



CHALLENGES OF CLIMATE CHANGE AND THREATS TO NATIONAL SECURITY OF PAKISTAN: A CRITICAL DISCOURSE ANALYSIS

Abid Ghafoor Chaudhry
abidgc@uaar.edu.pk

Associate Professor/Chairman, Department of Anthropology, PMAS-Arid
Agriculture University, Rawalpindi, Pakistan.

Dr. Muhammad Munir

Professor/Dean, Department of Social Sciences and Humanities, Muslim
Youth University, Japan Road, Islamabad, Pakistan.

Abstract

Pakistan is burning, flooding, starving and drowning, all at the same time and all due to a crisis that it hardly contributed to create. The research paper proposes a strictly-evidenced, mixed-method analysis of the compounding problems that climate change presents to the national security of Pakistan. To create a comprehensive picture of the economic, developmental, and humanitarian cost of climate change in Pakistan, the study uses only authoritative international institutional sources published between 2020 and 2025 - namely the International Monetary Fund (IMF), the World Bank, the Asian Development Bank (ADB), the World Economic Forum (WEF) Global Risks Report series, and the United Nations Development Programme (UNDP) Human Development Reports. Such quantitative results are then interpreted by a Critical Discourse Analysis (CDA) of the most meaningful climate and security policy texts in Pakistan, such as the National Security Policy 2022-26 as well as the National Climate Change Policy 2021, the aim of which is to reveal the discursive fractures and institutional misalignments that do not allow the country to develop an effective whole-of-government response to. The article critically analyses how climate change alters and magnifies the threats on the food security, water resource management, energy provision, economic stability, population health and internal displacement dimensions. One of the main areas of analysis is the recognition and criticism of the discursive bifurcation between the security governance architecture in Pakistan that has traditionally been concerned with conventional military threats and its climate governance structure that functions within a rather technical, developmental register that has little to do with national security planning. The paper contends that this bifurcation itself is a first-order failure of governance, with second-order material implications on social stability, state legitimacy, and national sustainability. The conclusion does not follow the typical structure of research papers but presents a substantive and implementable synthesis of evidence-based policy frameworks both at a national and international level and community-level intervention strategies aimed at fostering adaptive capacity at the ground level. These suggestions are informed by UNDP, World Bank, and ADB programmatic evidence and are tuned to the unique institutional, socioeconomic, and geopolitical situation of Pakistan.

Keywords: *Climate Change, Climate-Security Nexus, Community Resilience, Critical Discourse Analysis, Food Security, National Security, Pakistan, Water Security.*

Corresponding Author: Abid Ghafoor Chaudhry (Associate Professor/Chairman, Department of Anthropology, PMAS-Arid Agriculture University, Rawalpindi, Pakistan)
Email: abidgc@uaar.edu.pk

1. Introduction

1.1. Setting the Scene: Why Pakistan, Why Now

One-third of Pakistan was under water in summer 2022. Approximately 1,700 individuals were murdered. Almost eight million were forced out of their homes. Sindh, Punjab, and Balochistan Millions of smallholder farmers lost their livelihoods due to agricultural losses. Decades of years of publicly funded infrastructure was washed away in a few weeks, including roads, bridges, schools, hospitals, irrigation canals. When the United Nations Secretary-General António Guterres appeared before the cameras in the flooded plains of Sindh, he did not resort to the use of the language of development or environmental management. He dubbed it, simply, climate carnage (UNDP, 2023). The economic cost was estimated to be USD 30 billion - a figure of more than 10 percent of the total GDP of Pakistan and approximately the sum of all the international climate finance received by Pakistan over the last 20 years (Government of Pakistan, 2022). That was just one disaster in the history of climate in Pakistan. It is the rational extension of a trend of increasing the intensity of climate extremes that has been developing over decades and now is concurred upon by all major international scientific and financial institutions will become extremely severe in the decades ahead.

Pakistan has a contribution of less than one percent of the cumulative global greenhouse gas emissions (UNDP, 2023). Nevertheless, it is continuously in the top ten list of climate-vulnerable nations in the world. According to the Global Risks Report (2024) by the World Economic Forum, climate action failure, extreme weather events, and natural disasters are the top three risks to humanity in the next decade, with South Asia, and Pakistan in particular ranked as one of the most highly susceptible areas. This is an ugly imbalance between accountability and outcome, the ethical and political scenario in the light of which any serious examination of the climate-security issues in Pakistan should be placed.

1.2. What is the impact of this to national security?

The concept of national security that used to be viewed almost solely through the prism of territorial sovereignty, military prowess and geopolitical competition has been

subjected to a radical conceptual overhaul in the post-Cold War period. The identification of non-traditional security threats, such as environmental degradation, resource scarcity, pandemic disease, internal displacement, and economic fragility as elements of mainstream security analysis has been facilitated by the understanding that the largest threats to human life and state stability in the twenty-first century are as likely to come in the form of a monsoon failure or a glacial flood as they are the barrel of an enemy rifle. The incorporation of climate change into the national security framework is not an academic nicety to Pakistan as a nuclear-armed state of more than 230 million people operating within a region that is already volatile in terms of its security environment. It is a need to survive.

1.3. Problem Statement

The main issue that this paper is going to discuss is the structural mismatch: the dangers that climate change is becoming a threat to the national security of Pakistan are growing at an alarming rate, and are now documented with high confidence by major international institutions, but the governance architecture, institutional design, and policy conversation of Pakistan is still fundamentally ill-equipped to respond to them in an integrated, resourced-sufficient, and strategically coherent way. The National Security Policy of 2022-26 was the first time in Pakistan history that climate change is recognized as a type of non-traditional security threat but recognition is not action, and the institutional framework of climate-security rhetoric translation into action on response is at its most rudimentary stage. In this paper, the author explores the content of the threats as well as the governance failures that continue to keep people vulnerable.

1.4. Research Objectives

The main aim of this study is to critically review and analyze how climate change is a source, intensifier and transformer of threats to national security in Pakistan, as well as to formulate evidence-based policy and community intervention proposals to mitigate these threats, in an integrated mixed-method research approach.

2. Methodology

This research adopts a sequential explanatory mixed-methods approach to unpack the complexities of the climate-security nexus in Pakistan, which present as both tangible material effects (such as GDP losses, displacement, and crop yield reductions) and as discursively constructed political challenges subject to institutional agendas and political ideologies. The quantitative strand precedes and informs the qualitative strand, ensuring that statistical patterns (from triangulated secondary data drawn from institutions such as the IMF, World Bank, ADB, WEF Global Risks Reports, UNDP Human Development Reports (post-2020) are enriched by critical analysis. This mixed approach provides rich, multifaceted understanding unavailable from single methods, meeting doctoral research standards in International Relations.

The qualitative component uses Critical Discourse Analysis (CDA) as defined by Fairclough (2013) and Van Dijk (2015) to investigate power relations in pivotal documents, such as Pakistan's National Security Policy 2022-2026, National Climate Change Policy 2021, NDC submission, National Flood Response Plan, World Bank/UNDP country programs, and parliamentary speeches. Using Fairclough's tri-dimensional approach (textual: linguistic/rhetorical features; discursive practice: production/distribution/consumption; social practice: institutional/political contexts), CDA highlights the securitisation of climate threats, whose agendas are normalised, and what is unsaid in resource allocation debates. Challenges include bias in secondary data and interpretative biases in CDA, exacerbated by climate's intersection with non-environmental factors such as military attitudes and governance weaknesses.

3. Review of Literature

3.1. Securitization of Climate Change: Theoretical Understanding

The theoretical approach underpinning the explanation of why climate change turns into a security problem is the theory of securitization formulated by Buzan, Waever and de Wilde that belongs to the Copenhagen School tradition. In this context, securitization is the intersubjective process by which a certain problem is discursively framed as a threat to existence that must be addressed in extraordinary ways that exceed the normal parameters of politics (Buzan and Waever, 2003). In the case of climate change, securitization theory enquires: in what ways, by whom, by what means of rhetorical action, and with what institutional outcomes is climate change transformed into a problem of environmental management into a problem of national security?

McDonald (2018) has suggested that, though such securitization of climate change is analytically correct given the magnitude of the threat, it poses normative risks. Securitization may create a logic of emergency management that circumvents the democratic decision-making process that foregrounds state-centric and militarized reactions to community-centered and rights-based reactions, and marginalizes the experiences of people most vulnerable to climate effects. This framing between the demand of securitization and the democratic needs of climate justice permeates the literature on climate-security in the context of the developing countries.

3.2. The empirical Consensus on Pakistan Climate vulnerability

The academic and institutional publications that were produced since 2020 have delved a significant and convergent set of evidence on the extreme climate vulnerability of Pakistan. In the Global Climate Risk Index, Eckstein et al. (2021) consistently rank Pakistan in the top ten countries that have been hardest hit by climate-related extreme weather over the past 20 years, a fact also supported and intensified by the Sixth Assessment Report of the IPCC (2022), which predicts that South Asia will be one of the largest absolute increases in the frequency and intensity of heat extremes.

The IMF (2023) has directly linked climate exposure and chronic macroeconomic vulnerability in Pakistan, observing that climate shocks add to the fiscal stress caused by energy sector circular debt and structural current account deficit, as well as high levels of external indebtedness. The World Bank (2022) also reported the compounding relationship between climate change and poverty and has projected that decades of development progress because of the continued exposure to climate extremes without corresponding investment in adaptation may reverse decades of development gains and place millions more Pakistanis below the poverty line. The ADB (2023) has reported the most comprehensive sectoral decomposition of climate damages, as agricultural damages, water infrastructure damages, and health system damages prominently feature in its review of the climate risk profile of Pakistan.

3.3. Water-Energy-Food Nexus as a Security Framework

One of the most fruitful analytical trends in the literature of recent five years has been the use of the framework of Water-Energy-Food (WEF) nexus in the study of climate security in Pakistan. Rasul and Sharma (2014) show that the three sectors are so interdependent in the Pakistani political economy that climate shocks in one of the areas quickly spread to the other areas. The impact of a severe drought is that it reduces hydropower production, leading to power shortages, which disrupted agricultural activities, which in turn increased food prices, which in turn caused social unrest. The most important climate-governance weakness of Pakistan is its inability to control the WEF nexus within an integrated institutional framework, since the sectoral storage do not allow the anticipation and control of such cascading impacts.

4. Results and Discussion

4.1. Quantitative Findings: The Numbers behind the Crisis

The IMF, World Bank, ADB, WEF, and UNDP sources of quantitative synthesis create a portrait that is terribly frightening individually and more frightening when the systemic interrelation between the parts is considered. The main macro-level indicators, which are based on these institutional sources, are shown in Table 1 below.

Table 1: Climate-Economic and Security Indicators for Pakistan Drawn from International Institutional Sources (2020–2025)

Indicator	Estimated Value or Finding	Source	Year
Annual GDP growth reduction by 2050 (moderate-high emissions)	1.0–2.5 percentage points	IMF	2023
Additional people in poverty by 2030 without adaptation	7–8 million	World Bank	2022
Total economic losses from 2022 super-floods	USD ~30 billion	Govt. of Pakistan / UNDP	2022

Projected annual agricultural cost of climate change by 2050	USD 5–15 billion	ADB	2023
Pakistan's ranking on Long-Term Climate Risk Index	Top 5–10 globally	WEF / Germanwatch	2024
Annual climate finance gap (adaptation needs vs. flows)	USD 10+ billion/year	UNDP / ADB	2023
Projected internal climate migrants by 2050	7.6–18 million persons	World Bank	2021
Reduction in HDI growth rate attributable to climate change	15–25% slower	UNDP	2023
Acutely food insecure people following 2022 floods	14.6 million	WFP / FAO	2023
Dangerous glacial lakes posing GLOF risk	33 classified high-risk	ADB / UNDP	2023
Hydropower output loss in drought years	10–15% below capacity	World Bank	2022
Energy sector circular debt (2023)	PKR 2.6 trillion+	IMF	2023

Note. All data represent estimates as available in the referenced official reports.

Take into account the IMF figure. The estimated economic effect of a 2.5 percentage point decrease in the GDP growth rate every year, which would result in the moderate-to-high emission case, would be an economic disaster in a country already going through its twenty-third IMF bailout program and has an external debt burden that ate up more than forty percent of its export earnings in 2023 (IMF, 2023). Under normal conditions, the fiscal space in Pakistan is extremely limited. Climate change does not only decrease the resources at their disposal to invest and social spending, but it also leads to the heightened expenditure on emergency response, reconstruction financing, and social protection outlays. The net fiscal impact is a structural worsening of the public balance sheet, which accumulates over decades.

The poverty forecast of the World Bank is not any better. A further seven or eight million more Pakistanis pushed below the poverty line by 2030 is a rollback of some improvements that have taken 20 years of anguish-filled development to overcome. They are not statistical abstractions. They are school dropouts who are put to work to help earn a living. They are mothers who are economizing on food in the aftermath-flood high prices. They are young men with no economic prospects of ever returning to the city they are flooding into who have no economic perspective to expect their arrival in the city, which is becoming the urban poor, whose unmet expectations in the face of economic prospects are what security analysts are seeing as the seeds of instability.

4.2. Food Security: Agriculture under Siege

Agriculture in Pakistan supports about 37 percent of the national labor force, about 22 percent of the GDP, and furnishes the raw materials to the textile and food processing

sectors which combined comprise most of the export earnings (ADB, 2023). It is also, in any way, the industry that is the most directly and deeply affected by climate change. According to the World Bank (2022), South Asian wheat production which includes a significant role played by Pakistan might reduce by up to 30 percent by the year 2050 in case of high-emission scenarios. The textile industry, which depends on cotton production, has already been immensely derailed due to the heat stress combined with unpredictable monsoon and flooding which has been the order of the day in Pakistan during the recent agricultural seasons. The exports of rice, which is a large source of foreign exchange earnings, are becoming more and more unpredictable since flooding affects the planting schedules and logistics after harvesting.

Agricultural collapse has far-reaching security consequences, which go beyond the farm gate. When the smallholder farmers who constitute the greater majority of agricultural producers in Pakistan lose their crops and livestock to floods or droughts, the result spreads outwards at an astonishing rate and radius. The process of asset depletion by distress sale of land, tools and livestock destroys the productive capital base upon which recovery will take place in the future. Young ones are pulled out of school to help in family survival thus trapping them into a cycle of poverty. Debt levels increase as farmers take loans to plant and to restructure. Members of the same family who are males move to cities and interfere with the structure of the family and the social networks of the family, which alone are significant adaptive resources. Women, abandoned to housekeeping with insufficient resources, have to cope with the added burden of caring, gathering resources, and economic control in the environment of acute shortage.

After the floods in Pakistan in 2022, the WFP and FAO reported 14.6 million individuals in acute food insecurity in the country, which is more than the total population of some European nations (WFP/FAO, 2023). The fact that this crisis was experienced in a country that is a net agricultural exporter in normal times shows how swiftly and drastically climate shocks can turn a country into a net food importer. The scale and orchestration of the policy response though very significant was always reactionary in nature, responding to the disaster but not scheduled to prevent or reduce it. This reactive orientation itself is a product of the discursive and institutional failures that are identified in this paper.

4.3. Water Security: The most existential climate hazard in Pakistan

Considering that the most immediate climate vulnerability of Pakistan is food security, water security might be the most existential vulnerability. The entire system of irrigated agriculture in the country, urban water supply and about 30 percent of the total electricity generation capacity of the country all rely on the Indus River system. And the Indus, itself, relies upon the glaciers of the Himalaya, Karakoram, and Hindu Kush mountain ranges - which are melting away.

ADB (2023) estimates that in a scenario of a 1.5 degree Celsius warming, which is the optimistic limit of the Paris agreement, most of the glacial ice in the Hindu Kush Himalaya region, up to 36 percent, may disappear by 2100. In a 4 C scenario, which is in line with the current global emission patterns, even 75 percent of that ice would be gone within the lifetime of children currently alive. There are more than 7,000 glaciers in Pakistan (more than in the Polar Regions), and UNDP Pakistan (2023) has named at least 33 glacial lakes as presenting urgent, high-risk threats of Glacial Lake Outburst (GLO) Floods. These GLOFs come at ruinous speed, sweeping away decades of infrastructure investment in the northern areas of Pakistan and displacing communities that lack any other economic foundation.

The medium- and long-run pattern is a shift between excessive water to a lack of it. With the loss of glacial reserves, dry-season flows in the Indus and its tributaries will decrease, posing a risk to the sustainability of the largest continuous irrigation system in the world. The consequences to food production, urban water supply and hydropower generation are dire. Mirza and Ahmed (2024) have analyzed how this compounding effect of this hydrological transition on the geopolitics of Pakistan has contributed to worsening zero-sum competition between Pakistan and India - both nuclear-armed powers - over a shared resource managed through a treaty framework (the Indus Waters Treaty of 1960) that had never been designed to accommodate the hydrological realities of a warming world at the domestic level, the inter-provincial water allocation dilemmas between Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa remain unresolved, are habitually one of the most politically charged matters in the federal politics of Pakistan - and climate-induced water shortage will only exacerbate this situation.

4.4. Energy Insecurity: A Multiple Weakness

The electricity industry in Pakistan is already experiencing a crisis. The energy sector had a circular debt of over PKR 2.6 trillion in 2023, and the continuous power outages, which have become a permanent feature in the Pakistani government, under the guise of load-shedding, cost the nation immense amounts of money in terms of lost industrial output, domestic wellbeing, and health (IMF, 2023). Climate change comes into this already strained situation in several directions at the same time, and in none of them is the impact benign.

Hydropower (ca. 30 per cent of installed generation capacity in Pakistan) is directly affected by changed river flow regimes, augmented glacial sedimentation in dam reservoirs, and by Glacial Lake Outburst Floods (GLOF) destruction of hydraulic infrastructure. According to the estimates made by the World Bank (2022), already at peak years, climatic variability decreases the hydropower output by 10 to 15 percent in drought years. This variability will grow as the patterns of precipitation become more unpredictable and the influence of glacial flow on dry-season flows decreases. At the same

time, the escalating temperature, especially the heat waves that have become a regular event in Pakistani lowland cities, because a massive peak demand on electricity to cool the air and the grid is already overloaded in the face of the existing load requirements at the base level. The supply is lowered, and the demand is higher, not just an inconvenience. It is an economic crisis. According to the WEF (2024), energy insecurity is one of the key causes of economic stagnation and political instability in the emerging market economies, and the case of Pakistan is a textbook example of this process.

The situation in Pakistan in energy is deeply ironical in its structure. The nation has among the largest solar irradiance rates in Asia, large potential wind energy in the Balochistan and Sindh coastline, as well as large undeveloped small-scale hydropower in its mountainous areas. Pakistan has an enormous untapped potential of renewable energy, which has been reported in the Energy Transition Index (WEF) (2023) as well as the ADB (2023). However, the transition towards clean energy has been slow enough to have no material effect on the reliance of the country on imported Liquefied Natural Gas (LNG) and domestic coal, which are both a liability to the national security as well as to climate. The inability to exploit clean energy potential is in part a financing issue, in part a governance issue, and in part a discursive issue - the lack of a consistent national narrative that would connect energy transition both to climate adaptation and to national security needs.

4.5. Public Health: The Unspoken Health Security Crisis

The contribution of climate change to the population health in Pakistan is both the most heterogeneous, yet the most pernicious, and the least well-researched aspect of the climate-security nexus. It works via heat stress and heat mortality; via geographic spread and increase of the prevalence of the diseases that are spread by vectors, such as malaria, dengue fever, Crimean-Congo Hemorrhagic Fever; via outbreaks of waterborne diseases in flood-impacted and drought-impacted communities; via malnutrition due to food insecurity, especially in children younger than five years old; and via the In practically all of these pathways, the poorest and most marginalized Pakistanis which have the least access to healthcare, clean water, proper shelter, and social protection bear the brunt (Abid and Abid 2023; WHO, 2023).

The 2022 floods resulted in what WHO Pakistan termed as a first-order public health emergency (WHO, 2023). Relief camps and temporary settlements were packed with millions of displaced people with no proper water, sanitation or medical attention. The cases of malaria in the flood affected districts increased by a few hundred percent over the normal level. Through overcrowded shelters, diarrheal disease, skin infections, and acute respiratory illnesses are transmitted easily. Entire provinces were thrown off schedule in regular immunization programs and opened windows of susceptibility to vaccine-preventable diseases such as polio - a disease that Pakistan has been fighting to

get rid of over decades. Healthcare facilities themselves were submerged or destroyed, and the health workforce was already overstretched.

The mental health aspect should be given specific attention as it is so continuously overlooked. High-levels of post-traumatic stress disorder, major depression, grief reactions, and anxiety disorders occur in survivors of the 2022 floods, and women, children, and elderly persons are the most affected with psychological morbidity, as documented by Yousuf et al. (2023). With more than 230 million people, there are less than 500 trained psychiatrists in Pakistan which is a ratio that makes any meaningful response to climate-related mental health crisis practically impossible in the current environment. The psychological impact of climate disasters is intergenerational and lasting, and it has a direct effect on social stability: communities that experience a series of disasters without proper use of psychosocial recovery assistance become more susceptible to social disruption, family breakup, and the resentment that is used to recruit non-state actors.

4.6. Climate Displacement: Security Implications of Mass Migration

Groundswell report (2021) by the World Bank estimates that 7.6 to 18 million Pakistanis may be internally displaced due to the compounded effects of climate change by the year 2050. Such projections, distressing as they are in crude statistical units, are an underestimation in security terms of the impact of mass climate displacement, in the sense that they fail to reflect the exponential social, political and economic effects of mass involuntary movement within already strained urban and peri-urban settings.

Major cities such as Karachi, Lahore, Hyderabad, Faisalabad, and Multan have a history of urban migrant populations, who come to Pakistan and settle in already existing populations of urban poor living in grossly under-serviced informal settlements. The ability of the municipal governments to spread water, sanitation, electricity, houses, healthcare, and educational facilities to the fast growing urban peripheries is low. Police presence in informal settlements is ineffective and is often defined more by extractive relationships with the inhabitants than by protective relations. Such are the circumstances, social dislocation, economic marginalization, absence of governance, and concentrated grievance, of which criminologists, and security analysts write, as the most conducive to the rise of criminal networks, communal tensions, and extremist recruitment. Security implications of unchecked climate displacement are thus not speculative futures, but are paths which can be followed back to present circumstances with a fair degree of certainty.

There is a need to consider gender aspects of displacement. According to UNDP Pakistan (2023), women and girls in displacement settings are more vulnerable to gender-based violence, limited mobility, lost access to educational opportunities, not able to receive formal humanitarian aid, and lack ability to access economic opportunities in new urban settings. They are not simply human rights issues, but they are those as well. They

are failures of governance and have a direct implication to the social cohesion and community resilience.

4.7. Critical Discourse Analysis: Governance Fracture

As the CDA of the most important policy documents in Pakistan shows, the pattern in question is both unsurprising and, at the same time, consequences: climate change and national security are regulated, discourses, and institutionally structured in fairly different discursive worlds that, however, do not actually interact with one another. It is not just a scholarly comment on the style of rhetoric. It has material implications on institutional behavior, resource distribution, and policy performance.

The National Security Policy 2022-26 of Pakistan is an actual discursive breakthrough on how climate change is addressed by the security apparatus. The document is an official recognition of climate change as a non-traditional threat to security alongside terrorism, extremism, and external aggression as a challenge that is to be tackled by national strategies. Textually, this is a major deviation of the earlier national security structures that viewed the environment as being completely peripheral to national security issues. But upon a close reading of CDA, one can see the limitations of this breakthrough. Climate change is always discussed as a threat multiplier, a background situation that enhances other threats, but it is never discussed as a first-order, first-level security threat itself. The linguistic codifies subordinating climate change to traditional security issues, and the institutional prescriptions based on this framing are equally timid: improving disaster response capability, engaging with civilian authorities and attending international climate forums. Not present in the document is a demand to fundamentally institutionalize the security architecture to include climate risk assessment in strategic planning, to commit resources of the defense sector to climate adaptation, or to make a systematic connection between climate change and the military posture of Pakistan or its relationship with other alliances.

The National Climate Change Policy (2021), which is examined in parallel, acts in a completely different discursive register. It is technical, developmental and managerial in language. Climate change is positioned as a challenge in environmental governance to be solved by adaptation planning, ecosystem restoration, renewable energy implementation and mobilization of international climate finance. The security concerns of climate change (displacement, resource conflict, social instability, state legitimization) which are the focus of the literature examined in this paper are not much represented in the policy text. This discursive fragmentation of the security policy securitization of climate change, and the discourse of environmental management inherent to the climate policy, means that neither document has the whole picture of the climate-security nexus, and that the institutions involved in enacting each document have completely different understandings of what is at stake and what must be done.

Probably the most telling discovery of the CDA is what is not present in either of the documents: the voices, knowledge, and agency of the communities who have been most immediately and harshly impacted by climate change. Neither policy framework includes any systematic process through which the community knowledge can be integrated into risk assessment, the significant involvement of vulnerable populations in adaptation planning, or accountability to the affected populations of policy outcomes. The prevailing discourse in the two documents is technocratic expert-driven and state-centric. This discursive lapse of community agency is not only a normative deficiency; it is a policy failure, as policies that are developed without the knowledge and input of the very people they are supposed to protect will always perform poorly compared to community-involving policies (UNDP, 2023).

5. Conclusion: Policy Frameworks and Community Interventions

5.1. The Call of an Integrated Climate-Security Nexus Framework

The evidence that has been synthesized in this paper makes it apparent that the present strategy of Pakistan to deal with the intersection of climactic change and national security is structurally inadequate. Governance structure is scattered in silos among ministers. The discursive formation of climate change in policy discourses divides the governance of security and environmental matters in a manner that cannot allow concerted institutional action. An adaptation demand is a minor part of climate finance flows. Policy design does not involve community knowledge and agency. And all this is happening in the context of ever-growing climate effects that have no respect to any of these institutional lines.

What is needed is an Integrated Climate-Security Nexus Framework (ICSNF) - a national strategic framework that officially fills in the institutional, discursive, and resource disconnect between climate governance and national security planning. It is not a reason to militarize climate policy that has its own dangers of securitizing responses in modes that favor state interests over those of the community. It is an argument in favor of a truly holistic governmental strategy that acknowledges climate change as an issue of first-order national security that warrants strategic focus, institutionalization, and resource allocation such a naming suggests.

At institutional level, the ICSNF must be anchored by a Climate-Security Steering Committee at the level of the Prime Minister Secretariat, whereby there should be mandatory representation by Defense, Finance, Water Resources, Food Security, Health, Interior, and Planning. This should be supplemented by a Climate-Security Analytical Cell with a truly interdisciplinary team of environmental scientists, security analysts, economists, specialists in the field of public health, social scientists, to prepare periodic, publicly accessible integrated climate-security threat analysis to guide both budgetary allocations and strategic planning reports. Both the ADB (2023) and the UNDP (2023)

have suggested that the mainstreaming of climate risk into the Medium-Term Development Framework of Pakistan needs to be mainstreamed; the ICSNF needs to offer the institutional vehicle where mainstreaming would be implemented.

5.2. Bridging the climate finance gap

The so-called adaptation financing gap is, perhaps, the most tangible and practical aspect of the governance failure that this paper has outlined: UNDP (2023) and ADB (2023) estimated it at more than USD 10 billion annually. Any policy framework, no matter how well-designed, cannot be realized without sufficient resources and the magnitude of climate investment Pakistan requires is vastly greater than either domestic fiscal resources or the current international climate finance flows.

A multi-pronged approach to financing is needed. Domestically, Pakistan will have to prepare a National Climate Finance Strategy that will plot the available sources of finance, institutional constraints in climate finance absorption and disbursement, and prepare a portfolio of bankable adaptation projects to be submitted to international climate funds. All the three funds, the Green Climate Fund, the Adaptation Fund, and the Global Environment Fund have listed Pakistan as a priority recipient country, yet Pakistan access to these funds has been limited by the lack of institutional capacity to develop and manage the complex multilateral funding proposals. The capacity to do this, possibly by establishing a special National Climate Finance Unit within the Ministry of Climate Change with the technical assistance of the ADB and UNDP, is an urgent task.

IMF Resilience and Sustainability Trust (RST), to which Pakistan has been receiving balance of payments assistance with climate policy conditionalities, is a powerful, though inadequate, tool (IMF, 2023). It should be accompanied by significantly increased adaptation finance of developed countries in the form of grants, the implementation of the Loss and Damage Fund set at COP27 and COP28, and concessional lending dedicated to climate resilience infrastructure by the World Bank and ADB in particular. The government of Pakistan has a valid and compelling moral argument to present in global climate finance talks: as one of the highly vulnerable countries in the world, as well as one of the least contributors to global emissions, Pakistan is the poster child of climate injustice, and the developed states have the responsibility to offer equal attention.

5.3. Sectoral Policy Responses: Priorities and Pathways

5.3.1. Agriculture and Food Systems

A detailed National Strategy of Climate-Smart Agriculture is needed to ensure that the agricultural sector incorporates a risk assessment of climate in all aspects of agricultural governance: the development and propagation of crop varieties, the design and conservation of irrigation infrastructure, agricultural extension services, rural credit and insurance systems, and market linkage programs. The investment by the World Bank in

the agricultural productivity in Pakistan must be conditional on the systematic climate resilience standards. Smallholder farmer crop insurance - at the moment only in its infancy - needs to be expanded quickly, and the government should subsidize the premium and co-finance with the development bank, so that the most vulnerable farming households can have access to coverage. ADB (2023) recommends community-managed water harvesting systems as a cost-effective system to buffer agricultural water supply against monsoon variability and should be given priority in drought prone districts of Balochistan and southern Punjab.

5.3.2. Water Governance Reform

An urgent National Water Security Action Plan is required that spans the entire range of climate-water-security nexus, working on GLOF early warning and emergency response mechanisms in the northern mountains and groundwater governance reform in the Punjab plains and coastal aquifer safeguarding in Sindh and Balochistan. The Indus Waters treaty with India needs a well organized climate sensitive review process which should be best facilitated by the World Bank which was the guarantor of the treaty in the first place to come up with adaptive management provisions that will be able to adapt to the hydrological reality of a warming world. At home, the Water Apportionment Accord of 1991 needs to be renegotiated so as to include climate projections and to make the drought-sharing arrangements fairer so that the political instability of the inter-provincial water conflicts are lessened.

5.3.3. Energy Transition Acceleration

The clean energy transition in Pakistan should be drastically sped up. Both the WEF (2023) and ADB (2023) have reported on the colossal untapped solar and wind potential in Pakistan, not to mention that the cost of generating renewable energy has dropped by more than 80 percent worldwide over the last 10 years, making the economic argument to shift a stronger than ever before. It should look to achieve at least 50 percent of renewable electricity generation by 2035, with a National Renewable Energy Scaling Program that, through a mix of concessional multilateral lending, international climate finance, and reformed domestic energy subsidies, should achieve this objective. This would not only save the cost of importation of energy, bridge the electricity access divide in the rural and off-grid populations, decrease the climate susceptibility in the energy sector, but also add to the NDC commitments in Pakistan.

5.4. Community-Level Interventions: Building Resilience from the Ground Up

The greatest insight of twenty years of climate adaptation programming around the world - reported with especial clarity by UNDP and World Bank assessments - is that policies developed without substantial involvement of the affected communities are always weak, and community-based interventions are always stronger than externally designed technical solutions. The climate adaptation strategy of Pakistan needs to be

reconfigured in such a way that the communities become the center of design and implementation as opposed to the periphery.

5.4.1. Community-Based Disaster Risk Reduction

The most cost-effective and fastest implementing community resilience intervention to be employed is scaling Community-Based Disaster Risk Reduction (CBDRR) programs in all 100+ flood-prone and drought-affected districts of Pakistan. UNDP Pakistan (2023) has reported that in the 2022 floods, community members with active CBDRR programs (trained on identifying hazard, disseminating early warning, evacuation planning, and post-disaster recovery) had a much lower mortality and livelihood losses than similar communities that did not have programs. These programs are not costly. They are, in comparison to the cost of responding to a disaster reactive, extremely inexpensive. What they need is political will, sustained institutional support, and sufficient community-level resourcing - none of which has been intermittent and limited up to now.

5.4.2. Women at the Center of Climate Adaptation

Evidence from UNDP and World Bank programming across South Asia is unambiguous: communities in which women are genuine leaders — not token consultees, but decision-makers with real authority and resources — in climate adaptation planning achieve significantly better resilience outcomes. Women possess superior household-level knowledge of resource needs, vulnerability, and adaptive strategies. They manage water, food, health, and social networks at the community level. They are more likely than men to invest in community-level risk reduction rather than individual asset protection. And they are, in the great majority of Pakistan's climate-vulnerable communities, systematically excluded from formal decision-making processes. Pakistan's climate policy must explicitly mandate women's meaningful participation at every level, from community risk assessment to provincial adaptation budgets, and must address the legal, social, and economic barriers — including the absence of land ownership rights for most rural women — that limit their effective agency.

5.4.3. Indigenous and Local Knowledge as Governance Resource

The local and indigenous people of Pakistan, including the mountain valleys of the north, the Indus delta, the Thar Desert and the Balochistan plateau, possess ecological knowledge of local climatic patterns, cues of hazards, seasonality and natural resources management that have been developed over generations. Indigenous and local knowledge has been acknowledged as a key and systematically underused resource to climate adaptation in the Sixth Assessment Report (2022) by the IPCC. The national meteorological, oceanographic and disaster management institutions of Pakistan should come up with formal procedures of documenting, validating and incorporating this knowledge into official risk assessment and early warning systems. It is not just a practice

in cultural sensitivity, but that as well. It is a pragmatic governance necessity based on the understanding that scientific knowledge systems and indigenous knowledge systems represent different, yet, complementary aspects of climate reality, and integrating them yields superior risk information than taken alone.

5.4.4. Urban Climate Resilience for Displaced Populations

With the climate displacement intensifying, secondary and tertiary cities in Pakistan, to which rural climate displaced people are flocking in the greatest numbers, yet which have the least institutional capacity to respond, must have specialized urban climate resilience initiatives that explicitly meet the needs of the incoming displaced populations. These initiatives should include constructing climate-resilient affordable housing, equitable extension of water and sanitation to slums, urban heat action plans with a focus on the unique requirements of low-income communities with no access to cooling, and livelihood transition support initiatives that acknowledge the unique needs of agricultural workers in their transition to urban economic settings. The City Climate Finance Gap Fund by the World Bank provides a possible financing mechanism to these investments in secondary cities in Pakistan and the urban development programs of ADB should be explicitly restructured to include climate displacement as a key planning variable.

6. Conclusion

Climate vulnerability was not an option in Pakistan. The decisions of industrialized countries that had established their prosperity on carbon emissions in the last 200 years gave it to Pakistan which was mostly agricultural, poor and marginal to the global economy. The fact that historical injustice does not absolve Pakistan of the duty to manage its own climate response as well as its resources and institutional capacity would allow it to do so - and it does not allow the Pakistani institutions of governance to use the injustice of their condition to excuse institutional stasis or institutional fragmentation.

The converging quantitative and qualitative evidence in the mixed-methods analysis in this paper has shown that climate change is existential, multidimensional and accelerating threats to the national security of Pakistan in all its dimensions, including food and water, health, energy, economic stability and social cohesion. It has also shown that the response of the governance of Pakistan, though having some discursive development, especially the National Security Policy 2022, is still basically inadequate to the magnitude and the complexity of the task. The discursive dichotomy between security governance and climate governance, the dramatic underinvestment in adaptation, the lack of the agency and knowledge of communities in policy formulation, the absence of climate risk in mainstream economic planning are governance decisions that can and should be changed.

The interlaced policy frameworks and neighborhood interventions plans described in this conclusion are not egalitarian wishes. These are evidence-based, grounded,

institutionally viable recommendations, which can and must be acted upon by the government of Pakistan in collaboration with the international community. The second one — institutional fragmentation and lack of climate finance, exclusion of communities, and incoherence in discourse is not a steady state. It is a course towards further insecurity, poverty increasing, and a faster weakening of the state in one of the most significant and strategic countries of the world. It is a path that Pakistan cannot afford and neither, in fact, can the rest of the world.

References

- Abid, M. A., & Abid, M. B. (2023). Climate change and the increased burden of dengue fever in Pakistan. *The Lancet Infectious Diseases*, 23(1), 17–18.
[https://doi.org/10.1016/S1473-3099\(22\)00808-8](https://doi.org/10.1016/S1473-3099(22)00808-8)
- Asian Development Bank. (2023). Climate change and food security in Asia and the Pacific: Risks, impacts, and adaptation responses. Asian Development Bank.
- Asian Development Bank. (2023). Hindu Kush Himalaya assessment: Pakistan climate resilience country profile 2023. Asian Development Bank.
- Asian Development Bank. (2023). Pakistan: Country partnership strategy 2021–2025, climate mainstreaming assessment. Asian Development Bank.
- Buzan, B., & Waever, O. (2003). Regions and powers: The structure of international security. Cambridge University Press.
- Eckstein, D., Kunzel, V., & Schafer, L. (2021). Global Climate Risk Index 2021: Who suffers most from extreme weather events? Germanwatch.
- Fairclough, N. (2013). Critical discourse analysis: The critical study of language (2nd ed.). Routledge. <https://doi.org/10.4324/9781315834368>
- Fairclough, N. (2013). Critical discourse analysis: The critical study of language (2nd ed.). Routledge.
- Fairclough, N. (2015). Language and power (3rd ed.). Routledge.
<https://doi.org/10.4324/9781315694440>
- Food and Agriculture Organization & World Food Programme. (2023). Pakistan: Acute food insecurity situation overview. FAO/WFP.
- Government of Pakistan. (2021). National Climate Change Policy 2021. Ministry of Climate Change.
- Government of Pakistan. (2022). National Security Policy of Pakistan 2022–2026. National Security Division, Prime Minister's Office.
- Government of Pakistan. (2022). Pakistan floods 2022: Post-disaster needs assessment. Ministry of Planning, Development and Special Initiatives.
- Intergovernmental Panel on Climate Change. (2022). Climate change 2022: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Sixth

- Assessment Report. Cambridge University Press.
<https://doi.org/10.1017/9781009325844>
- International Monetary Fund. (2023). Pakistan: Staff report for the 2023 Article IV consultation and request for stand-by arrangement (Country Report No. 23/416). International Monetary Fund.
- International Monetary Fund. (2023). Resilience and Sustainability Trust: Program design and engagement with climate-vulnerable countries — Pakistan case. International Monetary Fund.
- McDonald, M. (2018). Climate change and security: towards ecological security? *International Theory*, 10(2), 153–180. doi:10.1017/S1752971918000039
- Rasul, G., & Sharma, B. (2014). Water, Food, and Energy Nexus in South Asia: Implications for Adaption to Climate Change. *Handbook of Climate Change Adaptation*, 1–18. https://doi.org/10.1007/978-3-642-40455-9_81-1
- Sultana, F. (2021). Climate change, COVID-19, and the co-production of knowledges. *Political Geography*, 88, Article 102438.
- United Nations Development Programme Pakistan. (2023). Disaster risk reduction and climate resilience in Pakistan: Progress, gaps, and forward pathways. UNDP Pakistan Country Office.
- United Nations Development Programme. (2022). The climate promise: Pakistan's revised Nationally Determined Contribution — implementation support assessment. UNDP.
- United Nations Development Programme. (2023). Human development report 2023/2024: Breaking the gridlock — reimaging cooperation in a polarized world. UNDP.
- Van Dijk, T. A. (2015). Critical discourse analysis. In D. Tannen, H. E. Hamilton, & D. Schiffrin (Eds.), *The handbook of discourse analysis* (2nd ed., pp. 466–485). Wiley-Blackwell.
- Van Dijk, T. A. (2015). Critical discourse analysis. In D. Tannen, H. E. Hamilton, & D. Schiffrin (Eds.), *The handbook of discourse analysis* (2nd ed., pp. 466–485). Wiley-Blackwell. <https://doi.org/10.1002/9781118584194.ch22>
- World Bank. (2021). Groundswell: Acting on internal climate migration (Part II). World Bank Group.
- World Bank. (2022). Pakistan poverty assessment 2022: Recession, floods, and the road to resilient growth. World Bank Group.
- World Economic Forum. (2023). Fostering effective energy transition 2023: Benchmarking energy system performance.
- World Economic Forum. (2024). The global risks report 2024 (19th ed.).
- World Food Programme & Food and Agriculture Organization. (2023). Pakistan: Joint acute food security assessment — July 2023.

World Health Organization. (2023). Pakistan flood response: Health cluster situation report and public health emergency assessment. WHO Pakistan Country Office.
Yousuf J, Mehmood H, Aquil S, Rija A, Syyeda Rahmat Z, Malikzai A. Effects of floods on the mental health of Pakistanis: a commentary. *Ann Med Surg (Lond)*. 2023 Apr 11;85(5):2253-2255. doi: 10.1097/MS9.0000000000000590. PMID: 37229015; PMCID: PMC10205206.