

# Exploring Journalists' Narratives on Challenges to Climate Journalism in Pakistan

Aqeel Ahmed<sup>1</sup>, Mohammad Kashif<sup>2</sup>, Sara Mansoor<sup>3</sup>

<sup>1</sup>Lecturer, Department of Media & Communication Studies, National University of Modern Languages, Islamabad, Pakistan.

<sup>2</sup>Lecturer, Department of Media & Communication Studies, National University of Modern Languages, Islamabad, Pakistan.

<sup>3</sup>Visiting Lecturer, Department of Media Studies, Bahria University, Islamabad, Pakistan.

Correspondence: [aahmed@numl.edu.pk](mailto:aahmed@numl.edu.pk)<sup>1</sup>

## ABSTRACT

**Background and Study Aim:** Pakistan has been classified among the five most vulnerable societies to climate change, yet its coverage in Pakistani media remains event-driven and limited. Given the absence of research in field, this qualitative research, based on focus group discussion, documents the narratives of Pakistani journalists about challenges to climate journalism in Pakistan.

**Methodology:** This qualitative research was conducted through a focus group discussion, collecting data from 11 Islamabad-based Pakistani journalists who have been serving different print, electronic and digital news media organizations as news reporters and news editors.

**Findings:** The findings of the study reveal event-based media coverage of climate change, lack of prioritization and desensitization of media on climate change, the influence of policy agenda on media coverage, and the lack of professional journalistic training and education.

**Conclusion/Policy Recommendations:** The study concluded/recommended that addressing the challenges to climate journalism in Pakistan required specialized training and sensitization of the journalists, besides the establishment of dedicated climate beats and desks within the media organizations. Enhancing the utilization of technology and fostering journalists-media academics collaboration, independent editorial policies, and introduction of climate change education in academic curricula can improve the quality and consistency of climate change awareness and coverage in Pakistan.

**Keywords:** Climate Change, Pakistani Journalists, Climate Journalism, Journalists' Narratives, Climate Awareness.

## Background of the Study

Climate change has emerged as the biggest global threat over time for mankind, posing a substantial danger for global ecosystems and human societies alike, with its impact gradually sensed by everyone. Listed among the five most vulnerable societies to climate change by the Global Climate Risk Index,

## Article History

Received:  
February 15, 2024

Revised:  
March 26, 2024

Accepted:  
March 28, 2024

Published:  
March 30, 2024

Pakistan faces serious threats like the excruciating floods of 2022 that cost the country about US\$15.2 billion in terms of financial losses (UN-Habitat, 2023). In a society that is extremely vulnerable to climatic disasters, the need for proactive media coverage is vital. However, despite the mounting perseverance of the crisis in the country, media coverage about climate change in Pakistan remains irregular and often limited to event-driven reporting. The media's role in public understanding and discourse cultivation is pivotal in any society. Media's ignorance of serious threats like climate change may add to the miseries of the public. Given the challenges of climate change and its aftermath, it is crucial to discover the perspectives of Pakistani journalists on the challenges they face while covering issues related to climate change. Identification of such challenges can help academia and professionals alike to improve the quality of climate journalism in Pakistan.

## **Introduction**

Climate change signifies the most significant crisis facing humanity in modern times. While climate change refers to the alterations and long-term shifts in weather patterns, temperature and the earth's climate system, usually as a part of nature-driven events including solar radiations and volcanic eruptions (Abbass et al., 2022), the current trend of rapid climate change has been driven by human activities (Shivanna, 2022). With the rising sea levels and global temperatures, shifting weather patterns, melting glaciers, and extreme weather events, the climate change impacts are both far-reaching and profound. This crisis has exceeded the environmental deprivation, posing existential intimidations to economies, health infrastructures, food security, and human existence. Environmentalists and climate change experts have raised serious concerns and urged the global community for corrective actions that if not taken, the effects of climate change could be irreversible, leading to disastrous consequences for humanity (Santos et al., 2022).

Despite contributing comparatively very little to global greenhouse gas emissions, Pakistan stands among the worst-affected countries. The Global Climate Risk Index has listed Pakistan among the top five victims of climate change, facing disproportionate threats like the devastating floods of 2022 that cost the nation about US\$15.2 billion in terms of monetary damages (UN-Habitat, 2023). The country has experienced a range of climate-related adversities in recent years, including prolonged droughts, heat waves, glacial melting, and devastating floods, all of them having critical socio-economic consequences. These events have threatened not only the lives of millions but also the stability of main sectors such as water resources, agriculture, and public health.

Journalism, as being fourth pillar or fourth estate of any society, has a great role in persuasion and agenda-setting. Climate journalism can play an active role in society to create awareness, highlight drawbacks in society regarding mitigation measures for climate change, and persuade people to take action to bring change (Mabon, 2020; Shabir et al., 2015). Media in Pakistan is diverse. The print media industry has a long and mature history. The electronic media and digital/social media platforms have witnessed a boom during last decades. All these media outlets enjoy rich audiences and have a role in public opinion formation.

Painter (2013) in his book stated that in media framing about climate change, uncertainty and disaster makeup to the dominant frames. He also opined that media pays lesser attention to opportunity and risk. The author highlighted that although the general public misunderstands the scientific uncertainty in general, the media can promote timely action about climate change issues by corrective use of risk-oriented language. He further recommended that journalists should be trained in risk handling, climate communication, employing probabilistic forecasting, using infographics, scientific concepts, and using infographics. Fahlström (2020) in her master's dissertation examined how climate change reporting in Sweden, during 2019, challenged the traditional journalism practices and professional boundaries, particularly involving NGOs. Her research emphasized on journalistic perceptions of environmental NGOs and the role played by them in media coverage of COP25 in Madrid. Applying the boundary work theory and conducting online interviews with Swedish journalists and representatives of environmental

NGOs, the dissertation explored four NGO roles in climate journalism: agenda-driven-player, watchdog, established source, and dependency. It also found that although the climate crisis had blurred boundaries between the NGOs and journalists, the latter still largely controlled the news development and agenda-setting process.

Schäfer and Painter (2021) in their study considered climate journalism for reporting about climate change and its associated aspects. The researchers explored the growth of this field given modern economic and digital communication infrastructures. According to their research, the specialized climate journalists in the Global South, although already rarely found, were usually the curators and not gatekeepers, mainly influenced by public relations. Willig et al. (2022) in a Danish study explored climate change as being the prime public agenda but also recommended improvements to climate journalism. The respondents of the study considered climate journalism as valuable for the society but rated it less trustworthy and below standard. However, the study findings were prejudiced by various demographic factors including age and political affiliation of the respondents.

Manzoor and Ali (2021) measured the perception of the Pakistani journalists working in mainstream media about climate change. They explored that the journalists in Pakistan lacked resources, were provided with old equipment, and had poor skills that resulted in faulty measurements and inaccurate information, leading to problems in authentic climate reporting. Qusien and Robbins (2023) carried out a thematic analysis of interviews of the Pakistani news reporters working on environment and climate beat to explore that the factors ranging from individual routines, and political economy shape the professional identities of journalists. They also explored environmental beat being regarded as less prestigious as compared to economy or politics. Noor et al. (2023) explored via mixed-method research that increased awareness, structured training initiatives, and improved technical capacity can improve journalists' efficiency in addressing the complex challenges of climate change.

### ***The Research Gaps***

This study has attempted to add to the existing body of literature and fill the voids since the studies available on climate change communication and challenges to journalists in Pakistan are scarce. Methodologically, no focus group studies are available on climate change communication in the Pakistani context involving journalists' perspectives that too about the challenges faced by them. The studies quoted above adopted in-depth interviews (Manzoor & Ali, 2021; Qusien & Robbins, 2023) or mixed method design (Noor et al., 2023).

### ***Context of the Study***

Given the nature and scale of the climate change crisis, media's information-communication has become crucial more than ever. Globally, climate journalism has grown as an indispensable feature of environmental reporting, with news reporters determined to decode complex scientific data into understandable narratives, which may engage, persuade and mobilize the public. Climate change has become a well-known and dedicated beat within news media set-ups in many parts of the world, with journalists receiving dedicated and specialized training and using advanced technologies to improve the impact of their professional assignments. However, despite these developments, challenges exist that include the need for consistent media coverage and greater integration of innovative, technological, and scientific perspectives. In contrast, climate journalism in Pakistan has been faced with significant hurdles. The Pakistani media landscape is often event-driven. This approach pays attention to news stories only in the aftermath of major disasters. This reactive style fails to deliver the continuous and nuanced media coverage required to promote awareness about climate change and its impacts on society. Moreover, many Pakistani media persons lack the essential training in climate and environmental science which leads them to their dependence on artificial reporting, not fully capturing the complexities of the crisis. Furthermore, technological integration in climate journalism including digital storytelling, satellite imagery, and data visualization, is yet to flourish in Pakistan. This undermines the capability of the journalists to convey the perseverance and scope of the crisis of climate change effectively.

### ***Research Objective***

This research aims to discover the accounts of Pakistani journalists about the challenges faced by them while reporting climate change and propose policy recommendations for the media organizations to make improvements about climate journalism.

### ***Research Question***

What are the challenges faced by Pakistani journalists while reporting climate change?

### **The Conceptual Framework**

The study has based its conceptual framework, involving Social Cognitive Theory, proposed by Albert Bandura and Organizational Communication Theory, commonly known as Situational Theory of Publics, developed by James E. Grunig. The Social Cognitive Theory is significant to explore the cognitive processes (self-efficacy and observational learning)—the influence of climate reporting by other journalists and media organization on journalists' perceptions and behaviors. Similarly, the Situational Theory of Publics helps to address how various stakeholders in the news gathering, production and dissemination process, including the climate reporters and editors, respond to matters, depending on their involvement as well as relationship with the particular issue. This helps analyze how the organizational contexts of the journalists and their communication strategies may impact their climate change coverage.

### **Methodology**

Guided by qualitative research approach, this study has adopted focus group discussion as method to explore an in-depth understanding of the challenges faced by the journalists in Pakistan while reporting on climate, climate change and its impacts on society from journalists' perspective. Focus group discussions help the researchers in investigating any social phenomenon thoroughly (Nyumba et al., 2018).

### ***Population***

The population for this study comprised Pakistani journalists who perform climate journalism.

### ***Sampling Frame and Sampling Size***

As an optimal formation of any focus group discussion ranges between eight to twelve participants, keeping in view the context and the nature of study population, the 11 participants were purposefully selected involving only those news reporters and editors who had been working in Pakistani print, electronic or digital media, and had also handled at least ten or more than ten climate/climate-change related story in one way or the other.

### ***Research Process***

The researchers approached the Islamabad-based journalists (both news reporters and editors including sub-editors and desk editors, depending on their personal contacts via phone, social media and peers. The study participants were selected on the basis of verbal discussions with over 93 news reporters and editors, 11, who had worked on climate, climate change or impacts of climate change related stories in one way or the other, and also agreed to be part of the focus group discussion. The research objective was explained to all potential participants. Once the researchers achieved the required sample (10/11), the discussion mechanism was clearly explained to all the participants. Every study participant had a fair chance to discuss his/her point of view during a four-hour session about different challenges faced by the journalists while covering/working on climate change stories.

### ***Thematic Analysis***

This research used thematic analysis as data analysis technique to discover and document the accounts of Pakistani journalists about the challenges faced by them while reporting climate change. The thematic

analysis is a widely-known analysis technique to explore and understand the themes among qualitative findings of in-depth interviews, focus group discussions, qualitative content analyses etc. It finds out the patterns within the collected data sets from the target audience/samples (Dawadi, 2020). The researchers use thematic analysis to explore the underlying meanings of the collected data (Lochmiller, 2021). The thematic analysis also helps the researchers to flexibly and systematically interpret the available data (Nowell et al., 2017). This study has applied a six-step systematic scheme (Braun & Clarke, 2006) that involves “data familiarization”, “code development”, “theme generation”, “theme revision”, “theme definitions”, and “locating exemplars”.

Table 1: *Demographic Characteristics of the Sample*

Participant	Age (Years)	Gender	Type of Media Served	Nature of Job
P1	24	Female	News TV	News Reporter
P2	33	Male	News TV	News Reporter
P3	36	Female	Digital	Desk Editor
P4	29	Female	Digital	News Reporter
P5	42	Male	Print	News Reporter
P6	44	Male	Print	News Editor
P7	31	Male	Digital	News Reporter
P8	43	Male	Print	News Reporter
P9	50	Male	Digital	News Editor
P10	42	Male	News TV	News Reporter
P11	32	Female	News TV	News Reporter

Table 1 above demonstrates the demographic data of all 11 journalists. The table reflected an age range between 24 to 50 years. It also showed that the study participants included four (04) female and seven (07) male journalists. The table also established that four (04) journalists served each of the news TV and digital platforms whereas three (03) worked in print media organizations. Similarly, the data also revealed that eight (08) of the study participants were news reporters whereas other three (03) were desk/news editors.

Table 2: *Main Themes and Individual Responses Explored as Sub-themes through Focus Group Discussion*

Sr.	Theme	Sub-theme 1	Sub-theme 2	Sub-theme 3
1	Climate Communication Divide	Coverage Disparities	Societal Impact Patterns	North-South Collaboration
2	Media Prioritization & Sensitization in Pakistan	Media De-prioritization	Commercial Interests	Lack of Media Sensitization
3	Absence of Specialized “Climate” Beat and Trained Reporters in Pakistani Media	Lack of Specialized Beat	Training Deficiency	Event-based Reporting
4	Policy Agenda-driven Pakistani Media	Policy Influence	Neglected Policies	Independent Reporting
5	Climate Change Education, a Missing Factor in Media Departments in Pakistani Academic Institutions	Educational Gaps	Future Workforce	Collaborative Training

The table 2 above has described five themes and their subsequent sub-themes explored by the thematic analysis of collected data from the focus group discussion of the Islamabad-based journalists. Here is the brief description of the main themes identified during focus group discussion:

### ***Theme 1: Climate Communication Divide***

In view of the responses of the journalists, the theme, “Climate Communication Divide”, has highlighted climate change as a challenge to countries across the globe, with news media being an important source of information on the issue. This theme has focused on the disparities in coverage of climate change between the developed Global North and the under-developed/developing Global South. It has further encapsulated the inadequate focus and attention on issues related to climate change in media narratives across regions. According to the discussants, while countries from the Global North have prioritized covering pre and post-climate change along with real-time crises more frequently, the countries from the Global South have frequently focused on its challenges and implications for society at large, i.e., the societal dimension of climate change. Mostly, the media coverage related to climate change has focused more on public and policy debates, parliamentary proceedings and policies, research implications by think tanks and long-term planning of counter strategies in the Global North. On the contrary, media in the Global South have focused on the aftermaths of the climatic calamities. The focus group participants highlighted the example of the 2022 floods that devastated almost 70% of Pakistan. The study participants recommended Northern and Southern media collaboration since media in the Northern media has been technically well-equipped and media in the South has been based in societies which has been worst affected of the climate change, predominantly due to activities in the North.

### ***Theme 2: Media Prioritization and Sensitization in Pakistan***

The focus group discussion has underscored media prioritization and sensitization in Pakistan. This is pertinent to note that media in Pakistan is neither sensitized nor does it emphasize issues like climate change. Predominantly driven by the policy agenda for its coverage, the media in Pakistan prioritizes politics, the war on terror, and to some extent economy, but not climate change which poses greatest threat to Pakistani society than any other country in the world. One of the important factors involved in the process of de-prioritization of climate change issues is the commercial interests of the media organizations. Since news stories on climate change and issues related to it are fact-based with no chance of sensationalism, this does not attract the attention of the common audience as per the perception of the media owners and managers. Hence, such stories are also not prioritized for media coverage due to this fact other than being influenced by policy agenda. This ignorance on the part of the media has led to lack of expertise and interest among the media workers regarding climate change as an important and sensitive beat to work on. Desensitization and de-prioritization of climate change as an important beat of media coverage by the media organizations has been an important reason lesser media coverage of climate change in Pakistani media.

### ***Theme 3: Absence of Specialized “Climate” Beat and Trained Reporters in Pakistani Media***

An important revelation during the focus group discussion for the researchers was the absence of specialized “Climate” beat in Pakistani media organizations. None of the Pakistani media newspapers or news television organizations have established any dedicated desks for climate coverage like they do for crime, sports, business and economy etc. The scientists can be important sources of information as experts but it is mainly the journalists who need to be trained and allocated the subject beat. But, important to note is that journalists in Pakistan are not sensitized on the matter and cover event-based stories only when their organizations require it. Carrying out professional reporting blended with technology is a missing factor, though. No special efforts are made on the part of organizations to arrange training for the reporters to occasionally work on covering climate-related stories. However, some reporters, at times, get opportunities of training, offered by some NGOs, INGOs, or international media setups, based on their connections or by luck or other vested interests. Special desks and trained reporters, editors, and writers

need to be established with equipped technologies for media workers and societal sensitization on climate change.

#### ***Theme 4: Policy Agenda-driven Pakistani Media***

While Pakistan's political, security and financial crises have always been on priority for media attention whereas the climate change crisis, its most pressing problem, has always been ignored. Pakistan is losing the capacity for its freshwater preservation and maintenance, and natural calamities like the devastating 2022 flooding have worsened the situation. The media's lesser attention towards water-related issues and limited event-specific media coverage is a clear manifestation of media being strongly influenced by policy agenda. Climate change and particularly water-related matters have never been the state's priority, so is the case with the media. As the media in Pakistan is predominantly influenced by policy agenda, it needs to come out of this influence and independently and rationally report issues related to climate change. Furthermore, regular broadcasts and media debates on the matter may convince the policymakers to reassess their agenda. State's prioritization of the issue of climate change and taking emergency measures and media, getting out of policy influence instead of getting influenced by the policy agenda, and setting priorities for the society, including policymakers, sensitizing every society member in Pakistan can help in spreading climate change awareness and persuade societal action to counter the crisis.

#### ***Theme 5: Climate Change Education, a Missing Factor in Media Departments in Pakistani Academic Institutions***

Furthermore, media departments in educational institutions do not pay attention to teaching media and climate change as a special subject which has led to further deviation of media from the issue. Sensitizing the media students about climate change who can join media as journalists in the future may help a lot in developing a useful future media workforce and climate change activists. Furthermore, the media departments in Pakistani universities can arrange workshops in collaboration with media organizations where the journalists and students are trained on one platform. It may boost the morale of the students and also raise awareness of climate change by widespread coverage in newspapers, television, and digital media of different stakeholders involved in the training and development process.

### **Discussion**

This qualitative study adopted focus group discussion to document responses of the Pakistani journalists about the challenges of climate journalism in Pakistan. The detailed discussion provided valuable insights into the problems the journalists (both reporters and news/desk editors) face while tackling news stories related to climate change. The Pakistani climate communication landscape is characterized by many interrelated factors that hinder effective media coverage and climate change awareness. These challenges include disparities in media coverage, lack of sensitization and de-prioritization of climate change issues, absence of specialized climate desks and beats, the influence of policy agenda, and most importantly insufficient academic infrastructure and training in climate journalism. All these findings support the existing body of literature (Manzoor & Ali, 2021; Noor et al., 2023; Qusien & Robbins, 2023). It is worth noting that if the media pays attention and due to the importance of issues related to climate change, it may yield fruitful results in terms of public awareness and action and application of other mitigation strategies. The establishment of Climate Desks and Climate Beats is important keeping in view the gravity of the crisis. Journalists' training is important to equip them with the latest trends and technologies in the field. Media must be independent and free to develop its agenda on climate change. It should not only sensitize itself but also prioritize news stories related to pre and post-climate change crises other than event-based routine coverage. Media and mass communication departments in various universities may introduce courses on Media and Climate Change to educate and sensitize their students and future generations of journalists.

## Policy Recommendations

Based on its findings, the presents the following recommendations:

1. All news media organizations including newspapers, television channels, radio stations, and digital media set-ups should establish specialized climate desks and dedicated beats to ensure comprehensive and consistent media coverage of the climate change crisis in the country.
2. All news media organizations must dedicate a group of journalists including news reporters, editors, photographers/videographers, and make suitable arrangements for their training and development of environmental science, climate change, and technological trends and knowledge in climate journalism. The journalists must be trained in digital storytelling, satellite imagery, and data visualization concerning climate change and environmental science.
3. Media editorial policies concerning climate change must not be influenced by political economy and should remain independent of policy agenda as well. Media owners and managers must sensitize their workforce and prioritize coverage of issues related to climate change.
4. Media and mass communication departments in various universities and higher education institutions (HEIs) of Pakistan should start teaching courses on "Media and Climate Change." to educate and sensitize media students—the potential future journalists—on the significance of climate change, training them to report efficiently on issues related to environment and climate change.

## Acknowledgements

None.


## Conflict of Interest


Authors declared NO conflict of interest.


## Funding Source

The authors received NO funding to conduct this study.

## ORCID iDs

Aqeel Ahmed <sup>1</sup>  <https://orcid.org/0009-0009-5407-560X>

Mohammad Kashif <sup>2</sup>  <https://orcid.org/0009-0008-2108-2793>

Sara Mansoor <sup>3</sup>  <https://orcid.org/0009-0004-4405-4251>

## References

- Abbass, K., Zeeshan, M., Huaming, Q., Muntasir, S., & Mahmood, H. (2022). A review of the global climate change impacts , adaptation , and sustainable mitigation measures. *Environmental Science and Pollution Research*, 29, 42539–42559. <https://doi.org/10.1007/s11356-022-19718-6>
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 2(3), 77–101. <https://doi.org/https://doi.org/10.1191/1478088706qp063oa>
- Dawadi, S. (2020). Thematic Analysis Approach : A Step by Step Guide for ELT Research Practitioners. *Journal of NELTA*, 25(1--2), 62--71.
- Fahlström, E. (2020). *Professional Boundaries in Climate Journalism: Journalists and NGOs during*



*Swedish media coverage of COP25*. Södertörn University, Stockholm.

- Lochmiller, C. R. (2021). Conducting Thematic Analysis with Qualitative Data. *The Qualitative Report*, 26(6), 2029–2044.
- Mabon, L. (2020). Making climate information services accessible to communities: What can we learn from environmental risk communication research? *Urban Climate*, 31, 100537. <https://doi.org/10.1016/j.uclim.2019.100537>
- Manzoor, S., & Ali, A. (2021). Media and Climate Change in Pakistan : Perception of the Journalists in Mainstream Media. *Annals of Social Sciences and Perspective*, 2(2), 145–155.
- Noor, R., Kashan, & Zafar, H. (2023). Green Journalism in Focus: Investigating Challenges and Perspectives in Climate Change Reporting within Pakistani Media. *Global Sociological Review*, VIII(I), 486–500. [https://doi.org/10.31703/gsr.2023\(VIII-I\).47](https://doi.org/10.31703/gsr.2023(VIII-I).47)
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis : Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16, 1–13. <https://doi.org/10.1177/1609406917733847>
- Nunes, L. J. R. (2023). The Rising Threat of Atmospheric CO<sub>2</sub> : A Review on the Causes , Impacts , and Mitigation Strategies. *Environments*, 10(66), 1–22. <https://doi.org/10.3390/environments10040066>
- Nyumba, T. O., Wilson, K., Derrick, C. J., & Mukherjee, N. (2018). The use of focus group discussion methodology : Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9, 20–32. <https://doi.org/10.1111/2041-210X.12860>
- Painter, J. (2013). *Climate Change in the Media: Reporting Risk and Uncertainty* (1st ed.). i.B.tauris & Co. Ltd.
- Qusien, R., & Robbins, D. (2023). Science Journalism in Pakistan: The Challenges Faced by Environmental Reporters. *Journalism Studies*, 1–21. <https://doi.org/10.1080/1461670X.2023.2201854>
- Rawat, A., Kumar, D., & Khati, B. S. (2024). A review on climate change impacts , models , and its consequences on different sectors : a systematic approach. *Journal of Water and Climate Change*, 15(1), 104–126. <https://doi.org/10.2166/wcc.2023.536>
- Santos, F. D., Ferreira, P. L., & Pedersen, J. S. T. (2022). The Climate Change Challenge : A Review of the Barriers and Solutions to Deliver a Paris Solution. *Climate*, 10(75), 1–32. <https://doi.org/10.3390/cli10050075>
- Schäfer, M. S., & Painter, J. (2021). Climate journalism in a changing media ecosystem : Assessing the production of climate change-related news around the world. *WIREs Climate Change*, 12(e675), 1–20. <https://doi.org/10.1002/wcc.675>
- Shabir, G., Safdar, G., Imran, M., Seyal, A.M., Anjum, A.A. (2015). Process of Gate Keeping in Media: From Old Trend to New. *Mediterranean Journal of Social Sciences*, 6(1S1), 588-593.
- Shivanna, K. R. (2022). Climate change and its impact on biodiversity and human welfare. *Proceedings of the Indian National Science Academy*, 88(2), 160–171. <https://doi.org/10.1007/s43538-022-00073-6>
- UN-Habitat. (2023). *UN Habitat Country Report 2023*. <https://www.unhabitat.org/pakistan-country-report-2023>
- Willig, I., Blach-Ørsten, M., & Burkal, R. (2022). What is ‘Good’ Climate Journalism? Public Perceptions of Climate Journalism in Denmark. *Journalism Practice*, 16(2–3), 520–539. <https://doi.org/10.1080/17512786.2021.2016069>