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FROM CONCEPT TO ACTION: GREEN LIBERALISM FOR PAKISTAN



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Policy Brief

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Abstract

Green Liberalism has emerged as a transformative approach to deal with socio-economic and environmental problems across the globe. It aims to address these problems single-handedly. By integrating environmental sustainability measures with values of liberal paradigm, Green Liberalism provides a framework for aligning economic growth with environmental goals through market-based solutions, renewable energy incentives, and efficient resource management. Pakistan falls among the list of top 10 nations, which are most vulnerable to environmental hazards. Given Pakistan's unique set of challenges, such as energy dependency, rapid population growth, unplanned urbanization and environmental degradation, this study examines how green liberal policies can help the country transform into a low-carbon economy while tackling socio-economic disparities. It aims to guide the nation towards sustainable development by promoting renewable energy, improving governance models, and encouraging international cooperation for climate resilience. By learning from the green liberal policies of other countries, we can implement them in a tailored manner, specifically designed to address the problems of Pakistan. This study suggests policy shifts that leverage market-driven incentives, such as carbon pricing, renewable energy subsidies, and tax credits to reduce reliance on fossil fuels and promote renewable energy. Addressing resource management challenges, it calls for property rights and governance models that reduce transaction costs and manage resources sustainably.

Keywords: Green liberalism, Environmental degradation, Low-carbon economy,





1. INTRODUCTION

The world has frequently introduced frameworks designed to mitigate environmental impact and drive the transition to a low-carbon economy. However, the success of these frameworks heavily depends on their adaptability to the specific local dynamics in terms of social, economic, political, and environmental. Developing countries face unique challenges in adopting these global solutions due to limited resources and greater vulnerability to climate change. As the world intensifies its efforts to achieve the Paris Agreement goals, there is a growing need for climate policies that are both inclusive and context specific. Tailoring global frameworks to fit the diverse realities of different regions requires the integration of local knowledge, ultimately encouraging more resilient and equitable climate strategies.

Green Liberalism has recently emerged as a compelling ideological framework that is being embraced by policymakers, environmentalists, and leaders. This approach represents a synthesis of classical liberal principles such as democratic governance, individual freedoms, rule of law, and human rights with an unwavering commitment to environmental sustainability (William 2020). The central tenet of Green Liberalism is the belief that economic growth, social equity, and environmental stewardship are not mutually exclusive, but rather can be integrated in a way that allows them to thrive together (Steinberg 2010). This vision promotes a future where the pursuit of economic prosperity is aligned with the imperative to protect and enhance our natural environment, ensuring that both present and future generations can enjoy the benefits of a healthy planet.

At the heart of Green Liberalism is the idea of harmonizing economic development with environmental protection through a balanced and strategic approach. This concept advocates for the efficient and sustainable use of resources, driven by innovation, technological advancements, and market-based solutions. Green Liberalism emphasizes the importance of setting the right incentives such as carbon pricing, renewable energy

subsidies, and regulatory frameworks that encourage green investments to guide market behaviour towards sustainable outcomes. Proponents argue that by leveraging the power of free markets and individual choice, alongside strong legal and institutional frameworks, we can achieve significant environmental gains without compromising the core values of liberalism, such as freedom, entrepreneurship, and human dignity (Brinn 2021). In this way, Green Liberalism seeks to create a sustainable future where economic vitality and environmental health reinforce each other, fostering a more resilient and equitable global society. Green liberals are usually liberal on social issues and green on economy.

The vision of Green Liberalism is ambitious yet achievable: it is a world where economic growth, social objectives, and environmental sustainability work in concert. This vision is based on the belief that innovation and technology, when guided by free market principles and appropriate incentives, can optimize resource use and mitigate environmental impact.

Objectives: This study discusses the concept of Green Liberalism with the objective to identify the pathway as to how it can work in countries like Pakistan. It further highlights the challenges and opportunities linked to Green Liberalism and how it can be implemented in the context of current policy measures being taken in the country in connection with environmental sustainability.

1.1 MALTHUSIANS AND CORNUCOPIANS APPROACHES

Within the framework of Green Liberalism, a central debate revolves around the differing perspectives of Malthusians and Cornucopians¹. Malthusians were of the view that unchecked population growth poses a significant threat to the planet's finite resources, and without stringent population control measures and careful management of natural resources, humanity will face severe crises such as famine, diseases, and environmental degradation (Kaack & Katul 2013). From a Malthusian perspective, the emphasis is on imposing limits to growth, advocating for a more cautious and conservative approach to resource use with a focus on sustainability and preservation to avoid ecological collapse.

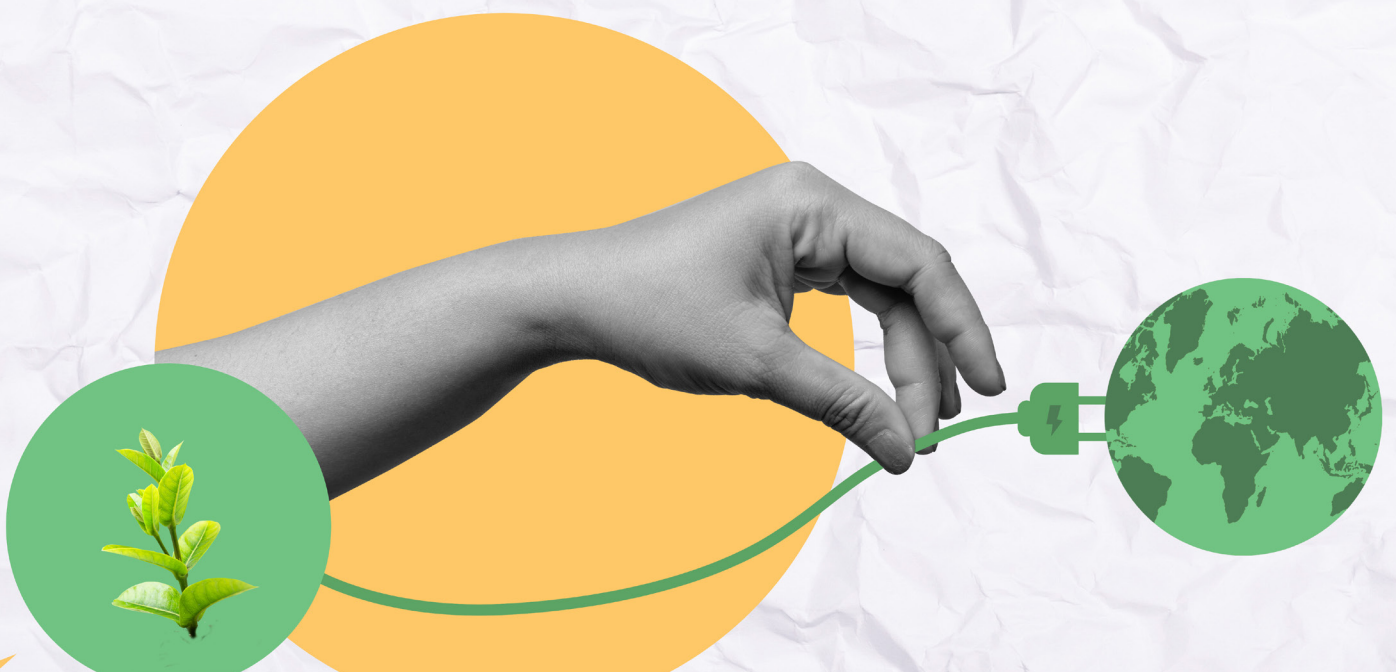
Cornucopians, on the contrary, embody a more optimistic outlook that aligns closely with the principles of Green Liberalism. They argue that human ingenuity, technological innovation, and market-driven solutions have the potential to overcome the limitations of natural resources. Cornucopians believe that through the judicious application of technology, free markets, and the right incentives, economic growth and environmental sustainability can coexist and even reinforce each other (Gleditsch 2003). In the context of Green Liberalism, this perspective suggests that rather than imposing strict limitations, society should invest in innovation and create policies that encourage sustainable practices while fostering economic prosperity. Cornucopians advocate for harnessing the power of human creativity to develop new ways of living that are both economically viable and environmentally sound, ensuring that progress is achieved without compromising the planet's health (ibid). Green Liberalism, thus, finds itself at the intersection of these two viewpoints, seeking to balance the cautious approach of the Malthusians with the optimism and faith in innovation that characterizes the Cornucopian outlook.

¹ Malthusians and Cornucopians are two schools of thought that offer contrasting views on the relationship between population growth, resource consumption, and environmental sustainability.



METHODOLOGY

The study uses a mixed method approach combining qualitative and quantitative data. This includes literature review on Green Liberalism, analyses of case studies from countries like Germany and the Netherlands, and assessment of Pakistan's environmental and economic conditions. Policy analysis frameworks were applied to evaluate the feasibility of adopting Green Liberalism in Pakistan, ensuring the strategies are contextually relevant and achievable.





DISCUSSION AND ANALYSIS

3.1 Applicability of Green Liberal Policies in Pakistan's context

Pakistan is faced with a range of environmental, economic, and social challenges, which are interconnected. These challenges include water scarcity, energy dependency, rapid population growth, etc. These issues are not only a threat to the country's sustainability, but they also hinder the socio-economic development. Green Liberalism, which focuses on market-based solutions, technological innovation, and sustainable development, offers a promising framework for addressing these challenges that are discussed as follows.

3.1.1 Environmental Challenges

Water scarcity in Pakistan is being exacerbated by inefficient management, pollution, lower groundwater level and climate change, straining the Indus River system due to over-extraction and contamination from agricultural runoff and industrial waste (Ebrahim 2020). The Indus is to become a seasonal river if glaciers in the north of Pakistan continue to melt by the year 2050 (International Water Management Institute [IWMI] 2023). This scarcity jeopardizes agricultural productivity, food security and economic stability. In addition to water scarcity being on its verge, the water available to people for consumption is not even safe for drinking. As documented by the Pakistan Council of Research in Water Resources (PCRWR), invalidity of safe drinking water is an issue concerning over 60% of the country's population. This contributes to 40% of all deaths and 30% of all diseases. Among many reasons is unmonitored use of pesticides and inadequate infrastructure for sanitation and industrial wastes management (Rasheed et al. 2021). The World Health Organization (WHO) estimates that waterborne diseases are the cause for death of about 55,000 children below 05 annually (Murtaza et al. 2021). Not only water, but solid waste ill-treatment is also yet another environmental hazard for Pakistan. It generates approximately 49.6 million tons of solid waste each year with an addition of 2.4% annual increase (Pakistan - Waste Management 2024). To combat this,

Green Liberalism advocates for market-based solutions and technological innovations such as advanced irrigation technologies and sustainable water management practices. Implementing efficient water use technologies and promoting conservation can mitigate the impact of water scarcity and support agricultural resilience.

3.1.2 Energy Dependency

Pakistan's reliance on imported fossil fuels creates significant energy insecurity and economic vulnerability, as nearly 40% of its total primary energy supply is imported (Haq 2023). The country's energy sector, predominantly reliant on coal and outdated technologies, contributes to environmental degradation and limits economic growth due to high energy costs. The dependence in energy sector has kept Pakistan in a long-awaited issue of circular debt. It was recorded PKR 2,467 billion which equals a total 5.6% of government's overall debt; and if goes unaddressed, can rise up to a huge amount of PKR 4 trillion by the year 2025 (Pakistan Economic Survey 2022-23). Green Liberalism addresses this through incentives for renewable energy investments such as feed-in tariffs and tax credits for solar, wind, and hydropower projects. By fostering a transition towards renewable energy sources and enhancing energy efficiency, green liberalism supports economic diversification and reduces the environmental footprint of energy production.

3.1.3 Population Growth

The rapid population growth in Pakistan, projected to exceed 400 million by 2050, exacerbates pressures on already strained resources, including water and energy (Ali 2024). This demographic expansion complicates urban planning and intensifies competition for limited resources, leading to social unrest and inequality.

In Pakistan, migration has primarily been driven by economic opportunities in certain areas rather than by the climate events that have affected many regions. As of the current year 2024 up till September, 5,25,378 people (excluding students) have emigrated from Pakistan for various employment opportunities (*Reports & Statistics - Bureau of Emigration & Overseas Employment, 2024*). Green Liberalism promotes sustainable development through integrated urban planning and infrastructure investment. Emphasizing green infrastructure, green as parks and green roofs, can improve urban resilience and quality of life. Additionally, community-based renewable energy projects can address local energy needs while promoting economic development.

3.1.4 Economic Challenges

Environmental degradation, particularly in agriculture and fisheries, directly impacts economic productivity and exacerbates poverty, especially in rural areas where dependence on natural resources is high. As reported in the Pakistan Economic Survey (2023-24), the financial year witnessed a real GDP growth of 2.38% but to have a greater impact in terms of growth, economic dependance is a major challenge. To overcome this dependance factor, the use of local raw materials and integration of sustainable practices are major requirements. Thus, green liberalism advocates for green industrialization, which includes investing in renewable energy, improving energy efficiency, and promoting sustainable agricultural practices. Initiatives like the Clean Green Pakistan campaign align with this approach by focusing on environmental sustainability and economic resilience.

3.2 How Green Liberalism Can Address Challenges

Green liberalism offers a multifaceted approach to addressing Pakistan’s challenges through market-based solutions, technological innovation, and sustainable development. Market-based solutions (such as carbon pricing and renewable energy incentives) can reduce reliance on coal and promote cleaner energy alternatives. Enhancing energy efficiency and fostering technological innovation, including advancements in clean energy and smart grid technologies, are essential for reducing environmental impacts and supporting economic growth. Additionally, green liberalism emphasizes sustainable development by integrating environmental considerations into national policies and urban planning, thereby creating a more resilient and equitable society. By embracing these principles, Pakistan can work towards overcoming its environmental, economic, and social challenges, paving the way for a sustainable future.

Table 1: Green Liberal policies

Table 1: Green Liberalism Case Study Comparison: Germany vs. Netherlands

INDICATOR	GERMANY	NETHERLANDS
Policy Framework (Market-Driven Climate Strategy)	Energiewende (Energy Transition): Market-driven renewable expansion using price signals, private sector investments, and decentralized energy production.	Climate Act & National Climate Agreement: Government sets emissions goals, but market mechanisms (carbon pricing, auctions, and financial incentives) drive private sector solutions.
Carbon Pricing (Using Markets to Reduce Emissions)	EU ETS Participation + National Carbon Pricing (2021) for transport & heating. Avoid heavy-handed regulation by letting companies choose least-cost reductions.	EU ETS + Additional National Carbon Tax on Industry: Ensures firms face a predictable carbon price, encouraging innovation without direct bans or overregulation.
Renewable Energy (Incentives over Regulation)	Feed-in Tariffs (EEG, 2000): Guaranteed long-term payments encouraged small businesses, cooperatives, and private citizens to invest in wind & solar. Major example of market-led energy transition.	Competitive Wind & Solar Auctions: Encourages private investment in large-scale renewables, reducing government subsidies over time. Netherlands now a global leader in zero-subsidy offshore wind.

Power Sector Transition (Market Efficiency in Energy)	Decentralized Energy Market: Over 50% of German renewables owned by citizens & cooperatives—reducing reliance on state-driven energy monopolies.	Grid Modernization & Private Investment: Fastest solar growth in Europe, but grid congestion challenges are managed through public-private investment in smart grids.
Economic Impact (Growth & Innovation in Green Markets)	370,000+ clean energy jobs created in renewables sector. Germany became a leader in wind & solar manufacturing, but high industrial electricity prices pose a challenge.	Market-friendly transition: Renewables expansion designed to cost only 0.5% of GDP per year. Government reduced reliance on subsidies by leveraging market competition in offshore wind.
Transport & Mobility (Incentives over Regulation)	Carbon pricing for fuel, but EV transition slower due to infrastructure gaps. No bans on petrol cars focus on incentives (tax breaks for EVs, investment in charging stations).	Strong cycling infrastructure, EV incentives, and gas phase-out for heating. Government avoids direct bans relies on market preferences shifting towards cleaner options.
Energy Market Design (Green Capitalism in Action)	Shifted from state-owned power to decentralized, competitive private investment in renewables. Feed-in tariffs made small-scale investors major energy players.	Uses market-based pricing signals to incentivize renewables—no long-term government subsidies. Offshore wind companies now develop projects without government funding.

<p>Challenges in a Green Liberal Model</p>	<ol style="list-style-type: none"> 1. Market Fairness: Early renewables surcharge increased electricity costs for consumers; later shifted to the state budget to protect low-income groups. 2. Competition Concerns: High energy prices affected industries, prompting compensation mechanisms. 3. Public Resistance to Infrastructure: Some local opposition to wind farms despite decentralized ownership. 	<ol style="list-style-type: none"> 1. Grid Congestion: Rapid renewables expansion overloaded infrastructure, requiring government-private investment in storage & grid modernization. 2. Equity Issues in Incentives: Net metering mainly benefited wealthy homeowners; policy now shifting toward more inclusive market structures. 3. Political Uncertainty: Shifts in government (more conservative leadership) may slow market-based climate policies.
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3.3 Economic adaptivity to green side of liberalism and governance model

Green Liberalism integrates the principles of political economy to effectively address environmental challenges by applying economic reasoning to ecological concerns. One fundamental concept is the role of **opportunity costs and incentives** in shaping corporate and individual behaviour. For instance, companies are often faced with decisions such as whether to invest in cleaner technology or to purchase carbon allowances under a cap-and-trade system. These decisions are influenced by the opportunity costs associated with each option and are further guided by a system of incentives both positive (such as tax breaks or subsidies for green investments) and negative (such as penalties for excessive emissions). By aligning economic incentives with environmental goals, Green Liberalism encourages market actors to make decisions that contribute to sustainability while also fostering economic growth. This approach reaffirms the belief that well-designed economic policies can effectively steer behaviour towards environmentally responsible outcomes without stifling innovation or economic freedom.

Another key element within the Green Liberalism framework is the recognition of the Tragedy of the Commons, which illustrates the risks associated with individuals acting in their own self-interest to the detriment of shared environmental resources (O’Gorman 2010). Green Liberalism advocates effective governance models, whether centralized or decentralized, that can manage common resources sustainably and equitably. This involves establishing clear property rights and minimizing transaction costs to ensure that resources are used efficiently and markets function smoothly. Additionally, Green Liberalism emphasizes the importance of knowledge, information, and freedom in

economic decision-making. Ensuring that decisions are informed by accurate data and free from unintended consequences is crucial for achieving long-term sustainability. In this view, transparency, education, and access to information are essential components of a green economy that respects both environmental limits and the principles of liberalism. By integrating these economic principles with environmental ethics, Green Liberalism seeks to create a resilient and sustainable future where economic vitality and ecological health coexist in harmony.

Green Liberalism prioritizes the urgent need to transition from fossil fuels to sustainable energy sources, recognizing this shift as both a critical challenge and a significant opportunity for innovation and global cooperation (Imuda 2024). On the geopolitical front, climate change acts as a force multiplier, exacerbating existing tensions and creating new sources of conflict, particularly in regions that lack resources or capacity to manage its impact. This global threat underscores the need for enhanced international cooperation, where nations not only work together on mitigation strategies to reduce emissions but also on adaptation efforts to build resilience against the inevitable effects of climate change. Green Liberalism calls for a holistic approach to energy policy that integrates climate action into broader geopolitical considerations, recognizing that a stable and sustainable global energy system is essential for peace and security. By fostering collaboration across borders and investing in both technological solutions and adaptive strategies, Green Liberalism seeks to navigate the complexities of the energy transition while ensuring that all countries, especially those most vulnerable to climate change, are supported in their efforts to achieve sustainable development.





POLICY RECOMMENDATIONS

In the context of Pakistan, adopting the concepts of Green Liberalism could be transformative for balancing economic growth with environmental sustainability. As the country tackles rapid population growth and escalating environmental degradation, encompassing Green Liberalism could be pivotal. To effectively integrate this approach, Pakistan needs to expand innovative and market-driven solutions, which would facilitate a transition from its dependence on fossil fuels to renewable energy sources. This transition is essential for fostering economic resilience while mitigating environmental impact.

Implementing Green Liberalism in Pakistan would require establishing clear property rights, reducing transaction costs, and ensuring informed decision-making to create policies that are both economically viable and environmentally sound. Additionally, effective governance models would be crucial for managing common resources sustainably, addressing the Tragedy of the Commons², and promoting equitable growth. By aligning economic development with environmental stewardship, Green Liberalism offers a hopeful and pragmatic way forward for Pakistan. Adopting this framework would involve harnessing technological innovation, incentivizing sustainable practices, and fostering international cooperation to address climate change and resource management challenges effectively.

Prioritizing investments in clean energy

Pakistan's limited financial resources and old technology base pose significant challenges in adopting the vision of Green Liberalism. This requires substantial investments in renewable energy, advanced water management, and sustainable urban planning.

² Tragedy of the Commons is a situation wherein people having access to a public resource act in their own interest, and as a result resource depletes.

The federal government along with the Ministry of Power should prioritize investments in renewable energy sources, such as solar by implementing incentives like feed-in tariffs and tax credits. This would reduce dependency on fossil fuels and foster economic diversification.

Establishing property rights

Rapid population growth has exacerbated strain on natural resources, complicated urban planning, and increased pressure on already limited water and energy supplies. Managing this growth sustainably while maintaining economic stability is a major challenge in the areas where the property rights are not clearly defined.

To manage resources equally and sustainably, Pakistan needs to establish clear-cut property rights and reduce transaction costs. Effective governance models should be developed to address the Tragedy of the Commons and promote equitable growth. Fair means of resource distribution must be adopted so that each segment of the society feels secure in contributing its part towards Green Liberalism.

Incentives for research and development

Pakistan's heavy reliance on imported fossil fuels makes transition to renewable energy more difficult. The existing energy infrastructure, which is heavily dependent on coal and outdated technologies, hampers efforts to diversify energy sources and reduce environmental footprint.

Ensuring an overall smooth transition towards clean and renewable energy resources, the government and its specialized institutes should take a leap to encourage innovation by providing incentives for research and development in clean technologies. Incentivizing the public in use of renewable energy resources will help speed the process of transition. Households can be independent in their energy supply and consumption. This could include supporting public-private partnerships to develop and implement sustainable solutions tailored to Pakistan's specific needs.

Fair accountability mechanisms

Effective governance is essential for the sustainable management of common resources and the successful implementation of Green Liberalism policies, ensuring both economic viability and environmental integrity. However, challenges such as corruption and institutional weaknesses can obstruct the effective execution of these policies.

To address these challenges, robust accountability mechanisms must be established. Government institutions should operate transparently within their legislative and constitutional frameworks, adhering to enforced accountability measures to uphold compliance and mitigate corruption risks. If a carbon taxation system is introduced, it should be governed by stringent transparency and oversight principles to ensure that revenues are properly collected and reinvested in clean energy initiatives and energy efficiency programs, preventing any potential misuse of funds.

Introduce a gradually increasing carbon tax to incentivize reductions in fossil fuel use. The revenue generated should be reinvested in clean energy projects and energy efficiency programs.

Collaborating between ministries and departments

Environmental degradation, particularly in agriculture and fisheries sectors, directly impacts economic productivity, ultimately leading to poverty. The challenge lies in reversing these trends while promoting sustainable practices across sectors.

To prevent agriculture from environmental degradation, the relevant ministries and administration should collaboratively work towards this goal with prior importance because the dangers of climate change and environmental degradation are increasing at an alarming level. There is a need to adopt advanced irrigation technologies and sustainable water management practices as clean water is not only essential for human health but also for sustenance of a healthy aquatic life. These efforts should focus on improving agricultural resilience and addressing water scarcity, which is critical for food security and economic stability.

Bridging technology transfer gap

A delay in adoption of innovative and advanced technologies is making Pakistan more prone to environmental dangers because the more we rely on conventional infrastructure, the more we keep on receiving their side effects in response to climate change. Bridging this gap is essential for achieving the desired environmental and economic outcomes.

To fill in the gap of technological transfer, the government and the ministry of information and technology should focus on strengthening partnerships with international organizations and countries that have successfully implemented Green Liberalism policies. They should offer different training programmes and facilitate skills execution platforms for the youth and skilled population so that they might equip themselves in thriving Pakistan by leaps under the flag of Green Liberalism.

People living in unplanned urban spaces are much affected due to temperature variations as a result of climate change.

Initiating green infrastructures

In order to adopt the concept of planned and green spaces, the Ministry of Climate Change and Environmental Protection should promote and facilitate climate-friendly architecture and run educational campaigns to train people. Municipalities and associated administrative units should facilitate and execute this at lower levels. The government should launch campaigns for the integration of green infrastructure, such as parks and green roofs, into urban planning to improve resilience and quality of life. Community-based renewable energy projects can meet local energy needs while promoting economic development. For this to execute effectively, it is important that the masses should know the severity of enforcement of sustainable practices.


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