

# An Examination of Taiwan's Policies in Responding to Climate Change

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## Abstract

This study explores Taiwan's climate strategies, highlighting both their strengths and areas for improvement. Initially, the paper provides an overview of Taiwan's current climate situation, establishing a baseline for understanding the existing policy landscape. It then critically evaluates the country's efforts concerning carbon emissions reduction, energy efficiency, and broader carbon-reduction initiatives implemented in recent years. The challenges encountered during the implementation of these strategies are thoroughly examined, leading to practical recommendations aimed at enhancing Taiwan's resilience to climate-related challenges. Key recommendations include improving policy coherence, enhancing risk mitigation strategies, increasing community involvement, refining oversight mechanisms, and supporting industrial evolution. This research seeks to guide future climate-focused policymaking in Taiwan by offering a comprehensive analysis and proposing innovative policy directions.

**Keywords:** Climate Change, Policy Implementation, Effectiveness evaluation, Climate Related Challenges

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## Introduction

### The contemporary landscape of global climate change

Global climate change remains one of the most daunting challenges the world faces today. Since the Industrial Revolution, human activities have consistently released greenhouse gases, leading to increased atmospheric concentrations of these gases. This increase has triggered various climate shifts, including rising global average temperatures, more frequent extreme weather events, and shrinking polar ice caps. The impacts of climate change affect the environmental, societal, economic, and health sectors across many nations and territories. According to a study published in the prestigious journal *Nature*, there has been an approximate 0.9°C increase in global temperatures over the last century, with the rate of this increase accelerating, highlighting the growing threat of climate change (Hansen et al., 2006). This rise in temperature poses direct and indirect risks to natural ecosystems and socio-economic structures, leading to inconsistent food supplies, heightened natural disasters, ecological degradation, and rising sea levels that threaten island nations like Taiwan.

In response, countries worldwide have developed strategic initiatives. Taiwan has taken significant steps by implementing policies aimed at reducing greenhouse gas emissions, adapting to climate changes, and transitioning to a low-carbon economy. However, effectively tackling Taiwan's unique climate challenges requires careful examination of its policies and constructive feedback on their effectiveness.

### Taiwan's crucial role in addressing climate change

Located at the confluence of tropical and temperate zones on Asia's northeast coast, Taiwan is home to a rich tapestry of ecological assets and a myriad of biodiversity. Yet, as the global climate transformation accelerates, Taiwan's vulnerability to its effects increases. A research article in the esteemed journal, *Science*, suggests that since 1981, Taiwan's temperature trajectory has exceeded the global average rate, placing Taiwan in a heightened vulnerability bracket concerning future climate shifts (Hsiang et al., 2011). This underscores Taiwan's critical role in combating climate change and highlights the urgent need for effective mitigation strategies. The threat of climate change could unleash a range of repercussions on Taiwan, including more frequent extreme weather patterns, unstable water reserves, ecological changes, damage to agriculture and fishing sectors, and socio-economic disruptions. These transformations could significantly hinder Taiwan's economic progress, disrupt societal balance, and alter its ecological harmony. Therefore, it is crucial for Taiwan to develop and implement strong and tailored climate countermeasures.

In response to these impending challenges, Taiwan's governing bodies are actively promoting policies that address climate change—ranging from initiatives to reduce greenhouse gas emissions, adapt to the changing climate, increase energy efficiency, and transition towards a low-carbon economy. However, a thorough analysis

of policy effectiveness and constructive critiques are essential to assess the strength of these strategies and strengthen them against the complex challenges that climate change imposes on Taiwan.

#### Research background and motivation

As the intensity of global climate change escalates, nations face increasing threats including erratic weather patterns, ecological shifts, and fluctuating water resources. Taiwan, with its advanced development and dense population, is particularly vulnerable to these climate-induced challenges. Acknowledging this, Taiwan's government is actively promoting adaptation strategies to mitigate the multifaceted impacts of climate change on its economy, society, and ecology. In the academic realm, much of the previous research has focused on the empirical and technical aspects of climate change, including climate projections and strategies for reducing greenhouse gas emissions. However, climate change is not solely a scientific issue; it involves complex interactions among political, economic, social, and ecological dimensions. This highlights a gap in the examination of government policies and strategies to address climate change.

This research aims to bridge this gap by analyzing and providing insights into Taiwan's approach to climate change, examining the effectiveness and challenges of the region's policy frameworks, goals, and mechanisms. Through a detailed assessment of existing policies and their implementation, we seek to gain a deep understanding of Taiwan's current climate change strategies and offer tailored policy recommendations. Ultimately, this study intends to enhance the Taiwanese administration's ability to develop robust and sustainable climate-focused policies, thereby strengthening Taiwan's resilience against the increasing challenges posed by climate change (Hsu & Chen, 2002).

### Research objectives and research questions

Amid the escalating consequences of global climate change, governmental bodies face increased risks, such as more frequent extreme weather events, ecological shifts, and water resource volatility. Taiwan, with its advanced development and dense population, is not exempt from these challenges. In response, Taiwan's leadership has been proactive in developing adaptive policies to address the economic, societal, and environmental effects of climate change.

Much of the existing literature has focused on the empirical and technical aspects of climate change, resulting in a noticeable gap in policy-oriented discourse. This research aims to shed light on Taiwan's policy landscape regarding climate change, exploring the effectiveness, complexities, and potential pitfalls of the strategies, objectives, and instruments utilized by the Taiwanese government. Specifically, our study will focus on the following critical questions: 1) What strategies has the Taiwanese government implemented to combat climate change, and how effective have they been? 2) What obstacles has the administration faced in implementing these climate-

centric policies? 3) Considering the inherent limitations and potential oversights of current strategies, this research will propose forward-looking policy advisories to enhance the government's approach to climate change.

By leveraging international research paradigms and methodologies, this study is set to perform a detailed analysis of Taiwan's climate change policies and subsequently provide actionable recommendations. Through this effort, we aim to offer valuable guidance not only for Taiwan's policymakers but also for other stakeholders striving to enhance their climate resilience (Lai et al., 2021).

## Research scope and methodology

The objective of this study is to provide a comprehensive policy analysis and offer recommendations regarding Taiwan's approach to addressing climate change challenges. To achieve this, the research will conduct a detailed examination of Taiwan's climate change policies, utilizing sources such as policy documents, relevant laws and regulations, government reports, and existing academic literature. Qualitative research methods, such as literature reviews and policy document analysis, will be applied to gain insights into the policy-making process, its objectives, and strategies. The findings will inform policy evaluations and recommendations.

To establish an appropriate research scope and methodology, references were made to several international journals and studies that focus on climate change strategies, including one that specifically examines Taiwan's adaptive measures. This particular study provided a multi-layered analysis of both the policy formulation and its implementation phases, offering a comprehensive overview of Taiwan's steps in addressing climate change (Chang et al., 2013). This prior work has significantly informed the organizational structures examined in this research and provided a substantial rationale for the selected focus and methods of this study

### Current status and trends of climate change

#### *Overview of global climate change*

Climate change is a critical environmental issue in contemporary times. The increase in greenhouse gas emissions, mainly due to human activities, is a primary driver of global climate shifts, leading to rising Earth temperatures. This increase in temperature has triggered various climate disturbances with extensive implications across ecological, societal, and economic dimensions. Authoritative sources such as the IPCC have noted an approximate increase of 1.1°C in global temperatures since the latter half of the 19th century. With the continuous rise in greenhouse gas emissions, future projections indicate an intensification of climate change severity. This trend is expected to lead to more frequent climatic extremes, including storms, droughts, and floods. The effects of these climate changes will leave a lasting impact on socio-economic structures, ecosystems, and the daily lives of people worldwide, with regions like Taiwan being no exception (Schleussner et al., 2016).

### Analysis of climate change status and trend in Taiwan

Located off the northeast shores of Asia, Taiwan is confronting the global impacts of climate change. Insights from notable international publications have placed Taiwan's climate trends under close examination. In recent years, the shifts in Taiwan's climate have become increasingly apparent. Research highlights a consistent rise in the nation's average temperature, with notably hotter summers. There has been a significant increase in the number of intensely hot days and prolonged heatwaves, presenting challenges for agriculture, environmental management, and public health. Additionally, changes in Taiwan's precipitation patterns are noticeable. There has been a greater concentration of rainfall and an increase in heavy downpour events, impacting water conservation, urban disaster management, and agricultural irrigation practices. Furthermore, Taiwan's coastal areas are experiencing an accelerated rise in sea levels, posing potential threats to its coastal ecological, social, and economic structures. If these climatic changes are not addressed, they could significantly affect Taiwan's socio-economic and ecological stability in the future, highlighting the need for thorough policy evaluations and adaptive measures (Lin et al., 2022)

### Analysis of Factors Affecting Climate Change in Taiwan

Taiwan's experience with climate change is influenced by a complex mix of natural and human factors. Internationally recognized research highlights that these factors significantly shape Taiwan's climatic patterns and trajectories. From a natural standpoint, global climatic changes, evidenced by rising average global temperatures, are reflected in Taiwan's climate records. Additionally, variations in significant atmospheric dynamics, such as the Asian monsoon and key circulation patterns like the Eurasian and Pacific Highs, influence Taiwan's climate characteristics, impacting its rainfall distribution and frequency of cyclonic events.

On the human side, activities such as industrial production and transportation contribute to climate change by increasing greenhouse gas concentrations in the atmosphere, thereby exacerbating global climate anomalies. Given its status as a rapidly industrializing center, Taiwan's carbon footprint is particularly significant. In summary, Taiwan's climate narrative is shaped by inherent factors like global climate shifts and atmospheric circulation changes, as well as by human-induced factors, primarily greenhouse gas emissions. A detailed examination of these influences is crucial for gaining a deeper understanding of Taiwan's climatic challenges and trends. Such insights are essential for stakeholders to develop effective, climate-focused policies (Chen et al., 2021).

### Climate change issues facing Taiwan

Consequences of climate alterations in Taiwan: from elevated sea levels and temperatures to severe weather events

Taiwan, as an island, is inherently vulnerable to the effects of climate change. Insights from prominent international research indicate that the factors influencing Taiwan's climate shifts are a combination of natural and

human-related causes. Naturally, Taiwan's location within the Asian monsoon belt makes it susceptible to monsoonal patterns, which significantly affect its precipitation patterns and overall climate variations. Recent times have seen an increase in extreme weather events in Taiwan, such as prolonged droughts and powerful typhoons, posing challenges to agriculture, water supply, and infrastructure.

On the human side, Taiwan's role as a major industrial center contributes significantly to greenhouse gas emissions, exacerbating the global climate crisis. Additionally, human activities such as changing land use, increasing urban sprawl, and expanding transportation networks lead to secondary climate impacts in Taiwan, including the urban heat island effect and challenges in water management. In conclusion, Taiwan's climate dynamics are shaped by a blend of environmental factors and human interventions. A thorough understanding of how these factors interact is crucial for policymakers and stakeholders to develop effective strategies that enhance Taiwan's resilience to the impending climate challenges (Hung & Chen, 2013).

#### Potential economic, social, and ecological ramifications of climate change for Taiwan

Taiwan, facing the ongoing challenges of climate change, finds itself at a critical juncture where economic, societal, and environmental impacts intersect. Research from respected international publications highlights a range of consequences, including economic difficulties, societal vulnerabilities, and ecological degradation. Economically, unpredictable weather events like typhoons and heavy rainfall endanger Taiwan's agricultural and marine industries. The consequences include crop destruction, declining fish populations, and damage to fisheries infrastructure, leading to reduced productivity and fewer job opportunities in these sectors. Furthermore, the integrity of vital infrastructure such as transportation, energy, and water systems could be compromised, challenging Taiwan's economic stability and growth prospects.

From a societal perspective, the emerging patterns of climate change may foster unrest. Extreme weather events, from droughts to floods, could compromise public health, lower life quality, and affect the well-being of the population. Particularly vulnerable are the elderly, economically disadvantaged, and rural residents, who may disproportionately suffer from these changes. Ecologically, Taiwan is at risk of significant environmental decline. Climate change threatens to diminish biodiversity, disrupt ecosystems, and disturb the ecological balance, thereby undermining the provision of ecosystem services. The expected rise in sea levels could transform ecological patterns, land use, and human settlements in coastal areas. Ultimately, Taiwan faces a complex climate challenge that intertwines economic, societal, and environmental concerns. A deep understanding of these interconnected impacts is essential for Taiwan's government to develop effective and responsive strategies.

#### Taiwan's current climate change response policies

##### Various measures taken by the Government of Taiwan

The Taiwanese government, as documented in renowned international journals, has implemented a

comprehensive range of strategies to combat the effects of climate change. These strategies encompass climate risk evaluations, adaptive measures, and mitigation efforts. Initially, the government undertook extensive climate risk assessments to identify and assess the vulnerabilities and threats posed by climate change across various sectors and regions. Research highlights Taiwan's efforts in conducting detailed climate change risk assessments, focusing on vulnerable territories and industries, which helps in prioritizing relevant policies (Yang & Ge, 2020). In terms of adaptation, the state has supported initiatives specifically designed to address the tangible impacts of climate change. These include promoting water stewardship through rainwater harvesting systems and enhancing water conservation efforts to safeguard against potential droughts and water shortages. Additionally, in response to urban challenges, there has been an emphasis on adjusting land use and urban planning to accommodate rising sea levels and erratic weather patterns (Tu & Yu, 2023).

On the mitigation front, the government has concentrated on reducing greenhouse gas emissions to slow climatic changes. This has involved fostering an energy transformation, increasing the use of sustainable energy sources, and enhancing energy conservation practices. Moreover, Taiwan actively participates in the global climate dialogue, setting emission reduction targets that align with international standards. In summary, Taiwan's proactive approach is evident in its comprehensive response to climate change, which includes risk assessments, adaptive strategies, and mitigation plans. These efforts are crucial not only for reducing the impact of climate change on Taiwan but also for strengthening its socio-economic and ecological resilience and fulfilling its international climate obligations.

#### Applicable legal frameworks, directives, strategies, and initiatives

Addressing climate change through policy interventions is crucial for Taiwan, involving a range of legislative frameworks, policy directives, and actionable plans. In an effort to proactively mitigate the impacts of climate change and promote sustainable growth, Taiwan has made significant legislative progress in recent years. Notably, the Climate Change Adaptation Act was introduced in 2015, quickly followed by the development of comprehensive strategies in 2016 aimed at mitigating the effects of severe weather events such as typhoons and rising sea levels. Additionally, the Taiwanese government has actively promoted sustainable growth models, as demonstrated by initiatives like the National Renewable Energy Action Plan and the blueprint for the National Center for Global Change Research, both aimed at reducing greenhouse gas emissions and encouraging sustainable development.

However, the process of translating these policy goals into effective outcomes faces several challenges. Some climate-responsive policies struggle with effective enforcement and are hindered by inadequate oversight mechanisms, leading to weakened impacts on the ground. Furthermore, the isolated nature of some policies can cause resource inefficiencies and suboptimal results. Therefore, there is a critical need to thoroughly examine these policies, assess their actual effectiveness, and suggest improvements. An article from the respected Climate Policy

journal highlights several key recommendations for global policymakers. It calls for the harmonization of policies and the promotion of inter-departmental collaboration to ensure seamless policy implementation. It also stresses the vital role of grassroots involvement, ensuring that policies meet local needs and gain community support. Additionally, the journal emphasizes the importance of robust oversight and evaluation mechanisms, advocating for transparency and effectiveness throughout the policy lifecycle. By incorporating these insights, Taiwan can refine its policy frameworks, making them more robust and effective in addressing the ongoing challenges of climate change.

#### Policy implementation and effectiveness evaluation of government agencies

The Taiwanese government has implemented a detailed strategy including laws, regulations, policies, and tactical plans to combat climate change. Nonetheless, the effectiveness of these measures in practice has sparked debate and scrutiny regarding the capabilities of governmental agencies. Scholarly research has been conducted to evaluate the efficiency and fidelity of execution by these agencies in relation to their climate change objectives. A significant study in 2020 by Chen and Lin explored the complexities of policy implementation in Taiwan. Their research highlighted various obstacles that hinder effective policy implementation, such as limited resources, poor inter-ministerial collaboration, and inconsistent policy alignment.

While the study recognized the significant progress made by government bodies in introducing relevant legislative frameworks and strategies for both mitigation and adaptation, it also identified critical bottlenecks. These include fragmented policy harmonization and uneven resource distribution across agencies. In essence, although Taiwan's plan for addressing climate change is comprehensive on paper, the actual execution by governmental entities faces significant challenges. Addressing these issues is crucial for achieving the desired outcomes of Taiwan's climate policies (Su et al., 2013).

#### Analysis of the advantages and disadvantages of policy measures

Taiwan has developed a comprehensive framework to tackle climate change, incorporating a range of policy tools including laws, regulations, policies, and strategic initiatives. However, a thorough evaluation is essential to determine the effectiveness and practicality of these measures. According to global research findings, Taiwan's current policies on climate change exhibit distinct strengths across the spectrum of policy instruments. The government has introduced significant legislative measures such as the Climate Change Response Law and the White Paper on Sustainable Energy Policy, which aim to guide and enhance climate-responsive actions. Furthermore, initiatives like the National Action Plan for Climate Change Adaptation and its counterpart for Mitigation provide clear directives for governmental bodies and stakeholders to coordinate their efforts in addressing climate challenges.

Despite these positive steps, there are noticeable gaps in the implementation of these policies. A lack of

synchronization and unity in policy deployment is apparent, with isolated efforts by various government entities sometimes leading to redundant actions and inefficiencies. The absence of a strong oversight mechanism complicates the evaluation of the policies' effectiveness at the ground level. Additional challenges include funding shortages, technological limitations, and varying levels of public support, all of which can affect the tangible outcomes of these policies. In summary, while Taiwan's framework for responding to climate change is supported by well-established laws, regulations, and plans, the implementation process is fraught with difficulties such as poor coordination, monitoring issues, and resource constraints. To strengthen its climate resilience, it is crucial for Taiwan to address these critical issues (Lee et al., 2022)

#### Assessment of measured potency, potential hurdles, and issues

In Taiwan, addressing climate change involves a comprehensive array of instruments, including laws, regulations, policies, and tactical plans. Understanding the real-world impact of these interventions requires thorough assessment. However, this evaluation process is fraught with complex challenges. The inherent complexity of climate change policies, due to their long-term scope and interconnected nature, means that the outcomes of these initiatives may not be visible for some time. Moreover, these policies are subject to a myriad of ever-changing factors, both temporally and geographically, necessitating a sustained and detailed analytical approach to accurately measure their effectiveness over extended periods.

The evaluation process is further complicated by the need for cross-disciplinary scrutiny and a robust data infrastructure, particularly in socio-economic areas where data may be limited or unreliable. This lack of data can affect the reliability and impartiality of the evaluation. Additionally, the political landscape plays a significant role, as climate change policies often disrupt established political and economic balances. The varied perspectives and vested interests of numerous stakeholders, including government bodies, interest groups, the corporate sector, and the general public, can influence the outcomes of policy assessments. To encapsulate, while it is vital to assess the effectiveness of Taiwan's climate change strategies, the task is complex, involving multi-dimensional policy issues, challenges with data, and the influence of stakeholder dynamics. Successfully navigating these complexities is crucial for conducting an unbiased and accurate evaluation of policy efficacy (Berkas et al., 2021).

#### Examination of Taiwan's strategies in addressing climate change

Dissecting the genesis and execution of Taiwan's climate change strategies, including policy background, aims, and instruments.

The research entitled "Policy Analysis and Suggestions for Taiwan's Climate Change Response Policies" explores the comprehensive strategy the Taiwanese government has implemented to address climate change. This study highlights the methods used in formulating and deploying policies, identifying their foundational elements: the policy background, objectives, and implementation tools. An article cited within the research suggests that the basis

for these policies likely stems from Taiwan's immediate and future climate challenges. These challenges include extreme weather events, rising sea levels, and decreasing water reserves, along with a commitment to meeting international climate change mitigation standards.

The goals of these policies include reducing greenhouse gas emissions, enhancing adaptive capabilities, protecting ecosystems and climate-vulnerable areas, and promoting a sustainability-focused development agenda. The mechanisms for achieving these goals encompass legislative measures, financial incentives, advancements in science and technology, widespread information sharing, and building international collaborations to fulfill the outlined objectives. The policy-making process, from development to execution, is influenced by various internal and external factors. These include the ideological orientations of the policy makers, the current political environment, stakeholder involvement and influence, and the logistics of funding and resource distribution. The government faces the challenge of balancing these dynamic factors to achieve policy goals while ensuring effectiveness, equity, and sustainable results (Hsu & Lin, 2013).

Assess the strengths and weaknesses of these strategies, Including the efficacy, practicality, and long-term viability

Drawing from analytical insights into Taiwan's climate change response policies, it is clear that the government has taken proactive steps in devising comprehensive measures to address the complex challenges posed by climate change. A key example of these efforts is the Environmental Protection Department of the Executive Yuan's 2015 blueprint, which outlined a national adaptation strategy to climate change, accompanied by supportive policies to mitigate environmental, societal, and economic impacts. On the positive side, Taiwan's climate-focused policies have made significant progress in specific sectors. The government has effectively reduced greenhouse gas emissions by promoting a shift towards more sustainable energy practices, enhancing energy efficiency, and encouraging the adoption of green energy sources. Additionally, the government has prioritized ecological conservation and disaster preparedness to protect both the environment and society from climate-related adversities.

However, the implementation of these policies is not without its challenges. The practical application of some policies requires substantial financial investments and technological expertise, which raises questions about their economic viability. Moreover, the long-term sustainability of these initiatives is vulnerable to the changing political landscape and societal dynamics. Factors such as policy consistency across different government tenures, societal acceptance, and public engagement play critical roles in determining the durability and effectiveness of these strategies (Shih, 2016).

Stakeholder analysis and evaluation

Within the scope of analyzing Taiwan's climate change response policies, stakeholder evaluation plays a

critical role. Stakeholders include all entities affected by or having influence over policy directions, ranging from government bodies and corporate entities to non-profit organizations, academic institutions, and the broader civil society. Conducting thorough stakeholder scrutiny can reveal how policies impact different groups, identify potential areas of conflict, and enhance the likelihood of policy durability and practicality. Research from an international academic journal emphasizes that government agencies are central to climate response strategies, overseeing policy design, financial support, and implementation. It is crucial for governmental units to engage proactively with all stakeholders during the policy formulation phase, taking into account their perspectives and needs, thus strengthening the fairness and credibility of the policies. Simultaneously, the corporate sector and NGOs play critical roles in the implementation phase, contributing their technical expertise, resources, and on-the-ground strategies.

However, the landscape is not without its conflicts. Corporations may primarily focus on economic benefits, while NGOs typically concentrate on ecological conservation and social fairness. This divergence necessitates governmental mediation to align these sometimes conflicting interests to ensure comprehensive policy outcomes. By conducting in-depth stakeholder evaluations, the government can refine its policies to better align with the expectations and concerns of all parties involved. Additionally, it is essential to establish lasting frameworks for collaboration, encouraging continuous dialogue and building rapport with stakeholders to prevent potential disputes and ensure unified efforts. Such collaborative engagements are fundamental to enhancing the strength, sustainability, and effectiveness of policies, which are crucial for the success of climate adaptation strategies (Shih & Tseng, 2014).

#### Issues and challenges in policy development and implementation

Taiwan's efforts to develop and implement climate change response policies are fraught with complexities and challenges, as highlighted by various international academic discussions. A significant challenge facing the Taiwanese government is the complexity involved in coordinating and integrating these policies. Common issues include unclear role definitions, overlapping responsibilities, and lackluster collaboration between agencies, which lead to fragmented and inconsistent policy planning and execution. Furthermore, the process of realizing these policies often faces resistance, either from opposition or lobbying by various stakeholder groups, which can significantly hinder the smooth implementation of policy initiatives. These obstacles underscore the need for more streamlined and effective policy management to overcome barriers and ensure the successful execution of Taiwan's climate strategies (Dupuis & Biesbroek, 2013).

#### Evaluation of policy effectiveness and efficiency

Within Taiwan's climate change mitigation framework, the importance of evaluating the effectiveness and efficiency of policies is paramount, necessitating thorough scrutiny and assessment. Numerous international academic publications have provided valuable insights into this area. Notably, one study applied system dynamics

A detailed and methodical evaluation of policies facilitates ongoing improvements, ensuring that strategies remain responsive to the dynamic nature of climate change. This evaluation framework not only identifies successful strategies that could be applied in other regions facing similar climate challenges but also promotes a culture of constant policy review and adaptation. Such an approach is crucial in enhancing policy outcomes and achieving the broader goals of climate change mitigation.

In Taiwan's climate change response policies, leveraging international experiences and conducting comparative research are instrumental for effective policy development and implementation. Numerous international studies offer valuable insights and recommendations through comparative analyses of climate change policies and measures adopted by various countries. For example, a study performed a global comparative analysis of climate change response policies and measures. The findings indicated that countries prioritize and implement diverse policy measures tailored to their specific needs, including strategies for reducing greenhouse gas emissions, managing climate-related risks, and enhancing climate risk communication. Furthermore, the study underscores the importance of cross-border cooperation and knowledge sharing in bolstering the effectiveness and innovativeness of climate change response policies. Such comparative research is invaluable in helping Taiwan refine its strategies by understanding and integrating best practices from around the world, thereby enhancing the efficacy and innovation of its own climate change policies.

To summarize, this research has conducted an in-depth examination of Taiwan's strategies for tackling climate change, highlighting the challenges present in current policies. It recognizes the achievements of the Taiwanese government in developing comprehensive climate change countermeasures, evidenced by the establishment of relevant statutes, regulations, directives, and operational frameworks, as well as mitigation and adaptation measures. However, the analysis also reveals several obstacles that compromise policy implementation, including the fragmentation of efforts, limited public involvement, and weak oversight mechanisms. To address these complexities, the study recommends several corrections: strengthening the unity of policy initiatives, enhancing risk management, increasing public engagement, improving execution and monitoring mechanisms, and

creating a supportive environment for industrial advancement. These recommendations aim to enhance the effectiveness of Taiwan's climate change strategies, better equipping the nation to handle future climatic challenges. The insights and advice provided in this research are intended not only for Taiwanese policymakers but also as valuable guidance for global leaders engaged in climate change mitigation.

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