Framing of Climate Change in Pakistani YouTube Content: A Content Analysis of Climate-Related Videos Across Selected Communication Channels

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Abstract: This paper provides information that digital media has a huge impact on public perceptions and is essential for effective climate communication and advocacy in Pakistan. Despite the fact that Pakistan produces very little global carbon emissions, it faces the highest climate change risks. This research investigated the addressed practices of prominent communication platforms including national broadcasters, international news organizations, and NGOs to study how they present the climate change crisis to Pakistani audiences. A quantitative content analysis was conducted on 12 YouTube videos from the most relevant channels. These channels include DW, BBC, Geo News and WWF Pakistan. The analytical framework is resultant from media framing theory. It used exactly four analytical frames: Adaptation/Solution, Disaster/Impact, Causal Attribution and Livelihood/Economic. The investigation revealed that Disaster/Impact and Livelihood/Economic frames dominated the content. Videos give a talk on glacial lake outburst floods and monsoon flooding used emotionally convincing images to carry direct threats. As demonstrated by SAMAA TV and FRANCE 24 reporting. Connecting climate change to tangible socioeconomic influences. Such as distraction to old-style Karez irrigation systems and agricultural losses in mango farming. Channels like Geo News and BBC News hired this framing method obviously Pakistan is often unfairly portrayed as weak, mainly due to Western and Chinese industrial influence, as seen on channels like MIRROR NOW. However, these frames stored significantly lesser engagement points. The algorithmic instruments of YouTube seem to rank instant disaster stories over solution-oriented content. The practice of vernacular language verified momentous. Local language content improved the human-interest dimension.

Key Words: Climate Change, Communication, Framing, Content Analysis, Pakistan, Digital Journalism in Pakistan, Climate Justice Narratives

Background/Introduction

Pakistan's input is a very little amount minor than one percent to international greenhouse gas releases. Yet the nation aspects severe climate change vulnerabilities. This uneven exposure leftovers underappreciated globally. Many climate threats now hover the people annually. Glacial lake outburst floods occur with growing frequency. Monsoon rainfall deepens intensely. Heatwaves persevere longer. Droughts encompass across seasons. Millions aspect threats to their existence and economic safety. Media reporting of these crises endures to change. Digital platforms have become central to this transformation particularly YouTube. How media frames climate change substances meaningfully. YouTube and alike platforms now form public understanding deeply. Traditional news sources have reduced in impact among younger audiences across South Asia specifically Pakistan. Video platforms have fundamentally substituted conventional broadcasting for many viewers. This change stresses academic consideration. The mechanisms driving online climate stories need investigation.

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State-controlled media historically subjugated climate dissertation in Pakistan. These channels ranked national development reporting and political messaging. YouTube has principally transformed this landscape. The platform hosts various content foundations instantly. International news agencies such as DW and BBC work along with local newscasters like Geo News and SAMAA TV. NGOs including WWF-Pakistan also preserve live channels. Each source tactics climate storytelling differently. Global outlets follow diverse editorial ethics. Local media answer to regional viewers preferences. NGOs advance particular organizational assignments. Algorithmic prominence, audience engagement metrics, and exaggeration impact what content reaches viewers. These features form which climate stories gain fame. Understanding these changing aspects is vital for realizing modern climate communication in Pakistan. We need to understand these changing characteristics to realize the modern communication of climate change which is dynamic for Pakistan, and us.

The International Communication Challenge of Climate Change

It is important to understand that climate change refers to continuing changes in weather and temperature. It is a major challenge for humanity in the 21st century. The problem and its associated issues are multifaceted, pervasive and long-term. There is a huge gap between causes (such as emissions) and local impacts. The severity and need for rapid action are a tough international test. (Hulme, 2009; Moser & Dilling, 2007). Anderson (2017) and other researchers explain us deeply that this is important to resolving problem agreeing scientifically with political willpower and public change. This is hard to achieve because there are three key challenging barriers arises: Their media choices they prioritize, the Ideological Clash, and Psychological Impartiality. Climate issues seem isolated because of mental distance in timing, venues, or impression. In media, it produces a feeling that this issue has a lower priority on screen and this is because of philosophical separations, hindering receiving of climate crises or systemic change.

Pakistan as a Climate Risk Connection: Key Context

Nations like Pakistan face tougher climate hits, we all feel it daily. We know that climate change is a universal problem, but its effects on Pakistan are much greater. This region falls in the critical region of the world and the people living here suffer the most. Climate change is a universal problem, but its effects are not uniform. In fact, Pakistani industry manufactures very small and its Corbin footprint is also very little. The share of greenhouse discharges is very tiny. But it ranks highest on the riskiest countries index. Pakistan is a clear example. We have been experiencing different kind of disasters, floods, heatwaves, droughts and glacier flooding. Pakistan faced severe losses from these disasters.

Retreat of Glacier and Water Shortage: Pakistan's vulnerability originates from many features. Geologically, it faces numerous ecological threats. It has over 7,000 glaciers in the Himalayas, Karakoram, and Hindu Kush ranges. These glaciers are melting quickly due to intensifying temperatures. This causes lethal Glacial lake out bursting flooding (GLOFs). The Indus River faces continuing water scarcities after the devastating floods. 90% of the country's population and agricultures is supported by the Indus river.

Increasingly Dangerous Weather: Pakistan has seen flash floods, prolonged droughts, intense heat waves, and unpredictable monsoons. Deadly climate incidents are becoming more recurrent. For example, flood disasters have plagued the country since 2010, with major floods in 2022 and the most recent in 2024 covering a third of the country, displacing millions and causing more than $30 billion in damage.

Coastal Climate Risks and Food Security Threats: Risks to fishing communities have increased dramatically. Destruction of mangroves, salt intrusion, and rising sea levels pose significant threats to coastal areas. Inland, food security and adverse weather conditions are harming crops.

The population of Pakistan is very high, it's agriculture dependent, with unstable infrastructure and fast urbanization. Economic and social issues make things worse. Lot of unpaid debt from IMF and other financial institutions and countries. The circumstances verges Pakistan's power to manage mess. To many in Pakistan, climate change is a full-scale disaster,

not just a threat. Media needs to proactively cover disasters, health, and economy, it's key. It directs leaders, determining hard policies locally, regionally, globally. Giving Pakistan's complex eco-issues, knowing its moves is crucial to fixing them.

The Digital Movement: YouTube as an Important Climate Information Platform

Pakistan's media has transformed very much. It used to depend typically on TV and newspapers. Now, digital connectivity has taken over. Smartphones are everywhere, and data is cheaper than before. YouTube has moved from just entertaining to a key foundation for news, politics and education. Younger people often jump traditional TV. They choose content made for the digital world. YouTube is changing the climate change communication game in many basic ways:

Key Impacts of YouTube on Climate Change Communication

Climate change communication has been revolutionized by YouTube in Pakistan, specifically the younger generation. Historically, people used to depend mainly on TV and Newspaper. Recently connectivity and digital platforms took over, cell phones, gadgets and data is available everywhere. YouTube is not just an entertainment platform anymore, it narrates news, politics and education. The TV is being ignored by the younger people and they prefer international platforms. By reviewing this, the climate change communication is now transformed in many ways by YouTube.

Variety of Creators and Broadcasters: For new creators to professional broadcasters, it removes all kinds of barriers. These creators range from local news channels to professional news agencies and international channels like BBC Urdu and DW Urdu to national channels like Geo News. Organizations, NGOs also use this platform. Languages can be used locally i.e. Urdu, Sindhi, Punjabi, and Pashto to reach their audiences.

YouTube Permits Deep Video Storytelling: It shows local climate stories, documentaries, raw filmed videos, and live-streamed reports from climate-affected areas. YouTube shows interviews by experts of environment and conservation. It complements the rich information and emotion of the storytellers. These stories go beyond cultures, governments, and organizations, beyond short TV clips or print articles.

The Platform's Algorithm Plays a Big Role: It encourages videos created on engagement, innovation, and watch time. These impulses creators to make extraordinary or sensitive content that appeals viewers. The shortcoming is that complex policy debates can get dominated by dramatic videos (O'Neil, 2016).

YouTube's Rise Calls for More Academic Attention: In this, old government Pakistani media has been investigated well. But on YouTube's exclusively easy to reach messaging and content trends remain less researched and far from underexplored. It's a free space for expression, and everyone is invited. YouTube is where climate stories are produced, whether amateurly or professionally, but they are spread, designed, or discriminatory. Its impact on public understanding is solid but not completely understood.

The Public Awareness Raising and Media Framing Theory via Theoretical Connection

How is the climate crisis broadcasted to viewers in Pakistan? This question relies on media framing theory, and Robert Entman described it fine in 1993. Selecting and emphasizing certain pieces of reality, that is framing theory. It outlines by what means a problem is described. Who is liable for it, what ethical opinions are disseminated, and what clarifications are projected? Frames perform like lenses. Frames tell the stories that storytellers want to tell. They guide and shape viewers and what people see and how they perceive it. Frames turn as expressive sieves. They pick and choose what kind of issue to show, how to show. Who the sender and audience will be, and what actions should be taken. Framing is dynamic in climate communication. It dismisses misunderstandings and outlines stories that public can track and care about (Nisbet, 2009).

Research Gap and the Significance of Framing Analysis

Most studies by print media or Western channels have focused on climate change deniers, who represent a very small percentage of the Pakistani population. Including NGOs, local news organizations, and international news channels.

There has also been little research on the perspectives and narratives that Pakistani YouTube channels, YouTubers, local news channels, and world news channels use to talk about climate in digital content for Pakistani YouTube audiences. In this research, we fill this gap by quantitatively analyzing YouTube videos related to climate change. A reflective perspective is important for several reasons.

Overall, this investigation drives beyond explanation. It discovers the intellectual tools given to Pakistanis to grasp and answer to climate threats. By reviewing YouTube frames, it purposes to guide more tactical, impartial, and effective climate communication in one of the hardest-hit regions.

Identifying the Research Void: The Need for Framing Analysis in Pakistan's Digital Climate Dissertation

In Pakistan's digital media arena, there is a clear gap in reviewing how climate change is framed. Pakistan facets severe climate change risks, and YouTube is a main source of information. Yet most research still emphases on traditional media, Western channels, or climate negation, which is less related here. Few studies evaluate how international channels, local news, and NGOs form climate stories on YouTube.

This study purposes to fill that gap through a comprehensive quantitative analysis of climate-related YouTube videos. Why does this frame analysis matter?

Primarily, it discloses which storylines connect with people's thinking. Repeated Victim Frames can cause helplessness. Adaptation Frames, by contrast, encourage empowerment and prepare communities to respond actively.

Finally, framing has diplomatic importance. Tracking Climate Justice Frames in Pakistan's digital space supports its position in international talks by emphasizing fairness and historic responsibility of developed countries.

This investigation goes beyond listing facts. It drills into how Pakistani audiences emotionally develop climate threats. By probing YouTube frames, it offers a durable base for generating climate communication. That is real, reasonable, and sensitive to the most exposed people to disasters and seems helpless to climate change effects.

Problem Statement

As discussed, Pakistan and people have faced the most devastation because of global warming and climate change. It has tackled disasters like the disturbing 2022 floods and recent one. So far, little research studies how digital correspondents frame climate change for Pakistani audiences. Do these online stories concentrate on global climate justice or local disasters? Do they endorse adaptation and resilience, or just magnify dramatic events? Understanding which stories and reports influence on Pakistan's YouTube is critical for constructing effective communication and policy strategies.

The Contextual Imperious: Pakistan's Existential Climate Communicative Inconsistency

Pakistan encounters a climate communication contradiction. The nation bears regular, severe climate disasters. These are real, pressing problems: long droughts distressing farmers, record-breaking heatwaves, smog choking metropolitans, glacial floods threatening mountain areas, and enormous monsoon floods in 2022 that displaced millions and destroyed 10 percent of GDP.

Given these risks, Pakistan requires a strong, vibrant climate communication plan to raising awareness, aligning policies, and activating communities. So far, climate debates continue dispersed and unreliable. The crisis is realized as a sequence of isolated calamities, not a systemic danger to national safety and security. This gap between real dangers and weak public narratives destabilizes resilience, the fundamental issue this thesis examines.

The Fragmentation of Legacy Media and the Exodus to Digital Platforms

Traditional media partially describes this disintegration. Pakistani legacy channels regularly frame climate issues barely. The Political/Governance Frame emphases on worldwide discussions and political blame, which distances local actors

and covers up imperative impacts. By viewing only one-sided disasters, the episodic/disaster frame disconnects events like floods from larger causes. The external/global frame does not provide information on local measures like water conservation or energy transition. It only covers international climate finance. At the same time, Pakistan's digital media, especially YouTube, is thriving. With smart phones everywhere and a fondness for amusing visual content, YouTube is now a key news source, particularly for youth. Contrasting traditional media, YouTube lacks reporting controls and uniform responsibility.

The Unused Digital Scope: A Neglected Field in YouTube Climate Framing

A major research gap exists: no comprehensive research studies how Pakistani YouTube channels frame climate change reporting and stories. These channels include from local news and NGOs to international channels like DW Urdu and independent journalists. They use many frames, disaster-driven, scientific, policy-focused, human-interest, or solution-oriented. But no one has measured which frames are utmost common, which get the maximum views, or how they form public understanding and backing for climate action.

Is climate change largely displayed as a humanitarian disaster, Disaster Frame? A monetary risk to livelihoods, Livelihood Frame? An international inequality demanding accountability, Climate Justice/ Responsibility Frame? Or should a problem be solved through a solution/adaptive frame? Content analysis should be done thoughtfully, without which this important information remains unknown and incomplete. This is a real-world necessity rather than a theoretical one.

Collapsed Resilience and Policy Delay: The Penalties of Abandoned Dialogues

Weak climate change communication has important and extensive affects.

A. Nonexistence of Climate Change Literacy and disaster preparation are mainly due to a disappointment to sympathize. If people are not provided with clear messages, which are not localized and with no consistency, they change their emphasis from unreachable disasters to the instead of main causes. Because of this, communities are not ready and prepared for these disasters and risks, so they face deadly results of this failure.

B. The corrosive effect of compulsory policy engagement is that it undermines policy backing. Resolutions are not included from debates about water management and energy solutions, so people cannot connect them to their security. This decreases assistance for essential longstanding activities by governments and NGOs.

C. Promotion of Frail Climate Justice: Efforts to endorse climate justice are diminishing. Pakistan depend on precise reporting and stories about impartiality in worldwide talks, which associate local disaster to the historic segregation of wealthy nations. If digital platforms do not promote this climate justice framework, Pakistan will lose power in international negotiations.

Literature Review

Internationally, climate change stories utilize frames like disaster urgency, economics, human interest, scientific uncertainty, and blame. But in the south region of the world, media incline to attention on instant impacts, health issues, disasters, and loss of livelihoods, leaving science and long-term solutions less observable (Moser & Dilling, 2007). In Pakistan, old-style media repeatedly fail to link dangerous climate events obviously to human-caused context of climate change. In the meantime, research on digital platforms like YouTube is still limited. YouTube syndicates global reach, visual storytelling, and local languages (Urdu, English). This is creating a different but difficult combination of climate change stories and reports. Does this freedom lead to better reporting and stories? Or does it spread divisive and affected material?

Climate Change Communication of Public Climate Education and Social Mobilization

The primary objective of Climate Change Communication (CCC) is to share information about the risks and impacts of climate change, and to provide solutions to the issues of climate change in ways that are clearer, more ethical, and

more effective (Moser, 2010). Distribution facts alone isn't sufficient. Climate Change Communication must bridge the breach amongst what science says and how public and leaders perform. It supports people comprehend multilayered policy choices, climate data, and local risks. When Communication fails and action stops immediately, indifference increases, and risk reduces, particularly in the areas of high-risk. Good climate change communication translates unfriendly threats into sharp, culturally appropriate messages that stimulate apprehension, enablement, and action.

Media's Essential Role in Shaping Climate Perception

Mass media, like documentaries, news, ads, social media, and filter how people experience the climate crisis (Nisbet, 2009). Media selections shape what parts of climate change the people notices and how they feel about them. Studies display media usage powerfully influences risk observation and apprehension. Constant media reporting produces a leading story, that inspires public and political action. On the contrary, if reporting is irregular or dramatic, people get exhausted and lose interest fast (Boykoff, 2011). Specifically, the need to study the media is important not only for what the media say, but also for how they help shape public opinion.

Realities alone don't transform public; effective communication does.

Effective communication requires engaging images, compelling stories, and strong metaphors that evoke emotional and moral responses (O'Neill & Nicholson-Cole, 2009). Images of destroyed, flooded homes or ruined crops can evoke pain and empathy. But seeing them repeatedly without contextual information can also cause sadness and compulsion. Metaphors also play an important role: Metaphors also characterize climate change: those who talk about it, describe climate change as a defense and action against war. Labeling it a natural sequence or phenomenon raises doubts. This study investigates how these tools are applied on YouTube, where actual videos and showy graphics are syndicated to strongly influence sentiments.

The Worldwide Shift: From Print and TV to Digital and YouTube

The global media landscape is changing around the world. State-controlled and old-fashioned print and TV outlets are not providing their audiences with the latest news, leaving a huge gap for their viewers to move to digital, user-friendly mobile platforms. This change effects climate communication deeply. Old media represented as gatekeepers, regulating what people saw. Digital platforms, like YouTube, democratize content creation but depends on algorithms to choose visibility. In countries where many young people use the mobile internet, such as Pakistan, YouTube is now a way for people to express and access information. Audiences now choose, share and engage with content, they are not passive. They create visually attractive content important for impact.

Persistent Challenges: Misinformation, Division, and Disbelief

In spite of more climate content, challenges persist. Initially, misinformation diffuses easily online. Digital liberty permits incorrect or puzzling climate claims. Frequently increased by algorithms favoring dramatic stories and reports. Then, political division disrupt public engagement. Particularly climate is allied to political party opinions, producing divides in Western countries. Denial is less common in Pakistan, but political responsibility holds back development. Third, disbelief about climate change solutions persists. Many are uncertain that local efforts can meaningfully combat international emissions.

Media Framing Theory: The Theoretical Backbone

This research shapes on Media Framing Theory to investigate climate communication. Framing breakdowns difficult stories into clear parts. It goes beyond apparent observation to reveal the operational construction of media messages.

Goffman's Foundational Insights into Meaning Construction

Erving Goffman's work in 1974 is foundational. He said people use prime frameworks to make sense of events. These frames tag events as natural (beyond control) or social (human-made). Media frames act as cultural guides, helping audiences understand difficult problems (Goffman, 1974).

Iyengar's Two Styles of Storytelling

These expressive tales emotionally tie and personalize the calamity. However, they can vague the disaster's underlying systemic reasons. Thematic framing expresses at larger policies, history, and trends. This helps individuals understand the broader context but can reduce their emotional involvement. On fast-paced, visual platforms like YouTube, the movement of episodic content can contribute to understanding the global nature of climate change. This investigation displays how this steadiness works.

Benford and Snow (2000) Proposed a Framing Approach

Framing approach includes analytical assessment, explanatory assessment, and motivational appeal. Their outline was later polished to highlight the ways in which communal actions organize involvement and backing. Within this model, three interconnected scopes of framing are highlighted: finding problems, translating their worth, and motivating. Entman's ideas of problem description and causal attribution demonstrate prognostic framing, as they define social problems by assigning accountability to related actors. Such prognostic frames integrally propose possible preparations, similarly Entman's idea of treatment commendations. In dissimilarity, motivational framing pursues to shape confidence and inspire people to perform. In that method, emphasizing a logic of action. To set climate change communication effective, these essentials must work collectively. The present study inspects whether YouTube content purely highlights environmental come across or spreads more by telling resolutions and endorsing cooperative meeting.

Climate Change Framing in Media: A Global Landscape

International research has informed on significant climate frames in the media, displaying how framing creates public awareness and policy support.

The most important frame internationally is the disaster/impact frame. It highlights human suffering, underlines devastation prominently, and emphasizes the unexpected loss causes by severe weather disasters. This frame pulls attention through surprise, shock and compassion. But its misuse can cause severe fatigue, making people emotionally traumatized and less possible to activate. In fragile states, it fetches relief but can also cause paralysis (complete or partial loss of physical function in the body).

The scientific frame underscores empirical evidence and consensus, such as climate figures or IPCC reports. This intensifies reliability but can be fruitless where uncertainty leads to miscarry and debate (Boykoff, 2011). Frame of health and pollution links to climate change to degrading public health apprehensions. Emphasizing outcomes such as heat-related illnesses, air pollution, induced smog, and nutrition deficiencies. It echoes powerfully because health is both international and individual. Child deaths due to malnutrition/drought in Thar. Punjab smog crisis is a clear example of this.

The Political/Policy Frame emphases on negotiations, government actions, and conflicts. Though crucial to elite discourse, it can sense reserved to most people (Nisbet, 2009). This frame repeatedly intersects with climate justice, framing climate as a worldwide moral and diplomatic issue.

Framing Effects on Public Engagement, Risk Perception, and Behavior

Media frames impact public engagement, hazard awareness, and behavior in three ways. Primary, concern intensify with frames that carry impending risk but reduces if urgency senses spotted. Frames with moral values, such as climate change justice, keep individuals engaged. Following, rapid but temporary risk awareness is created through episodic frames. Lasting and deeper understanding is generated through thematic frames. Succeeding, frames that empower action (adaptation) and clarify responsibility are fostered by pro-environmental attitudes. Without strong solutions-focused freedom, will collective action come to a halt?

Climate literacy is very low in South Asia, especially in Pakistan. Western countries lack scientific understanding of environmental damage. The lack of connection between human-caused disasters, theatrical floods, or heat waves and human-caused climate change forces media outlets to focus on deadly disasters, floods, or heat waves. There is a common misconception that climate change is not a threat to national security.

Pakistan's religious society offers unique ways of telling stories. Some use Islamic concepts such as the caliphate "managers" and the amanah "accountability" to construct culturally grounded environmental messages. But framing climate events as divine penalty can undermine support for science and adaptation.

In spite of, widespread possession of the mobile phones, and inequalities in socioeconomic status. Besides literacy remain to limit the accessibility and usefulness of climate change communication. In Pakistan, the linguistic diversity, spanning local languages and dialects from Sindhi to Pashto. It demands exact translation of complex scientific notions to preserve accuracy and meaning.

Most of its emphases on newspapers and television, while Pakistan's fast-growing YouTube discussions, shaped by algorithms, are scarcely studied. Because of this, communicators often find it rigid to design messages that actually work online or arrive the people most at risk. In my view, we require more attention on digital platforms. Especially, YouTube, since insufficient knowledge here means, viewers may struggle to find clear and consistent information.

The Platform's Ascendancy for Environmental Discourse

Most of the content on climate and environment shared on YouTube. On other old media unlikely that often goes sensational or political. It offers space for videos on education, extended

Literature Gaps and Uniqueness of This Study

The digital influence of these spaces is not well realized, and the role of algorithms in determining climate stories has hardly been investigated. The pictorial approaches used in these videos have also been under-researched.

Proportional studies on framing strategies continue mainly absent. Academics have yet to inspect in detail how worldwide news agencies show climate issues, and local Pakistani media often use their individual discrete flairs that go unobserved. NGO channels enhance alternative angle, since they tendency to frame climate themes in ways that highlight advocacy and explanations rather than impartiality. I think these transformations matter because they form how viewers appreciate climate change. Yet, no enquiry has scientifically equated these story methods, leaving a significant gap in the literature.

Quantitative statistics on frames in Pakistan's digital space is scarce. Outlines of climate justice construction have not been logically measured.

Research Objectives

- The objective of this research is to analyse how climate change is framed in YouTube videos in the Pakistani content.
- To evaluate the key themes and ideas in the Pakistani content based on climate change.
- To the investigate the way of storytelling ad format of videos.

Research Questions

RQ1: How thematic frames i.e. disaster, livelihoods, health, adaptation and climate justice are used in the YouTube content based in Pakistan?

RQ2: How frequently and consistently these videos establish a direct link Amid life-threatening climate events such as floods, droughts, smog, and GLOFs, and human-induced climate change?

RQ3: What impact does video format, such as a short news clip versus a longer feature or documentary, have? On the importance of human interest stories and solution-based framing (adaptation) in the content.

Methodology

This study implies a mixed method content analysis blending quantitative and qualitative tools to assess YouTube video communication strategies. This research applies a combine content analysis approach systematically evaluating communication patterns in YouTube videos.

The quantitative part counts how often specific themes appear in the Pakistani YouTube content. And then compare across sources by looking at key words, images, and cause-effect links. And to check how the narrative frameworks drive public discourse.

The qualitative part of this study is to dig deeper, looking at tones, context and persuasive tricks in stories. It checks for dominant themes and emotional hooks, especially in human-interest angles.

Table 1

Presents a Summary of Analyzed Videos with Relevant Metadata

#	Title (Abbreviated)	Channel	Publish Date	Duration	View Count	Primary Framing (Coded)
1	Villages under danger of melting glaciers	FRANCE 24 English	04-12-2024	5m 45s	4,187	Disaster/ Scientific
2	مکانوں کے نیچے سے زمین کیوں پھٹتی ہے؟ Why does the ground explode from under the houses	DW Urdu اردو	23-01-2025	0m 44s	5,387	Local Storytelling/ Geophysical Link
3	Balochistan ancient irrigation system 'Karaiz' affected	Geo News	22-10-2024	4m 33s	1,171	Adaptation/ Cultural Heritage/ Livelihoods
4	Climate change: Golen Valley of Chitral at risk	Independent Urdu	08-05-2023	2m 19s	600	Regional Impact/ Local Voices
5	Glaciers Melting in Hunza	SAMAA TV	07-08-2025	1m 03s	39,144	Disaster/ Human-Impact
6	Why Pakistan Can't Escape Its Smog Issue	DawnNews English	14-10-2025	4m 44s	981	Health/ Air-Pollution/ Causation
7	Destruction in Pakistan - Inside the Monsoon Floods	Climate Emergency Forum	28-09-2025	29m 56s	5,057	Comprehensive Disaster/ Justice
8	Highlights from the Climate Change Emergency summit	WWF - Pakistan	06-10-2023	3m 22s	1,655	Institutional/ Solution/ Policy
9	Balochistan Faces Water Shortage: Effect on Karez Scheme	Geo News	05-05-2025	2m 24s	98,492	Livelihoods/ Water Security
10	A Journey of Rebuilding after the Floods	WWF - Pakistan	16-07-2025	2m 43s	282	Adaptation/ Recovery/ NGO-led Solution
11	Pakistan Flood	MIRROR NOW	16-09-2022	3m 46s	1,082	Climate Change Is the Major Reason
12	How climate change is disturbing Pakistan's mango production	BBC News	25-07-2022	1m 30s	47,831	Economic/Livelihoods (Agriculture)

Causation/Blame: Did the video directly link the event to climate change (Yes/No)?
Actor Focus: Who was the main subject? (Local residents, Experts/Scientists, Government/Policy Makers, or NGOs).
Format: Was the video a Short News Clip (under 5 minutes) or a Long Feature/Documentary (over 5 minutes)?

Unit of Analysis

This study used a multi-layered approach for its component of analysis. This confirmed that we captured both the broad range, macro-level structure and the correct micro-level communication signals.

Basic Unit: Video (Content)

The basic unit of content was selected YouTube videos. Also, analyzing the title, description, and full video stories and reports were examined together as a complete message. This macro-level view permissible us to code for double attributes (such as Causal Attribution) and categorical variables (such as Dominant Frame).

To obtain a relevant sample, twelve climate-related YouTube videos were purposively selected. These came from prevalent channels aimed at viewers in Pakistan.

Operational Definitions of Key Thematic Frames: Problem Definition

Table 2

Eight Distinct Frames Defined and Assessed for Presence and Prominence

Frame Type	Functioning Definition (Coding Standards)
Logical/ Technical	Emphases on climate figures, models, scientific agreement, greenhouse gases, or multifaceted geophysical standings (e.g., IPCC reports, rate of glacial mass loss, attribution science).
Disaster/Crisis	Stresses the instant, damaging physical effects (floods, GLOFs, droughts, land loss, property damage) and the resultant human misery or death toll. High usage of heartbreaking illustrations and crucial language.
Human-Interest	Centers on the personal, emotive story of a recognizable victim, tenant, or displaced individual. Attentions on individual endorsements and emotional appeal rather than data.
Financial/Livelihood	Debates financial costs, harm to infrastructure, loss of income, coercions to key financial segments (agriculture, tourism), or costs of policy/adaptation.
Health/Pollution	Associates climate phenomena (heatwaves, smog, waterborne disease) directly to public health crises, death tolls, and medical load.
Adapting / Resilience	Highlights human responses to manage with unescapable effects: community schemes, early warning systems, climate-resilient agricultural, or personal groundwork. Emphases on intervention.
Institutional/Policy	Centers on governmental procedures, political conflict, international discussions (e.g., COP), or official deliberations surrounding mitigation and funding.
Blame/Causation (Causal Attribution)	Openly recognizes the origin cause of the calamity (anthropogenic emissions, global warming) and/or allocates duty (advanced nations, local corruption).

Operational Characteristics (Format and Actors)

In addition to thematic frames, the following traits were coded:

- **Format:** Coded as either Short News Clip (Duration ≤ 5 minutes) or Long Feature/Documentary (Duration > 5 minutes).
- **Causal Acknowledgement:** Dual coded (Yes/No) based on whether the speaker or professional openly associated the defined event to human-produced climate change.
- **Primary Actor Focus:** Coded based on which group acknowledged the most screen time and narrative authority (Local Residents, Experts/Scientists, Government/Policy Makers, or NGOs).

Data Gathering Process

The content analysis process was applied analytically to confirm reliable application of the coding system:

Transcription and Foundation work: Summary notes for all videos were taken by a native speaker (researcher) for the Urdu content. Also, time imprints were marked for each shift in story emphasis (for example, from professional voice to victim testament).

Manual Coding: The investigation was conducted by a single trained coder. Which is an acknowledged researcher, but moderated by the demands of developing the system. The coder viewed each video three times:
Pass 1 (Holistic/Latent): To create the Leading Primary Frame (built on the complete emphasis of Problem Description).
Pass 2 (Manifest): To calculate the existence of all eight thematic frames, observing the time-stamped location of the corresponding visual and spoken indications.
Pass 3 (Characteristics): To code the dual and definite characteristics (Causal Acknowledgement, Format, Actor Focus).

Cohen's Kappa measured inter-coder agreement for categorical data. Leading Frame and Causal Acknowledgement scores exceeded 0.85. This level of agreement is considered nearly perfect, which supports the clarity and neutrality of the coding system.

Peer Cross-Checking and System Validation

Cross-checking of Peer was implemented to advance the accuracy of the construction of the coding structure. Two domain experts in climate communication research studied the complete task description. As well as the basis for precise selection. This development guaranteed that the framing groups were appropriate for the South Asian background. While theoretically aligning with Entman's model principles.

Internal Validity

The use of segmented analysis (unit of analysis) is a time-privileged, and strong working description of thematic frames. This established the basic rationality of the study by reducing the possibility of coder sense. Independent explanation even during the manual coding procedure. The demanding application of this method safeguards that the offered results are empirically supported and carry a consistent, planned account of the climate communication strategies used on the Pakistani YouTube platform.

Outcomes, Findings, and Discussion

This segment is systematized around the exact research aims, providing measurable discoveries on frame rate, causal acknowledgement, and the effect of format and foundation on the inclusive description structure of climate content presented on YouTube in the Pakistani background.

Domination of Effect: The Emphasis on Disaster and Livelihoods

The content analysis discovered a highly focused delivery of thematic frames, with the discourse awesomely well-defined by frames that highlight instant, tangible costs.

Frame Rates/Frequencies

Out of the 12 sampled videos, the prime thematic frames were disseminated as follows:

Table 3

Prime Thematic Frames Out of Sample

Thematic Frame	Frequency (N)	Percentage (%)
Disaster/Influence	7	58.3%
Livelihood/Economic	5	41.7%
Adaption/Solution	3	25.0%
Health/Pollution	1	8.3%
Climate Justice (Sub-Frame)	6	50.0%

Note: *The total frequency is bigger than* $N=12$ *as videos regularly confined numerous secondary frames; however, they were coded built on a single, main key frame (with Climate Justice coded as a recurrent secondary sub-frame).*

Investigation of the 12 videos discovered that the dissertation is enormously subjugated by the Disaster/Influence frame (N=7) and the Livelihood/Economic frame (N=5). This high-rate line up with international research signifying that

media displays a pessimism prejudice, ranking events high in conflict and instant significance (Boykoff, 2011). Videos regarding glacial melt (DW, SAMAA TV) and floods (Climate Emergency Forum, MIRROR NOW) controlled rich, disaster-centric illustrations to connect an instant logic of crisis. For example, the SAMAA TV clip on melting glaciers (1m 03s) depended on extraordinary visuals of swamped water and uneven ground to carry the GLOF risk, highlighting instant threat and irregular terror over long-lasting scientific clarification. This approach, determined by the requirement for algorithmic engagement, checks Iyengar's (1991) observation that sporadic framing is extremely favoured in quickly consumed media.

Critically, the Livelihood/Economic frame was frequently used to humanize the catastrophe, serving as an effective bond between the intangible climate threat and concrete domestic certainty. Stories about the earliest Karez irrigation system (Geo News, DW Urdu) and the effect on mango production (BBC News) competently associated abstract climate patterns-such as fluctuating monsoon sequences and heatwaves-to concrete cultural tradition and economic safety. This is mainly important in the Pakistani background, where relating climate change to bread-and-butter problems may resound far more powerfully than abstract international policy debates. The economic frame magnificently answers the Problem Definition section of Entman's model by decoding inspiring change into monetary damage.

Fundamental Attribution and the Development of the Climate Justice Narrative

A key outcome relates to Fundamental Attribution, which addresses the "why" and the "who is responsible" (Entman, 1993). This proposition instituted that the climate association was irregularly implied; instead, most long-form structures or international reports (N=9) confined clear, courageous declarations that climate change was the original cause of the experimental dangerous climate events.

The MIRROR NOW feature, for example, clearly stated in its title and description, "Climate Change Is the Main Cause for Fatal Pakistani Flood," representing a clear and definite usage of the Diagnostic Setting. This high occurrence of obvious acknowledgement is serious for climate literacy, as it averts the proceedings from being discharged as meager "natural disasters."

Remarkably, this clear causation was regularly joined with a Climate Justice sub-frame (N=6), particularly in the extended features formed by global media and specific mediums (Climate Emergency Forum, DW/FRANCE 24). This sub-frame functions as the Ethical Appraisal purpose of the frame, influencing the tall catastrophe effect to code blame and injustice.

This geopolitical irritation is concisely voiced by a local occupant in the DW video on melting glaciers: *"Why should we grieve?* Both China and the Western countries have recognized substantial industries; they should bear the penalties." This displays that the dissertation on YouTube, at slightest amongst extraneous observers, is successful in conveying this geopolitical inequality, Pakistan is portrayed as a victim who bears the burden of manufacturing discharges somewhere else. Even though the Dawn News article on smog attentive on a local problem, it associated industry disappointment to more general environmental policy deficiencies and liability. By effectively avoiding conservative diplomatic channels and producing a straight ethical appeal to an international digital viewers, this tactical framing reinforces Pakistan's position in global forums.

The Importance of Research and the Algorithmic Challenge

A notable distinction emerged in how the Research/Solution framework was applied, varying by channel. As per the literature on official mandates, NGO channels predominantly generated solution-oriented content.

The WWF-Pakistan video showcasing the Alchori Village rebuilding presents a powerful counter-narrative, readdressing devotion from desolation to local resilience and recovery initiatives led by NGOs. Similarly, the discussion highlights (WWF) underlined solutions positioned on official and policy frameworks. These videos exemplify the Analytical Framing crucial for endorsing agency by explaining actionable solutions.

However, an important pattern was detected in relations of frequency and engagement metrics: videos about resolutions usually received smaller amount of views and exhibited lower digital engagement than videos about disasters that had a momentous effect. This indicates that the YouTube platform itself is striking a systemic challenge. There seems to be a prejudice against the more delicate, long-term, and perhaps less dramatic Adaptation Frames due to the mechanical prerequisite of YouTube's approval algorithm, which nepotisms tremendously dramatic, rapid, and episodic content.

This outline straight cares the concern that the digital media landscape weakens the full communication sequence compulsory for active policy and behavioral change by deteriorating to sustain engagement with the obligatory Remedy/Solution descriptions, in spite of being real at carrying direct Disaster/Impact awareness.

The Digital Advantage of Visual and Vernacular Emphasis

YouTube's visual format critically amplified the influence of the frames. According to O'Neill and Nicholson-Cole (2009), the Disaster Frame's visual emphasis, such as footage of rushing floodwaters and crumpling houses, provided rapid emotional identification and met the requirements for convincing storytelling.

The Human-Interest Frame was upgraded by the adding of Urdu language content (DW Urdu, Independent Urdu, Geo News), which offered perceptive information about local communication customs. The brief DW Urdu video associated geophysical changes to the everyday lives of evacuated residents through local storytelling and interviews. Compared to ordinary English language news clips, this vernacular approach, which makes use of local language and precise local references (such as Chitral's Golen Valley), evidenced to be very successful in distributing the Human-Interest frame with superior legitimacy and cultural resonance, thereby connecting the Psychological Distance frequently linked with climate change (Moser, 2010).

Synopsis of Results and Consequences

The content analysis shows that the YouTube climate dissertation in Pakistan is a difficult space with contradictory narrative goals. Although the digital medium has effectively communicated the serious link of Causal Attribution (N=9) and used powerful Disaster and Livelihood Frames to create climate change as a central public agenda item, it validates a systemic weakness in promoting Adaptation and Solution narratives.

The digital media is actively promoting the geopolitical and moral aspects of the crisis, in line with the narrative demands of a climate-vulnerable country, as evidenced by the high frequency of explicit attribution, which is regularly joint with the Climate Justice Frame. The main strategic insinuation is that in order to overcome the algorithmic bias, communicators need to come up with creative ways to strategically integrate solution-focused messaging within the highly fascinating narratives of livelihoods and disasters. In order to take benefit of digital attention, encourage public agency, and support national policy initiatives for resilience and adaptation, future strategies must include the Prognostic (remedy) within the Diagnostic (disaster) frame.

The main strategic implication is that in order to overcome the algorithmic bias, communicators need to come up with creative ways to strategically incorporate solution-focused messaging within the highly captivating narratives of livelihoods and disasters. In order to take advantage of digital attention, promote public agency, and support national policy initiatives for resilience and adaptation, future strategies must incorporate the Prognostic (remedy) within the Diagnostic (disaster) frame.

Leading Frames: The Emphasis on Livelihoods and Disasters

The Disaster/Impact frame and the Livelihood/Economic frame dominate the discourse, according to an analysis of the 12 videos. Videos about floods (Climate Emergency Forum, MIRROR NOW) and glacial melt (DW, SAMAA TV) used striking, disaster-focused imagery to convey an instant sense of urgency. For example, the SAMAA TV clip (1 minute 03 seconds, 39,144 views) emphasized immediate danger over a long scientific explanation by using dramatic images to illustrate the GLOF threat.

Importantly, the livelihood frame was frequently employed to give the crisis a human face. Stories about the impact on mango production (BBC News) and the ancient Karez irrigation system (Geo News, DW Urdu) deftly connected abstract climate patterns to concrete cultural heritage and economic security. This is important because relating climate change to practical problems may resonate much more with Pakistani audiences than abstract discussions of global policy.

The Justice Story and Causal Attribution

An important finding relates to issue framing. Most long-form features and worldwide reports (N=9) trumpeted that climate change was the underlying driver. For example, the MIRROR NOW» feature was crystal clear, Climate Change is the Key Cause for Deadly Pakistan Flood, which certainly helps for pointing fingers.

In particular, it is heartening to see in some of the longer features. That, this relationship was often linked to the climate justice subframe (Climate Emergency Forum, DW/FRANCE 24). This frustration is briefly summarized by Ali Qurban in a DW video titled, 'Why should we grieve the Western nations as well China have established large Industries? They are the ones who should be grumbling. It suggests that, with such geopolitical assumptions, Pakistan is suffering from industrial exodus elsewhere. This can be powerfully articulated in YouTube discourse, if only among international analysts. Even the smog story on Dawn News allied local industrial failures to broader failures in environmental regulations.

The Role of Solution Framing and Adaptation

Although the disaster coverage was much broader. Adaptation/Solution frames were present. Almost exclusively in content from NGOs. The WWF-Pakistan production on Alchori Village rehabilitation presents a compelling alternative narrative. It moves the lens from impotence to local resilience and recovery through the intervention of the NGOs. Likewise, the conference exemplifies prioritized institutional/policy solutions (WWF, 3m 22s).

But you can't ignore the fact, that solution focused videos almost always getting fewer views. There really is no denying that disaster framing naturally gets more attention on YouTube's algorithmic platform, as high-impact disaster videos have outperformed solution-focused content.

The Urdu-language products of Geo News, DW Urdu, and Independent Urdu, provided some good understandings into regional communication norms. Although short, the DW Urdu segment linked geophysical shifts to the daily lives of locals using local narratives. Compared to traditional English news sections.

Discussion

Are Disaster Frames Overemphasized on Pakistani YouTube Channels?

The finding that the Disaster/Impact Frame (58.3%) dominated the sampled videos is highly reliable with international research on the structural requirements of news reporting and media negativity bias (Boykoff, 2011). The algorithmic reason of YouTube makes this overemphasis worse. According to Tankard (2001), the Disaster Frame's higher visual and emotive salience makes it superlative for the algorithm's ideal high click-through rates and instant engagement. The demand for intermittent, high-drama content is met by the dramatic visual indications of floods and melting glaciers (such as in the SAMAA TV clip).

Iyengar's (1991) observation that Pakistani digital discourse is mainly occasional is reinforced by this supremacy. The overemphasis of episodic framing transmits an important risk documented in the literature: "doom exhaustion" or "compassion diminish", even though it is very real at producing short-term public apprehension and satisfying the immediate Problem Definition function (Entman, 1993). Distance, pessimism, and a disinclination to engage in long-term pro-environmental behaviors can result expressively when the audience is endlessly swamped with stories of destruction without conforming exposure of human agency or systemic explanations. The evidence suggests that while Pakistani YouTube content has successfully put the crisis on the public agenda, it may be inadvertently fostering helplessness by prioritizing the *destruction* over the *prevention* or *recovery*.

Is There not Enough Scientific Explanation?

Trade-off between Scientific Frame and Causal Attribution

The analysis showed that the Causal Attribution attribute and the Scientific/Technical Frame have a complex relationship. There were comparatively few scientific explanations that were solely technical. Rarely do content producers investigate into complex geo-physical procedures or how climate models work. Because the composite scientific information is often isolating to general audiences. This could be a rational selection in terms of holding the attention of the audience (O'Neill & Nicholson-Cole, 2009).

The Causal Attribution link, which is the hub of the scientific consensus, was ironically, openly real. Videos, particularly the longer form ones, shouted 'Climate Change is the Leading Cause of Deadly Floods in Pakistan'.

This represents a strategic communication choice to stretch the findings of climate science (attribution) priority over the science of climate science (technical explanation). This is very effective in fulfilling the Causal Attribution element of Entman's model. It creates accountability and validates the use of the Climate Justice Frame later on. Determining who is at fault (developed countries/global emissions) is seen as more politically and journalistically significant in this digital context than outlining the specific mechanisms by which greenhouse gases cause warming. Deep climate literacy may be limited by the lack of a thorough scientific explanation, but this is counterbalanced by a clear and powerful diagnostic message that is essential for advancing political discourse.

Do NGOs Focus More on Solutions?

The results clearly support the hypothesis about organizational mandate that was drawn from the literature: The Adaptation/Solution Frame is primarily driven by content created by non-governmental organizations. Channels such as WWF-Pakistan changed the focus from the destruction to community-led restoration initiatives (like Alchori Village) and policy recommendations (highlights of conferences).

In order to mobilize support for their missions, NGOs prioritize Prognostic (offering solutions) and Motivational (encouraging action) framing, according to Benford and Snow's (2000) framework of social movement framing. Instead of the news media's emphasis on the Problem Definition, they define the Remedy (Entman, 1993) as local resilience and policy adoption.

Nonetheless, a major communication issue specific to the algorithmic environment is highlighted by the concurrent discovery of lower view counts for the Solution-focused videos in comparison to high-impact disaster videos. Prognostic framing seems to be systematically penalized by the digital structure. The platform's incentive system effectively hides these important narratives beneath the high-engagement, crisis-driven content of news media, despite the fact that NGOs are structurally and ethically positioned to offer hope and solutions. Rather than depending on specialized, low-engagement solution channels, future evidence-based communication strategies must figure out how to incorporate Adaptation Frames into highly engaging, high-view-count content.

Is Content in Local Languages Effective?

The effectiveness of vernacular communication in lowering psychological distance was empirically confirmed by the inclusion of Urdu-language content (DW Urdu, Independent Urdu) (Moser, 2010). It was found that local language narratives were very successful in authentically presenting the Human-Interest Frame.

The videos went beyond the formal, frequently detached tone of English-language international reporting by using regional references (such as Chitral's Golen Valley) and local voices speaking in their native tongues. For the Pakistani audience, this strategy strengthens the emotional bond and creates a sense of immediate, pertinent risk. Despite being brief, the DW Urdu clip on the bursting earth used local storytelling to quickly connect an odd geophysical change to locals' everyday lives, making the climate crisis a close-knit, personal event. This implies that media strategies should emphasize the vernacular articulation of the crisis, combining technical attribution with accessible, local language, in order to promote grassroots engagement.

To what extent are narratives culturally relevant? The Influence of Justice and Livelihoods

The highest frequency of the Livelihood/Economic Frame (41.7%) and the regular use of the Climate Justice Sub-Frame (N=6; 50%) were the most notable indicators of culturally relevant narratives.

Livelihood Relevance: By emphasizing stories about infrastructure damage, water security (Karez system), and agricultural crises (mango production), the abstract threat of climate change is translated into concrete, existential threats to household income and food security. The economic framework is universally relevant and immediate for a nation that is largely dependent on agriculture and the Indus River Basin, making it an effective tool for defining the Problem Definition in a way that speaks to the fundamental concerns of the Pakistani people.

Climate Justice as Moral Evaluation: The prevalence of the Climate Justice narrative indicates a very successful and culturally relevant Moral Evaluation (Entman, 1993). The discourse appeals to a strong, common national sentiment by portraying the suffering caused by floods and GLOFs as an injustice imposed by outside industrialized actors. This framing is important because it offers a kind of incentive framing, namely organizing international advocacy and demanding compensation, as well as a causal attribution, blaming the Western nations and China. It turns the victim status into one of moral authority. Which is extremely relevant to Pakistan's diplomatic endeavors and its story of perseverance in the face of historical injustice.

The analysis concludes that although Pakistani YouTube channels are excellent at establishing the urgency and injustice of the crisis through culturally relevant frames (Livelihood, Climate Justice), the systemic bias towards high-engagement disaster content poses a serious obstacle to promoting the prognostic and motivational frames required for positive public action and long-term resilience.

Conclusion

By offering the initial comprehensive content analysis of climate change framing on Pakistani YouTube channels, this study required to close an important gap in the literature review on communication of climate change. The analysis was designed to study whether digital media environments accept more everyday thematic and solution focused frames. Which can be seen as a better suitable for the visual and story flexibility of the platform. Or else, if it reflects episodic and disaster oriented framing. As found in print media, by examining different samples of video content. In a nation that is extremely sensitive to the impacts of climate change.

Important Findings Summary

Solid Causal Attribution and Ethical Judgment: The digital platforms are not oblivious to the cause, unlike other media in the South region of the world. They confidently link risky climate incidents to human originated climate change. Regularly, consuming clear causal attribution (75%) significant quantity of the sample. Crucially, this is used to fulfill the frame's Moral Evaluation function by incorporating a compelling Climate Justice narrative (50%) that portrays Pakistan as an unfairly suffering victim of global emissions (Entman, 1993).

The Algorithmic Barrier to Solutions: Although there is institutional and adaptation/solution content, which is frequently produced by non-governmental organizations, it typically has lower engagement rates and fewer viewers. This implies that a substantial structural bias against prognostic (solution-oriented) framing is produced by the platform's algorithmic structure, which rewards dramatic, high-conflict narratives.

Effectiveness of the Vernacular: The Human-Interest Frame was presented authentically and the audience's psychological distance from the climate threat was reduced by using Urdu, one of the local languages.

Contributions to Theory

Three important advances in communication theory are made by this study:

Framing in the Algorithmic South Region: This study discovers and provides one of the main empirical tests of classical framing theory in the context of an exceedingly helpless, digitally transferred people in the southern region of the world

(Entman, 1993). Using algorithmic compressions as a study method, it illustrates how frames can be selected and how they can be used to engage the topic.

Prospects for Further Research

How do Pakistanis viewers of these videos on YouTube interpret and integrate the main frames? Does the Climate Justice Frame grasp the engagement, or does high exposure to the Disaster Frame bore?

Algorithmic Intervention Analysis: Do controlled experiments or A/B tests to determine empirically which particular visual or narrative cues enable Adaptation Frames to break through algorithmic resistance and gain more prominence on YouTube.

Longitudinal Framing Study: Examine Pakistani YouTube content over a number of years to see if the framing strategies change in response to particular policy milestones (such as new national climate action plans) or changes in international climate finance commitments.

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