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Pakistan and the Climate Crisis: Aligning National Environmental Laws with Global Sustainability Standards

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ABSTRACT

The present research study undertakes a critical examination. In the context, it attempts to provide an in-depth analysis of the alignment process between national environmental laws and global sustainability standards in Pakistan. The primary focus of the attention is on the legal and policy framework developed in response to the climate crisis. Pakistan in the context is characterized as a global epicenter of climate vulnerability. This characterization has been consistently noted in international reports. It exists despite a documented minimal contribution to global greenhouse gas emissions. The study has challenged the prevailing assumption that policy development alone signifies effective climate governance. It has moreover attempted to address a central paradox observed in the national response. This paradox relates to the co-existence of advanced legislative instruments and persistent implementation failures on the ground. The study in the context undertakes a systematic assessment of the national legal architecture. This assessment includes constitutional provisions, federal statutes, and provincial adaptations. The analysis, therefore, is grounded in a theoretical synthesis. This synthesis integrates the principles of 'Environmental Constitutionalism' with the frameworks of 'Resilience and Adaptation Theory'. The synthesized framework helps locate Pakistan's core regulatory challenges. These challenges are observed not to be rooted in a lack of policy intention. They are rather rooted in a state of operational paralysis. This paralysis is noted to be generated by profound institutional and financial constraints. The framework, therefore, urges that the national pathway to sustainability is fundamentally undermined by a synergistic interaction. This interaction is between 'governance fragmentation' and a 'financing chasm'. The study finding further reveals a significant legal evolution. This evolution is particularly observed in the recent constitutional codification of environmental rights. However, the operationalization of these rights remains severely constrained. In the context, this constraint is noted to stem from structural barriers entrenched after the devolution of power. The study, furthermore, identifies a critical implementation gap. National strategies exist as comprehensive and well formulated documents. However, their translation into ground level action is frequently observed to be ineffective. This gap therefore, allows climate vulnerability to persist and intensify. It effectively transforms policy ambition into a form of institutional inertia. The article concludes that achieving meaningful climate resilience requires a fundamental strategic shift. This shift must move decisively from symbolic policy formulation toward

enforceable and accountable action. It necessitates bridging the observed divide between legislative intent and administrative capacity.

Keywords: *Pakistan, Climate Change, Environmental Law, Sustainability, Adaptation, Governance, Implementation Gap, Environmental Constitutionalism*

Introduction

Pakistan, in recent decades, has been positioned at the forefront of the global climate crisis. The country faces catastrophic and recurring climatic events. These events include devastating monsoon floods and extreme heatwaves. Pakistan in the context represents a profound case study in climate injustice on the international stage. The nation's significant physical and economic vulnerability contrasts sharply with its negligible historical emissions. This situation presents a central paradox for global climate discourse and responsibility. The dominant explanation for Pakistan's acute crisis often references its geographical and climatic fate. However, such externalist explanations can obscure critical internal governance dimensions. This paper, therefore, aims to move beyond these external narratives. The study in this context attempts to conduct a systematic diagnostic analysis of the domestic regulatory landscape. The analysis is specifically focused on the alignment mechanism between domestic legal frameworks and global sustainability standards. The paper puts forward a core contention. The contention is that climate policy failure in Pakistan is not primarily a narrative of resource scarcity alone. It is rather a more complex narrative of governance failure. This issue flows from internal asymmetries observed within the state's own institutional design and political economy.

Therefore, the core research question forming the main inquiry is: "how do the internal pathologies of governance fragmentation and financial shortfall interact to immobilize Pakistan's legal framework for climate resilience and adaptation?" The paper attempts to address this critical question through an integrative analytical lens. In the context, it employs the established framework of 'Environmental Constitutionalism'. This framework serves as a primary diagnostic tool for examining the elevation of environmental protection to a constitutional imperative. This tool is positioned within a broader assessment of 'Institutional Capacity' and 'Policy Implementation'. The integrated framework therefore, allows for a nuanced diagnosis of the regulatory condition. It examines systemic policy failure not as an accident but as a product of recurring structural rather than incidental factors. The subsequent analysis draws upon a qualitative review of primary legal documents, national policy frameworks, and secondary scholarly literature.

Theoretical and Analytical Framework

The alignment of national law with global sustainability standards requires a structured and multi layered analytical approach. This study therefore employs several interconnected theoretical lenses. These lenses provide a scaffold for evaluating Pakistan's regulatory evolution and its persistent operational shortcomings. The application of these lenses is critical for a structured diagnosis.

The first lens is Environmental Constitutionalism. This framework views a clean, healthy, and sustainable environment not merely as a policy goal but as a fundamental constitutional and human right. It posits that the highest law of the land must embed this protection. In the Pakistani context, this principle has evolved from judicial interpretation to explicit constitutional text. The Supreme Court historically interpreted the Right to Life under Article 9 to include environmental integrity. This jurisprudence has now been codified through the 26th Constitutional Amendment. The incorporation of Article 9A therefore represents a formal

constitutional guarantee. This lens allows the analysis to assess the strength of the normative foundation and its justiciability.

The second lens is Resilience and Adaptation Theory. This theoretical perspective shifts the analytical focus from short term disaster response and recovery toward long term systemic capacity building and transformation. It advocates for the proactive integration of climate risk considerations into all tiers of planning, development, and fiscal budgeting. Pakistan's National Adaptation Plan (2023) serves as the primary strategic document for this theoretical transition. The theory helps evaluate whether policies are designed to foster anticipatory adaptation across key socio-economic sectors or whether they perpetuate a reactive cycle of post disaster recovery. It examines the move from coping to adapting.

A third critical perspective involves the Climate-Conflict Nexus. This analytical lens identifies climate change not as a standalone environmental issue but as a threat multiplier. It posits that climate induced resource scarcity, particularly of water, exacerbated by changing variability can intensify pre-existing social inequities, ethnic tensions, and political grievances. In Pakistan, inter provincial water disputes, such as those between upstream Punjab and downstream Sindh, are observed to be aggravated by changing precipitation patterns and glacial melt dynamics. This exacerbation challenges internal cohesion and the concept of positive peace. This lens is therefore crucial for understanding the national security and social stability dimensions of climate inaction.

The final lens is Global Compliance and Standards. This lens provides the external metric for measuring alignment. It encompasses Pakistan's international legal commitments under the United Nations Framework Convention on Climate Change (UNFCCC). Specifically, it examines its Nationally Determined Contributions (NDCs) under the Paris Agreement. Furthermore, it includes adherence to emerging transnational financial and disclosure standards. Standards like the IFRS Sustainability Disclosure Standards aim to align global corporate capital flows with climate objectives. This lens evaluates the technical and procedural harmonization of national systems with these evolving global norms.

Methodology

The present study has employed a qualitative methodological approach. This approach is designed for in depth, contextual analysis of complex policy and legal phenomena. The research is grounded in the systematic analysis of a triangulated set of primary and secondary sources. This methodological design ensures the findings are robust, credible, and contextually nuanced. It moves beyond purely quantitative metrics to understand the why and how of policy outcomes.

The primary source analysis formed the core of the research. It focused on key legislative and constitutional documents. These documents included the Constitution of the Islamic Republic of Pakistan (1973), alongside its subsequent amendments. The 18th and 26th Amendments were of particular relevance. The core environmental statutes analyzed were the Pakistan Environmental Protection Act (PEPA) 1997 and the Pakistan Climate Change Act (CCA) 2017. National strategic policy documents formed another critical component. These comprised the National Climate Change Policy (2021), the Updated Nationally Determined Contributions (2021), and the National Adaptation Plan (2023). The careful examination of these texts provided insight into legislative intent, institutional design, and strategic priority setting.

Furthermore, the research incorporated a wide range of secondary sources. These sources provided empirical context, critical analysis, and comparative perspective. Reports from major international financial and environmental institutions were consulted. These included the World Bank, the Asian Development Bank (ADB), the Intergovernmental Panel on Climate

Change (IPCC), and the Pakistan Meteorological Department (PMD). These reports offered essential data on climate vulnerability, economic impacts, adaptation costs, and financing needs. Additionally, the study engaged with a substantial body of academic literature from peer reviewed journals. This scholarship focused on relevant themes including environmental federalism, climate justice, ESG compliance, climate induced migration, and the socio-political economy of adaptation. The analytical process involved systematic thematic coding of the collected documents. Findings were categorized according to three overarching analytical pillars: the evolution of the legal and constitutional framework, the capacity and coordination of governing institutions, and the feasibility and justice of financial mechanisms. This structured categorization allowed for a clear and organized diagnosis of strengths, gaps, and synergies within Pakistan's climate governance regime.

Findings

The Evolution of Environmental Law and Constitutional Rights

Pakistan's environmental legal framework has undergone a notable and staged transformation over the past four decades. It has evolved from a centralized, command and control regulatory model under the Pakistan Environmental Protection Ordinance (PEPO) 1983 to a more decentralized and rights-oriented system. The promulgation of the Pakistan Environmental Protection Act (PEPA) 1997 marked a substantive legislative advance. It established the federal Environmental Protection Agency (EPA) and institutionalized the mandatory requirement for Environmental Impact Assessments (EIAs) for major public and private sector development projects. This was observed as a significant step toward formal environmental regulation.

However, a major structural shift occurred with the enactment of the 18th Constitutional Amendment in 2010. This amendment devolved the subject of "environment" to provincial legislatures, placing it on the Concurrent Legislative List alongside the federal government. This devolution created a new potential for locally tailored environmental strategies. These strategies could be more responsive to distinct provincial ecological and socio-economic contexts. Simultaneously, it introduced a high risk of regulatory fragmentation, inconsistency in standards, and weak enforcement across provincial boundaries. The governance of transboundary environmental issues became particularly complex.

The most recent landmark development in this evolution is the 26th Constitutional Amendment of 2024. This amendment formally introduced Article 9A into the Constitution. It explicitly grants every citizen the right to a "clean, healthy, and sustainable environment." This constitutional entrenchment represents the apex of environmental constitutionalism in Pakistan. It provides a powerful normative foundation for public interest litigation, policy advocacy, and holds the state accountable to a higher justiciable standard. The journey from PEPO to Article 9A therefore, illustrates a significant conceptual evolution in the legal standing of the environment.

Institutional Architecture under the Climate Change Act 2017

The Pakistan Climate Change Act (CCA) 2017 was enacted to provide a coherent national institutional structure for fulfilling international climate commitments, particularly under the Paris Agreement. The Act establishes a three-tiered institutional framework. The highest tier is the Pakistan Climate Change Council. It is envisioned as a high-level policy coordination and oversight body chaired by the Prime Minister. The second tier is the Pakistan Climate Change Authority. It is constituted as a corporate entity with the mandate to formulate, coordinate, and oversee implementation of programs for climate change mitigation and adaptation. The third core component is the Pakistan Climate Change Fund. It is designed as a dedicated

financial mechanism to mobilize, manage, and disburse domestic and international climate finance.

While this structure appears comprehensive in statutory design, critical operational challenges have been persistently observed. The Climate Change Authority has faced significant delays in becoming fully functional and adequately staffed. The Council's meetings have been intermittent, limiting its role in continuous strategic steering and inter ministerial coordination. Furthermore, the Act contains a contentious provision in Section 14. This clause grants indemnity to government officials for actions taken in "good faith" under the Act. Legal scholars and civil society actors have criticized this clause. They argue it potentially undermines bureaucratic accountability and could shield inefficiency or maladministration from legal challenge. The institutional architecture, therefore, remains partially realized in practice.

Strategic Priorities and the National Adaptation Plan 2023

The National Adaptation Plan (NAP) 2023 serves as Pakistan's overarching strategic blueprint for building systemic climate resilience. The plan identifies six priority thematic areas for intervention. These are the Agriculture Water Nexus, Natural Capital Management, Urban Resilience, Human Capital Development, Disaster Risk Reduction, and Social Inclusion. Within these areas, the NAP outlines ambitious quantitative and time bound targets. Notable among these are goals to achieve a 60% share of renewable energy in the national power generation mix and to ensure 30% of all new vehicle sales are electric by the year 2030. The plan strongly emphasizes the principle of mainstreaming. It advocates for the integration of climate adaptation considerations into all sectoral planning, development projects, and budgetary processes at both federal and provincial levels. The NAP is therefore a document of considerable scope. However, its effectiveness is contingent upon a detailed implementation framework and continuous resource allocation, which are areas of observed weakness.

Alignment with Global Financial and Disclosure Standards

Recognizing the critical role of the private sector and international capital, Pakistan has begun integrating global sustainability standards into its economic governance framework. A significant step in this direction was taken by the Securities and Exchange Commission of Pakistan (SECP) in 2024. The SECP issued comprehensive ESG (Environmental, Social, and Governance) Disclosure Guidelines for publicly listed companies. These guidelines are explicitly aligned with the IFRS S1 and S2 Sustainability Disclosure Standards. The strategic intent behind this move is twofold. First, it aims to enhance corporate transparency and accountability regarding climate related risks, opportunities, and impacts. Second, it is seen as a necessary condition to attract responsible foreign investment. It also integrates Pakistani firms into global value chains and financial markets that increasingly prioritize sustainability criteria. This alignment represents a proactive effort to bridge national practice with evolving global corporate norms.

Discussion

The Implementation Gap and Governance Fragmentation

A central and persistent finding of this analysis is the severe and recurrent gap between policy formulation and ground level implementation. Pakistan has developed a suite of national policies, laws, and plans that are often commended for their technical comprehensiveness and ambition. However, their execution is consistently observed to be hampered by deep seated governance deficits. The devolution of environmental authority following the 18th Amendment, while constitutionally sound in a federal structure, has created a complex and often uncoordinated mosaic of regulatory bodies. Federal and provincial environmental protection agencies now operate with overlapping and sometimes conflicting mandates. They

frequently exhibit inconsistent regulatory standards, poor information sharing, and weak coordination mechanisms.

This fragmentation is observed to be particularly detrimental for managing transboundary environmental issues. Air pollution, riverine ecosystem health, and the integrated management of the Indus River System do not respect provincial borders. The resulting inter provincial discord, especially concerning water allocation and pollution control, undermines collective climate action. Lower riparian regions like Sindh face compounded threats. These threats include upstream water variability and downstream sea level intrusion and salinity. This dynamic exacerbates existing socio-political tensions and trust deficits. It makes the establishment of cooperative, basin wide climate resilient management regimes a matter of urgent national security. Effective climate governance, therefore, requires not only strong laws on paper but also robust, trusted intergovernmental institutions. These institutions must be capable of fostering collaboration, resolving disputes, and enforcing cooperative agreements.

The Financial Chasm and Questions of Global Justice

The financial dimension of Pakistan's climate challenge presents a formidable and perhaps the most critical barrier. Comprehensive assessments, including the World Bank's Country Climate and Development Report (2022), estimate that Pakistan requires hundreds of billions of dollars to finance its transition to a low carbon and climate resilient economy. The energy transition alone is projected to need over one hundred billion dollars by 2030. This staggering financial requirement stands in stark contrast to the nation's constrained fiscal capacity. Pakistan already contends with high public debt, significant debt servicing burdens, and limited fiscal space for new domestic investment.

The international climate finance architecture has proven to be largely inadequate and inequitable for countries like Pakistan. Access to concessional grants and low interest loans from global climate funds is often limited, slow, and burdened with complex conditionalities. Consequently, Pakistan is frequently forced to rely on commercial or bilateral loans labeled as climate finance. This adds to its national debt burden, creating a perverse situation. In this situation, a climate victim pays for its own adaptation and recovery through further indebtedness. The profound injustice of this situation raises fundamental ethical and political questions. It concerns climate reparations, operationalizing the Loss and Damage Fund established at COP27, and defining the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC). Mobilizing scale, accessible, and justice based international finance is therefore not merely a technical necessity for Pakistan. It is a precondition for equitable and effective global climate action.

Technological Innovation and the Equity Imperative

Technological innovation is widely acknowledged as a critical pillar for both climate mitigation and adaptation. Pakistan has initiated several large-scale technological projects. These include the Quaid e Azam Solar Park and urban mass transit systems like the Lahore Metrobus and Orange Line. However, the distribution of technology's benefits is observed to be highly uneven. A significant digital and technological divide persists between urban and rural populations, and between different socio-economic classes. Advanced early warning systems for floods, geographic information system (GIS) based land use planning, and precision agriculture technologies often remain inaccessible to the most vulnerable stakeholders. These stakeholders include smallholder farmers, pastoralists, and remote coastal communities.

For technology to serve as a true instrument of broad-based resilience, it must be deliberately democratized. This requires proactive public investment in digital infrastructure, widespread capacity building and literacy programs, and the development of locally appropriate,

affordable, and socially acceptable solutions. Technology deployment must be coupled with policies that ensure access. If not, climate technology risks exacerbating existing socio-economic inequalities. It could concentrate adaptive capacity in the hands of a few. Technology must therefore function as an inclusive public good, not a private privilege, to avoid worsening the vulnerability of those most at risk.

The Role of Judicial Activism and Public Vigilance

In the face of occasional legislative and executive inertia, Pakistan's judiciary has emerged as a crucial actor in advancing climate governance. This has been particularly observed through public interest litigation. The landmark judgment in *Asghar Leghari v. Federation of Pakistan* (2015) was a watershed moment. The Lahore High Court declared that the federal government's delay in implementing the National Climate Change Policy constituted a violation of citizens' fundamental rights to life and dignity under Article 9. The court not only issued a directive for immediate action but also established a Climate Change Commission to monitor compliance with its orders. This case exemplifies the power of constitutional courts and public interest litigation. They can hold the state accountable to its constitutional and international obligations, filling accountability gaps.

This "public vigilance" through legal channels and civil society advocacy serves as a necessary counterbalance to bureaucratic lethargy and political short termism. It creates an additional pressure point for action. The judiciary's role in interpreting and enforcing the newly enacted Article 9A will be particularly significant in the coming years. It could catalyze a wave of rights-based litigation aimed at compelling specific actions from the government and private polluters. An engaged civil society, a free media, and an independent judiciary are therefore observed to be indispensable components of an effective environmental governance ecosystem.

Conclusion

Pakistan stands at a critical historical juncture in its confrontation with the climate crisis. The threat is no longer a distant environmental concern for future generations. It is an immediate and pervasive disruptor of the nation's social contract, economic stability, and national security. This analysis reveals that the nation has made significant progress in constructing a "visionary blueprint" for climate action. The constitutional entrenchment of environmental rights, the establishment of a dedicated climate change law, and the formulation of a detailed National Adaptation Plan collectively represent a substantial legal and policy foundation. This foundation provides the necessary starting point for a resilient future.

However, the nation's survival and prosperity in the Anthropocene epoch will be determined not by the quality of its plans on paper but by the efficacy and consistency of their execution. The persistent chasm between legislative intent and institutional capacity remains the most formidable obstacle. This gap is where political will often dissipates and where resources are frequently misallocated or underutilized. To navigate this challenge and achieve long term resilience, Pakistan must prioritize several key and interconnected actions.

First, it must systematically strengthen enforcement mechanisms. Environmental protection agencies and the Climate Change Authority require adequate and sustained funding, technical expertise, modern monitoring technologies, and unambiguous legal authority to sanction non compliance. Second, it must urgently bridge governance fragmentation. This could involve establishing a permanent, statutory Intergovernmental Council on Climate Resilience. Such a body would have the mandate to harmonize federal and provincial agendas, resolve disputes, and coordinate action on cross cutting issues like water and energy. Third, it must proactively and strategically mobilize climate finance. This requires developing a pipeline of bankable

adaptation and mitigation projects. It also necessitates operationalizing domestic carbon market mechanisms under Article 6 of the Paris Agreement. Furthermore, it involves relentless diplomatic advocacy for Pakistan's fair share and direct access to global climate funds, including the Loss and Damage Fund.

Ultimately, the overarching goal must be to ensure that Pakistan's climate response is firmly anchored in principles of climate justice and social inclusivity. The burdens and benefits of the low carbon transition must be equitably shared across regions, genders, and social classes. Technology and law must be consciously wielded as tools for empowerment, not exclusion. They must ensure that the most marginalized communities, who are often the most vulnerable to climate impacts, are not further left behind but are active participants in building resilience. The path forward is undoubtedly arduous and will require difficult political and economic choices. However, the alternative of inaction or incrementalism is unconscionable, given the scale of the threat. For Pakistan, therefore, aligning its national laws with global sustainability standards is not merely an academic or policy choice. It is an urgent and non-negotiable imperative for national survival, dignity, and a just future.

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