

FRAMING CLIMATE CHANGE IN SINDH'S PRESS: A COMPARATIVE STUDY OF THE DAWN, JANG AND KAWISH E-NEWSPAPERS IN PAKISTAN

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DOI: <http://doi.org/10.5281/zenodo.22807163>

Keywords

climate change communication; news framing; agenda-setting; print media; e-newspapers; Sindh; Pakistan

Article History

Received: 19 January 2026

Accepted: 04 March 2026

Published: 18 March 2026

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Abstract

This study examines how climate change is represented and framed in the news coverage of three widely circulated newspapers in Sindh, Pakistan, each serving a distinct linguistic and socio-economic readership. Climate change has become one of the most consequential public issues of the era, and in Pakistan the situation has grown graver than ever after the catastrophic floods of 2022 and the recurrent heavy monsoon rainfall that has continued to devastate Sindh. In this context, climate-change communication has emerged as a salient concern for scholars, journalists and policymakers alike. The newspapers analysed are Dawn (English), Jang (Urdu) and Kawish (Sindhi), which broadly correspond to elite, middle-class and lower-class audiences respectively. Using quantitative content analysis supported by descriptive statistics, the study measured the frequency, content type (news, columns and editorials) and temporal distribution of climate reporting across pre-flood, flood and post-flood periods, and related these patterns to differing editorial priorities and audiences. The findings show that all three outlets acknowledge climate change as a public problem, yet they diverge sharply in emphasis: Dawn devoted the largest and most balanced share of its content to climate news and analytical columns; Jang covered the issue moderately but allocated the bulk of its space to non-climate matters; and Kawish carried no dedicated climate news during the study period, signalling limited attention in the Sindhi-language press. These variations underline the agenda-setting power of the media in shaping public perception and environmental debate in Sindh. The study contributes to the growing literature on climate journalism by offering comparative lessons for reporters, editors, policymakers and researchers seeking to communicate climate risk more effectively and to engage the public.

1. Introduction

Climate change is one of the defining challenges of the twenty-first century, threatening the environment, public health, food systems and the global economy in mutually reinforcing ways. Its impacts are neither evenly distributed nor equally survivable. Developing countries, which have contributed least to global greenhouse-gas emissions, are among the most exposed to

climate-related hazards and the least equipped to adapt. Pakistan sits squarely in this category. Successive editions of the Global Climate Risk Index have placed the country among the world's most climate-vulnerable states, a status reflected in its repeated experience of floods, heatwaves, droughts and increasingly erratic rainfall (Aziz, 2025; Akmal, 2026).

The devastating floods of 2022 brought this vulnerability into sharp relief. Submerging roughly a third of the country, displacing tens of millions of people and inflicting damages estimated in the tens of billions of dollars, the disaster placed public awareness and climate communication firmly on the national agenda. The pattern has since recurred: the 2025 monsoon floods again inundated large parts of Sindh, Punjab, Khyber Pakhtunkhwa and Balochistan, claiming more than a thousand lives and reigniting debate about how the media narrate climate risk, attribute responsibility and mobilise response (Arshad et al., 2025; Ali et al., 2025; Raza et al., 2025). For a province such as Sindh, which lies downstream of the Indus and bears a disproportionate share of flood damage, the way newspapers construct the climate story is not a peripheral question but a matter of public safety and policy.

Mass media play a central role in educating the public on environmental issues and in shaping opinion through the selection, emphasis and formulation of news. Framing theory captures precisely this process: by defining what a problem is, what causes it, who is responsible and what should be done, the media influence how audiences perceive the origins, effects and possible remedies of an issue. Consequently, the media construction of climate change shapes public discourse, policy debate and citizen responses to climate risk, and does far more than simply report environmental disasters as they occur.

Pakistan's newspaper landscape is stratified by language and, with it, by class. English, Urdu and Sindhi dailies cater to different socio-economic groups with distinct editorial goals and information needs. Kawish serves a large lower-income, Sindhi-speaking readership; Dawn is oriented towards an affluent, English-literate elite; and Jang addresses a broad Urdu-reading middle class. These differences in readership can shape the public narrative which concerns receive attention, how climate change is explained, and what solutions are foregrounded. Comparing these publications therefore makes it possible to ask whether climate change is presented in

materially different ways across reader categories, and whether those differences are significant.

Despite the growing frequency of climate-related disasters in Pakistan, few studies have compared climate coverage across newspapers serving different socio-economic groups. Most earlier research has measured the volume of coverage rather than analysing how climate news is framed in multilingual media, and comparative work spanning English, Urdu and Sindhi outlets is especially scarce. Closing this gap matters for understanding how the media can support informed public participation and raise environmental awareness. Accordingly, this study examines the prevailing frames in the Dawn, Jang and Kawish e-papers and, through comparative content analysis, contributes to the expanding body of knowledge on environmental journalism and climate-change communication in Pakistan.

1.1 Statement of the Problem

Although Pakistan ranks among the countries most vulnerable to climate change, its print media have not consistently treated climate reporting as a priority. In Sindh, where climate-related disasters have produced severe social, economic and environmental consequences, newspapers are an essential instrument for public education. Yet there is little systematic evidence on how newspapers present climate change to elite, middle-class and lower-class readers. Language, readership and editorial preference can all shape how climate issues are framed and, ultimately, how they are understood by the public. This study investigates how climate change has been framed in Sindh's press by identifying the dominant frames and examining whether and how that framing differs across Dawn (English), Jang (Urdu) and Kawish (Sindhi), and thus across the different segments of the Sindhi reading public those outlets serve.

1.2 Significance of the Study

The significance of this study lies in its comparative, class-sensitive design. Rather than treating the press as a single undifferentiated actor, it examines framing across lower-class, middle-class and elite readerships and asks how

linguistic and socio-economic position is associated with different patterns of climate coverage in Dawn, Jang and Kawish. The findings add to the still-thin literature on environmental journalism and climate communication in Pakistan, where comparative studies of newspaper framing remain rare. The study also offers practical implications for journalists, media organisations and policymakers by highlighting both the dominant frames in use and the shortcomings of current climate reporting. Ultimately, it aims to inform better climate communication and to support more evidence-based climate policy and public awareness in Sindh and Pakistan.

1.3 Research Questions

RQ1. How do the Dawn (English), Jang (Urdu) and Kawish (Sindhi) newspapers of Sindh frame climate change and related issues in their coverage?

RQ2. To what extent does the volume, content type and temporal distribution of climate coverage differ across the three outlets and their respective readerships?

1.4 Hypotheses

H₀ (Null hypothesis). The framing of climate change and related issues in the Dawn, Jang and Kawish newspapers of Sindh is essentially identical.

H₁ (Alternative hypothesis). The framing of climate change and related issues differs significantly across the Dawn, Jang and Kawish newspapers of Sindh.

1.5 Theoretical Framework

This study is anchored in two closely related traditions of media theory: framing and agenda-setting. Framing theory holds that media do not transmit reality neutrally; rather, they select certain aspects of a perceived reality and make them more salient, thereby promoting a particular problem definition, causal interpretation, moral evaluation and treatment recommendation. Applied to climate change,

framing determines whether an event is narrated primarily as a natural disaster, a governance failure, an economic shock, a scientific phenomenon or a matter of international justice. Each of these frames carries different implications for how audiences assign responsibility and what solutions they consider legitimate.

Agenda-setting theory complements this by explaining how the prominence of an issue in the media shapes its prominence in the public mind. By deciding how much space to devote to climate change, on which pages, and in which formats news, column or editorial newspapers signal how important the issue is and steer public attention accordingly. Recent scholarship on Pakistani disaster reporting demonstrates both mechanisms at work: English-language outlets tend to foreground climate-science and international-justice frames, whereas Urdu outlets more often naturalise disasters or attribute them to political and cross-border factors, and community voices are frequently marginalised across the board (Khawaja et al., 2025; Raza et al., 2025). Together, framing and agenda-setting provide the conceptual lens through which this study interprets the frequency, format and distribution of climate coverage in Sindh's multilingual press.

2. Literature Review

2.1 Global perspectives on climate framing

The influence of media on public perceptions of the environment has made climate-change communication a vibrant field within media studies. A consistent finding is that news organisations shape public opinion by emphasising some aspects of the climate story and neglecting others. Comparative research shows that newspapers commonly draw on a recurring repertoire of frames disaster and threat, responsibility and blame, economic consequence, scientific evidence, human interest and policy solution and that the balance among them influences both policy debate and public understanding (Smith & Porter, 2018; Wang & Liu, 2017; Zhang & Zhang, 2019). Cross-national work further demonstrates that variation in coverage is driven by differences in ownership,

ideology, language and intended audience, and that visual and emotional framing can capture attention while displacing deeper structural explanation (Günay et al., 2025). Audience-level evidence indicates that exposure to, and trust in, particular outlets meaningfully shapes climate concern and engagement (Ejaz et al., 2025).

2.2 Climate reporting in Pakistan

In Pakistan, recurrent floods, droughts and heatwaves have pushed climate change up the news agenda, yet coverage remains comparatively limited and tends to privilege extreme events over long-term adaptation and mitigation. Hussain (2024) analysed the representation of climate change in Urdu and English newspapers and found that Urdu titles emphasised climate threats and impacts, while English titles adopted a more balanced framing that combined threat and efficacy. Hussain and Iftikhar (2023) examined editorial coverage in leading Urdu dailies and concluded that, despite Pakistan's acute exposure to natural disasters, the issue was under-reported, underscoring the need for deliberate climate communication to build public and policy awareness. More recent studies find that English-language titles differ markedly in thematic emphasis: Dawn ranges more widely across institutional solutions, scientific developments and climate policy, whereas socio-economic impacts and environmental-justice concerns are more visible in The News International (Ahmed et al., 2025). An ecolinguistic analysis of Dawn's climate reporting shows that the issue is frequently discussed through the lens of economy, development and security, and that the coverage is predominantly anthropocentric foregrounding risks to human society, infrastructure and policy (Saleem & Khan, 2025). Studies of the 2022 and 2025 floods sharpen this picture. Comparing Global North and Global South titles including Dawn Khawaja et al. (2025) found that solution, vulnerability and responsibility frames dominated, with human and societal causes emphasised over natural ones, though community-led efforts were largely overshadowed by victimisation. Analysing the 2025 floods across five mainstream outlets, Raza

et al. (2025) identified a persistent dual causal frame: English titles such as Dawn attributed the disaster to climate change and glacial melt and cited scientific and international authorities, whereas Urdu titles such as Jang more often depicted the floods as natural or divinely ordained and foregrounded cross-border water politics. Corpus-based work on Dawn and The News International similarly reveals justice-based narratives that place Pakistan's vulnerability within a global debate on accountability (Shaffaqat et al., 2026). Across these studies a common thread emerges: media do not merely report climate realities, they actively construct them, and coverage remains largely reactive and event-driven (Bibi, 2024; Arain et al., 2024).

2.3 Language, class and audience

A distinctive feature of the Pakistani press is that language maps closely onto socio-economic position, so that the choice of outlet is also, in effect, a choice of audience. English titles reach an educated, affluent and internationally oriented elite; Urdu titles address a broad middle class; and regional-language titles such as Sindhi dailies serve predominantly lower-income, rural and peri-urban communities. Because framing is shaped by an outlet's sense of its readers' expectations and its editorial priorities, these audience differences can produce systematically different climate narratives. Yet most existing research has compared only English and Urdu titles, leaving the regional-language press and the lower-income readers it serves comparatively unexamined.

2.4 Research gap

Taken together, the literature establishes that climate framing in Pakistani media is uneven, event-driven and shaped by language, ownership and audience. What remains under-studied is systematic, class-sensitive comparison that includes the Sindhi-language press alongside English and Urdu titles. The present study addresses this gap by comparing how climate change is represented across Dawn, Jang and Kawish elite, middle-class and lower-class outlets

and by relating those patterns to their respective readerships.

3. Research Methodology

3.1 Research design

This study employs content analysis, a systematic and replicable method for examining communication material. Content analysis is well suited to this research because it supports both an organised, quantitative account of media output and an interpretive, qualitative reading of the same material. Combining the two allows the study to describe patterns in the volume and format of climate reporting while remaining

attentive to the editorial context and emphasis that give those patterns meaning across print and electronic media.

3.2 Sample selection

Three newspapers were purposively selected to capture diversity in language, socio-economic readership and editorial orientation. Dawn represents the elite, English-language national press; Jang represents the mass-circulation, Urdu-language middle-class press; and Kawish represents the regional, Sindhi-language press oriented towards lower-income readers. Table 1 summarises the sample.

Table 1. Sample selection

Media type	Media outlet	Language	Coverage type
Print / e-paper	Dawn	English	National English newspaper (elite readership)
Print / e-paper	Jang	Urdu	National Urdu newspaper (middle-class readership)
Print / e-paper	Kawish	Sindhi	Regional Sindhi newspaper (lower-income readership)

Note. Outlets correspond to elite, middle-class and lower-class readerships respectively.

3.3 Study timeframe

Because the 2022 floods were the pivotal climate event of the study window, the analysis is organised around three phases pre-flood, flood

and post-flood allowing coverage to be compared before, during and after the disaster. Table 2 defines these phases.

Table 2. Key event timeframes

Flood period	Start date	End date
Pre-flood period	January 2022	May 2022
Flood event	June 2022	September 2022
Post-flood period	October 2022	December 2022

Note. The three phases correspond to twelve monthly observations used in the descriptive analysis.

3.4 Unit of analysis and coding

The unit of analysis was the individual climate-related item, coded by content type as news report, column or editorial. For each outlet and month, coders recorded the number of climate items and, for comparison, the number of non-climate items in the same categories. Climate-related items were those whose principal subject was climate change, its causes, impacts, mitigation, adaptation or governance, including

flood-related environmental reporting. This coding scheme makes it possible to measure not only how much each outlet covered climate change but also the balance between straight reporting and opinion-led formats, which signals the depth of editorial engagement.

3.5 Reliability and validity

To ensure consistency, a coding protocol with explicit category definitions was applied

uniformly across outlets, and a subset of items was double-coded to check agreement before full coding proceeded. Organising the data by month across the three phases yielded twelve observations per variable, supporting the descriptive statistics reported below. Because the analysis draws on publicly available e-paper archives, the material could be revisited and verified, strengthening the transparency and replicability of the study.

4. Findings

4.1 Climate coverage across the flood periods

Across the selected print media, climate coverage was substantial in all three phases but shifted in both volume and format. During the pre-flood period (January–May 2022), the outlets produced 109 climate items 69 news reports, 22 columns and 18 editorials. The dominance of news reports indicates that, before the floods, coverage was driven mainly by ongoing climate-related events

and emerging environmental problems, supplemented by columns and editorials on preparedness. During the flood event (June–September 2022), output rose to 116 items 65 news reports, 29 columns and 22 editorials. The increase in columns and editorials signals heightened editorial engagement and more critical commentary on policy response, disaster management and climate change as the crisis unfolded. In the post-flood period (October–December 2022), the total fell to 87 items 39 news reports, 36 columns and 12 editorials. Although straight news declined, the near-parity of news and columns reflects a shift from immediate disaster reporting towards analysis of the longer-term environmental, social and economic consequences of the floods, and towards recovery, resilience and adaptation. Tables 3–5 report the figures, which are visualised in Figures 1 and 2.

Table 3. Pre-flood period (Jan–May 2022)

Content type	News	Columns	Editorials
Total (Jan–May 2022)	69	22	18

Table 4. Flood event (Jun–Sep 2022)

Content type	News	Columns	Editorials
Total (Jun–Sep 2022)	65	29	22

Table 5. Post-flood period (Oct–Dec 2022)

Content type	News	Columns	Editorials
Total (Oct–Dec 2022)	39	36	12

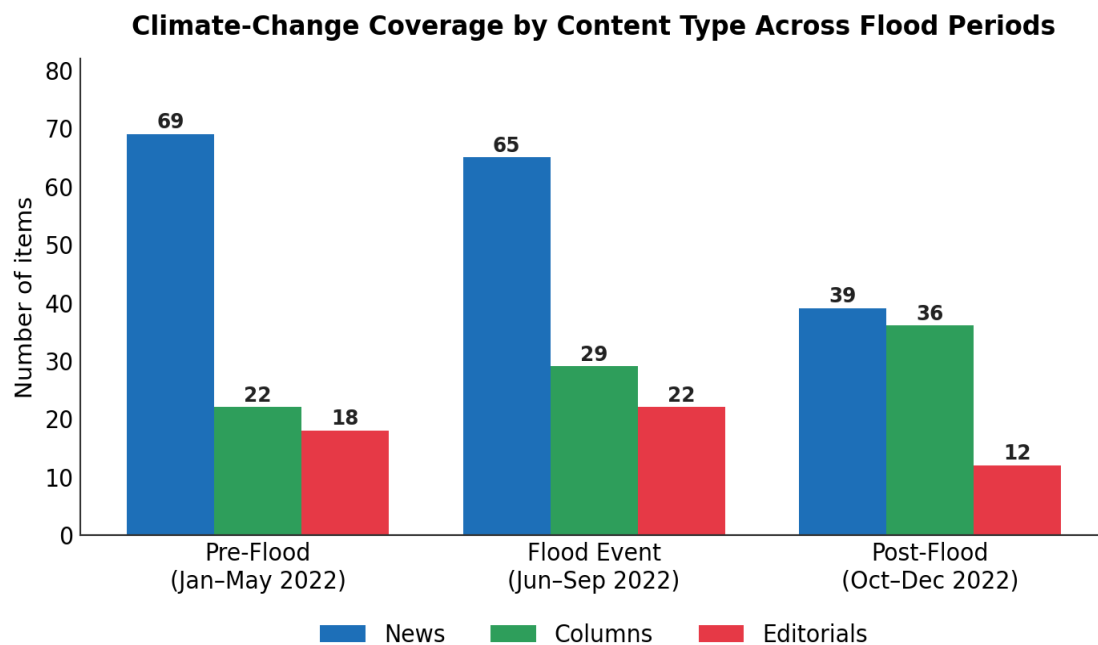


Figure 1. Climate-change coverage by content type across the three flood periods.

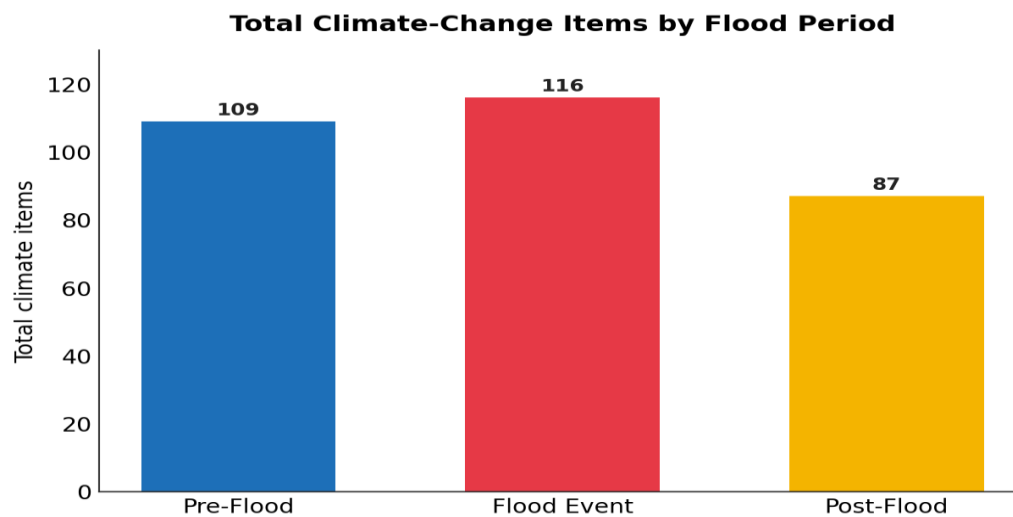


Figure 2. Total climate-change items in each flood period.

4.2 Descriptive statistics: Jang and Dawn

Monthly counts for the two outlets with dedicated climate coverage Jang and Dawn were summarised across the twelve observations. Table 6 reports the descriptive statistics. Dawn devoted markedly more attention to climate change than Jang. Dawn published, on average, 11.75 climate news items per month ($SD = 4.31$), against Jang's 6.50 ($SD = 4.08$). The same pattern held for opinion content: Dawn averaged 7.08 climate

columns per month ($SD = 4.70$), more than twice Jang's 3.08 ($SD = 3.78$). Editorial coverage was closer, with Jang slightly ahead ($M = 4.50$, $SD = 3.40$) of Dawn ($M = 3.83$, $SD = 2.25$). Crucially, Jang's non-climate news vastly exceeded its climate news ($M = 33.58$, $SD = 36.23$), whereas Dawn's was more modest ($M = 20.33$, $SD = 20.14$), indicating that climate change occupied a much smaller share of Jang's overall news hole.

Figure 3 compares the two outlets across the three climate content types.

Table 6. Descriptive statistics for climate and non-climate items (monthly, N = 12)

Outlet	Variable	N	Min	Max	Mean	SD
Jang	News on climate	12	2	16	6.50	4.079
Jang	News (non-climate)	12	3	114	33.58	36.225
Jang	Columns on climate	12	0	13	3.08	3.777
Jang	Columns (non-climate)	12	0	14	2.58	4.144
Jang	Editorials on climate	12	0	11	4.50	3.398
Jang	Editorials (non-climate)	12	0	11	3.25	3.769
Dawn	News on climate	12	4	20	11.75	4.309
Dawn	News (non-climate)	12	0	63	20.33	20.137
Dawn	Columns on climate	12	0	15	7.08	4.699
Dawn	Columns (non-climate)	12	0	5	1.00	1.414
Dawn	Editorials on climate	12	0	7	3.83	2.250
Dawn	Editorials (non-climate)	12	0	7	1.33	2.103

Note. Values are monthly means and standard deviations across twelve observations. "Non-climate" denotes items in the same format that did not principally concern climate change.

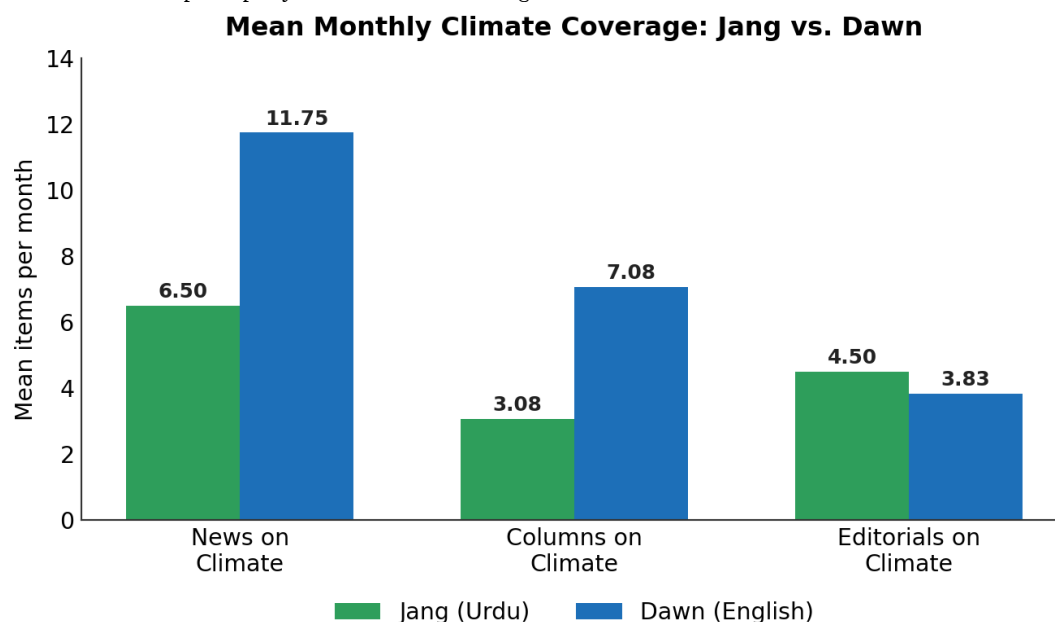


Figure 3. Mean monthly climate coverage in Jang and Dawn, by content type.

4.3 The climate share of total coverage

Aggregating across formats reveals a striking contrast in how central climate change was to each outlet. For Jang, climate items averaged about 14.1 per month against roughly 39.4 non-climate items climate change accounted for barely a quarter of its monthly output in these

categories. For Dawn, climate and non-climate items were almost exactly balanced at about 22.7 each, so climate change filled close to half of its comparable output. In other words, Dawn treated climate change as a core beat, while for Jang it remained one topic among many. Figure 4 makes the difference explicit.

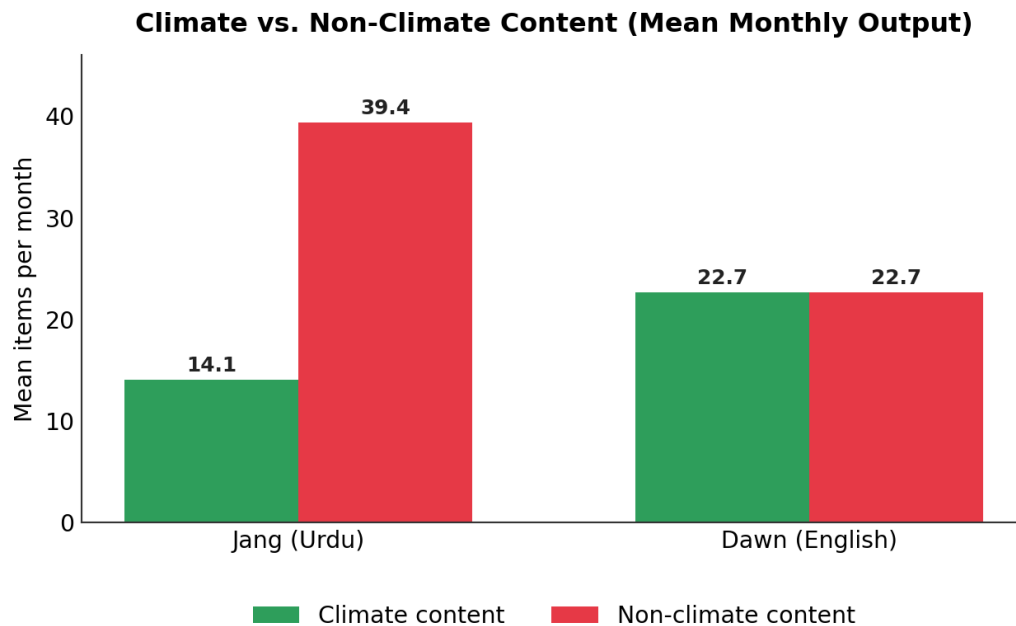


Figure 4. Climate versus non-climate content (mean monthly output) in Jang and Dawn.

4.4 Kawish and the Sindhi-language press

The most pronounced finding concerns Kawish. During the study period, the Sindhi-language daily carried no news items dedicated exclusively to climate change, and it therefore does not appear in the monthly descriptive statistics for climate news. This absence indicates that the Sindhi-language press the outlet closest to the

lower-income, rural communities most exposed to flooding in Sindh devoted markedly less dedicated attention to climate change than the Urdu and English titles. Figure 5 places the three outlets side by side on mean monthly climate news, with Dawn well ahead, Jang intermediate and Kawish at zero.

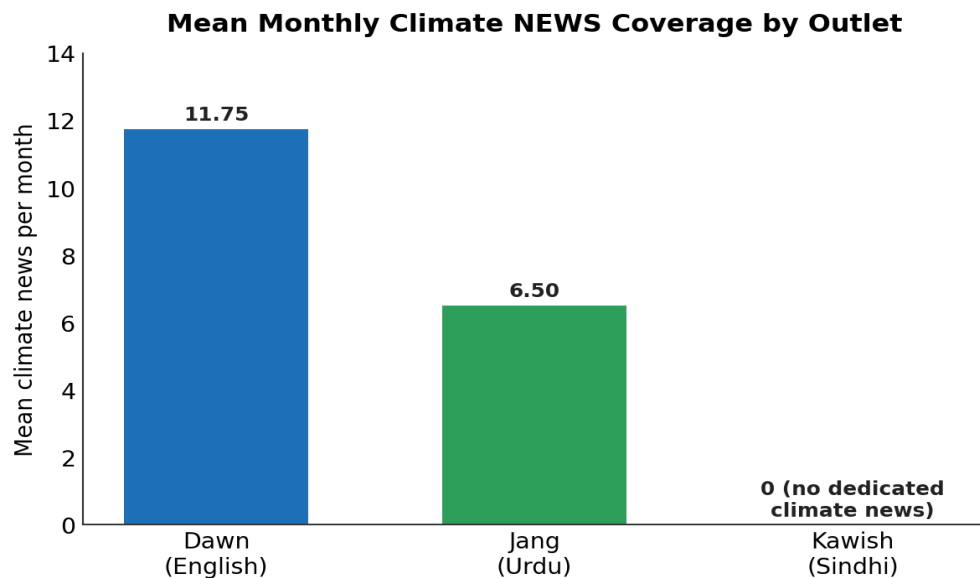


Figure 5. Mean monthly climate news coverage by outlet, including Kawish.

5. Discussion

The results support the alternative hypothesis: climate framing in Sindh's press differs significantly by outlet and, with it, by language and class. Read through the lens of agenda-setting, the gradient from Dawn to Jang to Kawish reflects three different judgements about how important climate change is for each readership. Dawn, addressing an educated and internationally connected elite, treated climate change as a standing priority, sustaining a high volume of both news and analytical columns and devoting roughly half of its comparable output to the issue. Jang, serving a broad Urdu middle class, acknowledged climate change but embedded it within a much larger flow of non-climate news, so that the topic competed for attention with politics, economy and society. Kawish, closest to the lower-income Sindhi communities most physically exposed to flooding, carried no dedicated climate news at all an agenda-setting silence with real consequences for the readers least able to absorb climate shocks.

The format data add a framing dimension. Dawn's heavy use of analytical columns alongside news suggests engagement with causes, policy and solutions rather than event reporting alone, consistent with evidence that English titles lean towards climate-science and international-justice frames (Saleem & Khan, 2025; Shaffaqat et al., 2026; Khawaja et al., 2025). Jang's comparatively higher share of editorials relative to its climate news hints at episodic, reaction-driven commentary spikes of opinion around visible disasters which aligns with findings that Urdu coverage often naturalises disasters or routes them through political and cross-border frames rather than sustained climate analysis (Raza et al., 2025; Hussain, 2024). The temporal pattern reinforces this reading: output peaked during the flood itself and the balance shifted towards columns afterwards, indicating that the press engages climate change most intensively when it arrives as spectacle and only gradually turns to recovery, resilience and adaptation.

These patterns matter because media framing helps constitute the public's sense of what climate change is and who must act. Where coverage is

thin or absent, as in the Sindhi-language press, readers are left with fewer resources to interpret the risks they face and to demand accountability, reinforcing the very vulnerabilities that make them dependent on relief. Where coverage is fuller but skewed towards spectacle, audiences may absorb urgency without acquiring the structural understanding needed to support adaptation and mitigation. The comparative design of this study thus illustrates a broader point in the literature: climate communication in Pakistan is not only uneven in quantity but stratified in kind, tracking the linguistic and socio-economic contours of its audiences (Bibi, 2024; Ejaz et al., 2025).

6. Conclusion

This comparative content analysis shows that the Dawn, Jang and Kawish e-papers differ substantially in how they cover climate change. Dawn displayed the strongest and most balanced commitment to environmental reporting, sustaining a high volume of climate news and analytical columns; Jang covered climate change moderately but devoted most of its space to non-climate topics; and Kawish published no dedicated climate news during the study period, indicating that the Sindhi-language press paid the least attention to the issue. Editorial coverage was broadly similar across Jang and Dawn, but their news and column output diverged sharply. The overall picture is one of stratified attention fuller in the elite English press, moderate in the middle-class Urdu press and minimal in the lower-class Sindhi press that mirrors the readerships each outlet serves. These variations offer insight into how public perceptions of climate risk are shaped by the interaction of audience, language and editorial priority, and they underline the agenda-setting power of the press in environmental debate in Sindh.

6.1 Limitations

Several limitations should temper these conclusions. The analysis covered three outlets over a single year centred on the 2022 floods, so the findings capture one disaster cycle rather than a long-term trend. The design was primarily

quantitative, measuring the volume and format of coverage rather than coding the specific frames sentence by sentence, which would require a dedicated qualitative pass. Restricting the sample to print e-papers excludes television, radio, digital-native outlets and social media, where much climate conversation now occurs. Finally, because Kawish carried no dedicated climate news in the window studied, its inferential comparison with the other titles is necessarily descriptive. These constraints point directly to the study's recommendations for future work.

6.2 Recommendations and Future Research

The study recommends strengthening climate reporting so that it moves beyond disaster coverage to encompass scientific explanation, policy analysis, and mitigation and adaptation. Regional-language outlets in particular above all the Sindhi press that reaches the communities most exposed to flooding should be supported to build climate desks and to give the issue sustained, thematic attention rather than episodic notice. Enhanced environmental journalism across socio-economic groups can raise public awareness, support informed decision-making and help underpin effective climate action in Sindh and Pakistan more broadly.

Future research should extend the comparison across multiple years to trace trends, add qualitative frame analysis to complement the quantitative counts, and broaden the media base to include television, digital and social platforms. Comparative work spanning provinces and languages, and studies of how audiences actually receive and act on climate coverage, would further illuminate the climate-communication landscape in Pakistan and the role the press can play in building resilience to a rising tide of climate risk.

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