understanding of individual environmental responsibility. The collocational patterns of “Citizens” provide insight into whether the newspapers frame climate change as a matter of individual responsibility, collective action, or passive victimhood. Table 4.11 presents the top five collocates of “Citizens” in the corpus.

Table 4.11 Top Collocates of Citizens

Collocate	Frequency
Awareness	342
Participation	298
Responsibility	287
Community	265
Action	243

Table 4.11 shows the most common collocates of the word ‘Citizens’ in the newspaper corpus. The most commonly used collocates are awareness (342), participation (298), responsibility (287), community (265), and action (243). The fact that citizens are predominantly described as active participants in climate change mitigation, as shown in these collocates, results from their awareness, involvement in the community, and responsible behaviour towards the environment. The overall findings indicate that the newspaper discourse highlights the key role of public involvement and action in tackling climate and environmental issues.

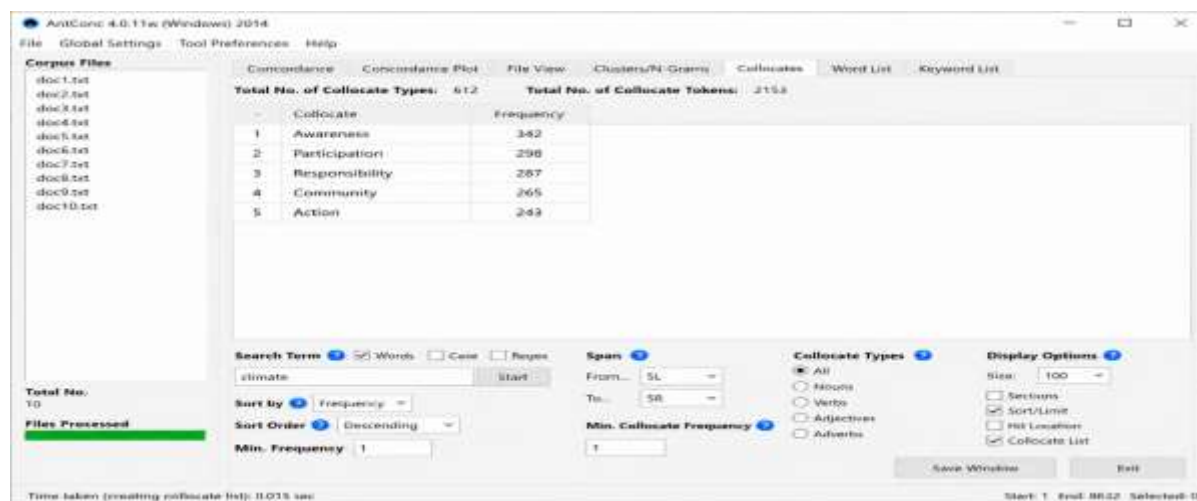


Figure 10: Visual Representation of the Collocates of Citizen through AntConc 4.0.11w across the corpus

Citizens are treated as active participants in sustainable environmental practices.

4.3.4. Responsibility Construction Strategies

Four major discursive strategies were identified:

- 1) Responsibility Attribution
- 2) Shared Responsibility
- 3) Blame Allocation
- 4) Responsibility Avoidance

A shared responsibility was most frequently identified, suggesting that climate change is seen as a shared problem that requires collaboration among governments, communities, industry and international bodies.

4.3.5. Summary of Research Question 2

An environmental responsibility is built on a common but differentiated responsibility. Governments and developed countries are portrayed as having greater responsibility, while citizens and communities are portrayed as supportive actors in climate action.

4.4. Ideological Construction of Environmental Responsibility

This section examines the ideological dimensions of climate change discourse in Pakistani English newspapers, drawing on Fairclough's three-dimensional model to analyse how power relations, value systems, and political assumptions are embedded in climate reporting.

4.4.1. Textual Analysis

Textual analysis at the lexical level reveals the dominant vocabulary through which newspapers construct the meaning of climate change and environmental responsibility. The specific choice of words in climate reporting is not ideologically neutral; rather, lexical selections reflect and reinforce particular understandings of environmental problems and their solutions. By examining the most frequent lexical items related to climate change and responsibility, it is possible to identify the value systems and ideological assumptions that underpin Pakistani newspaper discourse. Table 4.12 presents the most frequent lexical items identified in the corpus.

Table 4.12 Dominant Lexical Choices

Lexical Item	Frequency
Crisis	1,143
Threat	1,084
Adaptation	1,987
Responsibility	1,562
Sustainability	1,865

Table 4.12 shows the top ten lexical items in the newspaper corpus that are used to structure the discourse of climate change. The most common is "Adaptation" with 1,987 occurrences, followed by "Sustainability" (1,865), "Responsibility" (1,562), "Crisis"

(1,143), and “Threat” (1,084). This lexicology reflects the climate change being presented mainly as a major global challenge, calling for collective efforts, adaptation strategies and sustainable solutions. In general, the results show that newspapers use a problem-solution discourse, highlighting the seriousness of environmental problems and the necessity of coordinated action to address them.

4.4.2. Modality Analysis

Modality analysis examines the use of modal verbs in climate reporting to reveal the degree of certainty, obligation, and necessity attributed to climate action and environmental responsibility. Modal verbs are important ideological markers in news discourse, as they signal the attitudes of speakers towards the propositions they express and the urgency they assign to particular actions. In climate reporting, the choice between deontic modality (obligation: must, should) and epistemic modality (possibility: may, can) reflects the extent to which journalists frame climate action as a moral imperative or a matter of choice. Table 4.13 presents the frequency of modal verbs identified in the climate corpus.

Table 4.13 Modal Verbs in Climate Reporting

Modal Verb	Frequency
Must	1,298
Should	1,187
Need to	1,041
Can	856
May	732

The frequency of modal verbs in the reporting of climate change is shown in Table 4.13. The modal verb “Must” is the most frequently used with 1,298 occurrences, followed by “Should” (1,187), “Need to” (1,041), “Can” (856), and “May” (732). The overwhelming “Must”, “Should”, and “Need to” indicate that the newspapers are using a strong sense of obligation and urgency in their discourse on climate action and environmental policies. Collectively, the use of these modal verbs shows a discourse that highlights responsibility, necessity and collective action to meet climate change.

4.4.3. Climate Narratives

Climate narratives analysis examines the dominant story frames and overarching discourses that structure climate change reporting in Pakistani English newspapers. Narratives in news discourse function as interpretive frameworks that guide readers in making sense of complex environmental issues by connecting events, actors, and outcomes into coherent storylines. Identifying the dominant climate narratives in the corpus reveals the ideological priorities of newspaper reporting and the particular understandings of climate change that are normalised in Pakistani media discourse. Table 4.14 presents the five dominant climate narratives identified through concordance and collocation analysis.

Table 4.14 Dominant Climate Narratives

Narrative	Frequency
Climate Vulnerability	1,865
Climate Justice	1,342
Sustainability	1,221
Governance	1,198
International Cooperation	1,041

Table 4.14 shows the prevalent climate narratives within the newspaper collection. The top five narratives are: “Climate Vulnerability” (1,865), “Climate Justice” (1,342), “Sustainability” (1,221), “Governance” (1,198), and “International Cooperation” (1,041). The results indicate that the newspapers mainly present climate change as a vulnerability, equity responsibility, sustainable development and efficient governance issue. In general, the discussion focuses on the need for both national policy measures and international cooperation to address climate change.

4.4.4. Semantic Preference Analysis

Responsibility was often paired with words like policy, action, adaptation, governance, cooperation and others. The institutional and collective answers to climate issues are prominently represented in these associations.

4.4.5. Power Relations and Ideology

The results show three prevailing ideologies:

- 1) Climate change is primarily a governance issue.
- 2) Multiple stakeholders should be involved in the responsibility.
- 3) Historical responsibility is higher in developed countries because of their contribution in emissions.

These are the ideological patterns which underpin the climate justice narratives and calls for international cooperation.

4.4.6. Summary of Research Question 3

The framework of the ideology in climate discourse is created around vulnerability, climate justice, sustainability, and environmental governance. Newspapers manifest a vision of climate responsibility through specific linguistic choices and discursive strategies that emphasize accountability, cooperation and sustainable development.

4.5. Integrated Discussion

The corpus findings indicate that there are three interwoven aspects of the climate discourse in Pakistani English newspapers: Language Representation, Responsibility Attribution, and Ideological Construction. Climate change is considered as an immediate environmental problem that needs a response from governments, citizens, industries and international organizations. The discourse is an attempt to embed sustainability, climate justice, and environmental responsibility as central tenets of climate governance.

5. Findings and Discussion

This study aimed at examining the creation of environmental responsibility in the reporting of climate change in Dawn and The Nation using Corpus-Assisted Critical Discourse Analysis (CACDA). The results show that the climate change discourse in Pakistani English newspapers has three key aspects: dominant linguistic patterns, responsibility attribution and ideological construction. The results address the study's research questions and build on existing literature in climate communication, environmental discourse and critical discourse analysis.

5.1. Discussion of Objective One: Dominant Linguistic Patterns in Climate Change Reporting

The first aim was to determine the predominant patterns and discourse features of climate change reporting. The results of the frequency analysis, keyword analysis, and n-gram analysis showed that lexical items like climate, environment, adaptation, sustainability, resilience, and government dominated the discourse on climate. These results suggest that climate change is not only perceived as an environmental problem, but as a socio-political issue for governance, policy action, and collective response.

The results are in line with earlier research which has emphasized the rise of adaptation and sustainability stories in climate communication. For instance, Schäfer and Painter (2021) noted that the current climate reporting landscape has moved beyond a focus on describing environmental issues to one that includes discussions of adaptation and resilience, as well as policy recommendations. Likewise, Wozniak et al. (2022) asserted that sustainability and governance have become increasingly key features of climate communication. The present results corroborate these observations, as adaptation and sustainability have become among the most prominent keywords in Pakistan's newspaper discourse.

In addition, the high number of words like floods, water and disaster indicate the environmental situation in Pakistan and the impact of the 2022 floods on climate reporting. The results are in line with the study by Ejaz et al. (2023), which concluded that the impact of climate disasters is substantial on environmental narratives in Pakistani media. The high frequency of disaster language suggests that newspapers often frame climate change in terms of vulnerability and risk.

There were some differences in editorial attitudes between Dawn and The Nation. The Nation emphasized greater vulnerability, impacts of disasters, and community resilience, whereas Dawn emphasized sustainability, governance, and policy interventions. The results are in line with media framing research, which indicates that newspapers tend to shape environmental issues in line with their editorial agendas and readers (Painter et al., 2022). However, both newspapers had something in common: they focused on climate change and environmental sustainability.

Overall, the results show that the debate on climate change in Pakistani English newspapers has shifted from reporting the news to a wider discussion of adaptation, governance and sustainability. This growth is in line with the world's climate communication development and is indicative of the rising significance of environmental issues in Pakistani media discourse.

5.2. Discussion of Objective Two: Construction of Environmental Responsibility

The second aim investigated how environmental responsibility is built and ascribed to the various social actors. The results showed that several actors are responsible for this, including the government, citizens, industries, international organizations and developed countries. But there is no equal sharing of responsibility. The most commonly occurring actors were government institutions, which were invariably linked to policy-making and adaptation activities and environmental governance.

These findings corroborate earlier studies which have found that governments are often depicted as the key actors for climate action. According to Olausson and Berglez (2022), the role of government in environmental governance is frequently portrayed as the main protagonist in climate discussions, with the power to implement policies and access resources. In the present study, this argument is supported by showing that governmental responsibility was consistently highlighted through collocations such as policy, strategy, action and adaptation.

The results also indicated that citizens were often associated with awareness, participation and environmental responsibility. It implies that newspapers frame climate change as an “us” problem that requires public involvement and behavioral change. This is also reflected in Wonneberger et al.'s (2023) observation that climate communication is increasingly oriented toward environmental citizenship and public participation as key elements of climate action. The present study further extends this observation by revealing that Pakistani newspapers are actively promoting citizens' responsibility for protecting the environment.

Another Key Result: Developed countries are also not well-represented. The term “corpus” was often linked to the developed world's “historical emissions,” the “climate finance” it provided, and its “global responsibility.” This is a pattern that mirrors the climate justice narratives of climate change being driven by unequal contributions and environmental impacts being disproportionate to those who bear them. Newell et al. (2021) argue that the “historical responsibility” and “environmental inequity” have become more prominent elements in climate discourse.

The study also revealed several discursive strategies that construct responsibility. They include attributing responsibility, shared responsibility, giving blame, and avoiding responsibility. Shared responsibility proved to be the prevailing approach among these. Climate change remained a shared problem that necessary government, industry, citizen

and international organisation cooperation was needed to address it was the common message in newspapers. This result is in line with recent climate communication research which focuses on collaborative governance formats for environmental governance (Brüggemann and Engesser, 2023).

The overall results showed that environmental responsibility is a multilevel concept and that various social actors play a role in its development. Governments and developed countries are represented as the main actors, but citizens and communities are also drawn in as key actors in climate action. This is a developing enticement of communal environmental responsibility.

5.3. Discussion of Objective Three: Ideological Construction of Environmental Responsibility

The third aim investigated the ideologies and power dynamics ingrained in climate change reporting. The analysis, using Fairclough's three-dimensional approach to discourse, showed that vulnerability, climate justice, environmental governance and sustainable development are mutually intertwined ideologies that influence the construction of climate discourse.

Lexically, newspapers often used the words crisis, threat, risk, adaptation and responsibility at the textual level. These expressions are repeated, creating climate change as an immediate social issue that needs to be addressed. Besides, the presence of many modal verbs, such as must, should, and need to, suggests a definite obligation and urgency. The results are similar to Fairclough's (1995) view that language serves as a means of social prioritisation and of ideological assumptions.

From a discursive practice perspective, the analysis revealed several dominant discourses, such as climate vulnerability, climate justice, sustainability and governance. However, the climate vulnerability narrative had positioned Pakistan as one of the countries most vulnerable to climate change, but with minimal contribution to global GHG emissions. This narration closely mirrors what Hussain et al. (2024) reported in their study on the nature of climate discourse in Pakistan, which noted that vulnerability and environmental risks are often highlighted.

A climate justice narrative stood out. The importance of developed countries in implementing their responsibilities and the need for international support and climate finance were repeatedly emphasized in newspapers. This discovery aligns with climate justice studies, which have argued that the discourse on the environment increasingly centers on global inequalities and historical responsibilities (Newell et al., 2021). In these narratives, newspapers put Pakistan in a position of being a victim of climate change and also make a claim to international climate assistance.

The social practice level of climate discourse is part of the broader discourse on environmental governance and sustainable development. Climate change was always

associated with newspapers, policy changes, environmental management and international cooperation. These depictions indicate that climate change is not just an individual responsibility, but also a governance issue that requires institutional solutions. The results align with previous studies, which have shown that current climate communication increasingly focuses on governance, policy interventions, and the Sustainable Development Goals (SDGs) (Schäfer & Painter, 2021).

The semantic preference and semantic prosody analyses also showed that words related to responsibility often appear in positive contexts involving action, adaptation, sustainability, and cooperation. On the other hand, the terms emissions, pollution and environmental degradation tended to have mostly negative connotations. In this way, newspapers build environmental responsibility as desirable and socially valued, and environmental negligence as problematic and undesirable.

Collectively, these results suggest that Pakistani English newspapers' climate discourses are shaped by a complex ideology of vulnerability to climate change, climate justice, sustainability, and collective responsibility. Newspapers appeal to readers to view climate change as a national issue and a global responsibility, using language and discourse techniques.

5.4. Comparison with Previous Studies and Research Gap

In general, the results of this study corroborate the existing international research on climate communication, media discourse and environmental responsibility. As seen in earlier research by Schäfer and Painter (2021), Olausson and Berglez (2022), and Wozniak et al. (2022), the current study found that climate discourse is increasingly focused on adaptation, governance, sustainability, and collective responsibility.

This study has some other interesting dimensions, however. The study's use of a Corpus-Assisted Critical Discourse Analysis approach not only provided quantitative information on climate reporting but also qualitative insights, which is considered an improvement over many previous studies that adopted qualitative discourse analysis or framing analysis. Secondly, previous studies in Pakistan that analyzed either climate coverage, disaster narratives or media framing did not specifically examine the linguistic construction of environmental responsibility, as this study did. Third, the study involved a large number of newspaper articles (500) over seven years, providing a broader picture of climate discourse in Pakistan.

Most importantly, the results show that the concept of environmental responsibility is not merely introduced in climate reporting; linguistic patterns, collocational relationships, and ideological stories indeed shape it. The study fills a notable gap in the literature and offers new insights into how language, power, and environmental communication (EC) are interconnected in the context of Pakistan.

6. Conclusion

The current study examined the construction of environmental responsibility in climate change news reporting in Pakistani English newspapers, using Corpus-Assisted Critical Discourse Analysis of 500 articles from Dawn and The Nation newspapers from 2020 to 2026. The study used a combination of corpus linguistic and Fairclough's Critical Discourse Analysis approaches to analyse the dominant patterns, the attribution of responsibility, and the ideology of climate discourses.

It concluded that the themes of environmental vulnerability, sustainability, adaptation, resilience and governance are key to a project on climate change reporting. The repeated use of lexical items associated with climate change, along with the frequent repetition of discourse patterns, illustrates that climate change is symbolised as an environmental problem, but also as a social, political and developmental problem. The analysis also revealed that environmental responsibility is shared among various social actors, including governments, citizens, industries, international organisations and developed countries. However, there is no equal responsibility, with governments and developed countries depicted as having greater responsibility for climate action and environmental governance.

The study also identified the underlying ideologies of climate justice, collective responsibility, environmental governance and sustainable development. By using specific language choices and discursive strategies, the newspapers construct Pakistan as both a victim of climate change and an active player in addressing environmental challenges. In summary, the results underscore the media's role in shaping public perception of climate change and environmental responsibility. The study makes a significant contribution to the domains of corpus linguistics, critical discourse analysis and environmental communication by providing insight into the use of language in the construction of environmental realities and the shaping of perceptions of accountability in the Pakistani context.

7. Recommendations

- 1) Increase the capacity of climate journalists through in-depth training in environmental and climate reporting.
- 2) Foster equitable climate coverage, emphasising the roles of governments, industry, international organisations and people.
- 3) Expand solution-driven reporting related to climate change adaptation, sustainability and environmental protection.
- 4) Further corpus-based research to be carried out in other media, such as Urdu newspapers and digital media.

References

-
- Baker, P., Gabrielatos, C., KhosraviNik, M., Krzyżanowski, M., McEnery, T., & Wodak, R. (2021). *A useful methodological synergy? Combining critical discourse analysis and corpus linguistics*. Routledge.
- Boykoff, M. T. (2021). *Creative (climate) communications: Productive pathways for science, policy and society*. Cambridge University Press.
- Brüggemann, M., & Engesser, S. (2023). Climate communication and journalism in a changing media environment. *Environmental Communication*, 17(3), 245–259.
- Fairclough, N. (1995). *Critical discourse analysis: The critical study of language*. Longman.
- Intergovernmental Panel on Climate Change. (2023). *Climate change 2023: Synthesis report*. IPCC. <https://www.ipcc.ch/report/ar6/syr/>
- Machin, D., & Mayr, A. (2023). *How to do critical discourse analysis: A multimodal introduction* (3rd ed.). Sage.
- Newell, P., Srivastava, S., Naess, L. O., Torres Contreras, G. A., & Price, R. (2021). Toward transformative climate justice. *Wiley Interdisciplinary Reviews: Climate Change*, 12(4), e733. <https://doi.org/10.1002/wcc.733>
- Olausson, U., & Berglez, P. (2022). Media and climate responsibility: Discourses of accountability in climate communication. *Journalism Studies*, 23(9), 1051–1068.
- Painter, J., Schäfer, M. S., & Oliveira, T. (2022). Climate journalism and media framing in the digital age. *Environmental Communication*, 16(6), 701–717.
- Partington, A., Duguid, A., & Taylor, C. (2023). *Patterns and meanings in discourse: Theory and practice in corpus-assisted discourse studies* (2nd ed.). John Benjamins.
- Pera, A., & Aiello, G. (2023). Climate communication, media discourse, and public engagement. *Environmental Communication*, 17(8), 987–1004.
- Reuters Institute for the Study of Journalism. (2025). *Journalism, media and climate change reporting*. University of Oxford.
- Schäfer, M. S., & Painter, J. (2021). Climate journalism in a changing media ecosystem. *Wiley Interdisciplinary Reviews: Climate Change*, 12(1), e675. <https://doi.org/10.1002/wcc.675>
- Taylor, C. (2022). Corpus-assisted discourse studies and media analysis. *Corpora*, 17(2), 203–221.
- Wonneberger, A., Meijers, M., & Schuck, A. (2023). Public engagement and climate communication: The role of media discourse. *Public Understanding of Science*, 32(4), 451–468.
- Wozniak, A., Lück, J., Wessler, H., & Fähnrich, B. (2022). Climate change communication and media representations: Recent developments and future directions. *Environmental Communication*, 16(5), 561–575.