



PAKISTAN, CLIMATE CHANGE, AND FOOD SECURITY: SECTORAL ANALYSIS OF THE NATIONAL CLIMATE POLICY AND IMPLEMENTATION LACUNAS

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Abstract

Pakistan ranks among the nations that are highly vulnerable to the negative impact of climate change and there are grave consequences on food security, agricultural yield, water supply, health and social stability. The paper analyses the Pakistani climate change and food security connection through a sectoral approach, which will include the National Climate Change Policy, National Security Policy 20222026, Updated Nationally Determined Contribution (NDC), and corresponding response frameworks. The researcher assumes a sequential explanatory mixed-method research design. The first of the strands collects quantitative data on secondary sources after 2020, such as the International Monetary Fund (IMF), World Bank, Asian Development Bank (ADB), World Economic Forum (WEF), and United Nations Development Programme (UNDP). The second strand uses Critical Discourse Analysis (CDA) to the key policy texts to evaluate the way in which the issue of climate change is being framed as a security and development problem. Results show that climate change is already impacting crop production, food costs, hydrologic strain, displacement and financial load in Pakistan. Policy analysis also reveals that although climate risks are gaining increasing recognition in the official discourse, the process is very fragmented, underfunded, and poorly coordinated. The conclusion of the paper is that climate change has emerged as a structural issue in food security within Pakistan, yet policy implementation is limited by institutional silos and ineffective enforcement strategies.

Keywords: *Climate Change, Critical Discourse Analysis, Food Security, Implementation Gaps, Mixed Methods, National Climate Policy, National Security Policy, Pakistan.*

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1. Introduction

Climate change is now one of the greatest dangers to the long-term food security and national stability in Pakistan. Its impacts are evident in the increase in temperatures, unpredictable rains, melting of glaciers, floods, droughts, reduced water supply, soil-wasting, and strain on agricultural industries. Since the economy of Pakistan is still largely susceptible to climate-sensitive activities, especially agriculture and livelihoods relying on water, climate shocks are rapidly converted into human insecurity, inflationary pressures, and economic losses (World Bank, 2022; United Nations in Pakistan, 2022).

Food security is not only a problem of agricultural production in Pakistan. It also has the availability of food, affordability, nutrition and consistency of supply chains. Floods, drought, and heat stress do not only interfere with production but also transportation, storage, availability of labor and buying power of households. Therefore, climate change acts as a risk multiplier, which exacerbates existing vulnerabilities and increases structural inequalities (Asian Development Bank [ADB], 2020; World Bank, 2022).

The policy environment in Pakistan is indicative of increased awareness of this issue. The National Security Policy 2022 acknowledges non-traditional threats like food insecurity and climate change, and the Updated National Climate Change Policy and the Updated NDC of Pakistan focus on adaptation, resilience, and development that is compatible with climate (Government of Pakistan, 2021, 2022; UNFCCC, 2022). Yet, this awareness has not necessarily been accompanied by a good implementation. The gap that exists between policy formulation and delivery is very wide particularly in areas that have a direct impact on food security. The paper thus looks at the material impacts of climate change and the discursive and institutional constraints that undermine policy response.

The primary goal of the present paper is to discuss the role of climate change in transforming food security in Pakistan and to evaluate the effectiveness of the country in terms of its climate policy framework. To be more precise, the paper is going to recognize the primary sectoral channels, in which climate change can impact food security, assess the consistency of Pakistan discourse on climate-security, and examine the implementation gaps to restrict the effectiveness of policies.

2. Methodology

This research is a sequential explanatory mixed-method design. This design involves a quantitative strand that is analyzed initially to find out the key trends in climate-related impacts and then the qualitative strand is applied to elaborate the key trends. This strategy is appropriate since climate-security in Pakistan is both discursive and material. It can be seen in the signs of poverty, food prices, losses of crops, and the displacement, and it is also influenced by the language of policy, institutional interests, and the distribution of resources politically (Fairclough, 2013; van Dijk, 2015).

2.1. Qualitative Strand

The qualitative component applies Critical Discourse Analysis (CDA) to the analysis of policy documents and institutional texts that are related to them. CDA is suitable as it analyzes the power, meaning, and social reality as influenced by language. The analysis is based on the three-dimensional model of Fairclough (2013), which takes into account textual features, discursive practice and social practice. The corpus contains the National Security Policy 2022-26, the Updated National Climate Change Policy, Pakistan Updated NDC, the National Flood Response Plan, selected World Bank and UNDP country policies, and policy speeches and parliamentary references (Government of Pakistan, 2021, 2022; UNFCCC, 2022; United Nations in Pakistan, 2022).

2.2. Limitations

This paper is entirely based on secondary sources, which can be institutionalized assumptions and political priority. CDA is an interpretive phenomenon thus subject to various readings. Moreover, climate change cannot be singled out as a causal aspect of the overall political economy in Pakistan, where governance failures, inflation, conflict, and ineffective service delivery are also determinants of food insecurity. These constraints do not undermine the relevancy of the study, but they should be taken into consideration when interpreting causality.

3. Results and Discussion

3.1. Climate Pressure on Food Systems

The facts indicate that Pakistani food system is already being undermined by climate change. The World Bank (2022) cautions that climate shocks will exert more and more strain on food production and access, whereas emergency and flood response reports reveal that the extreme weather events have harmed crops, livestock, and agricultural livelihoods nationwide (United Nations in Pakistan, 2022). It is not just the decrease in production but also the disturbance of supply chains, access to markets, and affordability.

The agricultural sector of Pakistan is very delicate since it is reliant on the accessibility of water and stability of seasonal climate. The increase in temperatures, alteration in rainfall and water scarcity lowers the yields and the cost of production. Heat stress also reduces the productivity of labor particularly in the rural region where manual labor is still significant. All these factors work together to raise food prices, decrease household purchasing power, and amplify malnutrition in poor populations (ADB, 2020; World Bank, 2022).

In Pakistan, food insecurity is thus a result of losses in production and failure of access. Markets get detached with producers and consumers when roads and fields are destroyed by floods. With harvests going down due to drought, rural families lose income and food. Small farmers, landless laborers, women-headed families, and internally

displaced families are particularly hard hit by the effects, as they are the groups with the least ability to absorb shocks (United Nations in Pakistan, 2022; UNDP, 2024).

3.2. Sectoral Vulnerabilities

The sectoral analysis reveals that the key areas in which climate change impacts food security include agriculture, water, energy, health, and finance. In farming, climatic stress lowers production levels, kills livestock and dependence on imports. Stress to rivers, glacier, and irrigation systems in the water sector has an implication on the basic infrastructure of food production. In the energy industry, global warming and climate change exert stress on energy demand, infrastructure, and agricultural processing systems (ADB, 2020; World Bank, 2022). The health sector too is very pertinent. Climate sensitive diseases, heat stress and under-nutrition are mutually reinforcing and undermine the resilience of households. Meanwhile, fiscal strain is amplified as the emergency relief and reconstruction demand a large amount of government spending. This denies the government the resources to invest in long-term adaptation and resilience of the food system. Both the World Bank (2022) and UNDP (2024) underline that the macroeconomic impacts of climate damage are severe in the case of Pakistan.

Another weakness is climate finance. The policy documents in Pakistan have always emphasized on adaptation, resilience and sustainable development, yet the financial flows in the country are not enough compared to the needs. This misfit is significant since the long-term investment is needed in adaptation in agriculture, irrigation, storage, early warning, and disaster preparedness, not mere commitments. The policies that are well-designed still will not go beyond being declaratory without reliable funding (Government of Pakistan, 2021, 2022; UNFCCC, 2022).

3.3. Policy Recognition and Discourse

The results of CDA indicate that the policy talk in Pakistan has evolved to be more advanced and more accommodative. The National Security Policy 20222026 embraces a citizen-centric concept of security and clearly acknowledges food security and climate change as non-traditional threats (Government of Pakistan, 2022). The reason behind this is that it expands the definition of security to include other aspects other than military protection and recognition that climate risk can disrupt social and economic stability.

Climate resilience is also introduced in the Updated National Climate Change Policy and the Updated NDC as a part of the national development strategy (Government of Pakistan, 2021; UNFCCC, 2022). Nevertheless, the discussion is more robust than the implementation process. The terms used in the policy texts, like resilience, coordination, mainstreaming, and sustainability, are broad terms, and rarely include specific timelines, binding requirements, or sectoral goals that are measurable. Consequently, there is a language of concern, yet the accountability mechanisms are weak.

The other pattern of discourse is the common presentation of climate change as a cross-cutting issue without saying who is at fault. This kind of language is politically convenient as it is a signal of awareness without being institutionally accountable. This also disperses ownership among ministries and government levels, however. As a result, this leads to a disjointed implementation and no institution is accountable on its own (Fairclough, 2013; Government of Pakistan, 2022).

3.4. Implementation Lacunas

This paper has found out the most significant fact that Pakistan is more affected by an implementation gap rather than a recognition gap. The nation has also come up with a comprehensive policy framework, such as the National Security Policy, the Updated National Climate Change Policy, the Updated NDC, and flood response frameworks. However, the translation of policy to practice is imbalanced and loosely coupled (Government of Pakistan, 2021, 2022; UNFCCC, 2022; United Nations in Pakistan, 2022). Institutional fragmentation is one of the main gaps. Climate policy is decentralized among various ministries and agencies yet food security needs concerted efforts by the ministries of agriculture, water, disaster management, finance, and local governance. Temporal mismatch is another lacuna. Policymaking documents usually are long-term strategic, whereas politics and crisis reaction are short-term and reactive. This promotes managing crisis following disasters and not prevention of disaster through adaptation.

Another issue is a lax enforcement. The climate policies of Pakistan are boldly written with fewer binding mechanisms. This depends largely on political will, donor support and bureaucratic initiative to be implemented. This creates inconsistency particularly when the government priorities vary or the fiscal space becomes small. The experience of flood response demonstrates that emergency relief can be well organized within a short time, but the building of resilience in the long term is not developed yet (United Nations in Pakistan, 2022; World Bank, 2022).

3.5. Food Security as Security

The policy implication is obvious: food security should be considered as a national issue of core national security and not as a welfare issue. The citizen-focused perspective of the National Security Policy leaves a gap to such a change, yet the concept should be echoed in budgetary, planning, and administrative responsibility (Government of Pakistan, 2022). Food insecurity will further cause poverty, migration, social unrest and political instability should climate change further destroy agriculture and water systems.

This does not imply that there is no other source of insecurity in Pakistan other than climate change. There is the issue of governance failure, inflation, conflict and institutional weakness. Climate change is however, a multiplier that increases such vulnerabilities. It is based on this reason that policy response needs to be a combination of

adaptation, social protection, disaster preparedness, agricultural reform, and fiscal planning (ADB, 2020; World Bank, 2022; UNDP, 2024).

4. Conclusion

The climate crisis in Pakistan cannot be isolated of its food security crisis. The reviewed evidence indicates that climate shocks are already diminishing agricultural productivity, impairing livelihoods, and disrupting food supply chains and putting pressure on public resources. Meanwhile, climate change and food security are becoming focal national priorities in the major policy documents of Pakistan, which is a significant conceptual change (Government of Pakistan, 2021, 2022; UNFCCC, 2022). But it is not sufficient to be recognized. It is not the lack of policy but a feeble implementation that is the main problem. Disjointed institutions, poor coordination, insufficient financing, and poor accountability persist to hinder the state turning policy ambition to quantifiable resilience. The disconnect between speech and action is thus the characteristic of climate-security governance in Pakistan.

The paper concludes that Pakistan requires a more coherent climate-food-security system with specific objectives, binding obligations and long-term investment in agriculture, water, disaster risk management and social security. Lack of such reform will perpetuate climate change as a threat to food security and the increasing susceptibility of sectors and social groups.

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