



**RESEARCH PAPER**

**Climate Justice and Socioeconomic Inequalities among Flood Victims in Lahore**

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**ABSTRACT**

This study explores the link between climate justice and socio-economic inequalities through the experiences of the communities affected by the floods in Lahore, Pakistan. The study also examines how class, gender, and location shape people's vulnerability, impact, and recovery. Pakistan contributes a very low percentage in global carbon emission, yet it is highly affected by climate change particularly by flood. This study used qualitative approach to collect data from the residents of Lahore. The participants were 16 residents (8 men and 8 women) who have been affected by flooding, using purposive sampling of residents who are from a variety of socioeconomic backgrounds and lived in both informal settlements near drains and planned gated communities. Each participant was interviewed individually, through an interview guide. Findings of the study showed that floods affect people differently based on their income, class, household locations. However, people from upper strata, and higher income are less affected. The study also highlights gender inequalities, with women facing increased responsibilities, health risks, and limited decision-making power, whereas men deal mainly with financial pressure. Moreover, post flood relief distribution also remains unequal and influenced by connections and documentation, leaving many vulnerable groups unsupported. Overall, the study shows that floods in Lahore are not just natural events but are shaped by social inequalities and governance issues. It suggests that there is a need for long-term, inclusive, and equitable strategies to address climate risks and support vulnerable communities. It is important to ensure gender-sensitive disaster management through gender participation in planning and decision-making process.

**Keywords:** Climate Justice, Flood Vulnerability, Social Inequality, Urban Flooding, Gender Inequality

**Introduction**

Climate change is one of the greatest challenges in the twenty first century for the world but its impacts are not shared equally across populations and regions. Climate change is a global issue, but developing countries and low-income communities suffer the most, while making the least contribution to global greenhouse gas emissions (Skillington, 2023). The environmental justice concept, which emphasizes the unequal regional distribution of environmental damages, also addresses issues of social justice, human rights, and historical responsibility related to climate change. Climate justice calls for equitable sharing of climate risks and responsibilities, as well as the participation of all people in climate related decision-making processes. Socio-economic disparities increase vulnerability to climate change through reduced access to resources, education, land and decision-making ability. Consequently, marginalized communities are often subjected to increased challenges in adapting to, reacting to and recovering from environmental disasters. (Gore, 2020; CIFOR, 2015).

South Asia is one of the most climate change sensitive region. Rising temperatures, rainfall remain unpredictable and extreme weather events pose a growing risk to the livelihoods and infrastructure. Floods remain one of the most devastating climates that cause hazards in Pakistan particularly in the fast developing urban areas. Lahore has been facing severe floods for several years as a result of heavy monsoon rains, inadequate drainage systems, unplanned urban growth and blocking of natural drainage pathways. (Ali et al., 2023). However, the effects of urban flooding are not equal. This is more likely to affect those residing in low-income neighborhoods, informal settlements, low lying areas, peri-urban and beyond than those in wealthier areas when it comes to loss of home, livelihood and security. Female headed households, domestic worker households, households that depend on daily wages, or street vendors, may be more vulnerable because of their low savings, lack of secure income, and lack of recovery resources. These experiences are representative of the broader climate justice vulnerabilities, in which socially disadvantaged communities bear the pressure of the effects of climate risks.

Although Pakistan's emissions are fairly small when compared to the rest of the world, it is one of the countries hardest hit by climate change (Al Jazeera, 2025). The research on flooding in Pakistan has paid attention to the technical management of the disaster and its socioeconomic impacts, while little has been done on the role of social inequalities in creating socioeconomic vulnerability, impacts, and recovery aspects. This study aims to resolve this issue by analysing the concept of climate justice and inequality from a community perspective of people who were affected by floods in Lahore. In particular, it examines the relationship of class, gender and place with access to flood risk, the gendered nature of flood effects and recovery, and whether disaster responses are consistent with the goals of climate justice. The study aims to influence the discourse of flood risk management and urban climate adaptation in Pakistan in a more 'just and inclusive' way, with an attention to the lived experiences and structural inequities in relation to equity and inclusiveness in rights-based approach to flood risk management and urban climate adaptation. The study contributes to the discourse of flood risk management and urban climate adaptation in Pakistan, grounded in equity, inclusiveness and a rights-based approach, highlighting lived experiences and structural inequities. (Kamboh & Ittefaq, 2023; Uzair & Malik, 2025).

## **Literature Review**

Climate justice relates the climate crisis with the social and environmental injustice. It highlights that some groups are more effective at mitigating climate change, while others suffer the most from climate change (low income and marginalized groups) (IPCC, 2023; United Nations, 2022). In action, this is when one considers the impacts of climate change policies and disasters to have different effects on people based on their race, class, or gender. The theory calls for solutions to resolve root causes of climate change (e.g., greenhouse emissions and deforestation) and social inequalities (Skillington, 2023). The experts have observed that the warming and shift in rainfall have worsened the inequality among diseases of Pakistan, such as inability to cultivate food is the first to be affected by the warming and changing rainfall patterns on an average level while the poor and rural farmers get effected the most (Kamboh & Ittefaq, 2023). Climate justice therefore calls for a targeting of these disproportionate impacts as well as equitable recovery for everyone.

According to disaster researchers, social vulnerability is a concept that describes how personal and social characteristics increase the vulnerability of certain groups to disaster hazards, as defined by Social Vulnerability Theory (Blaikie et al., 1994; Cutter, 2003). From this perspective, flood is not equally harmful for all people and the outcomes are based on income, education, health and other factors. Poor people may be forced to live in hazard-prone areas such as steep hills or floodplains, because they are unable to afford other housing choices. The assets of the poor households are generally fewer, they do not have a lot of savings, and insurance and credit are not widely available to them. Thus, they

are often unprepared to face disasters and not able to recover quickly afterward (Cutter, 2003). This is evident from Pakistan's experience both socially and economically disadvantaged groups are disproportionately affected by the effects of climate events, it was reported, because of poverty and lack of infrastructure (Ali et al., 2023). Even basic services are adversely affected during floods affecting the needy disproportionately in such contexts.

Vulnerability is determined by multiplicative identities like poverty and gender, ethnicity and age, etc. The concept of intersectionality is that a poor woman could be vulnerable to a different disaster than a poor man (Crenshaw, 1989). Women, for instance, are less entitled to land ownership and lower in earning in Pakistan and if the crops or jobs are destroyed, women lose their livelihood and don't have any safety net. In the meantime, a woman's mobility and her decision making power may be restricted through the cultural norms. Research highlights the fact that policies do not take these connections into account can worsen the situation (Uzair & Malik, 2025). Intersectional analysis involves studying the interconnections of each disadvantage and its impact on the effects of floods, including low caste status, informal housing, and motherhood.

Environmental justice academics have noted that it is typically low-income neighborhood residents or minority populations that live in places where environmental hazards are located and who have the least political voice to ensure their protection (Bullard, 1990). These environmental inequalities can be intensified by climate change. Waste and deforestation near a community can make flooding more likely. One study identified deforestation and outdated infrastructure as the factors that contributed to flood losses in Pakistan (Ali et al., 2023). Therefore, environmental inequality is a cause and a result of differential impacts of disasters.

Plenty of evidence shows that disasters happen to be gendered in their impacts (Uzair & Malik, 2025). Women also have less access to information and resources than men. They also have more caring responsibilities and have to manage households or take care of old age people or children, which become more intense when they are stressed. Existing gender inequalities worsened the gender impact of climate change in Pakistan. Which is one of the reasons why the International Water Management Institute states that women and girls are among the most disproportionately affected. When floods occur, for instance, women have to walk long distances for water or food which exceed the scope of their work and safety. Harassment and loss of privacy in relief camps are often reported, particularly in situations of failure of clean water and sanitation. Therefore, there is a call for a more explicit approach to gender role in disaster literature, as floods can have a regressive effect on women's roles (staying at home), and can increase the risks for women and girls.

Response to flooding and the availability of good institutions and infrastructure are closely related. low-income countries often do not have good institutions and infrastructure. The problems identified in the research efforts related to floods management in Pakistan are, lack of warning system, lack of adequate urban planning (Pakistan Meteorological Department, 2023). The 2022 floods for example, have been analyzed to show that addition to extreme weather, many losses are attributed to a lack of government preparedness, weak dams and settlement of homes on river banks.

## **Material and Methods**

The research design for this study was qualitative in nature and aimed at analyzing the impact of floods and awareness of climate justice in Lahore. The city of Lahore was selected for its recent exposure to floods and the wide socio-economic disparities it experienced being a densely populated metropolitan city. The participants were 16 residents (8 men and 8 women) who have been affected by flooding, using purposive sampling of residents who are from a variety of socioeconomic backgrounds and lived in both informal settlements near drains and planned gated communities. Each participant

was interviewed individually, through the use of an in-depth interview guide, which had been pretested for interviews that asked about experiences in flooding, household conditions, gender roles, health impacts, access to aid and perceptions of fairness. Interviews were conducted in Urdu or Punjabi at participant selected sites, using audio recording with their consent, and with accompanying field notes. Interviews were transcribed and translated and analyzed with the thematic coding technique. By repeatedly reading the transcripts, key concepts were identified and related codes were thematically arranged under wider concepts that were related to the research objectives, for example, inequality and flood vulnerability, gendered experiences, access to recovery resources, and perceptions of justice. Thematic analysis was used as an inductive approach to developing the major themes. For maintain standards, the interview guide was pretested and revised, and the data collection ended at saturation. Ethical procedures were adhered to the purpose of the study was explained to each respondent, informed consent was taken and respondents were given assurance of confidentiality and right to withdraw at any time. None of the data was used for other purposes but for academic analysis and shown anonymously.

## Results and Discussion

### Socioeconomic Inequality and Differential Flood Vulnerability

The socioeconomic status had significantly impacted on the exposure and recovery from floods that is clearly found by participant's responses. There was considerable stress on large low-income families that relied on one income. One mother of four, said *"her husband, who drives a rickshaw, was their only source of income. Every monsoon, the water comes right to our door because the river is behind our lane"*. Another participant explained that *"when the flood happened, there was no work, no income and more mouths to feed"*. Participants reported that there was no way for families without savings or other means of income to prepare for floods. As one participant stated, *"People say, be ready, but how can we? We do not have extra money to arrange transport or safe storage"*. The stories reflect the wider findings that vulnerability to floods is not uniform, those in a more vulnerable situation (with lower resources and more dependent household members) do not have the means to cope and recover.

By contrast, people in higher income areas reported significantly less damage. One individual said that *"The 2025 floods were scary, but our society's management pumped out the water quickly. We live on higher ground, so the damage was minimal"*. Better-drained and poor municipal support kept wealthier families largely safe. A clear contrast indicates that the effects of flood are not just the effect of the flood hazard but also the socioeconomic hierarchy in the local context. Like other developing cities, the city of Lahore is most affected by floods in areas of high density and low altitude, whereas the high-income neighborhoods in Lahore have vast infrastructure to safeguard them against disasters. The study reveals that unplanned urbanization and inadequate drainage are key factors in causing urban floods in Pakistan. Meaning, the storm affects different parts of the country differently, affluent houses spring back up while less affluent families require assistance to bounce back. The distributional inequities refer to the most affected and most vulnerable people who are affected by the flood negatively, and the most privileged people who are relatively better off, referring to the climate-justice theory.

### Multi-Dimensional Impacts of Flood Disasters

The most vulnerable households were impacted by broad based losses caused by floods. Loss of assets and livelihoods and disruption of daily life was reported. Close to 2 lakh 20 thousand rupees worth of items were destroyed in one of the shops in a middle-class locality, as it was knee-deep in water. As one participant explained, *"The water reached knee level inside the shop and house. We lost stock worth almost two lakh rupees, including*

*flour, oil and everything was spoiled". Many families lost their stored food, documents and savings, putting them in debt. One individual said that "Before the flood, my son was running an academy with around 150 students. After the flood, the number dropped to only 20–25. Many children lost their books, bags, and school materials in the water, and parents told us they could no longer afford the fees."*

The impacts of these disasters have been documented and, on several occasions, have resulted in loss of livelihood, crops, and homes, causing acute food insecurity and income loss in Pakistan.

There was also an outcome on health and education. Participants reported on occurrences of waterborne diseases and increased malnutrition risk. Children's education was stopped by lost school uniforms, and by schools being flooded, one mother recounted how her daughter fell behind in school after her home was flooded. Low-income families faced long-term economic hardship, they had no savings and no insurance to cover costs, and some ended up in a cycle of debt, thereby demonstrating that floods push the poor into prolonged poverty. Some middle-income families who experienced a loss of income had a difficult time receiving relief programs. The results taken together indicate that the damages from a flood are multi-dimensional and that the impact is the greatest on a poorer household.

### **Gendered Experiences of Climate Injustice**

Flood effects were also gendered. Affected households were heavily burdened with the unseen burden of women. This was something that participants often mentioned during and after floods, as women's roles in caring for others and their domestic duties increased. One woman described her experience by saying, *"Health problems were terrible, no proper hygiene during periods, frequent skin rashes, and my neighbor even had a miscarriage because of the stress and unclean water. We did not feel safe in the relief camp because there was no privacy"*. One woman said *"Women carry more responsibility inside the house. Managing children, food, and hygiene becomes more stressful. Men are more focused on external arrangements"*. Girls were more affected by disruption of education and health, interviewees reported that adolescent girls were absent from school or that they were concerned about their safety in shelters. The limited mobility, increased care burden for women and threats to their dignity, were among these gender-specific hardships that were largely absent from official responses.

Men's accounts showed a different struggle. One male participant stated, *"My pressure increased because I had to repair the rickshaw and manage expenses without income. I had to borrow money from others"*. A number of male interviewees reported on the fixing of broken assets and finding new employment, which may have resulted in emotional and family stress. While the hardships were great for men, women's difficulties were added, their contribution within the home increased and they often did not participate in formal relief decision-making. A UN report on the floods of 2022, stated that women and children are likely to be disproportionately affected by the flood and that gender gaps will be intensified. In our research, women definitely expressed a need for more recognition, but their concerns were hardly given institutional attention.

### **Disparities in Relief and Recovery Resources**

Access to aid was also reported to be very unequal and was often related to political or social connections, interviewees reported. *"The government cash came very late. In our area, help went first to families who knew the local councilors. Women with small children often reached last"*. Another participant noted that *"During the flood, NGOs gave us food, water, and blankets, but it was limited. Government support was very little; people who lost a lot only received a small amount, which was not enough"*. These respondents indicate that

responsibility for distributing relief was sometimes reinforcing the status quo. Households with no land titles or formal were worried about not being able to access compensation. On the other hand, patronage connections or paperwork granted access to aid is more frequent. Participants also indicated lack of gender sensitive planning, one woman observed that there was a failure to provide necessary hygiene kits for women and were not included in distribution committees. These results align with evidence of corruption and targeting issues during the flood response in Pakistan. In the review of the crisis of 2022, it was noted that many of those impacted complained that the neediest were not the priority, while corruption was seen as an even greater challenge than logistics. Overall, the relief and recovery system in Lahore seems to be inequitable and insufficient, rather than fair and equitable, and there is a violation of the principle of distributive justice.

### **Climate Justice, Governance, and Structural Inequality**

In all of themes there was a clear thematic injustice and need for the systemic change. People made the comment that the floods were not just natural events, but the outcome of poor planning and governance. *"It is the responsibility of the government, the government should construct proper drains and embankments, not just disburse the money after a flood,"* said one man. Another participant said that *"The government should listen to poor communities, not just build fancy parks in rich societies"*. Women insisted that they need to be part of planning committees from the beginning, and wanted to be trained to stand out in meetings. Overall, there was a demand for long-term, equitable solutions rather than immediate relief, including; improved infrastructure, subsidized insurance, and specific livelihood programs.

The voices here represent climate justice, impacted communities see a need for a distribution of resources which is fair, inclusive decision-making and accountability. The participants were aware of the link between climate change, class and governance. The results indicate that social and political inequalities must be tackled if only technical flood responses are to be sufficient. This is an urgent need to make Pakistan more resilient in terms of physical structures and social reform, as one of the adaptation experts observes that Pakistan's floods demonstrate. In Lahore, it involves addressing structural inequalities, meaning that everyone, particularly those who have been marginalized, is able to access safe and decent housing, secure tenure and have a voice in recovery planning.

### **Conclusion**

This research study examined the relationship between climate justice and social inequalities using the real-life experiences of the people who were affected by floods in Lahore. The results indicate that not everybody is equally impacted by the floods. Rather, their effect is based on the pre-existing disparities in terms of classes, gender, and place of residence. The research indicates that low-income households are the most affected because they usually live in high-risk zones, have limited monetary resources, and struggle more to recover after floods. Meanwhile, middle-class families have their own set of challenges. They also have financial difficulties whenever there are floods yet they are not usually taken care of in terms of relief. On the other hand, higher income groups are in better conditions because they have stronger infrastructure and resources that enable them to bounce back faster. This is a clear indication that climate risks are not equally distributed even in the same city.

Gender is also significant in determining these experiences. Women are more likely to be burdened with household tasks, have restricted mobility, and security issues especially during and after floods. They are also rarely included in decision-making. Instead, men are primarily involved in financial stress and the need to take care of the household. These disparities indicate that floods never alter any social disparities; in fact, they tend to intensify them.

Disaster response and governance issues are also very severe in the study. Relief is not given fairly, and it is normally based on connections or proper documentation, leaving many vulnerable individuals behind. Poor urban planning and insufficient infrastructure also make the situation worse, which demonstrates that floods are not only natural phenomena but also associated with more structural issues. Lastly, floods in Lahore are also a clear example of climate injustice. They reveal and worsen existing social and economic inequalities and demonstrate flaws in planning, governance, and policy frameworks. To address this, there is a need to stop short term relief and move to long term, inclusive solutions that can assist the most vulnerable groups.

### **Recommendations**

The following recommendations are suggested based on these findings to work towards climate justice and climate resilience in Lahore:

- Enhance urban planning and infrastructures in flood prone areas particularly in low-income communities. Improved drainage, waste collection, disposal, flood resistant infrastructure should be built, and development should be regulated on drainage channels.
- Increase the resilience of early warning and community preparedness. Timely warning, evacuation information and regular awareness creation programs should be conducted in relation to flood risk areas, empowering people how to act during emergencies.
- Ensure that climate risks are captured in social protection programs. Access to emergency cash support, micro-loans and insurance schemes should be made available to vulnerable households. Relief operations should be more readily available and should cater to the needs of women and children.
- Ensure gender-sensitive disaster management through gender participation in planning and decision-making process. Women and girls should have equal access to relief materials at relief camps and distribution points, privacy and security should be guaranteed.
- Ensure transparency and accountability on relief distribution. The mechanism of needs should be tracked and verified, to assure that the aid is available to the needy and distributed impartially.
- Apply technology like digital registration of systems and GIS mapping for affected areas identification. Also, for the enhancement of delivery of relief and recovery services.
- Fund long-term adaptation strategies such as reforestation, green infrastructure and climate education. The current urban development policies should not encourage construction in flood prone areas, and should encourage sustainable urban development planning.

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