Polarizing Global Perceptions of 2022 Floods in Pakistan

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Abstract. Climate change marked by heatwave and high rainfall has resulted in major flooding in Pakistan. The floods in June–August 2022 resulted in more than 1,700 casualties and affected several communities in six districts in Pakistan. The issue of climate change has become a worldwide concern, but this flood event has given rise to various perceptions that have developed in the international community related to the causes of the natural crisis in Pakistan. The aim of this study is to show the public perception of natural disasters related to climate change. The method employed in this study is the discourse analysis method by taking data that emerged from social media. The data of this study were collected from 84 statements from various posts on social media platforms. The result of this study shows that there are two polarized perceptions of Pakistan Flood in 2022, first is the disaster a result of Pakistan's government mismanagement to mitigate the disaster and they are to blame. The second perception is that the Pakistan flood in 2022 is a result of global CO2 emission by the large polluting country and has become global responsibility.

Keywords: Flood · Pakistan · Polarization · Public perception

1 Introduction

The issue of flooding in Pakistan not only affects the country and its people, but also has an impact on the interactions that occur on social media. The floods in Pakistan have gained worldwide public attention due to the large number of discussions related to the issue on social media. Even world star and human right activist, Angelina Jolie, joined the discussion related to the Pakistani flood on their social media [1].

The fact about climate change and the various impacts on ecosystems in the world has become a concern for many parties, ranging from scientists, academics, activists, governments, and the public. In addition, the Intergovernmental Panel for Climate Change (IPCC) has also estimated that the Earth's temperature has increased between 0.3 °C and 0.6 °C over the past 150 years [2]. This is an important issue, especially since climate change has significantly impacted humans' survival. Most depend on natural resources, such as land, water, sea, and air. Climate change has become an important issue that concerns all countries, especially in 2022. Many consecutive events have occurred due to

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extreme heatwave and high rainfall. Some examples of countries experiencing extreme events from climate change, such as droughts that have reaped new records in Western Europe, the United States, and China, to floods in Japan and South Korea [3]. Not only that, climate change marked by heatwave and high rainfall also has resulted in significant floods in Pakistan.

Pakistan has experienced the worst flooding of the century. The extreme floods that hit Pakistan in 2022 occurred due to heavy rains and melting glaciers. Scientists have revealed several factors influencing the occurrence of an extreme event that has abandoned about 33 million people and killed more than 1,700 people [4]. Scientists argue that the beginning of the catastrophe was marked by the presence of an unprecedented heat wave. Pakistan's former Climate Change Minister, Malik Amin Aslam, revealed that Jacobabad City temperatures reached 51 °C in May, which made the heatwave one of the worst in the world. In addition, according to Athar Hussain, a climate scientist at COMSATS University Islamabad, there is an increase in the amount of water flowing into the tributaries that eventually flow into the Indus River caused by glaciers melting in the northern mountainous regions due to intense heat [5].

This situation was also aggravated by the early arrival of the monsoon on June 30 which had a major effect on Pakistan. This event has resulted in Pakistan receiving nearly three times the average annual rainfall for the monsoon period. In addition, Sindh and Balochistan Provinces have also received more than five times the average. This situation eventually left most of the water with no place to hold, resulting in significant flooding in Pakistan. The floods in June-August 2022 have resulted in more than 1,700 casualties and affected several communities in six districts in Pakistan. In addition, more than 1.2 million homes, 5,000 km of roads, and 240 bridges have been destroyed by floods that submerged one-third of the Pakistani country [6]. Estimates of total damage exceeding US$10 billion and further disruption to the country's economy and critical food production are also inevitable [7].

The issue of climate change has become a worldwide concern. However, this flood event has given rise to various perceptions that have developed in the international community related to the causes of the natural crisis in Pakistan. Social media has played an important role as an alternative information center during disasters and emergencies. Many social media users had shared their photos, news, sentiments, and opinions on a disaster. Perceptions circulating on social media can also identify victims, types of damage, and infrastructure damage caused by natural disasters, and this information collection can be useful for disaster responders in determining areas that need assistance as soon as possible [8]. In addition, public perceptions on social media can influence local and international community responses to disasters, or even governments in improving disaster management [9]. One of the perceptions that emerged and was debated during the flood disaster in Pakistan in 2022 was regarding the causes and who was responsible for this disaster. Although many public perceptions point the finger at climate change as the cause of flooding in Pakistan, other perceptions blame others as the ones who should be responsible for this natural crisis. Pakistani Prime Minister Shahbaz Sharif, Climate Change Minister Sherry Rehman, UN Secretary-General Antonio Guterres, and many other figures blamed climate change as the cause of the devastating floods. However,

Rehman also considered that developed countries, such as the West, were responsible for the disaster [6].

Major events in Pakistan have also reignited the debate that wealthier countries are responsible for the damage Pakistan has received. The perception that blaming wealthier countries as responsible for floods in Pakistan is something that cannot be separated from the role played by climate change. In addition, another public perception that has been debated about the mastermind of the disaster in Pakistan is the Government of Pakistan. Many blamed the poor disaster management in Pakistan, thus aggravating the crisis that occurred in 2022 [5].

Based on the explanations, this study aims to show the public perception of natural disasters related to climate change. In addition, this study will also look specifically at the two-polarized perceptions that have arisen regarding the parties who responsible for the occurrence of floods in Pakistan in 2022.

2 Method

We use a qualitative method using a discourse analysis approach. Discourse analysis has an object of study in the form of a language unit. Language has a link between text (statement) and context (practice). This approach believes that language is used as a medium of domination and the spread of power. We collect the data by collecting public statements about floods in Pakistan from news media and social media, then selecting the collected statements. From the data collection, we selected 84 statements from various posts on social media platforms. We collect statements from several news media, such as dw.com, bbc.com, washingtonpost.com, amnesty.org, usnews.com, and others. In addition, we also collect public statements related to floods in Pakistan 2022 from social media Twitter. All public statements or perceptions that have been selected are then categorized into two polarized perceptions of Pakistan Flood in 2022, which criticizes Pakistan and the wealthier countries. Furthermore, we interpret the data to look for the characteristics of each statement, as well as the implications of the polarization of perceptions that arise regarding floods in Pakistan.

3 Result and Discussion

Based on the data from Twitter that we have collected, we found that there are two dominant narratives regarding who should be responsible for the Pakistan flood phenomenon this time. The first narrative holds that the Pakistani government is responsible for its unpreparedness in dealing with the flood. The second narrative assumes that the wealthier country is responsible for the climate change that Pakistan feels through floods.

Through the data we have collected, we found two opposing narratives, the first is blaming the Pakistani government and blame rich countries. The narrative in blaming Pakistan is based on the argument that Pakistan is incapable of dealing with floods, because Pakistan is a country with high levels of corruption and deforestation coupled with the inability of the Pakistani government to manage infrastructure and disaster management. To see the arguments that emerge from first narrative on blaming Pakistan we

Table 1. Tweet Statement Distribution

Narration	Themes	Number of Statements
Blaming Pakistan	Mismanagement	3
	Corruption	9
	Infrastructure	5
	Deforestation	7
Blaming Wealthy Countries	Emission	17
	Industrialization	3
	Climate change	40

(Source: data processed by researchers)

categorize each narrative into several themes. We divide the themes into mismanagement, corruption, infrastructure, and deforestation.

The theme of mismanagement is based on public comments that refer to the government's inability to govern its country. The government's incompetence give an impact on the severe flood, if the government can manage its country well, the major impact of this flood can be overcome. The second theme is corruption, as one of the causes of flooding in Pakistan, the high level of corruption in the Pakistani government which results in the government's inability to deal with floods. Furthermore, regarding the theme of infrastructure, the statement shown stated that Pakistan does not have adequate infrastructure in dealing with floods. This is referring to the government's inability to build flood prevention infrastructure. In addition, it is also known that Pakistan's low awareness of the phenomenon of deforestation and construction of buildings around water infiltration areas around rivers, this is refers to the government's low awareness of preventing and mitigating deforestation.

As for the second narrative that blames the wealthier country, we divide the themes into emission, industrialization, and climate change. The emission theme is based on comments that refer to the number of emissions produced by wealthier countries compared to Pakistan. Pakistan, which contributes less than 1% of the world's emissions, has to bear the impact of the massive floods in August 2022. Therefore, wealthier countries that contribute more emissions in the world must take responsibility for the impacts. And also, industrialization is one of the factors considered to be the cause of Pakistan's flooding, this is referring to industrialized countries that contribute greatly to carbon emissions. The third theme is climate change which states that Pakistan is one of the countries affected by climate injustice, so Pakistan is one of the countries that should not be responsible for the effects of climate change (Table 1).

3.1 Public Perception on Blaming Pakistan

There are two narratives that emerge about the causes of floods in Pakistan that occurred in 2022. The first narrative tries to blame the incompetence of the Pakistani government for its ability to prevent natural disasters. This narrative is reinforced by the argument

that the floods that occurred in 2010 should be a lesson for the Pakistani government in preparing future flood prevention plans. Moreover, flooding itself is a long-standing problem in Pakistan. The Pakistani government's failure to learn from previous flood events is reflected in failed climate crisis planning and decisions to permit construction to alter the natural course of rivers and human settlements in floodplains. Mohammad Hanif, District Community Officer stated that most of the damage occurred in his province, Khyber Pakthunkhwa which is in an area where the Sindh, Kabul, Swat, and Kunhar rivers have been used for various commercial activities: "People have encroached and made construction on the beds of rivers and natural streams for commercial benefits."

The Pakistani community considers that the cause of flooding in Pakistan can not only be attributed to one factor but can be caused by the climate crisis, poor infrastructure, poor governance, and the failure of the Disaster Management Authority in anticipating disasters. On Twitter, some Pakistanis blamed the government for corruption in the flood disaster. The Pakistani people blame the Pakistan People's Party (PPP), "The Pakistan People's Party has been responsible for an incredible amount of corruption."

Apart from claims of corruption against the Pakistani government, Pakistanis also blame the poor governance system. Experts have warned of many signs of flooding that have emerged since early 2022, pointing to heat waves in May and April that are warning signs of extreme weather. Rina Saeed Khan, a Pakistani journalist who focuses on environmental issues, Pakistan needs to improve disaster preparedness including a better warning system as well as providing information on flooding to communities living around rivers. Pakistani government should pay more attention to reforestation and land use around Indus River. Deforestation is the initial problem that must be faced, lack of water absorption during the rainy season and experiencing drought in the summer, for example in the province of Sindh on the Indus River plain [10]. Saeed further added that illegal construction and lack of drainage systems are one of the causes of the poor quality of disaster management infrastructure in Pakistan [6] (Fig. 1).

Pakistan's poor management has exacerbated the crisis, in part because scientists have predicted that the average rainfall in India's summer monsoon season will increase due to climate change, explains Anja Katzenberger at the Potsdam Institute for Climate Impact Research. The South Asian region is considered vulnerable to the impacts of climate change, and the northern region of Pakistan contains more glacial ice than anywhere else in the world outside the polar regions [11].

Mohammed Hanif, District Community Officer in Kaghan, said that most of the damage done in his province were areas close to the Sindh, Kabul, Swat, and Kunhar rivers where these areas have been turned into commercial areas. "People have encroached and made construction on the beds of rivers and natural streams for commercial benefits," said Hanif. In addition, climate change activists believe that Pakistan should adopt a climate governance model to prevent such disasters. Aftab Alam Khan, CEO of Resilient Future International (RSI), a research and training social company focused on climate change in Pakistan, said the country should move towards a climate governance system as it cannot deal with such a disaster with ordinary governance. Khan said the government should learn from the 2010 floods that affected 20 million people and the 2005 earthquake and improve coordination among all departments [12].

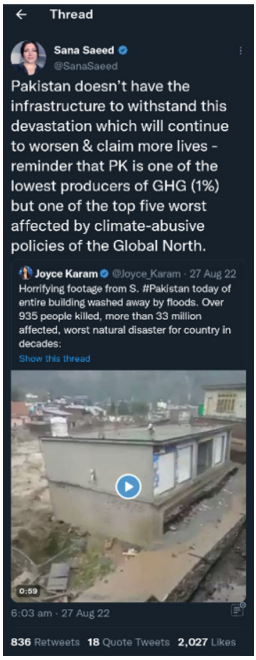

Fig. 1. Statement on Twitter about bad infrastructure in Pakistan

Arifa Noor, a Dawn journalist, argues that Pakistan needs better "data collection, mapping, and planning" for relief operations alongside a more integrated flood management and disaster management system [12]. Many researchers have warned that Pakistan is one of the countries experiencing increased heat and heavy rainfall. Despite the warnings, the Pakistani government still seems unprepared to deal with climate disasters even though this is not the first time Pakistan has faced major floods [13].

Previously in 2002, a River Act was passed by the provincial assembly which was then followed by a 2014 amendment to stop illegal construction. However, this act has not been implemented. This was expressed by District Community Officer, Mohammad Hanif: "The country even does not have the required departments to deal with such natural calamities" [14]. In an effort to deal with a crisis, one must first know the factors that cause the crisis so that the solution can be right on target.

3.2 Public on Blaming Wealthy Countries

The second narrative tries to make climate change the cause of flooding in Pakistan and considers the wealthier country as the party that should be responsible for the impact of the climate crisis felt by Pakistan. These narratives are usually uttered by Pakistani domestic political actors such as Pakistani Prime Minister Shahbaz Sharif and Climate Change Minister Sherry Rehman. Sherry Rehman added that the West was responsible for the floods, a statement alluding to that Pakistan only accounts for less than 1% of the world's emissions. Ahsan Iqbal, Planning and Development Minister, said "People

are enjoying their lives in the West but someone here is paying the price," [14]. Prime Minister Shahbaz Sharif called on the international community to fight climate change in order to avoid flooding in Pakistan in the future [15]. Sharif also stated "We are suffering from it but it is not our fault at all," [14].

Amnesty International states that rich countries are responsible for climate change, and should also support low-emission countries such as Pakistan, since the deadly floods became evidence of the devastating impact of climate change [16]. United Nations Secretary-General Antonio Guterres also called for "Wealthier countries are morally responsible for helping developing countries like Pakistan to recover from disasters like this and to adapt to build resilience to climate impacts that will, unfortunately, be repeated in the future," Guterres added that the G20 countries account for 80 percent of current emissions [17]. Guterres during his visit to flood-affected areas called for "stop the madness which we played with nature" [18]. Guterres said that South Asia is a "climate crisis hotspot" where people are 15 times more likely to die from climate change than other regions. Therefore, Guterres called for "Let's stop sleepwalking towards the destruction of our planet by climate change. Today, it's Pakistan. Tomorrow, it could be your country," [19]. Guterres also stated that "Pakistan is a victim of climate change produced by the more heavily industrialized countries," [20].

This narrative is reinforced by the argument that Pakistan only contributes 0.9% of global greenhouse gas emissions. With Pakistan's small contribution to world gas emissions, they feel that the country with the largest emission contribution in the world must take responsibility for the impact of the climate crisis. This is as stated by the Prime Minister of Pakistan, Sherry Rahman: "There are countries that have got to become rich on the back of fossil fuels and let's be honest about this. Now the time has come to make change and we all have a role to play but they have a greater role in this climate catastrope".

The increase in carbon emissions resulting in greenhouse gases contributes greatly to climate change. Carbon emissions come from the use of fossil fuels, the use of non-renewable energy, and other pollution from human activities. Each country releases a different amount of gas emissions, therefore each country has its responsibility for the climate crisis. Based on a report by the World Meteorological Organization (WMO), the concentration of gas emissions released in 2020 was 149% higher than in pre-industrial times (before 1750), with 7 of the 10 largest emitting countries in the world are Asian countries. China is in the first place with around 30% gas emission and followed by the United States in second place with 14% of the world's total gas emissions [21]. While Pakistan only contributes around 0.9% of the world's total gas emissions [22]. Jennifer Francis, a climate scientist at the Woodwell Climate Research Center in Massachusetts, also argues that flooding in Pakistan is caused by climate change "Clearly, it's being juiced by climate change" [22] (Fig. 2).

The dominant narrative is that flooding in general is single caused by climate change marked by extreme events that are becoming more frequent. Shehbaz Sharif stated: "We are suffering from it but it is not our fault at all". We can see this narrative not only as a mechanical explanation of floods that occur due to climate change but also from the point of view of moral and strategic policies [23]. Government behavior that blames climate change is commonly referred to as "blame games" where an actor does framing to

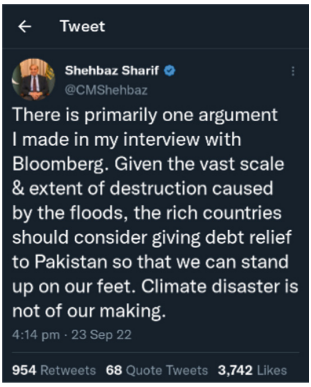

Fig. 2. Statement on twitter about climate injustice in Pakistan

attribute responsibility to the creation and resolution of social problems [24]. This is done by the Pakistani government where they blame the west for their biggest contribution to climate change and their obligation to take responsibility. This was expressed by the planning minister, Ahsan Iqbal "Richer country has a responsibility to help Pakistan deal with flooding and prevent future disasters because they've caused climate change" [25].

Cashore and Bernstein (2020) stated that "….experts carry hidden cognitive frames about how to conceive of the problem at hand. These frames, in turn, strongly influence policy prescriptions." Therefore, morality has an important role in a framing agenda. Normative words such as "should" become important words in framing [26]. We can also see how narratives that blame wealth countries often use normative arguments such as "they should help". This is as stated by the planning minister, Ahsan Iqbal "The international community has responsibility to help us, upgrade our infrastructure, to make our infrastructure more climate resilient, so that we don't have such losses every three, four, five, years."

3.3 Polarization Public Perception

The existence of polarization regarding who should be responsible for this flood affects decision makers to take the right decisions in dealing with and preventing flood disasters. Statements by Pakistan's decision makers such as the prime minister of Pakistan who blamed climate change for the floods and held the wealthier country accountable for the floods caused the Pakistani government's own policy to handle it less than performing. This is because the discussion that arises in the political space is how all of this is the fault of the wealthier country and positioning Pakistan as a victim. This causes the discussion about the handling that can be done by the Pakistani government not getting enough spotlight.

Based on the data we have collected, we see that there is still a lack of ability to draw lessons from previous flood events. We find that greater public discussion has been given to the construction of Pakistan's ability to survive in the "short term". Floods that occur in developing countries are often described as political disasters rather than natural disasters [27]. Various narratives that blame one party hinder people's opportunity to learn

responsibility as a community because they try to disengage their responsibilities from disaster management efforts. Despite having experience of previous flood events, this may not result in sufficient learning as various parties blame each other. In addition, the complexity contained in the phenomenon of climate change implies the responsibilities that must be carried out by various sectors and actors, both domestic and international. Therefore, blaming the flood to climate change will cause difficulties in making policies that are taken in efforts to prevent and overcome them [24].

"Blame game" is considered by political scientists as a series of interactions between politicians and the general public. There are three ways for politicians to manage their failure. The first is the management impression where the actor chooses the argument to be issued to minimize blame from the people or chooses a justification argument designed to change the blame into credit. The second way is through a policy strategy, for example in choosing a policy that supports "the bad guy" and a policy that supports the victim. The third way is by choosing an agency, for example in choosing between direct control or delegation [24].

4 Conclusion

The finding of the research is we found that floods that occurred in Pakistan are not a new thing. Pakistan experienced a similar flood disaster in 2010. However, the floods that occurred in 2022 created quite an interesting public discussion. Discussions about natural disasters are usually filled with the government's failure to deal with or prevent natural disasters from occurring. In the event of the 2022 flood, we found a discussion that blamed climate change as the cause of the extreme weather that caused the flooding. This discussion then continues on the demand for wealthier countries to be responsible for the occurrence of climate change. This is because wealthier countries contribute the most greenhouse gas emissions in the world. This paper then maps the polarization that occurs regarding who should be responsible for the 2022 Pakistan floods. The author finds that two dominant narratives emerge. The first narrative tries to blame the government for its inability to prevent natural disasters which they should have learned from the flood in 2010. The second narrative tries to blame climate change and hold the wealthier countries accountable for the natural disasters that occurred.

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