



Green Journalism in Pakistan: A Study of Challenges Faced by Environmental Journalists

Saleemullah Khan^{1*}  | Asmat Ara² 

Abstract

Environmental journalism in Pakistan has gained significance over the last decade as the country is facing severe climate related challenges including rising temperatures, floods and heat waves. Despite the urgency, environmental reporting is fragmented and underdeveloped. This study investigates the challenges faced by Pakistani environmental journalists and the nature of those challenges. A qualitative research design was used, with semi-structured interviews of 15 journalists with at-least two years of professional experience in TV, print and digital media. Interpretative Phenomenological Analysis (IPA) was applied because it allows exploration of journalists' lived experiences and perceptions in depth. Purposive and snowball sampling ensured that only respondents directly connected to environmental reporting were included. Interviews were conducted in Urdu, recorded, and transcribed into English. Findings show that disaster oriented news like floods and heat waves dominates the coverage as it has immediate audience appeal while long term environmental issues are ignored. Key hurdles include lack of financial and institutional support, political and industrial pressures and limited access to reliable scientific data. These constraints hinder journalists from providing sustained and evidence based environmental reporting. The study highlights the need for capacity building, institutional support and closer collaboration between journalists, scientists and policymakers to strengthen environmental journalism in Pakistan.

Keywords: Climate Change, Environmental Journalism, Media Framing, Qualitative Research, Environmental Reporting, Interpretative, Disaster-Oriented News, Journalistic Challenges.

Author's Affiliation:

Institution: Department of Mass Communication, University of Karachi ^{1,2}

Country: Pakistan

Corresponding Author's Email: *su.khan1992@hotmail.com

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1. Introduction

Climate change has become one of the most debated global issues of our time, posing serious threats both to human and animal lives. Pakistan is at the forefront of this environmental crisis with challenges ranging from irregular temperature patterns to glacier melting, inconsistent rainfall, and catastrophic floods. All of these not only threaten lives but also disrupt ecosystems and economic stability. In such a crucial context, the media play a significant role in promoting environmental awareness by framing stories and encouraging sustainable solutions through coverage of the environmental beat.

Green Journalism focuses on gathering, checking, creating, sharing, and presenting news and information about events, issues, and people connected to the environment, both human and natural. It focuses on how people interact with nature in everyday life (Chakraborty & Basu, 2022). The word green has long been associated with nature, life and the environment. Green journalism is a form of environmental reporting that focuses on climate change and ecological issues (Noor & Zafar, *Green Journalism in Focus: Investigating Challenges and Perspectives in Climate Change Reporting within Pakistani Media*, 2023). The color green traditionally symbolizes life, peace, and renewal. Green journalism represents a specialized and increasingly vital field within environmental communication, characterized by its dedicated focus on informing the public about environmental issues, ecological crises, and sustainable development initiatives, all while adhering to rigorous journalistic standards and ethical practices. This form of reporting extends beyond merely documenting environmental problems; it actively investigates the underlying causes, explores potential solutions, and holds accountable those responsible for environmental degradation (Gibson et al., 2015). The concept of green journalism, as a distinct field, emerged in the early 21st century. A notable institutional milestone was the founding of the Green Journalism project in 2013 by Prof. Dr. Peter Seeger at Darmstadt University of Applied Sciences in Germany (Pleil & Deuschel, 2023). While the broader tradition of environmental journalism dates back to the 1960s and 1970s, the formalization and naming of "Green Journalism" as a distinct initiative and educational platform can be attributed to Seeger and his colleagues at Darmstadt University. The term "green" began gaining political and social meaning in the 1970s and 1980s with the rise of the Green movement in Europe (especially Germany) and other parts of the world (Dobson, 2007).

Environmental journalism is a sub-category of the general category of journalism that possesses great potential to shape public opinion and policy. In Pakistan, journalists who are reporting on the environment face a host of challenges that make it difficult to do their jobs effectively. Such challenges include lack of institutional support, inadequate training, and limited coverage of environmental issues. The impacts of this gap are significant, as it restricts public access to information on environmental problems and delays necessary solutions.

This paper outlines the challenges of environmental journalists in Pakistan and aims to explain their underlying nature. It is hoped that once these issues become identified, solutions may be devised to empower reporters and improve the quality

of environmental journalism within Pakistan itself. A better, more informed media can play a great role in addressing climate change and other environmental issues, hence impacting society positively.

One of the most important drivers of climate change is temperature variation; recent decades show abnormal shifts compared to previous patterns. Seasonal cycles have become increasingly unpredictable, with issues such as glacier melting, irregular rainfall, and floods. These problems are causing severe consequences for human and animal life. Environmental journalism therefore plays a vital role in raising awareness and promoting solutions. However Illiteracy, lack of trained professionals and inadequate financial resources further limit effective environmental reporting. With Pakistan's rapidly growing population, resources are shrinking while environmental problems are escalating. Human activities are driving climate change, and evidence suggests that the Earth is now under overwhelming stress (NAP, 2010). Climate change is a global risk whose hazards transcend national borders (Sharif & Medvecky, 2018). The impacts of climate change include rising sea levels, more frequent heatwaves, and declining agricultural yields (Schramek & Harmeling, 2001; Smit & Wandel, 2006; Füssel, 2007).

Most studies on environmental journalism in Pakistan and elsewhere have looked at media content, coverage patterns, or policy debates. What has often been missing are the voices of the journalists themselves, the people working on the ground, facing pressures and limitations every day. This study takes a step toward filling that gap by listening to those voices and exploring how journalists deal with professional, institutional, and political barriers in their reporting. Using Interpretative Phenomenological Analysis (IPA), the research sheds light on their lived realities and everyday struggles, offering a perspective that has rarely been highlighted in earlier work. By focusing on these experiences, the study not only reveals the structural challenges that restrict environmental journalism but also points to the urgent need for reforms that can make evidence-based reporting possible in a country as vulnerable to climate change as Pakistan.

The significance of this research lies in its attempt to address the existing gap between environmental journalism and the necessitated climate action in Pakistan. The study suggests that specific interventions could emerge from understanding of journalists' obstacles, such as capacity-building initiatives, policy reforms and increased financial support for environmental reporting. At a broader level, media can be leverage to discuss the challenges in limiting climate change and achieving sustainable development.

1.1 Problem Statement

Pakistan is facing a major collision in the form of climate change. No one is safe from hazards of environmental issues and climate change. In this situation media can play essential role in better development of environment through framing and covering environmental stories. Environmental journalist in Pakistan faces numerous challenges. These challenges need to dig out and highlight them for solution. Environmental journalism can contribute positively in climate change

and environmental issues.

1.2 Objective of the research

The purpose of this research is to study the challenges faced by journalists to work on environment and green journalism and finding the nature of those challenges.

1.3 Research Questions

RQ1: Do Pakistani media have a full time beat for environment?

RQ2: What challenges environmental journalists face in Pakistan?

RQ3: In what circumstances environmental issues focused by Pakistani Media?

RQ4: Do Pakistani environmental journalists have awareness about scientific studies/environment knowledge?

2. LITERATURE REVIEW

Environmental journalism is not merely space-filling in mass media; it serves as a bridge connecting scientists, policymakers, and the public through mediated news coverage (Boykoff & Boykoff, 2007). They also found the rise and fall of media attention for global climate change. Boykoff and Boykoff (2007) showed that journalistic norms such as personalization, dramatization, and novelty “skew reporting toward sensational events rather than sustained scientific issues” (p. 1192). They conducted a descriptive content analysis of US media from 1988 to 2004. Coverage peaked during political events rather than scientific breakthroughs, making climate reporting episodic and “informationally deficient” (p. 1201). This echoes Pakistan’s context, where disaster-driven news dominates environmental coverage (Ali, 2013; Sharif & Medvecky, 2018).

In Pakistan, most journalists working on environmental journalism have limited knowledge about environmental science, since their academic backgrounds are rooted in journalism rather than environmental science, which is not a scientific study. This makes it more difficult to work on environmental issues and creating awareness-focused stories (Ali, 2013). This research was done on content analysis of two newspapers of Pakistan of two years and in-depth interviews were conducted with journalists. The research is limited to Lahore city.

Zia (2016) found that cultural and social norms restrict open discussion of environmental issues in the media. Interviews with producers and surveys showed that sensitive topics are often avoided. The researcher collected the awareness advertisements and examined them, also interviewed the producer of the messages. In the second step the researcher conducted a survey, in which sample of 60 male and female participants were targeted using random sampling method.

Sharif and Medvecky (2018) reported that environmental news is treated as event-based rather than a sustained beat, due to financial, political, and cultural pressures. Their study involved interviews with 30 journalists across different media platforms. A case study approach informed by social constructionism was

used to examine the targeted population. Moreover, limited scientific literacy, technological constraints, and a lack of collaboration between journalists and climate scientists further hinder comprehensive coverage. The episodic and superficial nature of reporting underscores the need for dedicated environmental reporting units and journalist training in Pakistan.

Together, these findings show that structural and institutional weaknesses keep environmental journalism on the margins of Pakistani media agendas.

Chakraborty and Basu (2022) suggested a more proactive role: journalists should act as advocates for the environment, educating the public and promoting solutions. The researchers conducted a survey of 200 participants to find the results for importance of media coverage for environmental issues. Chakraborty and Basu (2022) showed through statistical survey that the term “environment” encompasses all factors affecting human surroundings. People widely believe media coverage helps raise awareness about environmental problems and supports disaster management efforts. Their study also found that news reporting can influence both policymakers and communities to recognize the value of biodiversity, ecological services, and the fair use of environmental resources. Perhaps most importantly, they highlight the role of media coverage in shaping political decision-making on environmental issues. These insights connect closely to the Pakistani context, where journalists struggle not only with limited resources and training but also with the larger challenge of ensuring their work is both informative and impactful at the policy level (Chakraborty & Basu, 2022).

Ittefaq et al. (2023) observed that most climate stories rely on press releases. Due to limited knowledge and resources, reporters often avoid field reporting, resulting in coverage driven more by self-interest than editorial direction. Adding another dimension, Ittefaq et al. (2023) examined the ethical frontiers of climate journalism in Pakistan. They found that while journalists frequently report on climate impacts, ethical principles such as fairness, representation, and responsibility are often neglected. Drawing on UNESCO's ethical guidelines (DEPCC, 2017), the authors argue that journalists should not only communicate risks but also help audiences “understand the paths forward,” including mitigation strategies and local solutions. They stressed that ethical climate communication requires collaboration among journalists, scientists, policymakers, and civil society, but that in Pakistan, such dialogue remains inconsistent. Their work highlights the importance of embedding ethical deliberation into climate journalism, ensuring that reporting is both accurate and socially responsible.

Building on these debates, Noor et al. (2023) found that while Pakistani journalists are generally aware of climate change, their reporting is hampered by limited training and weak technological capacity. Journalists with specialized workshops or professional development opportunities produced more accurate and impactful stories, whereas outdated tools and lack of the institutional support restricted the in-depth coverage. These findings extend earlier studies (Ali, 2013;

Sharif & Medvecky, 2018; Ittefaq et al., 2023) by highlighting how gaps in skills and technology remain overlooked yet critical barriers to strengthening climate journalism in Pakistan. They conducted a survey of 110 journalists with 20 in-depth interviews. Their findings show that journalists frequently pointed out that outdated equipment, poor access to digital tools, and weak institutional support limit their ability to investigate and present stories in engaging ways. Although many journalists expressed willingness to report on climate change, institutional pressures and scarce resources often reduced such reporting to surface-level coverage.

Building on these concerns Ejaz et al. (2023) examined 7,655 climate change-related news articles published between 2010 and 2021 in three Pakistani English newspapers using topic modeling. Their study revealed a substantial increase in climate coverage over time, yet reporting remained overwhelmingly focused on political governance and societal impacts, while scientific developments and environmental issues received limited attention. Consequently, audiences may receive a skewed perception of climate urgency, prioritizing governance issues over actionable environmental knowledge. This emphasis on political narratives may inadvertently marginalize ecological and scientific perspectives, constraining public understanding and reducing the media's capacity to foster informed debate and climate action. These findings complement earlier studies (Ali, 2013; Sharif & Medvecky, 2018; Noor et al., 2023) by emphasizing that even as coverage grows quantitatively, qualitative aspects such as scientific accuracy, environmental depth, and public education remain underdeveloped.

Qusien & Robbins (2023) deepened this picture by showing that environmental reporting in Pakistan suffers from low prestige compared to politics or business beats. Reporters also face commercial and editorial pressures that push environmental stories aside, while "balance as bias" framing dilutes scientific consensus. Differences between English and Urdu language media further complicate reporting, as newsroom cultures and linguistic practices affect how scientific issues are portrayed. Research was based on purposive sampling and thematic analysis of interviews. The researchers conducted interviews with environmental journalists from six Pakistani newspapers.

Taken together, these studies highlight multiple layers of constraint like financial, political, cultural, professional, and editorial, that shape environmental journalism both globally and in Pakistan. What remains underexplored, however, are the lived experiences of journalists themselves: how they perceive these pressures, cope with them, and negotiate their role. The study draws on social constructionism to examine how journalists interpret and negotiate environmental issues within institutional and cultural constraints. The study explicitly links empirical findings to social constructionism, showing how perceptions and institutional structures shape reporting practices. By focusing on these perspectives, the present study seeks to fill this gap and show that improving environmental journalism requires systemic reforms, institutional support, and the

capacity building across both textual and visual practices. While prior research largely focused on content and output, the lived experiences of journalists remain underexplored, justifying the use of semi-structured interviews and Interpretative Phenomenological Analysis (IPA) to capture nuanced insights into the challenges and coping strategies of Pakistani environmental journalists.

3. METHODOLOGY

This research is qualitative in nature. Semi-structured interviews method was used for data collection (Sharif & Medvecky, 2018). A case study approach was used to identify targeted population. Interviews were conducted with 15 journalists having at-least 2 years of experience in environmental journalism. Interviews were conducted until the saturation of theme was received. Interviews were conducted through internet, call and face to face. Purposive sampling technique was used to collect data only from the respondents connected to the research.

A list of 15 environmental journalists was generated based on the relevance of research topic. A semi-structured questionnaire was prepared and pilot-tested for clarity for interviews. Questionnaire has mentioned in "Appendix C" in the end of the paper. The data has been collected in descriptive form, according to the experiences of respondents. All interviews were audio-recorded and then transcribed into English from Urdu, the native language of respondents, with accuracy ensured through cross-checking by the researchers.

All participants were informed about the purpose of the study, and their oral consent was obtained before interviews. Participants were informed that they could withdraw at any time without consequences. Permissions were obtained for recording the interviews. They were informed about that their names and interview transcriptions will be share in research article and their names will be also published. The transcription was shared with them for the confirmation of their interview and transcription is matched. Also permission from each participant was obtained for recording the interviews.

3.1 Sampling

In qualitative research the data was collected in the form of words and the results are presented in the form of descriptive way (Wimmer & Dominick, 2011). Researchers had decided two methods of sampling in this research. These are purposive and snowball sampling.

3.2 Purposive Sampling

This type of sampling selects respondents rich in case (Nyimbili & Nyimbili, 2024), it includes that if the respondents are best for the topic, subjects or elements of the sample selected for specific characteristics those are eliminated who fails to meet criteria (Wimmer & Dominick, 2011).

3.3 Snowball Sampling

This type of sampling is much helpful in selecting and interviewing the most related respondents for the research criteria and accurate data related to the topic. It is suitable to find the relevant samples (Naderifar et al., 2017). Initially we contacted some respondents and in the end of interview ask the respondent to refer some other relevant respondents (Wimmer & Dominick, 2011).

Purposive and snowball sampling were appropriate for this research, ensuring participants were highly relevant and data aligned with the research themes. These two methods coordinated to enhance sampling efficiency and data validity.

3.4 Data Analysis

The data were transcribed in English, by using an Interpretative Phenomenological Analysis (IPA) approach “to explore in detail how participants are making sense of their personal and social world” (Smit et al., 2009). Researchers are native Urdu speakers also the respondents are not native English speakers so the data has collected originally in Urdu. Researchers cross-checked translations to ensure accuracy and maintain meaning. A semi-structured questionnaire was prepared and pilot-tested for clarity before the interviews. A table of themes was generated for research. Themes were derived through systematic coding. Themes were derived from each interview through systematic coding.

Researchers acknowledge their perspectives may influence interpretation of data. To reduce subjectivity, coding and theme analysis were reviewed by multiple researchers, and disagreements were resolved through discussion.

3.5 Limitations

The study is limited by the small sample size and reliance on self-reported experiences. Language translation from Urdu to English may introduce minor interpretation differences. Additionally, purposive and snowball sampling could introduce selection bias and the small sample size limits generalizability.

3.6 Data Validation

To ensure the trustworthiness and credibility of the data, several steps were taken. First, the study included journalists from different media types such as, TV, print, and digital as well as from various roles, providing a rich and diverse perspective on environmental journalism. Second, all interviews were audio-recorded, transcribed from Urdu to English. Third a detailed audit trail was maintained, including transcripts, coding notes, and reflections, to ensure transparency throughout the research process. Finally, interviews were conducted until no new themes emerged, ensuring that the findings reflect a comprehensive and accurate understanding of the participants' experiences. These steps together strengthen the validity and dependability of the study's results.

4. FINDINGS OF STUDY

4.1 Interviews

Sources of Interview are mentioned in “Interviews respondents” below. The Interviews showed the problems faced by journalists during coverage and their recommendation for solution. As well as challenges and their own efforts during coverage of disastrous area. Transcription of interviews are in appendix A after references section.

Table 1: Interview Respondents

N O.	Name	Gender	Exp	Position	Lang	Location	Medium	Org	Nature
1	Sidra Azhar Dar	Female	14	Correspondent	Urdu	Karachi	Digital	Voice Of America	Online
2	Mania Shakeel	Female	7	Correspondent	Urdu	Karachi	T.V	DW	Online
3	Hawwa Fazal	Female	2	Reporter	Urdu	Karachi	Digital	Dawn News	Online
4	Abid Khan	Male	25	Senior News Producer	Urdu	Karachi	T.V	Aaj News	In-person
5	Waqas Alam Angaria	Male	3	Reporter	Urdu	Karachi	T.V	Geo News	In-person
6	Ahtisham Yousuf	Male	4	Reporter	Urdu	Lahore	T.V	Public News	Online
7	Laiba Hussan	Female	5	Reporter	Urdu	Peshawar	T.V	Aaj News	Online
8	Farah Naz	Female	10	Copy Editor	English	Karachi	T.V	Aaj News	Online
9	Tufail Ahmad	Male	26	Senior Reporter	Urdu	Karachi	Print	Express News	In-person
10	Yasir Arfat	Male	16	Senior News Producer	Urdu	Karachi	T.V	Aaj News	In-person
11	Shazia Arshad	Female	18	Associate Producer & Reporter	Urdu	Karachi	T.V	Aaj News	In-person
12	Huma Butt	Female	15	Reporter	Urdu	Lahore	T.V	Aaj News	Online

13	Hamna Nisar	Female	2	Reporter	Urdu	Karachi	T.V	Aaj News	In-person
14	Aftab Khan	Male	26	Senior Reporter	Urdu	Karachi	T.V	Express News	In-person
15	Naveed Khalid	Male	18	Senior News Producer	Urdu	Karachi	T.V	Aaj News	In-person

The research findings highlight significant trends and challenges in environmental journalism in Pakistan, particularly in the Urdu-language television medium. Through interviews with experienced journalists from various news organizations, it becomes evident that environmental issues are gaining increasing attention, but there are still substantial gaps in coverage, resources, and public awareness.

4.2 Growing Awareness and Coverage of Environmental Issues

Over the past few years, there has been a noticeable increase in the number of journalists focusing on environmental issues. Environmental stories are now being recognized as critical, especially in light of climate change and its impacts on public health, such as heat-waves, floods, and air pollution (Arfat, In-person interview, September 22, 2024; Arshad, In-person interview, September 26, 2024; Hussan, Online Interview, October 17, 2024). Yasir Arfat (In-person interview, September 22, 2024) emphasized that, "media is focusing more on global warming due to glaciers melting and deforestation" and highlighted the increasing focus on heat-waves, particularly in urban areas like Karachi, where excessive heat continues to pose a significant public health threat. Laiba Hussan (online interview, October 17, 2024) noted that, "environmental journalists are now more aware of the issues and are working to highlight these stories, especially with the rising frequency of environmental disasters". This growing awareness is attributed to both the increasing frequency of environmental disasters and the rising public concern about their effects.

a. Public Perception and Engagement

The public's perception of environmental issues is another critical factor influencing the effectiveness of environmental journalism. Laiba Hussan (Online interview, October 17, 2024) and Aftab Khan (In-person interview, October 4, 2024), noted that while public awareness is increasing, especially in urban areas, there is still a significant gap in understanding the long-term implications of climate change. Laiba Hussan (online interview, October 17, 2024) stated, "People are becoming more aware of environmental issues, but there is still a lack of understanding about the long-term effects of climate change". Cultural and religious beliefs, as well as a general lack of education on environmental matters, often shape how the public engages with these issues. However, the role of media in raising the awareness is

undeniable, and journalists believe that continued coverage can foster greater public engagement.

b. Cultural Barriers

Public awareness about climate change and environmental issues has improved, but significant gaps remain. Many journalists emphasized the role of media in shaping public perception. As Laiba Hussan (online interview, October17, 2024) observed, "People are still not very conscious about climate change due to cultural and religious beliefs and a lack of awareness."

Cultural barriers often complicate efforts to raise awareness. For instance, misconceptions about the causes of environmental issues can hinder effective communication. Journalists must navigate these challenges carefully, crafting narratives that resonate with diverse audiences while addressing misconceptions.

4.3 Challenges in Environmental Reporting

A recurring theme in the interviews was the lack of resources and institutional support for environmental journalism. Hamna Nisar(In-person interview, October4, 2024) pointed out, "Very few channels have a full-time environmental beat, and reporters often juggle multiple assignments, diluting their focus." Similarly, Aftab Khan(In-person interview, October4, 2024) highlighted the systemic issues, stating, "Authorities lack documented data, and much of the information provided is based on hypotheses rather than empirical evidence."

The financial constraints faced by journalists and media organizations further exacerbate these challenges. According to Shazia Arshad (In-person interview, September26, 2024), "Financial issues and lack of resources often make it difficult to reach affected areas." This sentiment was echoed by Yasir Arfat(In-person interview, September22, 2024), who emphasized the need for government support to facilitate on-ground reporting during disasters.

a. Political and Economic Pressures

Despite the growing awareness, political and economic factors continue to influence the coverage of environmental stories. Aftab Khan(In-person interview, October4, 2024) and Hamna Nisar(In-person interview, October4, 2024) stated that when environmental issues conflict with political or industrial interests, the media often faces pressure to downplay or avoid coverage. Aftab Khan(In-person interview, October4, 2024) remarked; "political and industrial pressures often influence how environmental issues are covered, especially when the story conflicts with the interests of powerful groups". Hamna Nisar(In-person interview, October4, 2024) echoed similar concerns, stating that "the political factors affect environmental journalism, especially when reporting on projects that may be damaging to the environment". Industrialists, for instance, are often reluctant to

discuss the environmental impact of their operations, especially when it involves pollution or waste management. This dynamic is exacerbated by the political nature of mainstream media in Pakistan, where political stories tend to dominate, pushing the environmental reporting to the backseat unless a disaster occurs.

Political and economic considerations significantly influence environmental journalism in Pakistan. Several journalists highlighted the pressures exerted by industrialists and political entities to suppress unfavorable stories. Shazia Arshad (In-person interview, September26, 2024) stated, "Industrialists often use their influence to prevent coverage of issues related to their waste management practices."

Economic constraints also shape the scope and focus of environmental reporting. As Farah Naz (Online interview, September23, 2024) explained, "Media agencies prioritize stories based on their marketability, often sidelining critical but less sensational environmental issues."

b. Lack of Resources and Data

One of the most striking challenges faced by environmental journalists is the lack of reliable, documented data. Waqas Alam Angaria (In-person interview, October11, 2024) and Shazia Arshad (In-person interview, September26, 2024), pointed out that they often rely on press releases from government agencies or NGOs, as official data on environmental issues is either unavailable or unreliable. "The lack of documented data on environmental issues makes it difficult to report effectively. We often rely on press releases and information from authorities, but there is no real check on the accuracy of this data" (Arshad, In-person interview, September26, 2024). The absence of a structured, research-based approach to environmental journalism makes it difficult for reporters to provide in-depth, accurate coverage. Additionally, technological limitations further hinder journalists' ability to access and analyze environmental data effectively.

4.4 Limited Focus on Environmental Reporting

Although environmental issues are becoming more prominent in the media, there is still no dedicated, full-time environmental beat in most news organizations. While some channels have started to dedicate resources to environmental reporting, many others continue to treat environmental stories as side projects, often assigned to journalists with no specialized training in the field. (Arfat, In-person interview, September22, 2024; Ahmad, In-person interview, October2, 2024). "In Pakistan, environmental reporting is not always treated as a full-time beat. It's often given to journalists who are already covering other topics, which means the stories are not always covered in-depth" (Arfat, In-person interview, September 22nd, 2024). This lack of specialization means that environmental stories are sometimes covered superficially, without the necessary scientific background or in-depth research.

4.5 Opportunities for Growth

Despite these challenges, the future of environmental journalism in Pakistan appears promising. The increasing number of dedicated environmental reporters and the growing awareness among the public are positive indicators. Yasir Arfat (In-person interview, September 22, 2024) expressed optimism, stating, "Media can do a lot to spread awareness about environmental issues by focusing on stories about pollution and its hazards."

Digital media offers a significant opportunity for growth. As Hamna Nisar (In-person interview, October 4, 2024) observed, "In this era, it is essential to work on social and digital media to reach targeted audiences and spread awareness." By leveraging digital platforms, journalists can bypass traditional gatekeepers and engage directly with the public, fostering a more informed and proactive citizenry.

4.6 Role of NGO's and Scientists

In the absence of government support and resources, NGOs and scientists play a crucial role in environmental journalism. Journalists like Shazia Arshad (In-person interview, September 26, 2024) and Hamna Nisar (In-person interview, October 4, 2024) noted that they often collaborate with NGOs to access information and reach affected areas, especially during disasters. "We often collaborate with NGOs to get information and support in reaching affected areas. Without their assistance, it would be difficult to cover environmental stories, especially in remote areas" (Arshad, In-person interview, September 26, 2024). Scientists also provide valuable data that helps reporters shape their stories, although, as Farah Naz (Online interview, September 23, 2024) mentioned, the lack of direct interaction between journalists and scientists can limit the depth of reporting.

4.7 Role of Media in Environmental Awareness

Environmental journalism in Pakistan has seen notable growth over the past decade, with an increasing number of journalists dedicating themselves to this beat. As Shazia Arshad (In-person interview, September 26, 2024) noted, "The number of environmental reporters has increased in the last five years due to the growing significance of environmental issues." However, mainstream media still prioritizes political and trending topics over environmental stories, as Farah Naz (Online interview, September 23, 2024) observed: "Electronic media covers issues that sell, often sidelining smaller or less sensational environmental stories." This trend underscores the need for a paradigm shift where environmental reporting is treated as a central rather than peripheral concern.

4.8 Role of Technology and Science

Technology and scientific research play a pivotal role in enhancing the quality of environmental reporting. "Technology is crucial for covering environmental stories, and scientists provide quantitative data essential for accurate reporting" (Arfat, In-

person interview, September22, 2024). Despite this, several journalists reported limited access to advanced tools and training. Huma Butt (Online interview, October15, 2024) remarked, "Journalists are not much engaged with scientific tools due to the lack of resources in the media industry."

Workshops and training programs could address this gap, equipping journalists with the skills needed to interpret scientific data and utilize technology effectively. Hamna Nisar (In-person interview, October4, 2024) suggested, "Workshops for environmental journalists should be conducted to raise awareness about scientific knowledge."

5. CONCLUSION

The findings of this research highlight the evolving landscape of environmental journalism in Pakistan, shedding light on the challenges, priorities, and opportunities faced by journalists. Through the interviews conducted, a multifaceted picture emerges, reflecting both progress and persistent gaps in this critical area of reporting.

Environmental journalism in Pakistan is increasingly recognized as important due to the growing impacts of climate change and environmental crises. This study confirms that full-time environmental beats are rare (RQ1), coverage is often disaster-focused, and journalists face financial, institutional, and political pressures (RQ2 & RQ3). Most Pakistani media outlets do not have a dedicated, full-time environmental beat, and environmental reporting is often handled by journalists covering multiple topics.

While some media outlets have started to establish dedicated environmental beats, many still prioritize political and trending topics, leaving environmental reporting underrepresented. Furthermore, the study reveals that journalists' scientific awareness varies considerably, with many possessing limited knowledge of environmental science and restricted access to reliable data (RQ4). The limited scientific knowledge among journalists and lack of structured resources emphasize the need for targeted training and institutional support. These findings highlight how structural, financial, and political constraints influence journalists' reporting practices, often limiting the depth and consistency of environmental coverage. From a social constructionist perspective, these results show that journalists' perceptions and institutional pressures shape the way environmental issues are framed in Pakistani media.

The interviews demonstrate that structural, financial, and cultural constraints strongly influence reporting practices. Political and industrial pressures often limit coverage of sensitive environmental issues, while technological and institutional

short comings hinder journalists' ability to provide in-depth, evidence-based reporting. Cultural and public awareness barriers further shape the framing of environmental stories, sometimes restricting engagement with long-term ecological concerns.

Despite these challenges, journalists are finding ways to improve reporting through digital media, collaboration with NGOs, and engagement with scientific research. Strengthening environmental journalism in Pakistan requires investment in dedicated beats, access to reliable data, and capacity-building initiatives for reporters. By addressing these structural and institutional challenges, the media can play a more effective role in promoting sustainable development and climate action. Ultimately, targeted interventions, institutional support, and training can empower journalists to provide accurate, consistent, and impactful environmental reporting in Pakistan.

5.1 Recommendations for Media Owners

As media can play a big role in environmental crisis. Media can educate and spread awareness by focusing on the crisis due to environmental changes. For that media owners can take action and prepared strategies and policies. We would like to recommend that:

- There should be a bulletin on environmental issues at least in a month.
- There should be a full time environmental beat and desk. This will also help in choosing journalist with environmental journalism background or scientific language background.
- Environmental journalists should be trained before covering any disaster. Also there should be a training sessions in month by the help of NGO's and of environmental scientists.

5.2 Recommendations for Educational Institutions

Universities and other institutions of media sciences and social sciences can also contribute in environmental issue as:

- Environmental sciences studies should be a part of course.
- Training in environmental reporting should be provided to the media students.
- Strategies of environmental journalism should apply to produce more environmental journalists.

5.3 Recommendations for Researchers

Researchers and scholars are working on environmental issues and the numbers are increasing day by day. I have some recommendations for researchers working on media and environment.

- There should be a data of environmental news, researchers should explore

the topic of environmental news and explore the remaining topics that needs coverage.

- Researchers can work on exploring techniques and studies that helps environmental journalists training.
- International standard of environmental journalism can be part of research. Which will be helpful in upgrading techniques and updating knowledge of Pakistani environmental journalists.

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Appendix A.

Interviews Transcript

Interviewee No: 1

Sidra Azhar Dar is a correspondent of Voice of America for digital platform in Urdu language with experience of 14 years, according to her; “In our organization there is no concept of censorship, we don’t run story until it is balanced, in environmental stories nothing is censor but violent visual are hide, due to ethics. Environmental stories are interesting for me always, Environmental stories are difficult to cover, due to some issue are highlighted and we think it should be a part of study, but during covering it we don’t have data and visuals are not available. Shots and other data for visual are very difficult to find out and also to execute them. Climate change themes are not in mind before covering but, when work on this topic but we have covered heat-waves, flood, cyclone and other development related to climate change. Environmental reporters are increased in previous five years, you can say that coverage of environmental coverage has increase.

People now are more aware and conscious about environmental issue. Media has played a role in this awareness, also social media and digital media has played a role in awareness. There is no internal factors effect in my organization but the report should be balance with documented data. Government has made a lot of policies but never received response for them. Its challenging job, climate change reporting is different for other reporting, reporters have to investigate, talk to people and observe the affected area. Scientist can play a big role in environmental journalism, if they conduct workshop and training of reporters about how the reporting of environmental journalism should be. In Pakistan local news channels there is no space in bulletin for climate change stories, very few might be working on web or digital media. Journalist are not using such scientific tools, very few might use scientific tools to produce attractive report. There is no full time dedicated beat in Pakistani media, due to organizations are not focusing on it, this topic is treated as dry and not as valuable topic.

The reporter whom are producing and working on daily weather are not environmental journalist, in western countries there are dedicated environmental journalist, they research on it and full time work on environment, with qualification and experience for specific beat. Very few on full time environmental reports are available in Pakistan associated to local media. After 2015 heat wave urban environmental problems are increased in Karachi, birds and animals are decreased in Karachi, Seas are polluted and in the result sea animal are decreased. In case affected areas are far then the reliable and trusted source

are assign to talk with them and get information. We get information to understand the reasons behind the disasters, to know the climate change issues as well as highlight the problems and issues after the disasters which is known as post disaster affects, like diseases after disasters, new born babies problem and women problems, so related issues with disasters should cover. During 2022 flood, I have decided to cover Sindh's affected areas. Problem starts when you reached the affected area, at this time it was emergency in the affected areas big problem was to reach the areas. There was no restaurant or hotel open, nothing was available to eat, no washroom no place to stay and no internet and mobile signal were available, these challenges were facing by us during disaster, international channels provide finance and other facilities to reporters, government organization and officials are delayed in providing data, when we send them letter to provide the data we need”.

Interviewee No: 2

Mania Shakeel is working for DW as Urdu Language Correspondent for Television, holding seven years of experience, stated in interview that, In national media stories are depend on the journalist that how they portray the climate issue, it all depend on the creativity of reporter. In national media there is not much importance of climate change. In national media decision makers don't have much interest in environmental problem. I don't prefer specific theme but any issue that is effecting humans or living life. Political and economy influencer are effected on climate change issues. Climate change issues and disaster are effecting the economy. In international media they appreciate the reporters on their climate change stories with the solutions. Scientist are important source for information, I don't publish any story without any expert opinion and talk to them. There is not full time beat in national media, there is still something missing due to importance of environmental journalism. I like to work on the environmental story that are not covered before to highlight them. Environmental stories are not difficult find out but to give it angles and portray it with different angles are interesting and challenging. Urban planning is declined, infrastructure is the biggest problem of urban areas during disasters like heavy rain, air pollution in the due to industries and vehicles are biggest problem, water is also polluted, even we can't say any one of the problem is biggest problem there are much problem in Karachi. The number of environmental journalist are now increased, even not every journalist is environmental journalist, but they are increased due to fellow-ships, grants and other facilities. People now are more conscious due to hazards are increased also. Being a journalist it's my responsibility to create awareness according to control the climate change issues. I use it in my reports to cover the awareness in my reports. Ground realities are gathered only by direct meeting with them on the ground. Solution based reporting is when report any disaster is cover before arriving. Specific and authentic information are highlight

and not censor by organization. I research on daily basis and work on it before covering the story.

Interviewee No: 3

Hawwa Fazal is reporter and sub-editor at Dawn News, holding experience of 2 years in English at digital platform, stated that, “I think in national media the coverage of climate change is really less and there is not enough content to talk about climate change. They don’t put climate change enough of as emergency that details. I work on climate change issues, environmental issues and litigation around climate change. Political and social influencer are not as of now play any role in climate change issue. It does also we are pointing the problems but not problems in the system. The more resistance comes when you start reporting about the system, since system is not developing problem in highlighting this issue, so there is no problem in reporting these issues. A lot of editors don’t want climate change stories because these are not very people friendly and they don’t have audience as such. They don’t give much time to reporting on climate change and don’t say yes all time.

Scientist play a big role in reporting climate change, as they provide phenomena and data that we need to explain the issue. Journalist in Pakistan are not much interact with technology to produce climate change stories. For gathering data I have to use government sources because there is no other official source, sometimes from NGO’s that I trust on. It is very difficult to convince the editor on climate change issues without official government data. There is no censorship on climate change stories. There is a full time environment beat but not completely dedicated for environment, it is usually mixed with city beat in the form of two or three beats by a reporter. Very few amount of people are conscious about climate change issues, most of the people are not aware of the environmental issues. During disaster our resources are government officials and sometimes provide by NGO’s. Public perceptions are collected by talking with them in public place”.

Interviewee No: 4

Senior News Producer Abid Khan at Aaj News, holding experience of 25 years in television in Urdu language, share that; “As a senior producer, I have done a lot of bulletins on environment. I have started from water pollution like when the waste material of industries are drown in rivers, for that I have asked the reporters to work on whether the industries are treating the waste material or not. I have found that there is no mechanism for treating there waste material. There is no pressure on reporters according to covering environmental stories, but there is no co-operation from government officials. When our reporters want to talk about the government organization, they don’t talk on-camera according to the environmental issues. I haven’t found any interest in my carrier that news director

or controller news have interest about environmental issues. They focus more on political issues. Environmental issues are cover only on the basis of personal interest of a journalist. There is no beat on environmental in national media, health reporters are assign for environmental. There is no research base work, it is due to the lack of interest by the decision makers. Due to there is no specific beat of environment, there is no research and no interest to work on environment. Media channels don't provide resources and even reporters don't have facilities and salaries problems they don't work with full interest. I guess there should be an hourly bulletin in a month at-least. There must be an environmental reporter just like other beat, so they can work on daily basis and produce a story for environment".

Interviewee No: 5

Waqas Alam Angaria working as reporter at Geo news with experience of 3 years in television witnessed that, "Climate change has many sub topics, which are very important to understand. First it is important to differentiate that climate change reporting and weather reporting has a big difference. Climate reporting has completely different zone. In climate change reporting the geography has to determine and classify in water quantity, air quality and other things. In weather reporting the coverage is accordingly rain or other weather forecast. Climate change many sub topics in its-self. Heat-wave reporting is also a different domain. Floods come in disasters, so in natural disasters earth quick and other disaster which are very dangerous for humans. I have experience 2022 flood and I have worked for 8 month to coverage flood in Baluchistan. On the other side drought in Pakistan is not cover like it should be.

Drought is the underline natural disaster its-self in Pakistan. I had covered drought in Baluchistan, I have worked a lot on Baluchistan drought. In environmental reporting Baluchistan was my point of focus. When natural disasters occurred there are a lot of problem and triggered. Development and ill-infrastructure. Global warming is also a part of climate change. In Pakistan there is not much work about sea level which comes in global warming. To work on environmental reporting we have to make a bracket that what will we covered in our story. After that when go to the area to cover, first problem we face is logistics, when we reach to the ground we face that there is no place to live, nothing to eat, equipment, signal and medical problems. When going to produce story we face that there is no documented data and climate change reporting data is not possible without documented data. There is no geographical data, nor digital data. Even I have seen many areas that were not included in map. Due to not a part of map and unidentified areas, government is unable to send help in these affected areas. I have experienced it in 2022 flood in Nasirabad a place in Sindh. A lot of places there were not identified and they were not a part of map, in

result they were in big problem and disaster. As I work for GEO, my organization they provide all kits, gadgets, vehicle and financial support. In television weather beat is available for beat but there is no full time environmental journalism beat. Television has not yet focus environmental journalism nor it suitable for them economical. As they focus on political journalism because in Pakistan the main stream media is running on political issues. Also the audience are not aware about terminologies and issues, even public is not discuss it in society.

Environmental stories are not difficult to find out but there is no facilities of data and scientific research which is the source to giver angle and coverage story. Authorities doesn't have documented data. We get information from websites and press releases but if there is no research work and tools how do the authorities provide the information. Environmental issues are connected directly with development, like when the seas, forest and other natural habitat are disturbed. When natural resources are changed into artificial resources like uncontrolled development just to get financial resources. In Pakistan due to censorship nobody can talk about those type of development which comes in industrialization. In urban areas it is a forest of concrete. Internal factors are effected on environmental journalism. People are conscious about environmental issue from beginning but in urban areas are aware now about that due to they face it but in indigenous people”.

Interviewee No: 6

Ahtisham Yousuf reporter of Public News in Islamabad, holding experience of 4 years in Urdu language for television medium, share that, “In past couple of years Climate change is a subject of Pakistani media, but government is not showing much interest about this issue. Even government have decrease the budget for this issue than previous budget. I guess national is unable to highlight the environmental issue to government. I work on systematically negligence about environment, and causes that are the reasons of climate change. Climate change is directly link to the political, administrative and economic system. If the corporate owners are in the organization they don't care about climate change, environmental issues are not part of their issues, climate change is not hitting them. Wealth, business and empires are their concern. Environmental scientist are the only source of information in journalism. Pakistani journalist are not interact to or use technology because they don't have access and knowledge about technology”.

Interviewee No: 7

Laiba Hussan is working for Aaj news is a Urdu language reporter for television in Peshawar with experience of 5 years, she said that, “I have noticed that print media has started work since 5 years and they are aware now talk about

that also the reporter are now aware how to cover this issue. Main stream media talk about this issue when there is some kind of disaster occur until it goes to some kind of political issue or have link with. Main stream don't go in the detail of environmental issue as they preferred to political issues. Journalist are trained by the NGO's and other organization. Environmental journalists search for the platform where they can highlight their work, for that they work as freelance and other platform. Main stream media focus on political issues so we are sometimes unable to show our work on mainstream media. In Media organization there is no full time beat, they think this beat is not useful in media industry.

I think there should have a proper segment and bulletin in news and programs related to environmental issues. Government should also take action for environmental issue. The number of environmental journalist are increased now and they are aware about the stories related to environmental issue. People are still not much conscious about climate change. Environmental journalist are working more on digital media than main stream media. During disaster safety kits are provide by international media or very few of local media but not by government. Some stories are life threatening for reporters, in that case organization don't allow the journalist to cover that story and they don't publish it on main stream media. It is easy to get data from sources we have a lot of source like government official sources and observation in the field.

Climate change awareness is much difficult as public perception is different due to cultural and religious believes, and lack of awareness about environmental issues. Main stream media should give space for environmental issues and their stories should take serious. In future the climate change will be the main story”.

Interviewee No: 8

Farah Naz is working as a copy editor at Aaj News, she has experience of 10 years in television in English language. She witnessed that, “Electronic media cover the issue that is selling, if there problem is bigger but the area is not so much important or not a big city it is not cover by the media. I prefer to cover the heat waves which is the most common issue in urban area, also the flood when it's the monsoon season. There is no any external factor that effects on climate change. Media is focusing on hot and trending topics, electronic media has always eyes on other channels what they are preferring. Scientists are very important when we need quantitative report. In Pakistan journalist are not much interact with technology in reporting on environmental issues, rather than they gathered information from social media. Pakistani journalist are facing big problem of salaries and lack of resources that's why they can't work fluently specially on any environmental issue.

Media agencies prefer to cover the story by senior journalist if the issue is hot and big, in case there is no senior reporter in that station and have correspondent then they don't release budget for that to send a senior reporter to cover the issue. If the story is not so big then they hire the junior reporter for the covering that issue instead of available senior reporter. There is no full time environmental beat in Pakistan. Air pollution and noise pollution are most common issue in urban areas. As well as increased of health issues people now are more conscious as compared to previous five years. Media is not much playing a role in creating awareness according to environmental issues. I get information from UNO, WHO and other international sources about coming disasters. Strategies about disasters are depend upon the issue , if the issue is most important and disastrous then I prefer it to be the most valuable news on television, otherwise just cover it as normal news. People perception are obviously gathered by talk to them and their SOTs are a part of the news story, also scientist's SOTs are preferred to make part of the story. In environmental stories I have never seen any sensor or guide line about to minimize the story, the stories are covered from all angles and data. I never research on daily basis regarding environmental journalism but check the international standard sources to cover if there is any disaster. Water pollution is the very alarming issues now a days, our seas and oceans are polluted and the result is sea animals are dying in which very rare fishes are included, this should be highlighted most".

Interviewee No: 9

Tufail Ahmad is a senior reporter in print media at Express news with 26 years of experience. He provide shocking information in interview, as he said; "Government doesn't have exact data about diseases, patient or any environmental issues, in any department. Due to non-recorded data reporters have much difficulties. All the data provide by government are depend on just hypothesis. Urban areas has insufficient greenery and lack of trees. Due to this issue Karachi has excessive heat and different types of diseases and air pollution. Pakistani media didn't have any environmental beat but now it has full time beat. Environmental beat is one of the biggest beat. Government doesn't have any role in awareness about environmental issues. NGO's and media has played a big role in creating awareness. Environmental news are never sensor and has no guide line. Very few of reporters are working on daily basis on environment. Mostly news are depend on press release and sometimes big news related to that".

Interviewee No: 10

Naveed Khalid is a senior news producer at Aaj News, holding experience of 16 years in television media, said that undocumented data is the biggest problem in environmentl journalism. Reporters are not trained for collecting data and its very difficult to make them understand about the report we need for news.

Scientific language is the another issue that we face during our reporters packages. Sometimes our reporting method is not accept by our seniors and them want their way of presenting it.

Interviewee No: 11

Senior news producer Yasir Arfat at Aaj News, holding experience of more than 16 years in urdu language in television medium, stated that, Media is focusing more on global warming due to glaciers are melting and de forestation, I prefer more heat waves in my working on environmental issues due to deaths by heat wave. Political and pressure groups are sometimes effected on environmental journalism. Media can work a lot on environmental issues to spread awareness. Scientists are playing an important role in providing quantitative data about required report. Technology is playing an important role in covering environmental reporting. In Pakistan there is a full time beat in media of environmental reporting. There is no difficulty in finding environmental story. Urban areas has big issue of smog. People now are more conscious then 5 years ago, due to increase of diseases by pollution and media awareness about the reasons. Media can spread awareness by stories on pollution and their hazards. We get information by news agencies like television and online sources. We contact on our local correspondents to work on the disaster by collecting SOTS, visuals and talk to the related ministers. People perceptions are collected by talking with them. It happens rare that the initial reports and prediction of scientists, we cross check all reports and forecast. We report what we see, never sensor any angle of the story in environmental reporting. We prefer various sources and we do research on environmental issue.

Interviewee No: 12

Shazia Arshad is a News Associate Producer & Reporter at Aaj News with more than 18 years of experience in Urdu language television medium. According to her, National media focus on flood and excessive rain in climate change because these are effecting economy of country as well as children's and women health. Our focus in reporting is about the disasters. Flood is not due to just by melting glaciers but also it occurs when India release water towards Pakistani dams. Women are more effects by rain, due to flood, diseases are increase and pregnant women face problem as like their ingredients they need, food and other necessities. In flood and other disasters we have to go to check the ground situation by talking the people, also by observation of the situation at the effect area. In soft news we cover the situation related to women problems due to climate change. Cutting of tree are also part of soft news in climate change. After flood situation we also cover the stories for focusing the problem and issues facing by the people in affected areas. If our organization support us to visit the affected areas, but the mostly financial issues and lack of resources, it is unable to

reach out every time. We get help of NGO's for covering stories, we registered our self with related NGO's and get information by their seminars and conferences, these NGO's also some-times support us the reach the effected people and areas by providing us fund.

Political and economic factor are effected on environmental journalism, Industrialist don't want us to talk or cover the issues or when we talk with them about their waste material they don't want to talk about them. Except governmental projects like green Pakistan and projects about plantation. The climate change is going very fast but factors are saving their cost instead and issues that are generating by them they won't change them. Print media and social media is more supporting and providing resources to reach the issues and effected area and also after the story is produce, they publish the story. But in electronic media mostly the story is produce but the stories are not on-air due to time because they more focus on political issues, if the topic is not in trending. Environmental scientist are very important due to quantitative data can only be collected from them. Journalist don't have much technology instead of mobile camera, digital camera, DSNG etc.

In past years there was no environmental beat but now as environmental issues are increasing in Pakistan now we have a full time environmental beat. Before that this beat was cover by anyone as journal issues. Female reporters are prefer due to they can cover the issues with the ladies. But if the areas are not safe for female and if the situation is difficult for female then male reporters are prefer. When I started the carrier there were not much climate issues but now the situation is different and there are a lot of issues and stories are every-where. If we talk about any health issues they linked at a point with the climate change. In urban areas excessive heat, dust and health issues are common due to lack of tree and more buildings. The number of environment reporters are increased in 5 years due to environmental issues. People now are more conscious about environmental issues, due to awareness, this goal achieve by the awareness of media and when they know how the issues are generated so now they talk about that. We observed our self also the authorities share the information about coming disasters. We use SOP's and precautions to safe our self during disasters to cover the story.

Public perception can only collect by talking with the effected people. Coming disaster stories are cover in the words with predictions not by surety. We collected the information by authorities with the help of their press release, also check out related websites. Never experience about to sensor story or part of story. But if any journalist cover any part which is problematic side for industrialist then they use their sources to stop it. Government should support us about to reached the areas that should cover so it could be possible to highlight the issues in uncover

effected areas.

Interviewee No: 13

Huma Butt is a Lahore based reporter at Aaj News with 15 years of experience in Urdu language television medium. She said; “Environmental issues are now focusing more in news as in top stories or a part of bulletin. In reporting we watch our work that we done before and focus on elements that should cover in next story. Economics and social factor influence the climate change issues. But political factors don’t work for anti-environmental issues. Internal factors don’t influence or impact on environmental reporting as much. Scientist are not playing much role in environmental issues but sometimes there research work is helpful for reporters. Journalist are not much interact with scientific tools, as we don’t have much resources in media industries. There is full time environmental beat in Pakistan. There is not much difficulties in covering environmental stories. Traffic is the biggest problem of urban pollution. The number of environmental reporter are now increased due to environmental issues. People now are more conscious as compared to past 5 years due to environmental problems and media has played a big role in awareness. Government now make it more serious to work on climate change issues. During disasters there is no much strategies but one mission and challenge to cover the story without hurting anyone and to be hurt”.

Interviewee No: 14

A reporter of Aaj news Hamna Nisar stated that, she focus mostly on cutting tree issues, in Karachi we are facing excessive heat. If the tree cutting is not stop and planting tree projects are not started the heat could increase more in coming days. Vehicles and air-condition are also cause of increase heat. Political factors affected on environmental journalism, in case the reporting is affecting their project, like when highlighting the environmental issues cause by their project. Climate change reporting is the biggest beat in journalism in the world, environment is focused more in journalism in the world. Scientist are playing big role in the environment, their researches are very important for environmental journalism. In her 2 years of experience in Urdu language television medium, she found that data issues are big problem in environmental journalism, there is no check and balance and documented data available with authorities. The only can provide the information that is provide by the officials. In Pakistan there is a full time environmental beat, but there is an issue that very few channels have full time environmental beat and the reporter work on that beat. Most of the channels have distribute the environmental beat to other journalist, due to this the journalist can’t focus on specific beat and issues. In Karachi dust, heat and air pollution are the major issues currently. Senior journalist have a lot of information and experience but they have limited them-selves to the newspaper or television. The

time has changed and now audience are diverted to digital, in this era it is necessary to work on social media and digital media to reach the targeted audience and spread awareness. Authorities provide the information and do research, we get information from authorities as they send press release, and we get information from the authorities and don't research on daily basis. There should workshops for environmental journalist to aware them about scientific knowledge.

Interviewee No: 15

Aftab Khan is senior reporter at Express News, having experience of 26 years in Urdu language based television media. He witnessed in interview that; In 2015, Karachi experienced its first major heat-wave, creating an alarming situation for its citizens. This heat-wave was also a significant concern for India during the same year. Approximately 2,200 people in Karachi lost their lives due to the extreme heat, a direct consequence of climate change. Similarly, climate change has contributed to several catastrophic floods in Pakistan, including the super flood of 2010 in Sindh, followed by severe flooding in 2012 and 2020, during which many cities were submerged. The media often creates a hype and provides extensive coverage of heat-waves and floods caused by heavy rainfall. However, authorities and the government typically fail to take early warnings seriously, only responding when the situation becomes imminent and dangerous. Despite the urgency of these environmental crises, the media tends to prioritize political news over environmental issues. Additionally, industrial waste and untreated sewage are frequently discharged into the sea, introducing hazardous and toxic materials that harm marine life, pollute water, and damage other natural assets.

In the past, reporters lacked access to technology, but advancements in social media have now enabled them to use basic technological tools, improving their reporting capabilities. This shift has made environmental journalism a full-time beat, driven by the growing urgency of climate change. Unfortunately, public awareness about environmental problems remains low. Many people fail to follow standard operating procedures (SOPs) during disasters and are often unwilling to evacuate affected areas during floods or other emergencies. Internal factors have historically had little impact on environmental issues, and there are no strict regulations or restrictions from authorities. When errors occur in news reporting, authorities provide guidance and corrections, but they lack the facilities and infrastructure necessary to manage disasters effectively. I recall covering a flood when the Army assisted us in reaching the affected area, highlighting the absence of government-provided resources. The government does not prioritize disaster preparedness or invest in the necessary facilities to handle such emergencies. This lack of foresight and planning continues to exacerbate the challenges posed by

climate change and environmental crises.

Appendix B:

Nested Themes

Theme	Sub-Themes	Details
Reporting of Climate Change Issues		
1. Disaster-Oriented News	a) Flood	Coverage on floods caused by heavy rainfall, glacier melting, and water releases from India (Shazia Arshad).
	b) Heat Wave	Focus on deaths and health crises caused by extreme heat, especially the 2015 Karachi heatwave (Aftab Khan).
	c) Melting Glaciers	Reporting on the link between glacier melting and rising water levels (Yasir Arfat).
2. Event-Oriented News		Stories on tree-planting campaigns, seminars by NGOs, and environmental awareness events (Hamna Nisar).
3. Foreign Sources	a) WHO	Health-related environmental statistics and data.
	b) BBC	International comparative coverage of environmental issues (Mania Shakeel).
	c) UNO	Reports on global environmental data and climate change impacts.
Public Awareness and Perception		
1. Increased Awareness		Media has played a key role in making people more conscious of environmental issues (Huma Butt).
2. Public Resistance During Disasters		Many people fail to follow SOPs or evacuate during emergencies, worsening the impact (Aftab Khan).
Challenges in Environmental Journalism		
1. Limited Resources		Reporters often lack access to advanced tools and technology for environmental reporting (Huma Butt).
2. Budget Constraints		Financial limitations restrict coverage of remote areas and disasters (Shazia Arshad).
3. Lack of Data		Inadequate documentation and reliance on official press releases hinder in-depth reporting (Hamna Nisar).
4. Political Pressure		Industrialists and political groups resist coverage of issues affecting their interests (Shazia Arshad).
Media Agencies Psychology		
1. Check Out Competitors' Stories		Monitoring other media outlets for trends in environmental coverage (Mania Shakeel).

2. Focus on Story That Sells		Preference for disaster stories or high-impact issues that attract more viewership (Yasir Arfat).
Environmental Issues		
1. Air Pollution	a) Smog	Urban smog's health impact, particularly in Lahore (Huma Butt).
	b) Dust	Dust-related issues in urban areas, especially Karachi (Hamna Nisar).
	c) Heat	Urban heat issues due to tree-cutting and air-conditioner usage (Hamna Nisar).
	d) Water Pollution	Stories on industrial and sewage waste polluting marine ecosystems (Aftab Khan).
2. Deforestation		Coverage of tree-cutting issues and their role in worsening urban heat (Hamna Nisar).
3. Climate-Induced Health Issues		Reports on health problems such as heatstroke, respiratory issues, and diseases linked to floods (Shazia Arshad).
Psychological Appearance of News		
1. Hot Topic/Big Story		Assigning experienced reporters for major environmental crises to increase audience interest (Huma Butt).
2. Trending Topic		Prioritizing stories that are currently viral or heavily discussed online (Aftab Khan).
3. Senior Reporter for Big Story		Experienced reporters like Aftab Khan and Yasir Arfat handle impactful stories.
4. Junior Reporter for Soft Topic of Weather		Junior reporters handle lighter, less urgent stories like weather changes or tree-cutting issues (Hamna Nisar).
5. Any Correspondent to Avoid Budget Expenses		Local correspondents are often used to minimize costs for covering environmental stories (Shazia Arshad).
Role of NGOs and Authorities		
1. NGOs as Sources		NGOs provide data, organize seminars, and sometimes fund coverage of environmental stories (Hamna Nisar).
2. Government Initiatives		Limited government support for disaster preparedness and environmental projects (Aftab Khan).
Technological Influence		
1. Use of Digital Tools		Reporters now use mobile phones, digital cameras, and social media for real-time updates (Aftab Khan).
2. Shift to Digital Media		Senior journalists emphasize the importance of digital platforms for reaching wider audiences (Hamna Nisar).

Appendix C.

Questions for Interview

Q1: Demographics

Q2: To what extent does national media (print, electronic, and digital) portray climate change in their content?

Q3: When reporting on climate change, what themes do you prefer to cover in your stories?

Q4: Do you believe that external factors, such as political, economic, or social influences, affect climate change reporting? If so, how?

Q5: How do internal factors within media organizations (media culture) impact climate change reporting?

Q6: To what extent do you consider scientists to be a vital source of information for journalists covering climate change?

Q7: How do you think Pakistani journalists use and interact with technology to produce climate change news stories?

Q8: Is there a dedicated, full-time environmental beat in Pakistani journalism?

Q9: What has been your experience covering environmental news stories?

Q10: Are environmental stories difficult to find? If so, why?

Q11: In your opinion, what are the key urban environmental problems?

Q12: Do you see an increase in the number of environmental reporters compared to five years ago?

Q13: Do you think people today are more environmentally conscious than in the past? If so, how has that awareness been achieved?

Q14: What role is the media playing in raising awareness about environmental issues?

Q15: How do you gather information regarding an impending disaster?

Q16: What strategies do you use when reporting on disasters?

Q17: How do you gauge public perception in your climate change or disaster coverage?

Q18: What do you do when your news story does not align with the eventual outcome of a disaster (when the disaster does not occur as predicted)?

Q19: Does your organization censor certain information when reporting, or follow specific guidelines for disaster and climate change stories?

Q20: What sources do you prefer when gathering news, and do you conduct daily research on your own?