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Conceptualizing Green Governance: Prospects and Challenges for Pakistan

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Abstract

Green governance is conceptualized as new environmental regimes based on deliberative and collaborative policy-making by the states to prevent environmental degeneration. The emerging threats to the environment led the states to develop more transformative and coherent measures to implement new regulations for successfully achieving sustainable development goals. This research envisages that environmental degeneration causing climate change at regional and global levels and the issues faced by the global south lacking appropriate mechanisms to opt more synergic approach in the present time. Similarly, why it is one of the serious issues in Pakistan which is consistently ranked as one of the world's most climate's vulnerable countries, despite contributing less than 1% of global greenhouse gas emissions. Moreover, there are multiple other factors like variations in solar outputs, human activities of burning fossil fuels, deforestation building developments in cities and greenhouse gas emissions affecting environment. This qualitative research explains the implications of storms, rising sea levels, melting glaciers, natural calamities and hazardous diseases in Pakistan. The analytical technique is applied to examine that the successive governments in Pakistan developed policies reasonably to contain the negative consequences of climate change and for ensuring green governance. According to the International Institute for Sustainable Development, global environmental governance is "the sum of organizations, policy instruments, financing mechanisms, rules, procedures and norms that regulate the processes of global environmental protection". Global organizations are playing pragmatic roles in tackling the issues of climate change such as the International Energy Agency 1974, the International Panel of Climate Change 1988 and the United Nations Framework Convention on climate change, henceforth this research explores that state authorities in Pakistan intend to operationalize top-down and bottom-up approaches for safeguarding environment.

Key Words: Climate Change, Challenges, Green Governance, Mitigation, Pakistan.

Introduction

Green governance is a new phenomenon with respect to emerging trends in international politics. Traditional regimes like the Kyoto Protocols 1998 and Montreal Protocol 1987 did not bring holistic outcomes. Initial efforts at the international level by the UN with the support of G7 countries like the Rio Conference (Brazil), Climate Change Conference, Berlin Conference (Germany) and UN Framework Convention on Climate Change during the 1990s remained less successful in bringing desired results concerning mitigation in gas emission due to less coherence among states. New regimes (Paris Agreement 2015) envisaged limiting greenhouse gas emissions to the same levels that trees, soil and oceans can absorb naturally and global temperature to 2 degrees Celsius till 2050 (Caprotti, F., & Bailey, I, 2014).

In addition to this, each country needs to set its emission-reduction targets. Richer countries may volunteer to assist poorer nations by providing Climate finance. According to the International Institute for Sustainable Development, global environmental governance is "the sum of organizations, policy instruments, financing mechanisms, rules, procedures and norms that regulate the processes of global environmental protection". This research envisages that environmental degeneration causing climate change at regional and global levels and the issues faced by the global south lacking appropriate mechanisms in the present time. The new concept of green governance has contributed to making a state-centric style to tackle environmental issues more geo-centric. It is relatively inclusive and integrated largely with the incorporation of multiple private, and public entities and local resources to follow carbon standards and biodiversity standards. Green governance necessitates links between top-down and bottom-up approaches aligned with state and non-state actors. Global organizations playing a pragmatic role in tackling the issues of climate change such as the International Energy Agency, International Panel on Climate Change, and the United Nations Convention Framework on Climate Change (Maryman, & Umbanhowar, 2008).

Research Objectives

- To suggest ways to improve transformative and coherent measures to develop green governance for achieving sustainable development goals.
- To evaluate climate change and its impact to augment social inequality in Pakistan.
- To identify Pakistan's initiatives for Green Governance.
- To examine the collaborative and cooperative role of Global Organizations towards Climate Change.

Literature Review

(Hauge & Ellingsen, 1988) expressed that neo-Malthusian theory contributed to enhance cognizance about the repercussions of climate change that focuses on scarcity of resources with the increasing human population and deteriorating ecosystem. Therefore, states are more concerned about environmental security, food security and preservation of natural resources to safeguard human life. Moreover, there is a growing perception that disruption in climate conditions creates social disequilibrium mainly poor countries. Now it depends that how states respond to

these emerging challenges and take constructive measures to secure depleting resources. (Janjua et al., 2010) expounded the ramifications of greenhouse gases comprising Carbon Dioxide, Methane and other dangerous gases including Nitrous Oxide. They contribute to global warming and frequent drought, famine and incompatible weather conditions. These emerging pressures are perceived more harmful for agricultural economies in Global South like Pakistan. There is a close connection between climatic variations and economic instability. Frequent spells of heavy rainfall damage agricultural output and cause decline in economic growth. This alarming situation is growing concern for food security in developing states.

Third world economies like Pakistan where agriculture contributes 21% to GDP are the direct affecters of deteriorating environment in terms of loss of soil-fertility and volatile temperature. Rising temperature in Asian and Pacific regions have contributed to vulnerabilities in agricultural sectors. It is estimated that the temperature would increase to 3℃ till 2040 which will reduce the wheat production by 50 % in this hemisphere. These challenges would aggravate the issue of human security. In Pakistan adverse change in weather affected four main crops including wheat, rice, sugarcane and cotton. Thus, precautionary measures require for the safety of both cash crops and food crops. This is also related to industrial output as cotton production is the fundamental component in textile industry. Consequently, policymakers require to develop a comprehensive structural arrangement to enhance agricural growth and manufacturing capabilities (Pakistan, 2011).

(Koakutsu and Tamura (2012) reveals the prospects of green economy through low-emission environment, recycling technologies, social inclusion for human security and carbon regimes. Asian region has multiple issues related to carbon-emission industries like coal power generation, bricks producing kilns and burning of wastes. Now globally the attention is being diverted to green industries renewable energy sources including solar power, windmills and LNG (Liquid Natural Gas). In this connection the Copenhagen Accord of 2009 emphasized to promote green energy for sustainable development. Similarly, Asian countries essentially need to develop carbon-mitigation strategies to ensure environmental security. Japan developed fund for 'regional green new deal' in order to encourage environment-friendly industries, traffic system and vehicles. Additionally, the power-saving devices in homes are also emboldened for safe environment. The concept of green management is bolstered in Republic of Korea through eighty percent investment in environment related projects like green transportation, waste management and energy saving to create new jobs.

Salik (2017) pronounced the agenda of COP 21 held in 2015 where it was reiterated to motivate all the states for sharing their responsibilities to keep the average increase in global temperature below 2℃. It could be possible while decreasing the discharge of greenhouse gases in all regions. Important concerns about the process of urbanization and deforestation were deliberated to control the deteriorating conditions of environment which caused speedy melting of glaciers. Simultaneously, United Nations postulated 'Sustainable Development Goals' in 2015 focusing on combating the issue of climate change with its 'Goal 13' to foster policy framework on the part of all national governments. Less Developed States need to opt bottom-up as well top-down strategies like green economy against

environmental degradation. Global regimes also provide technical assistance to LDCs.

(Holley, 2015) described that state's sovereignty over natural resources made lesser contribution to protect global environment. Therefore, state centric approach was gradually transformed to global governance to deal with environmental problems. In this perspective intergovernmental treaties were encouraged. Similarly, market based tactics were needed to preserve environmental resources. Over a period of time during 1980s onwards, it was held necessary to use market instruments like pollution taxes to protect natural sources to clean environment. However, states faced several challenges to implement market instruments due to lack of regulatory mechanism. These emerging issues were addressed at an international level with the collaboration of tripartite arrangements among different communities, regulatory authorities and industrial units. Civil society played an important part to establish worldwide networks like Forest Stewardship Council 1994 (FSC) to penetrate their influence over state actors and its trickle-down effects.

Hansen (2022) explained that global environmental regimes focus on energy efficiency in order to avoid traditional methods of combustion, coal power generation, burning of fossil fuel and greenhouse gas emissions. Although the developing countries lack recycling technologies and environment-protection strategies but on the other hand the developed world is more likely the emitter of carbonated and greenhouse gases. For instance, US is contributing 16 percent and China is contributing 25 percent to the global gas emission. Now all the stakeholders need emission budgets and adequate policy framework for zero-carbon economy. Renewable energy sources are immensely effective and reliable for industrial and agricultural growth. In the recent past both China and India committed to phase-down carbon and US and China concluded an agreement at the COP 26 Climate Summit 2021 in Glasgow to cut down gas emission for global environmental protection.

Krupocin and Krupocin (2020) elucidated that climate change is a multi-dimensional phenomenon as it has various implications for security, significantly cultural security. This includes both tangible culture like historical buildings and intangible cultural values, traditions and customs. Lack of green governance and rapid change in climatically conditions compel local population for forced migrations. Unnecessary flow of immigrants put burden on the resources of host areas. Cultural sites are also affected due to extreme weather conditions i.e. heavy rainfall, floods and smog. Additionally, the affected areas, deserted lands and barren places provide hide-out to criminal activities. Terrorist groups use such places for their networks and create problems for national security. There are plenty of examples around the world where dry weather caused bushfire in Australia in 2019, poisonous wildfire in Amazon and California. These unfortunate incidents severely threaten human life as well as animal species. Moreover, forced migrations intricate the ethnic identities of native people. They get marginalized and feel isolated in host countries.

Blitz (2018) correlates global migrations and life-threatening weather conditions. People become stateless because of decreasing habitable lands mainly in African countries. Similarly, small nations living near coastal areas like Marshall Islands also get affected due to rising sea-level. Depleting resources aggravate conflicts

among diverse nations and ethnic or sectarian identities like civil war 2011 in Syria and 2019 conflicts in Mali. War-torn states make difficult for local people to meet their essential needs. If this situation persists for a longer period of time that exacerbates issues of global migrations and conflicts. Immigrants in new territories change the demographic composition or sometimes complicate the situation between insiders and outsiders. This socio-economic polarization intensifies exclusion among people belonging to distinct communities. As a matter of fact, climate change is a wide-ranging phenomenon distressing national and cultural security.

Methodology and Significance

This qualitative research mainly addresses the global issue of climate change and the need to delve the conceptual grounds of green governance. The problem is identified with the analysis of previous literature on variations in climate and weather patterns. Mostly the writers focus on the reasons of global warming and the efforts by the developed states to initiate counter measures for preserving natural resources and ecosystem. This article extends an intellectual discourse to identify the potential impacts of climate inconsistencies on Pakistan and develops a framework for abstracting green governance.

Research questions are designed to manifest a relation between green governance and necessary safeguards for environmental preservation. This research is a combination of explanatory, exploratory and analytical in its scope. It largely expounds that why and how the concept of green governance is linked with the safeguards for natural environment. The problem area is significantly examined with secondary sources to investigate the theoretical suppositions about green governance and its connection with policy initiatives. The case study method envisages the negative implications of global warming on Pakistan's socio-economic conditions with the standpoint to enhance green growth actions by the government. The exploratory nature of this research opens new avenue to develop diverse case studies in global south.

Research Questions:

- Why conceptualization of green governance is preconditioned with the countermeasures for climate change?
- What are the transformative features of new climate change regimes?
- How Pakistan can develop top-down and bottom-up approaches to execute climate regimes?

Repercussions of Climate Change in Pakistan

Developing states are often more vulnerable to the impacts of climate change due to various factors like limited resources, high population density, and dependence on climate-sensitive sectors like agriculture. Pakistan is vulnerable despite its contribution to less than 1% of the global greenhouse gases. Furthermore, Pakistan with the smallest carbon footprints is the 8th most vulnerable nation in the world. Pakistan is located at a place on the globe that bears the brunt of two major weather systems: One can cause high temperatures and drought, like the heat wave in May

and the other brings Monsoon Rains. The majority of Pakistan's population live along the Indus River, which swells and can flood during Monsoon Rains. These climatic problems also increase internal migration from flood-affected zones to urban areas, putting pressure on metropolitan cities. Global warming is making air and sea temperatures high, leading to more evaporation. Warm air holds more moisture while making Monsoon rainfall more intense in Pakistan.

Climate change exacerbates health issues through heat-related illness, the spread of diseases and increased air pollution. According to the UN observer for South Asia estimated that due to global warming, all glaciers of Pakistan will melt by 2035. Additionally, Himalayan Glaciers are on track to lose up to 75% of their ice by centuries due to climate change. Besides, temperatures increased up to 50 degrees Celsius in parts of Pakistan in June 2023. Pakistan experienced 126 heat waves between 1997 and 2015 as well as on the extreme heat waves over 65,000 people were hospitalized with heat stroke. In 2022, the deadliest floods were caused by Monsoon rains which affected 1/3 of Pakistan's population (3.3 million displaced). Pakistan's vulnerabilities increased because of the climate change effects due to its geography: its immense glaciers**.**

Floods destroy infrastructure, cropland and forced millions out of their homes and villages. The flood of 2022 damaged more than 8000 miles of roads and 410 bridges. The flood led to a construction cost of $16 billion and crop loss was $1.3 billion. The people of Pakistan faced multiple waterborne diseases such as Typhoid fever, Cholera, Diarrhea, and Hepatitis A. The Global Alliance on Health and Pollution estimated in 2019 that 128,000 Pakistanis die annually due to air pollution-related illness. The damages of flood continued in the months of June and July 2023 when 160 people were killed due to lack of preventive measures. Around 1,00,000 people were evacuated from affected areas. Frequent evacuations and displacements cause multiple psychological, social and cultural complexities among natives. People feel deprived for not having proper rescue facilities and basic needs i.e. food, shelter, clothing and medication in remote areas (Maqbool, 2023).

Climate Change is Augmenting Social Inequality in Pakistan: Vicious Cycle

Initial inequality causes the disadvantaged groups to suffer disproportionately from the adverse effects of climate change resulting in greater subsequent inequality. More exposure of the underprivileged groups to the adverse effects of climate change. Increase in their vulnerability to destruction caused by climate change. Decrease in their ability to manage and recover from the damage suffered. In this regard, environmental governance is vital for improving the social dimension of governance in Pakistan. The traditional capitalist/Industrialist class in Pakistan emphasizes economic expansion while ignoring ecological health; the "whole cost" of economic progress frequently includes environmental damage while making underprivileged sections of society comparatively more vulnerable to calamities. These discriminations accentuate the weaknesses of the societal structure and makes the credibility of concerned authorities like Disaster Management Department more doubtful.

Environmental degradation costs the country at least 6 percent of GDP (Rs. 365 billion per year): these costs fall disproportionately upon the poor. Air pollution (indoor & outdoor), diarrheal diseases and typhoid due to inadequate water supply, sanitation and hygiene and reduced agricultural productivity due to soil degradation

are more affecting low socio-economic classes due to lack of access to health, technological resources, and preventative measures. An impoverished area lacks resources to adapt to the impacts of climate change. They often reside in high-risk zones prone to flooding and sea-level rise, with inadequate infrastructure and limited access to healthcare and education. Low–income groups especially those reliant on agriculture or natural resources for livelihoods, face grave loss of income due to devastation by climate change. Flood-affected areas are more poverty-striken. Therefore, socio-economic asymmetries keep on increasing among privileged and under-privileged people, between historically neglected provinces like Balochistan and relatively developed Punjab. Infect the corollaries of climate change are multifarious in Pakistan (Siddiqui et al., 2012).

Efforts to address issues of climate change in Pakistan require inclusive measures that prioritize vulnerable communities, improve access to resources and promote sustainable livelihoods. Furthermore, there is also a need to ensure equitable distribution of benefits from rehabilitation plans and relief packages. Environmental governance is vital for improving the social dimension of governance in Pakistan. The traditional capitalist/Industrialist class emphasizes economic expansion while ignoring ecological health; the "whole cost" of economic progress frequently includes environmental damage while making underprivileged sections of society comparatively more vulnerable to calamities. Floods in 2022 caused the death of 1700 people and left 33 million families homeless. About one million livestock were perished. Environmental degradation costs the country at least 6 percent of GDP (Rs. 365 billion per year) these costs fall disproportionately upon the poor.

The neighboring country India is making a lot more investment in green economy providing different packages to various classes. The state authorities have been creating this cognizance that the protection of environment is possible through both traditional and non-traditional techniques. Indian government committed to reduce carbon emission up to 25 % from the level of 2005 and expand greater capability for energy security through renewables, mainly solar power. India is principally focusing on poverty eradication to uplift socially and economically backward classes to guarantee future for green growth. Pakistan government necessitates to set priorities for green energy to usher ecological balance in South Asian region. Environment Ministry entails to upgrade agenda for national action plans to counter climate change.

Pakistan's Initiatives for Green Governance: SWOT (Strengths, Weaknesses, Opportunities & Threats) Analysis

Green governance involves the implementation of policies, strategies, and initiatives aimed at sustainable environmental with management, conservation, and eco-friendly practices. In Pakistan, efforts are based on various initiatives and policies to combat climate change. In addition to this, the government of Pakistan formulated various programs to promote sustainability and environmental protection. In 2022, Pakistan took several measures against climate change. Though there are certain problems and weaknesses on the part of state authorities however, various steps were taken to augment the strengths of concerned departments during last few decades.

- The Environmental Protection Act of 1997 is a crucial legislation in Pakistan for safeguarding the environment and natural resources. It provides a framework for environmental protection, pollution control and the conservation of natural resources throughout the country. It also establishes the Pakistan Environmental Protection Agency responsible for environmental impact assessments, waste management, and air and water quality standards.
- In 2012, Pakistan introduced a national climate change policy that focused on multiple domains such as agriculture, water resources, energy and water waste management to enhance more reservoirs. Concerned authorities require to take constructive initiatives for the move towards safe industrialization to meet the challenges of modern time. Textile sector necessitates to restructure with modern equipment to dispose of waste and avoid water and air pollution (Imran, Z, 2013).
- In 2018, an ambitious reforestation step was taken to plant ten billion trees across the country to improve biodiversity and mitigate the effects of climate change. As the process of urbanization damaged natural resources in Pakistan. Henceforth, there is a growing need to cultivate more plants.
- Wind, solar, and hydropower renewable energy projects are promoted by the Alternative Energy Development Board of Pakistan. Multiple projects have been formulated to increase resilience against climate change impacts. The use of renewable sources is little bit slow. Henceforth, public-private partnership essentially contributes to enlarge green energy ventures. CPEC projects have much scope for climate compatibility plans.
- Pakistan is a signatory to international agreements, such as the Paris Agreement, outlining its commitment to reducing greenhouse gas emissions.
- The government of Pakistan is taking a lot more progressive steps to educate the public about alarming situations of climate change through the medium of seminars and workshops to opt environmentally friendly environment.
- Pakistan is also the signatory of various international agreements[1] for water conservation. Therefore, action-oriented water sector adaptation strategies to increase water reservoirs is a prerequisite to meet the challenges of climate change. In this connection the Framework for Implementation of Climate Change Policy is a federal instrument to guide all the relevant departments to opt counter strategies. South Asian region is not only volatile due to climate vulnerabilities but also faces certain transboundary riparian issues. India and

[1] United Nations Framework Convention on Climate Change (UNFCCC) 1992, Sendai Framework for Disaster Risk Reduction 2015- 2030, Sustainable Development Goals (SDGs), United Nations Convention to Combat Desertification 1994, Indus Water Treaty 1960, Ramsar Convention on Wetlands of International Importance 1971, Convention Concerning the Protection of World Cultural and Natural Heritage 1972.

Afghanistan built various dams to store water on shared rivers leaving insufficient amount of water for Pakistan. This is affecting irrigation system in Pakistan. More storage capacity requires for flood and rain water to avoid massive destruction in agricultural sector (Iqbal & Khan, 2018).

- After 18th amendment in the 1973 constitution, environment ministry was delegated to provinces that created certain ambiguities between centre and provinces regarding water management. Provinces lack capacity and resources to implement environment related mechanisms.

- Similarly, FICCP needs to expand framework for marine ecosystem. There is a 1000km long coastline along Arabian Sea. Comprehensive plan of action necessitates to safeguard fishing industry, shipyards and support blue economy in Pakistan. The current political turmoil hampers democratic sustainability and diverts the attention of state authorities from core issues to internal political collusions.

- Climate Change Policy 2021 and National Adoption Plan to Build Resilience is a productive step towards green governance. The reforestation initiative is central to a wide-ranging plan by the Pakistani government and the Billion Tree Tsunami Project (BITP) by the PTI government to revive forest and wildlife resources (provided green jobs through green stimulus to 84,609 daily wagers). The government announced a new electric vehicle policy and plans to get 2/3 of its electricity from wind, solar, and hydropower by 2030.

- Civil society and educational institutions are vital for creating awareness among people to prevent environmental degeneration through social dialogue, conferences, collaborative research, inclusive approach for all communities and establishing ground-breaking trends for accountability.

- Few Economists in Pakistan talk about the ‘Green Economy’. Contemporary problems like deforestation, unsustainable agricultural practices, urbanization, and industrial emissions need financial contribution. Powers are delegated to the Provincial Government under section 26 which further delegated powers to Environment Protection Agencies. The absence of Local Government hampers the execution of policies at the operational level. Political and social agents in society like political parties and NGOs are raising slogans in their agendas and campaigns to opt policies for secure environment in future. Substantial investments in people-centric climate adaptation resilience expand the social protection system by involving people in green economics.

- In the context of a green economy in Pakistan, addressing social discrimination is crucial. Pakistan needs ‘Green Politics’ to develop massive strength to build national consensus and policies should ensure equitable access to resources and

opportunities, especially for marginalized communities. By fostering inclusive strategies and empowering marginalized groups through education, employment, and participation in decision-making processes, a green economy can strive for fairness and social justice alongside environmental sustainability (Mahmood et al., 2016).

- Climate change has indeed multiple implications for Pakistan, leading to issues like erratic weather patterns, increased heat waves, and water scarcity. No doubt, that international organizations are making very effective contributions towards Pakistan to mitigate negative effects of climate change. They offer funding, technical expertise and policy guidance to develop climate-resilient infrastructure, promote renewable energy, improve water management, and implement sustainable agricultural practices. Additionally, the United Nations, the World Bank, and the Asian Development Bank play a crucial role in collaborating with the Pakistani government to raise awareness, build capacity and implement strategies to address challenges of climate change.

Role of International Institutions to Mitigate Climate Change:

The International Energy Agency (IEA) is an intergovernmental organization that provides analysis and recommendations on global energy policy which collaborates with Pakistan in various capacities to support the country's energy sector development. The IEA assists Pakistan in improving energy efficiency, adopting cleaner energy sources and enhancing the overall sustainability of its energy infrastructure. Pakistan, like many other nations, utilizes the Intergovernmental Panel on Climate Change reports and recommendations to inform its climate policies, set targets for reducing greenhouse gas emissions, develop adaptation strategies to cope with climate impacts like water scarcity and extreme weather events, and seek international support for climate-related initiatives.

The Kyoto Protocol, an international treaty aimed at reducing greenhouse gas emissions, required participating countries to set emission reduction targets. Pakistan, as a non-Annex I country under the Kyoto Protocol, was not obliged to reduce emissions but could participate in clean development mechanism projects which allowed industrialized countries to invest in emission-reducing projects in developing nations. Pakistan's involvement in the Kyoto Protocol primarily revolved around participating in CMD (Climate Moisture Deficit) projects to attract investment in clean energy, renewable projects, and sustainable development projects. Moreover, Pakistan engaged in various projects focusing on renewable sources, energy efficiency, and benefiting from technology transfer and financial assistance from annex I countries to tackle its environmental challenges within its framework of the Kyoto Protocol.

As a signatory to the UNFCC, Pakistan participates in its conferences where countries discuss and negotiate agreements related to climate change mitigation, adaptation, finance, and technology transfer. Pakistan presents its national climate action plans, shares its challenges regarding climate change impacts, and collaborates with other nations to address common concerns. The Montreal Protocol aimed at protecting the ozone layer by phasing out the production and consumption of ozone-depleting substances. Pakistan as a signatory to the Montreal Protocol, has

been actively involved in adhering to the phased reduction of ODS (Ozone Depleting Substances). By complying with the protocol requirements, Pakistan has contributed to the reduction of substances like chlorofluorocarbons, which not only deplete the ozone layer but also act as potent greenhouse gases contributing to global warming. (Mendelsohn, R., Dinar, A., & Williams, L., April 2006).

Paris Agreement 2015 an international treaty on climate change with 195 signatories aims to combat climate change by restraining global warming to well below 2 degrees Celsius above pre-industrial levels, with efforts to pursue a more ambitious target of 1.5 degrees Celsius. Pakistan has committed to reducing its greenhouse gas emissions, enhancing resilience to climate impacts, and contributing to global efforts to address climate change. Pakistan's Nationally Determined Contributions outlines its plans to mitigate emissions, adapt to climate change impacts, and foster sustainable development. Through these various roles and engagements, Pakistan aims to mitigate the adverse effects of climate change, build resilience, and contribute to global efforts to combat this pressing issue.

Conclusion

From the aforementioned discussion, it is concluded that Pakistan faces significant challenges due to climate change including increased frequency of extreme weather events, melting glaciers leading to natural disaster, water scarcity, and agricultural disruptions. The concept of green governance emphasizes the interconnection between environmental health, societal well-being, and economic development. It requires government institutions, businesses, and communities to work collaboratively, adopting holistic approaches to address environmental challenges. No doubt that implementing green governance entails fostering transparency, accountability, and participation in decision-making, promoting eco-friendly technology, supporting renewable energy, enforcing environmental regulations, and engaging in global partnerships for sustainable development.

The country has taken proactive steps to mitigate these impacts, engaging actively with international organizations, aligning policies with global agreements like the Paris Agreement assessing climate finance, and implementing adaption and mitigation strategies. However, there is still much need to be done. Pakistan continues to face hurdles in implementing comprehensive climate actions due to resource constraints, infrastructure limitations, and completing socio-economic policies. Addressing these challenges requires sustained efforts, increased investment in renewable energy, better water management, enhanced agricultural practices and increased public awareness. Despite these challenges, Pakistan's commitment to combating climate change through international collaborations and localized strategies remains crucial in safeguarding its environment, economy and people from the detrimental effects of a changing climate.

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