STREET-LEVEL CLIMATE GOVERNANCE IN PAKISTAN: A CRITICAL ASSESSMENT OF THE CLEAN AND GREEN MOVEMENT

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Abstract

Despite contributing approximately only 1.01% to global greenhouse gas (GHG) emissions, Pakistan remains one of the most vulnerable countries to the impact of climate change. Several environmental initiatives most notably the Clean and Green Pakistan movement, align national efforts with Sustainable Development Goal 13 (Climate Action). This study critically examines the design and implementation challenges of major initiatives including the Ten Billion Tree Tsunami, Recharge Pakistan, and the Clean Green Pakistan Index. Using a qualitative methodology grounded in the analysis of policy documents, government reports, media sources, and institutional data, the research explores how these programs aim to advance environmental sustainability and public awareness. The effectiveness of these programs is constrained by significant implementation barriers, such as inadequate resources, weak intergovernmental coordination, corruption, and limited institutional capacity. These challenges often create a disconnect between national policy ambitions and realities on-ground. Drawing on Michael Lipsky's Street-Level Bureaucracy framework, the study argues that the success of environmental governance in Pakistan depends not only on sound policy design but also on requires stronger institutional support, enhanced transparency, and more inclusive community engagement to translate environmental commitments into long-term, sustainable outcomes.

Keywords: *Climate governance Pakistan, Clean Green Pakistan, SDG 13 Implementation, Street-Level Bureaucracy, Environmental Policy Barriers*

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Introduction

In the global discourse on environmental governance, Pakistan has emerged as a tragic emblem of the 'Climate Paradox.' Despite contributing 1.01% to global greenhouse gas emissions, the country remains disproportionately vulnerable, consistently ranking among the top ten nations most affected by long-term climate risks. While the international community has established the 2030 Agenda for Sustainable Development, the transition from global Sustainable Development Goals (SDGs) to local implementation remains fraught with friction. For a developing economy like Pakistan, climate change is no longer a distant threat but a structural crisis, as evidenced by the 2022 super-floods which inflicted an estimated $30 billion in damages, which is a staggering blow to a nation already grappling with fiscal constraints and institutional fragility.

Environmental sustainability is a major focus of SDG 13 (Climate Action), which seeks to combat climate change and its consequences by encouraging efforts to reduce greenhouse gas emissions, strengthen climate resilience, and incorporate climate change mitigation measures into policies and strategies. SDG 13 isn't just about 'Climate Action' on paper; for a country like Pakistan that loses $30 billion to a single flood season, it is a survival mandate.

As a developing country with a smaller economy, Pakistan is facing severe problems related to climate change, and is ranked at 5th position worldwide in the vulnerability index which,[1] harms both public health and the state's economic development. Pakistan has also launched various initiatives to promote climate resilience and sustainability. Many environmental policies exist, like the Pakistan Environmental Protection Act 1997, the National Clean Air Policy (NCAP), yet problems related to implementation challenges affect performance resulting in policies ineffectiveness. The Pakistan government introduced a clean and green Pakistan initiative in 2018. This program aimed to improve the country's environmental sustainability by encouraging tree plantation drives, reducing trash, improving sanitation, and increasing environmental awareness. Pakistan has also been active on the global stage and engaged with other stakeholders to address environmental issues. For instance, Pakistan committed to adhere to the UN Framework Convention on Climate Change--SDG 13.[2]

This study looks at the "Ten Billion Tree Tsunami," "Recharge Pakistan," and the "Clean Green Pakistan Index" as policy frameworks. However, a wide gap exists between policy frameworks and implementation phases.Insufficient and inadequate resources, corruption,

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1 Wajid Ali, *"Timeline: How Climate Change Affected Pakistan in 2024,"* Samaa TV, December 23, 2024.

2 Jahan Zaib, *"UN SDG 13: Climate Action and Pakistan,"* September 6, 2022.

and a total breakdown in intergovernmental coordination choke the policies' effective implementation.

This study argues that this 'implementation gap' results from a crisis of street-level governance. Using Michael Lipsky's framework, it contends that environmental success in Pakistan depends on the forest guards and local administrators, who are the frontline workers. How they cope with resource constraints and other mechanisms will determine their "street-level" choices and the fact if a policy meets success or failure.

Research Methodology

This study employs a qualitative methodology, using a case study designed to investigate the structural and behavioral complexities of environmental governance in Pakistan. The data collection process follows a triangulation strategy to ensure that the findings are substantiated and verifiable, directly depending on reliable institutional evidence. The triangulation strategy is built on a multi-source approach that blends official state records including performance audits, with independent outside perspectives available in the form of academic literature, and media monitoring. Primary data is derived from official government publications, most notably the Pakistan Economic Survey 2023-24, performance audits from the Ministry of Climate Change (MoCC), and fiscal reports from the Auditor General of Pakistan (AGP). These are supplemented by secondary sources, including international SDG trackers, peer-reviewed literature on the 18th Amendment's impact on devolved governance, and independent media reports. The study specifically focuses on the timeframe between 2018 and 2024, providing a longitudinal view of the Clean and Green Pakistan Movement across shifting political administrations and through the prism of the 2022 climate-induced flood crisis. The analytical framework utilizes thematic content analysis to synthesize this data. Information is categorized according to Lipsky's core tenets: chronic resource scarcity, the burden of discretion, and the resulting adaptations of frontline workers.

Theoretical Framework: Street-Level Bureaucracy and Climate Policy Implementation in Pakistan

In understanding the effectiveness and more often the ineffectiveness of environmental initiatives like *Clean and Green Pakistan*, it is vital to move beyond policy documents and grand declarations. Instead, we need to look at where policies meet the public on the ground. This is where Michael Lipsky's theory of Street-Level Bureaucracy becomes deeply relevant. In the Pakistani context, the forest guards of the Ten Billion Tree Tsunami represent Lipsky's 'street-level bureaucrats.' They operate with high discretion in remote areas with low supervision, making them the ultimate arbiters of whether a sapling is actually planted

or merely recorded on paper. These individuals are not mere messengers of public policy; they are, in fact, policymakers in practice, as they shape how policies are interpreted, delivered, and experienced by the public.

Pakistan's environmental strategies-including tree-planting drives, city cleanliness competitions, and public awareness campaigns-are executed not by high-level planners, but by mid- and low-level government officials, schoolteachers, local administrators, field workers, and community volunteers. These are the people who are tasked with heavy lifting of SDG 13, which requires planting trees, monitoring forest areas, educating schoolchildren, and engaging communities. However, these front-line actors often face limited resources, bureaucratic red tape, and conflicting mandates, forcing them to make difficult choices on how to implement national-level policies in very localized, resource-starved realities.

In the Ten Billion Tree Tsunami Program, success is decentralized to local forest department officials and daily-wage laborers who operate under 'chronic resource stress'. When a forest guard is underpaid or lacks the logistical support to challenge entrenched local elites like the 'timber mafia,' they face an operational dilemma. This often results in a 'coping mechanism' where officials prioritize political harmony or personal job security over environmental enforcement. These systemic constraints, rather than 'bad policy' design, create the documented implementation gaps.

Institutional Analysis and Development (IAD) Framework

This model, developed by Elinor Ostrom, is a standard for studying collective action. The IAD framework includes analyzing actors, norms, institutional settings, incentive structures, rules, and more.[3] However, it has limits here. Ostrom's model assumes polycentric, self-organizing environments, but the CGPM is a top-down, state-driven mandate functioning through a rigid, patron-heavy hierarchy. Therefore, this study pivots to Lipsky for a "reality check". Where Ostrom looks for community cooperation, Lipsky allows us to see the administrative friction. Climate policy in Pakistan is a living process that "lives or dies" in the hands of the frontline. Bridging the gap requires more than money; it requires empowering the bureaucrats who form the actual backbone of the nation's resilience

[3] Ostrom Workshop, "Institutional Analysis and Development (IAD) Framework," Indiana University Bloomington, accessed February 4, 2026, https://ostromworkshop.indiana.edu/

Application of Theories on Pakistan's Environmental Governance

The Clean Green Pakistan Index (CGPI) offers a sharp look at the "burden of discretion". Municipal officers, pressured to climb the rankings, often face a temptation to prioritize visible "beautification" in high-traffic urban centers while ignoring the systemic waste rotting in the outskirts. It is an adaptation to physical and fiscal constraints. Similarly, sanitation workers are frequently expected to meet "Total Sanitation" targets without basic protective gear or even standardized tools. This creates a massive discrepancy between the national vision of a "Clean Green" nation and the localized environmental reality.

Viewing Pakistan's climate initiatives through the lens of street-level bureaucracy offers several important insights:

1. Policy success pivots not only on vision and capital but on the empowerment of local actors, which not only requires resources, but also proper training and recognition.
2. A top down Institutional accountability mechanism that involves public feedback on the quality, effectiveness, and fairness of policy execution can prove fruitful, enabling public feedback on the quality and fairness of implementation.
3. Behavioral change campaigns are needed that should include and recognize the lived realities of implementers, ensuring that those delivering environmental services are themselves treated and paid fairly and are involved in the mission.

Pakistan Clean and Green Movement and its Principal Initiatives

Pakistan's Clean and Green initiative is aligned with the United Nations Sustainable Development Goal (SDGs), especially SDG 13. It was officially launched on October 30, 2018, by the federal government as a flagship environmental program. It has also been called a "people's movement" with a goal to foster behavioral change through education and awareness campaigns about the severe effects of climate change. The program is substantial, as it is concerned with citizens' participation and a bottom-up governance system rather than relying on top-down governance approaches. The focus has been given on public awareness. The program aimed to engage community participation in addressing environmental issues.[4] The project is structured with specific emphasis on communities, particularly school children, to generate awareness and the need for conservation and protection of valuable natural resources. This education aspect is important as environmental literacy offers awareness

[4] Muhammad Jahanzaib, *"Clean and Green Pakistan: Achieving the Goal for Future,"* Graana, November 15, 2023

for the promotion of sustainable development activities. In addition, the project underscores the fact that active citizen participation hinges on the provision of education on environment and its key roles in urban areas.

Main Pillars of Clean and Green Campaign

The campaign has five main pillars on which it sets its targets, which include safe drinking water, solid waste management, total sanitation and hygiene promotion, liquid waste management and tree plantation. All these aspect need maximum participation of the public to effectively implement this policy. The major initiatives launched under the Clean and Green Pakistan movement are, Ten Billion Tree Tsunami project and the Clean Green Pakistan Index.

Ten Billion Tree Tsunami Program

The ten billion tree tsunami, a massive reforestation program, stands on the success of the Billion Tree Afforestation Project (BTAP) in Khyber Pakhtunkhwa, launched in 2015 by the PTI provincial government. Operating from 2014 to 2018, BTAP became a global case study by meeting its 1.02 billion tree target in half the planned time. This wasn't merely a state-led planting drive; it was a hybrid success where 60% of the growth came from managed natural restoration. By mobilizing women-led guide teams to oversee 20% of local nurseries, the project turned impoverished households into primary 'policy carriers,' allowing Khyber Pakhtoonkhawa to become the first sub-national entity to fulfill the international Bonn Challenge[5]. According to Bloomberg estimates, Pakistan forest cover remains 5% of its total area, compared to the global average of 31%[6]. Lowest at this comparison, the country had launched this program to enhance its forest cover. The aim was to restore the forest to plant 10 billion trees, go for biodiversity, promote sustainable development and mitigate climate challenges, supported by United Nation Environment Program (UNEP)[7]. Pakistan had lost its more than 41,100 hectares of green cover in the past few decades, and the deforestation rate had been 1.6% annually. Several other forestry-related campaigns have also been launched to tackle these issues, but have not been very effective due to different challenges. The target of the Ten Billion Tree Tsunami was to boost carbon fixation to 148 million tons of CO2 by 2030 and to restore 350,000 hectares of damaged land into forest. Moreover, a budget of

5 Heinrich-Böll-Stiftung Afghanistan/Pakistan, "From Grey to Green," April 5, 2022, https://afpak.boell.org/en/2022/04/05/grey-green.

6 United Nations Environment Programme, "Pakistan's Ten Billion Tree Tsunami," March 29, 2021, https://www.unep.org/news-and-stories/story/pakistans-ten-billion-tree-tsunami.

7 Sehr Rushmeen, *"Sustainable Pakistan: Climate Action Now,"* Green Planet, June 1, 2024

125.18 billion[8] for four year (2021-2023) was allocated for this project. As a result, from June 2021 approximately, 350 million trees and 814.6 million plants had been planted all over the country along with approximately 85,000 green jobs to the daily wager.. This considerably increased the forest cover from 2% to 35% by the year 2021, and also made efforts to expand Mangrove Forest, particularly in coastal areas such as Karachi, as the main objectives of the Ten Billion Tree Tsunami.[9]

Multi-Stakeholder Participation

Stakeholders like NGOs and other institutions in Pakistan also initiated minor and major tree plantation programs, which included 20 Plants twenty numbers, A billion Tree Honey Project, and the Olive Tree Plantation Project. Al-Khidmat foundation launched a tree plantation week, dedicated to the Clean and Green Pakistan Movement along with several other projects. The purpose of all these programs was to enhance the green cover of Pakistan and to cope with climate change. A "Green Stimulus Package" was initiated in April 2019 to further expand the green cover, and create a chance for employment for the Pakistani youth, particularly during the period of pandemic COVID-19.[10] According to the GHG inventory of 2022, 9% of the emissions in the forest sectors were reduced after the Ten Billion Tree Tsunami project.[11]

Clean Green Pakistan Index

A Clean Green Pakistan Index has been a healthy competition among the major cities of Pakistan. The initiative ranks cities based on their cleanliness and greenery and the reason behind this competition is to improve their infrastructure and environmental sustainability. . In the first phase, it was decided to rank 19 cities from Punjab and KP, with 13 cities in Punjab and 7 cities in KP. In the first phase, cities included from Punjab were Lahore, Gujranwala, Rawalpindi, Faisalabad, Sargodha, Sahiwal, Multan, Dera Ghazi Khan, Okara, and Bahawalpur, were judged on 35 indicators, including solid waste management, safe drinking water, liquid waste management, city beautification, etc. The top-ranking cities were

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8 Syed Mohammad Ali, “From Grey to Green,” *Dawn*, June 10, 2022, https://www.dawn.com/news/1694025.

9 Asif Kamal, Ma Yingjie, and Ahmad Ali, "Significance of Billion Tree Tsunami Afforestation Project and Legal Developments in Forest Sector of Pakistan," *International Journal of Law and Society* 1 (2019): 157.

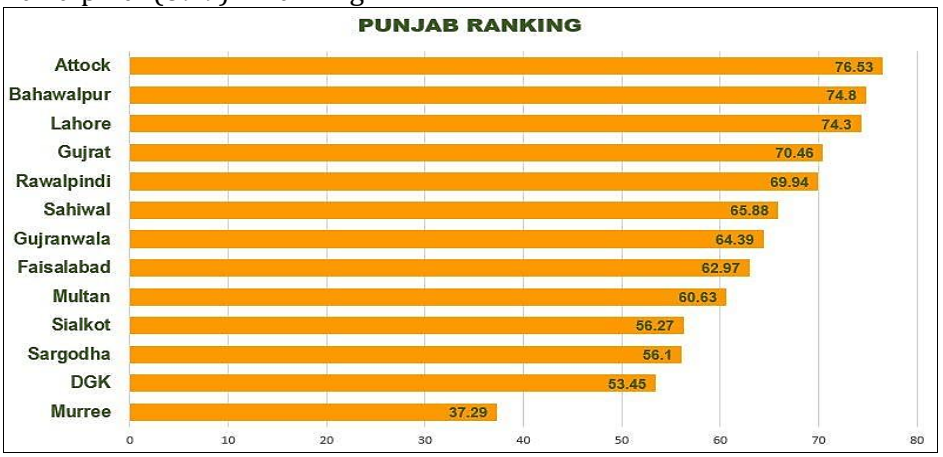
10 Ministry of Climate Change (MOCC), *"Homepage,"* 2021, http://www.mocc.gov.pk/.

11 Associated Press of Pakistan, “Pakistan’s Massive Plantation Endeavours Help Emit 9 Percent Less GHG Emissions,” April 12, 2021, https://www.app.com.pk/national/

rewarded with special federal and provincial funds.[12] The purpose was to engage and motivate the public. Without the public involvement, the initiative was likely to remain ineffective. However, with limited resources and improper execution, the government could not effectively protect the newly developed forests from grazing and wood cutting.

The First Phase of Clean and Green Pakistan Index

The first phase of Clean and Green Pakistan Index ended in June 2020. According to the survey of the local government department, the result of the competition ranked Punjab cities as the top cleanest cities with Attock (76.5), Bahawalpur (74.8), Lahore (74.3), Gujarat (70.5), and Rawalpindi (69.9) in ranking.[13]



Source: Nadeem Ahmad, *"Clean Green Pakistan Index,"* LinkedIn, October 29, 2020, https://www.linkedin.com/pulse/clean-green-pakistan-index-cgpi-nadeem-ahmad.

The result of KP cities marked Bannu at the first rank (57.5%) , then Kohat (52.97%) , followed by Abbottabad (52.71%)

12 DAWN. "PM launches Clean Green Pakistan Index, Urges Masses To Participate To Curb Pollution" (November 25,2019). https://www.dawn.com/news/1518776

13 Nadeem Ahmad, "Clean Green Pakistan Index," *LinkedIn*, October 29, 2020, https://www.linkedin.com/pulse/

Source: Nadeem Ahmad, *"Clean Green Pakistan Index,"* LinkedIn, October 29, 2020.

2nd Phase of Clean Green Pakistan Index

The 2nd Phase of the Clean Green Pakistan Index (CGPI), launched in March 2021, expands the competition for sustainable, clean, and green urban environments from the initial 19 cities in Punjab and Khyber-Pakhtunkhwa to other provinces including cities from Gilgit Baltistan, Sindh, Baluchistan, and Azad Kashmir., It was then followed by the third phase. All phases would have specific objectives to achieve with changes in attitude, behavior, awareness, and adoption of sensible practices with institutional intensification.

Clean Green Champion Program:

Besides, the Clean Green Pakistan Index, the government introduced the "Clean GreenChampion Program" to encourage high public participation. The theme of the initiative was "My City My Responsibility", which was basically a voluntary program to engage the local community in keeping their cities clean and green, and enabling a sense of ownership in them regarding their habitats and cities. The government has also set up an interactive website to facilitate its citizens, where volunteers can become a Clean Green Champion.[14] High-scoring participants earn the title of 'Champion,' moving beyond mere appreciation to receive tangible rewards and public acknowledgement. By acknowledging these individuals, the state attempts to bridge the implementation gap through social capital rather than just technical enforcement.

[14] Malik Muhammad Ashraf, *"Making Pakistan Clean and Green," The Nation*, November 29, 2019, https://nation.com.pk/29-Nov-2019/making-pakistan-clean-and-green.

Implementation Challenges of the Clean and Green Movement

The implementation of Clean and Green initiatives is hindered by a variety of challenges, which complicate efforts to meet the targets of Sustainable Development Goal 13. The situation becomes more complex because Pakistan has been ranked at 140th out of 167 states in the 2025 SDG index[15]. It has also been confronted with a serious environmental crisis, so effective intervention and policy implementation are required to curb environmental issues.[16] An effective and strong implementation mechanism is not a choice, but a need for this contemporary and vulnerable situation of Pakistan. Although the state has structured many institutions and made policies to address the problems of climate change, but it still, faces severe consequences of climate change, including floods, droughts, air pollution, and biodiversity loss, and many other related challenges that hinder the implementation mechanism.

Institutional Fragmentation: Centralization and the Post-18th Amendment Crisis

The major challenge that Pakistan Clean and Green Movements implementation face is centralization and lack of a coordinated mechanism. The subject of climate change is a federal subject, and Pakistan is a signatory to several International Climate Agreements. These agreements require the ministry to perform a reporting task to the secretariat about Pakistan's performance in implementing these agreements. However, many of the subjects of Greenhouse Gas emission in Pakistan, most notably energy transport and agriculture, are under the the provincial governance, not under the federal government. And there is no effective coordination between the federal and provincial governments in making effective policies and decisions regarding environmental challenges. So, there is a need for coordination between the federal government, represented by the Ministry of Climate Change, and provincial-level departments, which are actually responsible for the implementation of environmental policies. There is no formal connection between the federating units and the federation when it comes to the

15 Jeffrey D. Sachs et al., *Sustainable Development Report 2025: Financing Sustainable Development to 2030 and Mid-Century* (Paris: SDSN; Dublin: Dublin University Press, 2025), Pakistan Country Profile, https://dashboards.sdgindex.org/profiles/pakistan/fact-sheet/

16 S. Ahmad, M. A. Khan, and S. A. Zaidi, "Environmental Challenges in Pakistan: A Review of Policies, Laws, and Regulations," *Environmental Science and Pollution Research* 27, no. 6 (2020): 6013–6027.

implementation of international agreements, which are provincial in nature.[17]

After the 18th Amendment, the provinces were given the responsibility to have their climate policies, as climate change is very localized. Despite the 18th Amendment, the federal government plays a key role in the policymaking of provinces regarding foreign commitments. Without the coordination of the provincial government, ambiguity, conflicting mandates, and jurisdictional clashes between federal and provincial authorities undermine effective policy implementation. Federal government control over funds and strategic planning frequently translate to delayed or insufficient provision of resources to provincial Environmental Protection Agencies (EPAs), which are executive agencies for implementing environmental statutes.[18] As the impact of climate change in KP is very different from Baluchistan, which would be different even within a province, we do not just need provincial policies, we need localized policies that provide some sort of idea about climate change and its consequences.

Local government is the third tier of government, which resolves the problems at the grassroots level. Local government plays a major role in climate governance but is dysfunctional due to various issues such as political interference, inadequate resource allocation, and lack of standard administrative practices. The local government doesn't have veritable autonomy, which limits the local government ability to address climate change and enforce policies effectively. To cope with climate changes, it is essential to address these shortcomings and undertake crucial reforms.

Fiscal Constraints and the "Economic vs. Environment" Dilemma

Pakistan is a developing country with a fragile economy. It lacks sufficient funds for essential environmental infrastructure to control pollution, treatwastewater, provide for storage of clean water, and above all provide for policy implementation mechanisms. Pakistna's water storing capacity is 13.7 million acre-feet, although it receives annually over 145 million acre-feet water. This results in significant water loss during floods and monsoon seasons. Likewise,, only around 8% of wastewater is treated primarily in a basic manner, and most cities lack adequate treatment facilities because of a lack of funding, modern technology, and expertise.[19] There is incoherence between environmental

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17 Abdul Rehaman Khan, *"Clean Green Pakistan,"* accessed June 10, 2025, https://www.scribd.com/document/439949768/Clean-Green-Pakistan.

18 Maryam Umer Khayam and Iftikhar Ahmad, *"Decentralization of Environment in Pakistan: Issues in Governance,"* accessed June 10, 2025, https://www.scienceopen.com/document_file/

19 Farzana Zaheer Sayed, Muhammad Waris Awan, and Tahira Mumtaz, "Environmental Governance and Policy Implementation in Pakistan:

objectives and economic development goals which further slows implementation. Policies that are aimed at shielding the environment often come in clash with policies focused on economic growth. This friction leads to a lack of incentives for implementing environmental policies, as economic interests always take precedence over the environment. So, to attain economic goals, compromising the environmental interests is neither recommended nor desirable, it may bring in short term boost but result in a long term devastation.

There is a persistent conflict where economic growth takes precedence over sustainability. As noted in the Pakistan Economic Survey 2023-24, the fiscal impact of the 2022 floods, totaling $15.2 billion in GDP loss, demonstrates that neglecting the environment for short-term economic gains leads to long-term financial disaster. While international frameworks like the Green Climate Fund (GCF) were intended to support developing nations, cumbersome regulations mean that of the $100 billion promised annually, only a fraction reaches countries like Pakistan. Currently, Pakistan has received only $258 million for eight projects, a sum insufficient to address the scale of its industrial pollution.

Due to a lack of facilities and enforcement, Karachi, which is home to a large portion of Pakistan's industry, releases over 70% of its industrial waste into the Arabian Sea untreated because there is no proper mechanism. The Karachi Harbour, which spans over 62 sq kms, receives a diverse range of pollutants, including at least 411 million gallons per day (MGD) of liquid effluents, 122 MGD of municipal waste, and 350 MGD of industrial waste.[20] As a result of this, there is a severe challenge to public health, water, and air.

Street Level Implementation: Corruption and Lack of Enforcement Mechanism

Viewed through Michael Lipsky's framework, the failure of enforcement is often a symptom of "street-level" governance issues. Transparency International news report says that corrupt countries tend to be the ones most prone to environmental hazards. Industrialists and other businessmen in Pakistan are not following environmental laws, and they face no punishment for their activities. Lack of accountability undermines the entire system of environmental protection. Corruption distorts policy priorities by granting short-term elite interests at the expense of long-term environmental sustainability. For instance, when the catastrophic floods of 2022 swept across the country, and it was apparent how poorly decades of mismanagement had prepared Pakistan for natural disasters. The administration rushed to deploy relief operations, but

Assessing Institutional Capacities and Challenges," *Journal of Development and Social Sciences* 5 (2024).

20 "The Drowning Karachi Coast," *The Express Tribune*, May 28, 2025.

corruption consumed funds, slowing down relief efforts and leaving millions without adequate assistance.[21] Lack of transparency, improper policies, and implementation processes hamper public awareness of the environment and participation in environmental activities.

Policy Flux and Technical Capacity Gap

The uncertain nature of policymaking is a major challenge in effective policy implementation. Every government comes into power with a different priority and suspends or reverses the policies that are functional and launched by the previous government, no matter how much it costs or how beneficial it is for the country. Many of the Provincial Environmental Protection Agencies (EPAs) do not have advanced technology, such as pollution monitoring equipment and adequately trained staff members, which constrain their ability to effectively enforce environmental regulations.Currently, major metropolitan hubs like Karachi lack the advanced pollution monitoring equipment and trained staff necessary to enforce regulations. This results in severe public health crises, such as the discharge of 70% of industrial waste untreated into the Arabian Sea, purely due to the absence of sustained infrastructure and technical oversight.

Discussion

The findings of this study underscore that Pakistan's vulnerability to climate change is a structural economic threat. According to the Pakistan Economic Survey 2023-24,[22] climate-related disasters between 1980 and 2022 have caused staggering losses, with the 2022 floods alone resulting in a USD 15.2 billion loss to the GDP and affecting over 33 million people. These figures reinforce the urgency of initiatives like the Clean and Green Pakistan Movement (CGPM). While the movement was designed as a 'people's movement' to align with SDG 13, its implementation has become a battle ground between federal ambitions and provincial reality.

A central contribution of this research is the realization that underperformance in the Clean Green Pakistan Index (CGPI) was rarely a result of simple administrative oversight. When examining Ministry of Climate Change (MoCC) performance reviews, it becomes clear that 'street-level' municipal staff were forced to exercise discretion under conditions of chronic resource scarcity. These frontline workers often prioritized 'survival duties' such as immediate emergency sanitation and

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21 Hafeez Ali and Usman Mustafa, "Urbanization and Environmental Degradation in Pakistan: A Review and Research Agenda," *Sustainability* 11, no. 22 (2019): 1–16.

22 Government of Pakistan, *Pakistan Economic Survey 2023-24: Highlights* (Islamabad: Finance Division, 2024), p. 34, https://finance.gov.pk/survey/chapter_24/Highlights.pdf.

flood rehabilitation over the laborious reporting requirements of the federal index. As Lipsky's framework predicts, this behavioral shift explains why many cities failed to meet targets despite the availability of national policy frameworks.

Furthermore, the 'Timber Mafia' and localized corruption represent a failure of institutional oversight. While official reports from the Auditor General of Pakistan (AGP) have highlighted systemic 'irregularities' and non-compliance in environmental projects, this study frames these not just as financial lapses, but as 'coping mechanisms' of an under-supported bureaucracy. When forest department officials are complicit in illegal logging, it is often a symptom of systemic neglect where low wages and high discretion meet powerful local elites. This explains why, despite the Ten Billion Tree Tsunami successfully planting over 2 billion saplings and generating 85,000 green jobs as of March 2023, Pakistan still struggles with one of the highest annual deforestation rates globally.

Finally, the study highlights the detrimental role of 'policy flux.' For Pakistan to move from a 'responsible international actor' on paper to a resilient state in practice, climate responses must be insulated from the political volatility often noted in Planning Commission reviews. True sustainability requires anchoring environmental goals in the empowerment of the street-level bureaucrats who serve as the true backbone of the nation's climate resilience.

Conclusion

The Clean and Green Pakistan Movement (CGPM) represents more than a suite of environmental targets; it is a litmus test for the state's ability to translate global climate mandates into local resilience. This study has demonstrated that while initiatives like the Ten Billion Tree Tsunami and the Clean Green Pakistan Index have achieved significant milestones, such as the creation of 85,000 green jobs and the successful ranking of cities like Attock and Bannu, their ultimate success is mediated by the 'street-level' reality of implementation.

The research concludes that the 'implementation gap' is not merely a product of financial scarcity, but a result of the discretionary choices made by frontline bureaucrats who must navigate conflicting mandates with inadequate tools. As this study argues, when forest guards or municipal workers are forced to adopt 'coping mechanisms' due to resource stress, the high-level ambitions of SDG 13 are often diluted. Therefore, the 'Bannu or Attock models' should not be viewed as mere winners of a competition, but as case studies in how localized agency and street-level dedication can overcome systemic barriers.

There is a critical need to pivot from top-down directives to an inclusive governance model that integrates indigenous knowledge. Local

communities are not just passive beneficiaries; they are the primary observers of shifting climate patterns. To move from a 'news report' style of governance to a sustainable institutional framework, Pakistan must insulate its climate policies from the 'policy flux' of changing administrations. Ensuring transparency, strengthening the institutional capacity of frontline actors, and fostering a culture of accountability are not secondary goals; they are the prerequisites for survival. Ultimately, Pakistan's journey toward a clean and green future depends on bridging the distance between the policymaker and street-level field of action.