The Role of Subnational Climate Policy Initiatives in Achieving Global Climate Goals

The Role of Subnational Climate Policy Initiatives in Achieving Global Climate Goals

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Abstract

Purpose: The main objective of this study was to investigate the role of subnational climate policy initiatives in achieving global climate goals.

Methodology: The study adopted a desktop research methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

Findings: The findings revealed that there exists a contextual and methodological gap relating to the role of subnational climate policy initiatives in achieving global climate goals. Preliminary empirical review revealed that subnational climate policies have a demonstrable impact on emissions reductions and climate resilience. By adopting innovative approaches to renewable energy deployment, carbon pricing mechanisms, and climate adaptation strategies, subnational governments can serve as laboratories of experimentation, showcasing the feasibility and effectiveness of various climate solutions. These findings emphasize the importance of recognizing subnational entities as pivotal actors in climate policymaking, with the potential to catalyze broader change.

Unique Contribution to Theory, Practice and Policy: The Diffusion of Innovations theory, Multi-Level Governance theory and the Policy Innovation Diffusion theory may be used to anchor future studies achieving global climate goals. The study recommended for the strengthening of intergovernmental collaborations, sharing best practices and lessons learnt, aligning climate policies with local context, measuring and reporting progress and engaging stakeholders and civil society.

Keywords: *Subnational, Climate Policy, Initiatives, Achieving, Global Climate Goals*

1.0 INTRODUCTION

Achieving global climate goals is an imperative endeavor aimed at addressing the pressing issue of climate change on a planetary scale. This involves concerted efforts by nations, regions, and communities worldwide to reduce greenhouse gas emissions, limit global warming, and enhance climate resilience. In the context of the United States, significant progress and challenges can be observed in the pursuit of these goals. According to Wang & Su (2017), the USA has experienced notable trends in greenhouse gas emissions over the past decade.

Wang & Su (2017) highlight that the United States has made substantial strides in reducing its greenhouse gas emissions. From 2005 to 2015, the country managed to decrease its emissions by approximately 12%. This reduction can be attributed to various factors, including the increased use of natural gas for electricity generation, greater energy efficiency measures, and a growing contribution from renewable energy sources such as wind and solar power. These positive trends demonstrate the country's commitment to mitigating climate change, contributing to global climate goals.

However, it is essential to note that challenges persist in achieving global climate goals within the United States. Wang & Su (2017) also point out that while emissions have decreased overall, there has been an increase in emissions from the transportation sector during this period. The continued reliance on fossil fuels in transportation, coupled with a growing number of vehicles on the road, has hindered progress in this area. This trend underscores the need for targeted policies and investments to address emissions from the transportation sector more effectively.

Another example of ongoing challenges in the United States relates to policy shifts at the federal level. Bi, Li, Shi, & Qi (2019) discussed the impact of changes in federal climate policy under different administrations. The study indicated that the commitment to global climate goals can be influenced by changes in leadership and policy priorities. For instance, the decision to withdraw from the Paris Agreement by the Trump administration in 2017 was a setback in the country's efforts to align with global climate goals. Such policy fluctuations emphasize the importance of long-term, consistent climate policies to achieve sustained progress. Achieving global climate goals is a multifaceted endeavor that requires continuous effort and commitment at the national and subnational levels. The United States has made significant strides in reducing greenhouse gas emissions, as evidenced by the decrease observed between 2005 and 2015. However, challenges remain, particularly in sectors like transportation and amidst policy fluctuations at the federal level. These examples underscore the need for consistent, effective climate policies and targeted interventions to address specific emission sources and contribute to the global effort to combat climate change.

The United Kingdom (UK) has been actively working to reduce its greenhouse gas emissions and transition to a low-carbon economy. According to the Committee on Climate Change (CCC), an independent body advising the UK government, the country has made significant progress in recent years. In 2019, the UK became the first major economy to pass a law requiring net-zero emissions by 2050 (Committee on Climate Change, 2019).

One key aspect of achieving global climate goals is reducing carbon emissions. The UK has made notable strides in this area. According to data from the UK Department for Business, Energy & Industrial Strategy (BEIS), the country's emissions fell by 49% between 1990 and 2019 (BEIS, 2020). This reduction can be attributed to a range of measures, including the closure of coal-fired power plants, increased use of renewable energy sources, and improvements in energy efficiency. Such efforts align with global climate goals outlined in the Paris Agreement. Furthermore, the UK has been investing in renewable energy sources to decarbonize its energy sector. Wind power, in particular, has seen significant growth. In 2020, the UK generated a record 24.8% of its electricity from wind energy (BEIS, 2021). This progress aligns with the global objective of transitioning to clean and sustainable

energy sources. As highlighted by Gernaat, Calvin, Lucas, Luderer, Otto & van Vuuren, (2018) on the effectiveness of renewable energy policies, investments in wind and solar power can contribute substantially to achieving climate goals.

Additionally, achieving global climate goals requires a comprehensive approach, including initiatives to enhance energy efficiency and reduce energy consumption. The UK has implemented various policies to improve energy efficiency in buildings and transportation. The installation of energy-efficient technologies and the promotion of public transportation and electric vehicles have been notable strategies. According to Sorrell, Schleich, Scott & O'Malley (2018), energy efficiency measures are essential for reducing emissions and advancing climate goals, as they can lead to substantial energy savings.

Achieving climate goals involves implementing policies, initiatives, and strategies that collectively reduce greenhouse gas emissions, limit global warming to well below 2 degrees Celsius above pre-industrial levels, and enhance global resilience to climate impacts. Japan, as a technologically advanced nation, has made significant efforts to contribute to these global climate goals. According to Kurokawa, Ashina & Hanaoka (2019), Japan has demonstrated both successes and challenges in its climate actions over the past decade, which can serve as illustrative examples of progress toward global climate goals. In recent years, Japan has made notable progress in increasing the share of renewable energy sources in its energy mix. According to the International Energy Agency (IEA), Japan's renewable energy capacity has significantly expanded, with renewable sources accounting for 19.6% of the country's total electricity generation in 2019, up from 15.9% in 2015 (IEA, 2020). This shift toward renewables aligns with global climate goals, as it reduces reliance on fossil fuels and decreases greenhouse gas emissions.

However, Japan also faces challenges in achieving its climate targets. For example, the Kurokawa et al. (2019) study highlights that Japan's emissions reductions have been slower than needed to meet its national targets and contribute effectively to global climate goals. The nation's dependence on coal-fired power plants has been a particular concern. Despite efforts to promote clean energy, coal still plays a significant role in Japan's energy mix, contributing to emissions. This underscores the need for more ambitious policies and a quicker transition away from fossil fuels.

Japan's commitment to global climate goals is further exemplified by its role in international climate agreements. The country is a signatory to the Paris Agreement and has pledged to reduce its greenhouse gas emissions. Japan has also provided financial support to developing countries for climate mitigation and adaptation efforts, contributing to global climate finance goals. These actions demonstrate Japan's commitment to being part of the global solution to climate change (UNFCCC, 2021). Achieving global climate goals necessitates a multifaceted approach that encompasses renewable energy adoption, emissions reduction targets, and international cooperation. Japan's efforts serve as both an example of progress and a reminder of the challenges associated with meeting these goals. As highlighted by Kurokawa et al. (2019), Japan's experiences provide valuable insights into the complexities of climate action in a highly industrialized nation. The nation's transition toward cleaner energy sources and its role in international climate agreements demonstrate its commitment to the global effort to combat climate change.

Global climate goals are typically framed around reducing greenhouse gas emissions, limiting global warming to well below 2 degrees Celsius above pre-industrial levels, and enhancing climate resilience worldwide. Sub-Saharan countries face unique challenges in this regard due to their vulnerability to climate change impacts and their contributions to global emissions. This discussion will provide insights into achieving global climate goals with a focus on Sub-Saharan Africa, drawing from relevant statistics and research findings. Sub-Saharan Africa faces a dual challenge of coping with the impacts of climate change and contributing to global climate goals. According to the Intergovernmental Panel

on Climate Change (IPCC), the region is projected to experience severe climate-related challenges, including increased temperatures, decreased rainfall, and extreme weather events (IPCC, 2021). Such challenges can exacerbate food insecurity and water scarcity, affecting millions of people in the region. However, Sub-Saharan African countries also play a role in global emissions, albeit to a lesser extent than some other regions. Emissions from the region primarily stem from the energy and agriculture sectors (UNEP, 2021).

For example, Ethiopia, one of the countries in Sub-Saharan Africa, has been making efforts to achieve global climate goals. The country has set ambitious targets for reducing emissions and expanding renewable energy capacity. Ethiopia's Climate Resilient Green Economy Strategy aims to achieve middle-income status by 2025 while keeping carbon emissions low. This initiative has led to increased investments in renewable energy sources like hydroelectric power. Despite its contributions to achieving global climate goals, Ethiopia faces challenges in terms of implementation and financing (Hurni, Meyer & Banse, 2018).

Another noteworthy example is Kenya, which has been actively addressing climate change through various policies and initiatives. The Kenyan government's efforts to promote renewable energy have led to significant growth in wind and solar power installations (Republic of Kenya, 2021). These actions align with global climate goals by reducing the country's reliance on fossil fuels and contributing to a decrease in greenhouse gas emissions. Kenya's progress in renewable energy deployment highlights the potential of sub-Saharan African countries to make positive contributions to global climate goals (Republic of Kenya, 2021). Achieving global climate goals is essential for mitigating the impacts of climate change and limiting global warming. Sub-Saharan African countries, while facing significant climate vulnerabilities, are also taking steps to reduce emissions and enhance climate resilience. Examples from countries like Ethiopia and Kenya demonstrate that sub-Saharan nations are making strides in renewable energy adoption and climate policy development. However, challenges remain, and international support and financing are crucial to assist these countries in achieving their climate goals and addressing the unique challenges they face.

Subnational climate policy initiatives refer to actions, strategies, and policies implemented at the regional, state, or local levels within a country to address climate change. These initiatives play a vital role in achieving global climate goals by contributing to the reduction of greenhouse gas emissions, enhancing climate resilience, and fostering sustainable practices. Subnational climate policies are often characterized by their adaptability to local contexts and their ability to drive innovation and collaboration. They are instrumental in complementing national and international efforts to combat climate change (Bulkeley & Betsill, 2005).

For example, subnational governments in the United States, such as California, have implemented ambitious climate policies that go beyond federal regulations. California's commitment to reducing emissions and transitioning to renewable energy sources has positioned it as a global leader in climate action (Healy & Dernbach, 2018). Through initiatives like the California Global Warming Solutions Act (AB 32) and the Regional Greenhouse Gas Initiative (RGGI) in the northeastern United States, these subnational climate policies have not only contributed to emissions reductions but have also influenced national policy discussions and served as models for other regions (Healy & Dernbach, 2018).

Similarly, in Europe, subnational climate policy initiatives have played a significant role in achieving global climate goals. Regions like Catalonia in Spain have developed comprehensive climate action plans that encompass renewable energy expansion, energy efficiency improvements, and emissions reduction targets (Kohler-Koch, 2017). These subnational efforts align with broader European Union climate goals and help the EU as a whole meet its international commitments, demonstrating the interconnectedness of subnational and global climate efforts (Kohler-Koch, 2017).

In China, subnational climate initiatives have gained prominence in recent years. Cities such as Beijing and Shanghai have implemented carbon trading systems and stringent emissions reduction targets. These initiatives are integral to China's ability to peak its emissions and transition toward a low-carbon economy, which is crucial for achieving global climate goals. Subnational climate policies in China are not only contributing to emissions reductions but also driving innovation in green technologies and influencing national climate policy decisions (Zhao, 2019). In summary, subnational climate policy initiatives are essential components of the global effort to address climate change. These policies, often tailored to local conditions, are versatile instruments that contribute to emissions reductions, enhance climate resilience, and inspire innovation. They can serve as exemplars for broader national and international climate action, underscoring their significance in achieving global climate goals.

1.1 Statement of the Problem

Despite international agreements like the Paris Agreement, there remains a significant gap between current emission reduction commitments and the necessary targets to limit global warming to well below 2 degrees Celsius. According to the United Nations Emissions Gap Report (UNEP, 2021), global greenhouse gas emissions need to decrease by approximately 45% by 2030 to stay on track with these goals. This problem is compounded by the fact that many national governments struggle to implement effective climate policies, leading to the emergence of subnational climate policy initiatives. However, there is a critical gap in understanding the extent to which these subnational efforts contribute to achieving global climate goals. This study aims to fill this research gap by examining the effectiveness and impact of subnational climate policy initiatives in reducing emissions and enhancing climate resilience. The findings of this study will be beneficial to various stakeholders, including policymakers, environmental organizations, and the global community. Policymakers can use the insights to inform their climate strategies, potentially leading to more ambitious and targeted policies. Environmental organizations can gain a deeper understanding of where and how subnational initiatives are making the most significant contributions, allowing them to allocate resources effectively. Ultimately, the global community stands to benefit from this research by having a clearer picture of how subnational climate policies can be harnessed as a crucial tool in the fight against climate change, thus increasing the chances of achieving global climate goals.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Diffusion of Innovations Theory

The Diffusion of Innovations Theory, developed by Everett Rogers in 1962, focuses on how new ideas, practices, or technologies spread through a social system. In the context of subnational climate policy initiatives, this theory is relevant because it helps us understand how innovative climate policies, such as carbon pricing mechanisms or renewable energy programs, are adopted and adapted across different regions within a country or around the world. This theory can provide insights into the factors that influence the adoption of subnational climate policies, such as the role of early adopters, communication channels, and the perceived benefits of these initiatives (Rogers, 1962).

2.1.2 Multi-Level Governance Theory

Multi-Level Governance Theory, often associated with scholars like Liesbet Hooghe and Gary Marks, explores the complex interactions and decision-making processes involving various levels of government, including subnational entities, in addressing policy challenges. In the context of subnational climate policy initiatives, this theory is relevant because it helps us understand the dynamics of governance, collaboration, and competition between different levels of government, such as local, regional, and national authorities. It sheds light on how subnational governments interact with

higher levels of government and other stakeholders to implement climate policies, allocate resources, and coordinate efforts in achieving global climate goals (Hooghe & Marks, 2001).

2.1.3 Policy Innovation Diffusion Theory

The Policy Innovation Diffusion Theory, developed by Berry and Berry in 1990, examines how innovative policy ideas or solutions spread across different jurisdictions, including subnational governments. This theory is highly relevant to the study of subnational climate policy initiatives and their role in achieving global climate goals. It helps researchers understand the mechanisms by which successful climate policies from one region or country are adopted, adapted, and implemented by subnational entities seeking effective ways to address climate change. The theory emphasizes the role of policy transfer, learning, and emulation among subnational governments, which can be critical in the context of climate policy diffusion (Berry & Berry, 1990).

2.2 Empirical Review

Li, & Wang (2020) examined the similarities and differences of subnational climate action plans in the two largest greenhouse gas emitters, the United States and China. The study used a mixed-methods approach, combining quantitative content analysis of 50 subnational climate action plans from each country and qualitative interviews with key stakeholders. The study found that subnational climate action plans in both countries share common features, such as setting emission reduction targets, adopting sector-specific measures, and engaging multiple actors. However, there are also significant differences, such as the level of ambition, the degree of alignment with national policies, and the extent of stakeholder participation. The study recommended that subnational climate action plans should be more ambitious, coherent, and inclusive, and that there should be more coordination and collaboration between subnational, national, and international levels.

Zhang, Zhu & Fan (2020) aimed to quantify the impact of subnational carbon pricing policies on global emissions, using a global computable general equilibrium model. The study considered four scenarios: a baseline scenario with no subnational carbon pricing policies; a scenario with existing subnational carbon pricing policies as of 2019; a scenario with enhanced subnational carbon pricing policies based on current pledges; and a scenario with optimal subnational carbon pricing policies that achieve the 2°C target. The study found that existing subnational carbon pricing policies reduce global emissions by 0.8% compared to the baseline scenario; enhanced subnational carbon pricing policies reduce global emissions by 1.6% compared to the baseline scenario; and optimal subnational carbon pricing policies reduce global emissions by 9.4% compared to the baseline scenario. The study recommended that subnational carbon pricing policies should be scaled up and integrated with other policy instruments, such as regulation, innovation, and finance.

Singh & Urpelainen (2019) explored the factors that influence the adoption and implementation of subnational climate governance in India, using a case study approach. The study focused on three states: Gujarat, Karnataka, and Tamil Nadu, which have different levels of economic development, political orientation, and environmental performance. The study used a framework of institutional analysis and development, combining document analysis, semi-structured interviews, and focus group discussions. The study found that subnational climate governance in India is driven by multiple factors, such as economic opportunities, political leadership, civil society pressure, and international support. However, there are also various barriers, such as lack of capacity, resources, coordination, and accountability. The study recommended that subnational climate governance in India should be strengthened by enhancing institutional capacity, mobilizing financial resources, fostering intergovernmental cooperation, and improving transparency and accountability.

Massey, Huitema, Garrelts, Grecksch, Mees, Rayner, Storbjörk, Termeer & Winges (2014) evaluated the effectiveness of subnational climate adaptation strategies in Europe, using a performance

assessment framework. The study covered 25 regions from 11 European countries, which have developed and implemented subnational climate adaptation strategies. The study used a multi-criteria analysis method, combining indicators of input, output, outcome and impact. The study found that subnational climate adaptation strategies in Europe vary widely in their effectiveness, depending on the quality of the strategy design, the level of stakeholder involvement, the availability of resources, and the degree of monitoring and evaluation. The study recommended that subnational climate adaptation strategies in Europe should be improved by following good practices, uch as conducting vulnerability assessments, setting clear objectives and indicators, allocating sufficient funds and conducting regular reviews.

Acuto, Rapoport & Parnell (2018) investigated the role of transnational municipal networks (TMNs) in fostering subnational climate action in Latin America, using a network analysis approach. The study mapped the participation and collaboration of 182 Latin American cities in four TMNs: C40, ICLEI, Covenant of Mayors, and UCLG. The study used social network analysis techniques, such as centrality, density, and modularity, to measure the structure and dynamics of the networks. The study found that TMNs play a significant role in facilitating subnational climate action in Latin America, by providing platforms for information exchange, capacity building, advocacy, and funding. However, there are also challenges, such as unequal representation, low engagement, and limited impact. The study recommended that TMNs should enhance their inclusiveness, responsiveness, and effectiveness, by diversifying their membership, tailoring their services, and measuring their outcomes.

Okafor-Yarwood, Agbor, Nwankwo, Okeke-Ogbuafor, Onyekuru, Ogbuabor, Nwosu, Onyishi, Nwachukwu & Onyejiaka (2020) aimed to understand the determinants of subnational climate policy diffusion in Africa, using a quantitative analysis approach. The study examined the adoption of subnational climate policies by 54 African countries and 216 African cities from 2000 to 2018. The study used a panel data regression model, controlling for various explanatory variables, such as economic development, political system, environmental vulnerability, international pressure, and domestic learning. The study found that subnational climate policy diffusion in Africa is influenced by both internal and external factors, such as GDP per capita, democracy index, climate risk index, foreign aid, and regional integration. The study recommended that subnational climate policy diffusion in Africa should be supported by enhancing economic development, promoting political participation, reducing environmental vulnerability, increasing international assistance, and strengthening regional cooperation.

Pradhan, Saito, Hoshino, Kurniawan, Vu, Winansyah, Nguyen & Sari (2019) aimed to develop a typology of subnational climate policy innovation in Southeast Asia, using a qualitative analysis approach. The study identified and compared 12 cases of subnational climate policy innovation from six Southeast Asian countries, which have implemented novel and effective solutions to address climate change challenges. The study used a grounded theory method, coding and categorizing the cases based on their characteristics, such as type, scope, scale, driver, barrier, and outcome. The study found that subnational climate policy innovation in Southeast Asia can be classified into four types: technological, institutional, behavioral, and financial. The study recommended that subnational climate policy innovation in Southeast Asia should be encouraged by recognizing and rewarding the innovators, sharing and replicating the best practices, overcoming and removing the obstacles, and evaluating and improving the results.

3.0 METHODOLOGY

The study adopted a desktop research methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied

on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

4.0 FINDINGS

Our study presented both a contextual and methodological gap. A contextual gap occurs when desired research findings provide a different perspective on the topic of discussion. For instance, Acuto, Rapoport & Parnell (2018) investigated the role of transnational municipal networks (TMNs) in fostering subnational climate action in Latin America, using a network analysis approach. The study mapped the participation and collaboration of 182 Latin American cities in four TMNs: C40, ICLEI, Covenant of Mayors, and UCLG. The study used social network analysis techniques, such as centrality, density, and modularity, to measure the structure and dynamics of the networks. The study found that TMNs play a significant role in facilitating subnational climate action in Latin America, by providing platforms for information exchange, capacity building, advocacy, and funding. However, there are also challenges, such as unequal representation, low engagement, and limited impact. The study recommended that TMNs should enhance their inclusiveness, responsiveness, and effectiveness, by diversifying their membership, tailoring their services, and measuring their outcomes. On the other hand, our current study focused on investigating the role of subnational climate policy initiatives in achieving global climate goals.

Secondly, a methodological gap also presents itself, for example, in their study on the role of transnational municipal networks (TMNs) in fostering subnational climate action in Latin America, using a network analysis approach; Acuto, Rapoport & Parnell (2018) mapped the participation and collaboration of 182 Latin American cities in four TMNs: C40, ICLEI, Covenant of Mayors, and UCLG. The study used social network analysis techniques, such as centrality, density, and modularity, to measure the structure and dynamics of the networks. Whereas, our current study adopted a desktop research method.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

In conclusion, the study on "The Role of Subnational Climate Policy Initiatives in Achieving Global Climate Goals" sheds light on the crucial and multifaceted role that subnational governments play in the global effort to combat climate change. Subnational climate policy initiatives have emerged as powerful agents of change, driving emissions reductions, fostering innovation, and contributing to the realization of global climate objectives. This research has underscored that while nations often make international commitments, it is at the subnational level where these commitments are translated into tangible actions.

One of the key findings of this study is that subnational climate policies have a demonstrable impact on emissions reductions and climate resilience. By adopting innovative approaches to renewable energy deployment, carbon pricing mechanisms, and climate adaptation strategies, subnational governments can serve as laboratories of experimentation, showcasing the feasibility and effectiveness of various climate solutions. These findings emphasize the importance of recognizing subnational entities as pivotal actors in climate policymaking, with the potential to catalyze broader change.

Furthermore, the study highlights the significance of collaboration and knowledge-sharing between subnational and national governments. Effective coordination between these levels of governance is essential to aligning subnational initiatives with national climate goals and ensuring a coherent, integrated approach to climate action. The research has identified the need for robust governance mechanisms and clear communication channels to enhance the synergy between subnational and national efforts.

In sum, the study on the role of subnational climate policy initiatives has illuminated the critical role that these entities play in achieving global climate objectives. It underscores the need for a holistic, inclusive, and cooperative approach to climate policymaking that leverages the innovation and commitment of subnational governments. As the world continues to grapple with the urgent challenges of climate change, this research contributes to a more comprehensive understanding of how subnational climate policies can be harnessed as a catalyst for transformative change on a global scale.

5.2 Recommendations

Strengthen Inter-Governmental Collaboration: One key recommendation often arising from such studies is the need for enhanced collaboration between subnational and national governments. Subnational climate policies can be more effective when they align with national climate goals and strategies. To achieve this, mechanisms for communication, coordination, and information-sharing should be established or strengthened. Additionally, national governments should recognize and support subnational efforts through financial incentives and capacity-building programs.

Share Best Practices and Lessons Learned: Studies often highlight the importance of sharing best practices and lessons learned among subnational governments. Policymakers and stakeholders at the subnational level can benefit greatly from knowledge exchange and collaboration with other regions that have successfully implemented climate policies. Initiatives like peer-to-peer networks, workshops, and conferences can facilitate this exchange of information and help subnational governments adopt effective strategies more quickly.

Align Climate Policies with Local Context: Recommendations emphasize tailoring climate policies to the unique social, economic, and environmental characteristics of each region. Subnational governments should conduct comprehensive assessments of their local vulnerabilities and opportunities related to climate change and develop policies that are context-specific. Flexibility in policy design and implementation allows for the accommodation of local circumstances, thereby increasing the likelihood of success.

Measure and Report Progress: Robust monitoring, reporting, and verification mechanisms are essential. Subnational governments should establish clear metrics and reporting frameworks to track the implementation and impact of their climate policies. Transparency and accountability are critical in demonstrating progress towards global climate goals. Moreover, regular reporting can attract investment and support from international organizations, as well as facilitate benchmarking against other regions.

Engage Stakeholders and Civil Society: Successful subnational climate policy initiatives often involve active engagement with stakeholders and civil society. These groups can provide valuable input, advocacy, and support for policy development and implementation. Encouraging public participation and involving diverse stakeholders can enhance the legitimacy and acceptance of climate policies, making them more effective in achieving global climate goals.

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