

Power, Patronage and Climate Insecurity: Moving towards an Integrated Framework for Climate Resilience in Sindh, Pakistan

NUST Journal of International Peace & Stability
2026 Vol. 9(2) Pages 52-69



njips.nust.edu.pk

DOI: <http://doi.org/10.37540/njips.v9i2.222>

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Abstract

Sindh province's formal climate governance framework has expanded considerably through climate change policies, disaster management institutions, and adaptation programmes. Yet climate insecurity and resilience outcomes remain deeply uneven across the province. This study draws on critical political economy, political ecology, and climate justice perspectives, arguing that climate insecurity in Sindh is produced not only by hazard exposure but also by structural inequality, power asymmetry, and patronage-mediated governance that systematically exclude marginalised communities from protection and recovery. The study adopts a qualitative comparative case study design grounded in a critical realist ontology. Ten semi-structured interviews were conducted with purposively selected experts across flood-affected districts of Sindh and triangulated with documentary analysis of secondary data using a hybrid inductive-deductive thematic analysis. Findings from the 2010 and 2022 floods reveal that identical patterns of exclusion were reproduced across both events despite significant institutional expansion in the intervening period. Relief distribution, embankment protection, and reconstruction support consistently followed patronage networks rather than vulnerability criteria. The study demonstrates that resilience in Sindh functions as a politically distributed privilege and that institutional expansion without power redistribution reproduces rather than resolves climate insecurity.

Keywords

Sindh, climate governance, climate insecurity, power, patronage, climate resilience

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Received 18 January 2026; Revised 16 May 2026; Accepted 28 June 2026; Published online 30 June 2026

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Introduction

Sindh, one of Pakistan's most climate-vulnerable provinces, has experienced six major floods between 2010 and 2025, with recurring droughts, heatwaves, and saltwater intrusion compounding the crisis across its 30 districts (NDMA, 2025). The World Bank estimates that 15 per cent of Sindh's GDP is lost annually to environmental damage and climate change (Sayeed et al., 2024). The adverse effects are evident in widespread displacement, asset loss, livelihood destruction, and ecological degradation. While several parts of the province experience flooding during the monsoon, others simultaneously endure prolonged drought, leading to crop failure, food insecurity, and malnutrition, a paradox that reveals the depth of Sindh's structural exposure to climate hazards.

The consequences of these climate events, however, are deeply uneven. Politically marginalised and lower-income communities are typically not given early warnings or evacuation assistance (Mustafa et al., 2015; Tariq et al., 2023). Post-disaster compensation remains skewed in favour of politically well-connected and economically well-off groups (Zaidi, 2012; ReliefWeb, 2010). As a result, marginalised communities take substantially longer to recover from each disaster, and by the time a new climate event strikes, they have fallen deeper into cycles of insecurity (Cappelli et al., 2021; IPCC, 2022; International Growth Centre, 2022).

These patterns suggest that climate insecurity in Sindh is not a function of geography or hazard exposure alone. It reflects entrenched power relations that determine who is protected and who is left behind (Mustafa & Wrathall, 2011; Sayeed et al., 2024). Despite the province's significantly expanded formal climate governance framework, which now includes the Sindh Climate Change Policy (2022), disaster management institutions, and sectoral adaptation programmes, patterns of exclusion have remained strikingly consistent across successive disasters.

Sindh is a critical analytical case precisely because of this combination. The province brings together the most concentrated feudal land ownership in Pakistan, an entrenched patronage-based political system in which formal institutions are consistently overridden by informal arrangements, repeated catastrophic flooding on a scale matched by few subnational jurisdictions globally, and a formal governance architecture that has expanded substantially without producing equitable resilience outcomes (Pakistan Climate Security Risk Assessment, 2023). Studying Sindh, therefore, offers a uniquely revealing window into how political economy mediates climate insecurity in agrarian, patronage-governed settings, a dynamic underexplored in existing scholarship on South Asian climate governance.

The existing literature on climate governance in Pakistan disproportionately focuses on institutional weakness, adaptation deficits, and hazard exposure (Ali et al., 2019; CSCCC, 2018; Umar, 2023; Pirzada, 2024; Warraich, 2025). The question of how informal power structures mediate resilience outcomes receives limited systematic attention. Scholarship on vulnerability and resilience more broadly treats these as distributive outcomes shaped by access to resources, political voice, and institutional responsiveness (Adger, 2006; Ribot, 2014; Nightingale, 2017). A few studies apply this framework to the specific conditions of feudal agrarian governance in Pakistan's flood-affected provinces.

This study argues that structural inequality and power asymmetry in Sindh produce a patronage-based governance environment in which resilience outcomes are systematically unequal. The analysis is organised around three research questions. How does structural inequality shape political influence within climate governance processes

in Sindh? How do informal patronage networks affect access to early warning systems, relief distribution, compensation, and reconstruction support during climate disasters? Why do some communities remain trapped in repeated cycles of vulnerability across successive disasters, while others recover relatively quickly?

The study contributes to debates in climate governance and political economy in three ways. First, it places power asymmetry at the centre of explanations of climate insecurity, challenging purely technocratic accounts of vulnerability. Second, it shows how formal climate institutions can coexist with deeply entrenched informal systems that determine resilience outcomes. Third, it reconceptualises resilience as a politically mediated and distributive outcome rather than a neutral technical capacity, explaining why climate insecurity in Sindh persists unevenly despite repeated disasters and expanding governance frameworks.

Literature Review

The literature on climate insecurity, governance, and uneven resilience converges across four interrelated bodies of scholarship: climate insecurity and political economy; subnational climate governance; patronage and informal power; and the social reproduction of vulnerability.

Climate Insecurity, Political Economy, and Climate Justice

Early scholarship established that vulnerability arises not from hazard exposure alone but from structural conditions that determine who can protect themselves and who cannot. Watts and Bohle (1993) traced disaster risk to entitlement failure and political marginalisation, while Blaikie et al. (2004) located vulnerability within deeper structural pressures and unequal institutional arrangements. This shifted analytical attention from the hazard itself to the conditions that determine differential suffering. Adger (2006) extended this argument by showing that adaptive capacity depends on social and institutional arrangements rather than material assets alone, and Ribot (2014) showed that resilience outcomes are shaped by differential control over resources and decision-making authority.

Climate justice scholarship deepened this political turn. Schlosberg and Collins (2014) traced the evolution of climate justice discourse from procedural fairness to distributive and recognition-based claims, arguing that just adaptation requires addressing who is heard, who receives protection, and who bears disproportionate loss. Eriksen et al. (2021) similarly argued that adaptation is inherently political because power relations determine whose vulnerabilities are addressed and whose are ignored. Pelling (2011) warned that resilience-centred adaptation frameworks risk reproducing existing social orders rather than challenging them, since they treat stability as the goal rather than the transformation of unequal structures. O'Brien et al. (2004) introduced the concept of double exposure, demonstrating that communities facing simultaneous pressures from climate change and economic marginalisation experience compounding rather than additive vulnerabilities. Leichenko and Silva (2014) extended this argument by showing that vulnerability intersects with class, gender, and ethnicity to produce layered forms of insecurity during climate shocks. Together, this body of scholarship treats resilience as a distributive outcome shaped by unequal access to authority, recognition, and institutional protection.

Subnational Climate Governance, Resilience and Institutional Fragmentation

As adaptation responsibilities shifted towards provincial and local governments, scholars began examining how governance fragmentation shapes resilience outcomes. Biesbroek et al. (2013) argued that poor coordination between national and local institutions systematically weakens adaptation planning. Alam and Rahman (2014) found that donor-led adaptation programmes in Bangladesh frequently bypass existing institutions, thereby reducing local ownership and creating administrative confusion. Tschakert and Dietrich (2010) further showed that marginalised communities are routinely excluded from anticipatory governance processes, limiting their capacity to shape adaptation decisions before crises occur.

These dynamics are evident in Pakistan. Mustafa and Wrathall (2011) argued that provincial institutions in Pakistan suffer from overlapping mandates, weak legitimacy, and donor dependence. Syed et al. (2023) observed that many local climate adaptation committees operate only nominally, while Ahmad and Afzal (2020) found that adaptation projects in Sindh and Punjab are consistently shaped by elite preferences, owing to opaque project selection and weak oversight. This literature collectively demonstrates that governance failures are political rather than technical, shaped by fragmented authority and unequal influence rather than insufficient administrative capacity alone.

Patronage, Informal Power, and Disaster Governance

A substantial body of literature examines how informal patronage systems shape access to disaster relief and climate adaptation resources. Dasgupta and Beard (2007) argued that where formal institutions remain weak, informal networks become the primary channel for distributing public goods. Harvey (2009) found that disaster aid is often allocated according to political alignment rather than humanitarian need. Faguet and Pöschl (2015) demonstrated that decentralisation without democratic accountability strengthens local elites and deepens inequality rather than improving service delivery.

Barnett and O'Neill (2010) introduced the concept of maladaptation to describe how adaptation interventions can actively worsen inequality by selectively benefiting politically connected groups at the expense of vulnerable populations. Jones and Boyd (2011) documented similar dynamics in Nepal and Bangladesh, where adaptation resources were redirected through kinship ties and political brokers. In Pakistan, Gazdar and Mallah (2013) documented that floodwater diversion decisions during the 2010 floods mapped directly onto feudal landownership patterns, with politically connected estates receiving systematic protection. Moreover, flood management decisions in Sindh were shaped by informal negotiations among landlords, bureaucrats, and politicians rather than by formal vulnerability criteria. Memon (2023) further documented that aid distribution during the 2022 floods followed party loyalties, with politically connected communities receiving faster and more sustained support. Lund (2006) conceptualised this as twilight governance, in which formal and informal authority overlap continuously, a condition that appears deeply embedded in Sindh's climate governance landscape.

Uneven Resilience and the Reproduction of Vulnerability

The combined effect of structural inequality and patronage governance is the persistent reproduction of uneven resilience across successive disasters. Leach et al. (2010) argued that resilience is shaped by historical exclusion and unequal access to institutions, while Cannon and Müller-Mahn (2010) linked chronic vulnerability to structural violence, noting that those suffering the greatest losses typically have the least institutional voice. Sultana (2014) brought a feminist political ecology perspective to this argument, demonstrating that climate vulnerability is gendered through unequal property rights, restricted mobility, and systematic exclusion from governance processes. Wajid et al. (2020) provided direct evidence from Sindh that female-headed households are frequently excluded from relief mechanisms due to patriarchal assumptions embedded in governance systems. Mustafa et al. (2023) argued that disparities in resilience outcomes between the 2010 and 2022 floods reflect a sustained failure to confront entrenched social hierarchies. These patterns confirm that vulnerability is not simply inherited from environmental conditions but is actively reproduced through unequal governance arrangements across successive disaster cycles.

Although these bodies of scholarship offer important insights, they remain largely studied in isolation. Existing research rarely integrates structural inequality, political influence, informal governance, and the reproduction of uneven resilience into a single explanatory framework for a specific subnational context. This paper addresses that gap by synthesising these strands within a political economy framework centred on Sindh, a province where concentrated land ownership, entrenched patronage networks, and repeated catastrophic flooding make it a critical site for understanding how power relations shape climate insecurity over time.

Conceptual Framework

This study is situated within three intersecting theoretical traditions: critical political economy, political ecology, and climate justice. Together, these traditions share the foundational argument that climate vulnerability arises not solely from environmental exposure but from historically embedded relations of power, inequality, and access that determine who receives protection and who does not (Watts & Bohle, 1993; Blaikie et al., 2004; Ribot, 2014). The framework treats resilience not as a technical or institutional capacity but as a politically mediated, distributive outcome, shaped by governance arrangements and unequal social relations rather than by hazard severity (Eriksen et al., 2021; Pelling, 2011). Climate justice scholarship further argues that equitable adaptation requires not only distributive fairness in resource allocation but also recognition-based justice, meaning that marginalised groups must be acknowledged as bearing disproportionate burdens and be included in the governance processes that determine how those burdens are addressed (Schlosberg & Collins, 2014; Sultana, 2014).

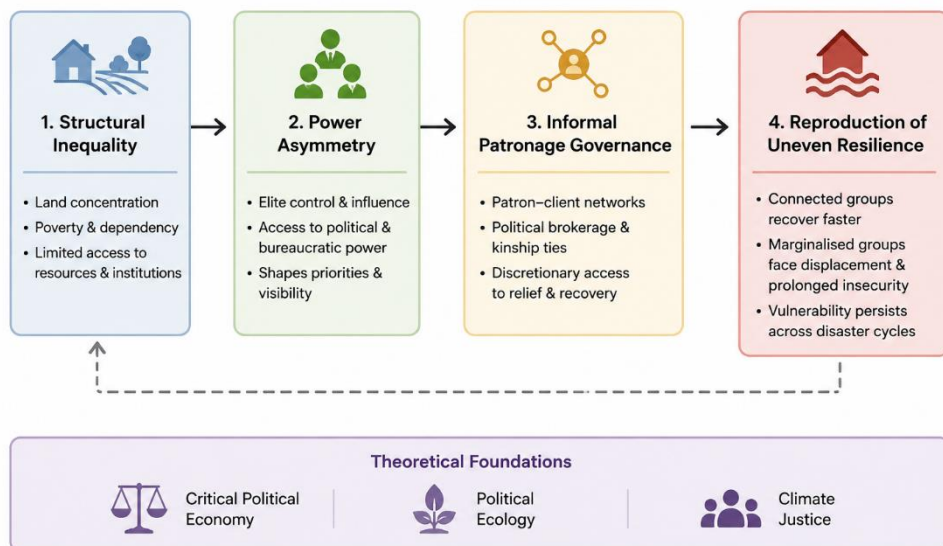
The framework operationalises these traditions through four interconnected dimensions: structural inequality, power asymmetry, informal patronage governance, and the reproduction of uneven resilience. These are not isolated variables but mutually constitutive processes that produce and sustain climate insecurity across successive disaster cycles in Sindh.

Structural inequality forms the foundation. Sindh's political economy is characterised by concentrated land ownership, entrenched rural poverty, sharecropping, and dependence on informal labour. These conditions create material deprivation while reinforcing social dependence on landlords, political intermediaries, and local elites. Vulnerability arises not merely from a lack of assets but from unequal control over decision-making processes and access to institutions that govern protection and recovery (Ribot, 2014; Wisner et al., 2004).

Power asymmetry stems from structural inequality. Economic elites convert material resources into political influence through electoral dominance, bureaucratic access, kinship networks, and control over local governance structures. Following Lukes (2005) and Gaventa (1980), power is understood here not only as direct decision-making authority but also as the capacity to shape institutional priorities, determine whose needs are recognised during crises, and render certain communities invisible to formal governance systems. In Sindh, these asymmetries shape access to flood-protection infrastructure, compensation schemes, disaster declarations, and reconstruction resources.

Informal patronage governance mediates the relationship between power asymmetry and actual resilience outcomes. Helmke and Levitsky (2004) argue that informal institutions frequently coexist with formal governance frameworks and, in practice, override them. In Sindh, patron-client relations, kinship structures, political brokerage, and discretionary bureaucratic behaviour collectively determine access to relief and recovery far more reliably than formal eligibility criteria. Patronage, therefore, functions not as an aberration external to the state but as an embedded governing logic that shapes climate response. This is what Lund (2006) theorises as twilight governance, in which formal and informal authority overlap continuously rather than operating in separate domains.

Reproduction of uneven resilience is the cumulative outcome of the three preceding dimensions. Communities embedded within patronage networks receive earlier warnings, faster relief, and greater reconstruction support, while marginalised groups experience repeated displacement, livelihood erosion, and prolonged insecurity across successive disaster cycles. Leach et al. (2010) describe this as institutionalised exclusion, through which vulnerability is reproduced despite the expansion of formal governance frameworks. Pelling (2011) warns that resilience-centred adaptation risks deepening this reproduction by treating stability as the goal rather than transforming the power relations that generate vulnerability in the first place.

Figure 1. Linking Political Economy Indicators with Resilience Outcomes

Source: Authors.

Figure 1 operationalises these four dimensions by linking political economy indicators to governance mechanisms and resilience outcomes across the macro, meso, and micro levels of analysis. Climate shocks do not, in themselves, generate insecurity. They interact with historically embedded structures of inequality and informal governance mechanisms that mediate access to protection, adaptation, and recovery. This framework explains why vulnerability persists unevenly across communities in Sindh, despite repeated disasters, institutional reforms, and expanding climate governance policies.

Methodology

This study is grounded in a critical realist ontology, which holds that structural conditions such as inequality and power asymmetry exist independently and shape observable social outcomes, and in an interpretive epistemology that treats expert knowledge and lived experience as essential sources of analytical insight. This philosophical positioning justifies a qualitative comparative case study design, enabling a systematic examination of how structural inequality, power asymmetry, and patronage governance shape climate insecurity across the 2010 and 2022 floods in Sindh (Yin, 2018).

Primary data were collected through 10 semi-structured interviews with purposively selected respondents. Selection criteria prioritised professional expertise in climate governance, disaster response, political economy, or civil society practice; geographic diversity across flood-affected districts of Sindh; and direct engagement with the dynamics under investigation. Respondents included an environmental scientist, a political economy researcher, a former district administrator, a climate policy analyst, an agricultural officer, a human rights lawyer, a political science

academic, a disaster response coordinator, an investigative journalist, and an NGO director, representing Karachi, Dadu, Sukkur, Hyderabad, Jamshoro, Larkana, and Badin. All participants provided informed consent and were anonymised using codes R-01 to R-10.

Data were analysed using a hybrid inductive-deductive thematic analysis. An initial deductive coding framework was derived from the theoretical literature and organised around economic inequality, power asymmetry, patronage governance, and uneven resilience. Codes were then refined inductively through iterative reading of interview transcripts, with Claude AI (Sonnet 4.6) supporting preliminary thematic extraction under continuous human supervision. Themes were cross-validated against documentary sources, including provincial climate policies, NDMA assessments, and civil society flood reports.

Findings

Evidence from the 2010 and 2022 floods shows that climate governance in Sindh is characterised by exclusion rather than merely weakened by it. The same communities repeatedly experience greater losses, slower recovery, and weaker institutional support across successive disasters. Interviews for this study consistently pointed to a structural relationship among economic inequality, political influence, patronage networks, and uneven resilience outcomes (R-02; R-03; R-08).

Structural Economic Inequality

Climate insecurity in Sindh is rooted in concentrated land ownership, agrarian dependency, and entrenched poverty, with formal laws and policies frequently designed to protect landowner interests rather than distribute protection equally (Pakistan Climate Security Risk Assessment, 2023). The 2022 floods exposed these inequalities with devastating clarity. Sindh accounted for 70 per cent of Pakistan's total flood losses, with 24 of 30 districts declared calamity-hit, over 1.7 million hectares of crops destroyed, and more than 8 million people pushed into poverty (PDMA, 2023; UNOCHA, 2023). Of 2.1 million households surveyed, 69 per cent had homes fully destroyed, with 79 per cent being *kacha* structures, confirming that the poorest households bore the overwhelming share of physical losses (Government of Sindh, 2022).

Respondents directly linked these patterns to agrarian inequality. Poorer communities remain trapped in "permanent insecurity" because they depend on landlords for livelihoods and for access to state institutions alike (R-03). Landless farmers regularly lose crops and livestock yet fail to qualify for compensation because they lack ownership documents (R-05). Women and lower-caste communities remain institutionally invisible during disasters, surfacing only in casualty statistics (R-06). Leichenko and Silva (2014) describe adaptive capacity as dependent not only on material resources but also on institutional recognition, which structurally marginalised groups in Sindh systematically lack, producing what Watts and Bohle (1993) characterise as a vulnerability trap in which repeated shocks deepen insecurity rather than allowing recovery.

Translation of Wealth into Political Influence

Economic inequality in Sindh translates directly into political influence, shaping access to flood protection infrastructure, relief distribution, and adaptation investments. Feudal landowners maintain control over governance structures through clientelism and electoral dominance, using political influence to manage water availability and resource allocation to their advantage (Pakistan Climate Security Risk Assessment, 2023). During the 2022 floods, rainfall in July exceeded historical averages by 307 per cent and in August by 726 per cent (Government of Sindh, 2022), yet the geography of recovery did not mirror the geography of exposure.

Irrigation flows, embankment repairs, and relief distribution are shaped by informal negotiations among landlords, bureaucrats, and politicians rather than by vulnerability assessments (R-02). Politically connected communities were more likely to receive repeated rounds of aid, while unconnected settlements remained excluded for weeks (R-09). Civil society assessments documented cases in Badin, Khairpur, and Dadu in which embankment diversions protected politically connected estates while adjacent settlements flooded (Sayeed et al., 2024; Naseer Memon, 2023). Some villages were excluded from beneficiary lists for being considered politically disloyal (R-06; R-10). Acemoglu and Robinson (2012) argue that institutions in unequal societies tend to preserve elite dominance, a pattern strongly confirmed across both flood cycles.

Informal Patronage and Governance

Climate governance in Sindh operates largely through informal patronage systems rather than formal institutional rules. Where formal institutions remain weak, informal networks are the primary channel for distributing public goods (Dasgupta & Beard, 2007), and feudal relationships based on land ownership mediate formal governance through elite brokerage (Pakistan Climate Security Risk Assessment, 2023).

Aid lists during the 2022 floods were often prepared with input from political actors who prioritised affiliated communities over vulnerability criteria (R-08). Relief distribution was widely described as mediated by party loyalties, biradari ties, and elite brokerage (R-03; R-08; R-10). An interview respondent characterised provincial climate governance as “reactive administration controlled by personal influence instead of rules” (R-04), while an academic observed that it “looks formal from outside but functions informally during crises” (R-07). Local waderas/landlords and political intermediaries-controlled compensation negotiations, leaving women, lower-caste communities, and landless tenants without representation (R-06; R-10). Wajid et al. (2020) found that patriarchal assumptions embedded within governance systems systematically exclude female-headed households from relief mechanisms. Lund’s (2006) concept of twilight governance, in which formal and informal authority overlap continuously, precisely describes the hybrid space within which climate response in Sindh operates.

Reproduction of Uneven Resilience Across Flood Cycles

The combined effects of inequality, political influence, and patronage governance result in the repeated reproduction of uneven resilience. The 2010 floods affected more than 20 million people nationwide, destroyed 1.1 million houses, and caused damage worth USD 9.7 billion (NDMA, 2010). Recommendations made to the government

after 2010 were largely ignored, and the same institutional unpreparedness reappeared in 2022 (R-01). As of January 2023, over 89,000 people remained displaced in Sindh, with Dadu recording the highest concentration of internally displaced persons at 41,742 (UNOCHA, 2023), precisely the district whose respondents described the deepest patterns of patronage-mediated exclusion.

A respondent described coastal communities entering each flood cycle with progressively weaker assets and greater reliance on informal patrons because recovery from the previous disaster had never been completed (R-10). Post-2010 recommendations were structurally ignored, leaving the conditions that produced unequal recovery in 2010 unchanged when 2022 struck (R-01). Mustafa et al. (2023) similarly argued that resilience disparities across successive flood cycles reflect a sustained failure to confront entrenched social hierarchies. Respondents also linked uneven resilience to declining institutional legitimacy, with excluded communities increasingly turning to religious organisations and local patrons rather than the state, a shift the Pakistan Climate Security Risk Assessment (2023) identified as creating new governance vacuums and expanding the influence of non-state actors. The consistency of this pattern across both flood cycles, despite significant institutional expansion in the intervening period, confirms that climate insecurity in Sindh is structural rather than cyclical.

Discussion

Structural Persistence Across Flood Cycles

The findings of this study reveal that climate insecurity in Sindh is produced by a political economy in which structural inequality, power asymmetry, patronage governance, and selective institutional behaviour interact to determine who receives protection and who does not. This pattern did not emerge as a contingent response to the 2022 floods. It was already documented during the 2010 floods, and the consistency of exclusion across both events, separated by twelve years of institutional expansion, constitutes the most significant analytical finding of this research. Respondents confirmed that recommendations made to the government following the 2010 disaster were substantially ignored (R-01). The same institutional unpreparedness, the same embankment politics, the same patronage-mediated relief lists, and the same marginalisation of landless and politically unconnected communities reproduced themselves in 2022, with near-identical patterns (R-03; R-08; R-09). This persistence is not evidence of cyclical administrative failure. It is evidence of structural reproduction, confirming Watts and Bohle's (1993) argument that vulnerability is generated through entitlement failures embedded in social and political arrangements rather than through the hazard itself.

This argument gains force when set against Sindh's current formal governance architecture. The province has a Climate Change Policy (2022), a functioning PDMA, donor-funded adaptation programmes, and district-level coordination structures. The 2022 Floods Response Plan mobilised the NDMA, provincial authorities, international organisations, and over 100 NGOs within weeks of the disaster (Government of Pakistan, 2022). Yet, as several respondents observed, this formal apparatus coexisted with a parallel informal system that determined actual outcomes. An analyst described

provincial climate governance as “reactive administration controlled by personal influence instead of rules” (R-04), and in Political Science, it was also noted that disaster governance “looks formal from outside but functions informally during crises” (R-07). This is precisely what Lund (2006) theorises as twilight governance, where formal rules and informal authority overlap continuously, and what Helmke and Levitsky (2004) identify as the condition in which informal institutions override formal ones in practice. The Sindh evidence extends this theoretical observation by demonstrating that the dynamic persists not across a single crisis but across an entire decade of successive disasters and institutional reforms.

Institutional Expansion without Power Redistribution

Pelling (2011) warned that resilience-centred adaptation frameworks risk reproducing existing social orders by treating stability as the objective rather than transforming the underlying power relations that generate vulnerability. The Sindh case provides strong empirical support for this critique. The expansion of the governance architecture between 2010 and 2022 improved overall coordination and response speed. BISP disbursed PKR 70 billion in cash relief to approximately 2.1 million households following the 2022 floods (Government of Pakistan, 2022). Yet beneficiary selection processes remained vulnerable to political interference, with respondents describing how PDMA lists were shaped by party loyalties and elite brokerage rather than vulnerability criteria (R-08; R-10). The Pakistan Climate Security Risk Assessment (2023) similarly found that social protection programme selection processes can increase social tension when political interference and favouritism are embedded within the system. Institutional expansion, therefore, produced more resources to be distributed unequally rather than altering the distributional logic itself.

Barnett and O’Neill’s (2010) concept of maladaptation is directly applicable here. They argue that adaptation interventions can actively worsen inequality by selectively benefiting politically connected groups at the expense of vulnerable populations. Evidence from Badin, Khairpur, and Dadu shows that embankment diversions protected politically connected estates while adjacent settlements flooded, and that excluded villages waited weeks for compensation despite being formally registered in disaster databases (R-06; R-09). This meets the definitional criteria for maladaptation. Adaptation resources reached Sindh in substantial volume. Their distribution followed political geography rather than vulnerability geography, deepening the divide between connected and unconnected communities. The Minority Rights Group (2024) documented this pattern in Umerkot district immediately after the 2022 floods, confirming that the exclusions described by respondents in this study were not isolated incidents but part of a systematic provincial pattern.

Comparative Perspectives from South Asia and Beyond

The comparative evidence from South Asia and beyond reinforces this interpretation. Aggarwal (2013) showed that politically influential regions in India attract disproportionate adaptation finance, while Alam and Rahman (2014) found that donor-led programmes in Bangladesh frequently bypass existing institutions, concentrating resources among well-positioned intermediaries. Gazdar and Mallah (2013) documented, specifically in the case of Pakistan, how floodwater diversion decisions

during the 2010 floods mapped directly onto feudal land ownership patterns. What distinguishes the Sindh case within this comparative field is not that patronage mediates disaster governance, a finding documented across multiple South Asian and sub-Saharan African contexts, but that this mediation has persisted through repeated disasters, international engagement, substantial policy reform, and significant increases in formal governance capacity. The political economy governing protection has remained largely unchanged because, as the Pakistan Climate Security Risk Assessment (2023) concluded, incentives for the informal coalition of elites, including large landowners, political parties, and the bureaucracy, to act in favour of structural reform remain low as long as they can maintain power and benefit from rents.

Institutional Legitimacy and the Erosion of Trust

This has significant implications for how institutional legitimacy is understood in climate governance debates. Several respondents noted that communities repeatedly excluded from formal relief systems increasingly turned to religious organisations, kinship networks, and local patrons as alternative service providers (R-03; R-08). Communities in coastal districts have developed deep scepticism towards state institutions, with some reportedly resisting evacuation during the 2022 floods because prior displacement had left them without compensation or recovery support (R-10). This erosion of trust is analytically important. Effective disaster response depends on institutional credibility and public cooperation. Where formal systems have repeatedly failed to protect without political mediation, the conditions for future response are undermined. The Pakistan Climate Security Risk Assessment (2023) identified the growing influence of non-state actors, including religious organisations, in filling governance vacuums created by this institutional failure, a development that carries its own long-term risks for social cohesion and security.

Climate Justice, Recognition, and Gendered Exclusion

Schlosberg and Collins (2014) argued that climate justice requires not only distributive fairness in the allocation of adaptation resources but also recognition-based justice, meaning that marginalised groups must be acknowledged as bearing disproportionate burdens and must be included in the governance processes that determine how those burdens are addressed. The findings from Sindh reveal a systematic failure of recognition-based justice. Tenant farmers, fisherfolk, women, and internally displaced communities were not simply underserved by the formal system. They were structurally invisible within it until they appeared in post-disaster statistics. Female-headed households and lower-caste communities lacked the institutional standing to negotiate access to compensation or relief outside of formal beneficiary lists they could not influence (R-06). Sultana (2014) similarly showed that gendered vulnerability operates through unequal property rights and exclusion from decision-making, a pattern the Sindh evidence confirms at multiple levels of governance.

Policy Considerations

The findings demonstrate that climate insecurity in Sindh cannot be resolved by technical improvements alone. Governance reforms must engage directly with the political economy of exclusion. Four targeted interventions follow from the evidence:

Accountability in Relief and Reconstruction

The PDMA and district administrations should be required to publish beneficiary lists before and after each relief distribution cycle, with independent verification by civil society organisations. Respondents consistently described aid lists as shaped by political actors rather than by vulnerability criteria (R-08; R-10). Rule-based allocation tied to NADRA-verified household data, already operational within the BISP framework, should be extended to disaster compensation to reduce elite capture (Government of Pakistan, 2022). The Sindh Climate Change Policy (2022) mandates transparent governance mechanisms; implementation must be enforced, not merely aspirational.

Meaningful Inclusion of Marginalised Groups

The Government of Sindh, through the PDMA and the newly established Sindh Social Protection Authority, should establish mandatory representation of tenant farmers, women, fishing communities, and displaced populations on district disaster management committees. Respondents documented that female-headed households and lower-caste communities were entirely excluded from compensation negotiations (R-06; R-10). Participation without structural representation is insufficient; formal quotas with grievance redress mechanisms are required (Schlosberg & Collins, 2014).

Insulating Disaster Response from Patronage

The provincial government should establish an independent flood response ombudsman at the divisional level, tasked with receiving and investigating complaints of selective protection and exclusion during declared disasters. The Sindh Implementation Framework (2019) recommends accountability mechanisms; a dedicated oversight body would give this institutional form. Respondents identified the absence of a grievance mechanism as a structural gap that enables continued patronage-based relief mediation (R-04; R-07).

Structural Vulnerability Reduction

Long-term climate security in Sindh requires reforms to land tenure, crop insurance, and social protection to reduce dependency before disasters occur. The district commissioner-led emergency declaration process, which respondents identified as a barrier to insurance pay-outs for landless farmers (R-05), should be reformed to allow sub-district declarations that do not trigger full revenue implications. BISP's anticipatory social protection capacity should be expanded to respond to slow-onset hazards, including drought and heatwaves, affecting the eight most drought-vulnerable districts (Sayeed et al., 2024).

Conclusion

This study examined climate insecurity in Sindh as a politically produced outcome rather than an environmental or administrative one. Across the 2010 and 2022 floods, the same structural pattern repeated: economic inequality generated power asymmetry, which sustained patronage governance, and patronage governance determined who received protection and who did not. Sindh bore 70 per cent of Pakistan's total 2022 flood losses, with 69 per cent of surveyed homes fully destroyed and over 89,000 people still displaced as of January 2023 (PDMA, 2023; UNOCHA, 2023). These

figures alone do not constitute evidence of hazard severity. They reflect the accumulated consequences of structurally unequal resilience.

The study's central argument is that formal institutional expansion without redistributing power reproduces rather than resolves climate insecurity. Sindh's governance architecture expanded considerably between 2010 and 2022. The political economy governing access to protection did not. As respondents in all ten interviews confirmed, communities without political patrons or bureaucratic access remained excluded from relief, even when resources technically existed. Resilience in Sindh functions as a politically distributed privilege rather than a universal adaptive capacity.

Three contributions emerge from this analysis. The study refines the threat multiplier framework by showing that climate hazards amplify pre-existing inequalities rather than create new ones. It advances a political ecology of institutions by demonstrating that formal and informal governance coexist and that informal systems consistently override formal ones during crises. And it reconceptualises resilience as a distributive outcome that requires political transformation, not technical optimisation, as its precondition.

Future research should examine slow-onset hazards, including drought and heatwaves, extend comparison across provinces, and incorporate community-level perspectives from the most structurally marginalised groups, whose voices remain underrepresented even in critical scholarship on climate governance in Pakistan.

Conflict of Interest: The author declares no conflict of interest.

Funding: This research received no external funding.

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