

Climate Action Strategies under International Environmental Law: Pathways toward Sustainable Development

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Abstract

This study aims to analyze the climate action strategy and the role of international environmental law in guiding global efforts to enhance climate action and achieve sustainable development pathways. It highlights the contribution of international agreements, such as the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement, in promoting international cooperation and establishing effective environmental policies to address climate change. International conferences, including COP21 and COP26, alongside United Nations initiatives and plans, also play a pivotal role in supporting these pathways.

The study's findings indicate that international environmental law mechanisms face significant challenges that limit their effectiveness, most notably the pronounced disparity in implementation capacities among countries, alongside limited financing and weak technology transfer to developing nations. In this context, the study emphasizes the importance of strengthening international commitments, developing and supporting national legal frameworks, increasing financial resources for developing countries, and encouraging technological innovation, all of which contribute to

advancing climate action efforts and achieving sustainable development goals.

Keywords: International environmental law, climate action, climate change, sustainable development, environmental protection.

Introduction

Climate change has emerged as a complex global issue that strongly asserts itself on the international agenda due to its intertwined environmental, economic, and social challenges, necessitating coordinated legal and institutional responses at both international and national levels. In this context, international environmental law serves as a fundamental reference framework for regulating climate action through its principles, mechanisms, and agreements aimed at mitigating the impacts of climate change and promoting sustainable development pathways.

Significance of the Study:

The importance of studying the climate action strategy within the framework of international environmental law lies in its role as the primary regulatory tool for guiding state obligations and building effective international cooperation

that ensures the advancement of sustainable development pathways. This significance is heightened by the increasing severity of extreme climate events and the widening gap between the capacities of developed and developing countries to respond, making the assessment of the effectiveness of the international legal system in addressing climate change an urgent matter.

Problematic of the Study:

Despite numerous international agreements and UN conferences, such as the UNFCCC, the Kyoto Protocol, the Paris Agreement, and climate summits like COP21, COP26, and COP28, a central question remains:

To what extent has the climate action strategy under international environmental law succeeded in achieving sustainable development goals?

Objectives of the Study:

This study aims to:

- Analyze the international framework regulating climate action.
- Identify the strengths that have contributed to enhancing international cooperation in the climate domain.
- Determine the legal, institutional, and financial challenges that hinder the activation of mechanisms to address climate change.
- Propose solutions to enhance the effectiveness of climate action.

Methodology of the Study:

This study adopts a descriptive approach by defining and analyzing the fundamental concepts related to climate action and international environmental law and reviewing relevant international agreements and conferences to provide a comprehensive overview of the legal framework governing climate action. Additionally, an analytical approach is employed to examine the content of international agreements and legal mechanisms addressing climate change, assess their contribution to achieving sustainable development goals, identify gaps and challenges hindering their

practical implementation, and propose ways to develop and enhance their effectiveness.

Plan of the Study:

To address the research problem, the study is divided into two main sections. The first section examines the international legal regulation of climate action, including the conceptual framework of climate action and international environmental law, and reviews the key international mechanisms, particularly agreements and climate conferences. The second section addresses the contribution of climate action to supporting sustainable development pathways, highlights the main legal, financial, and technological challenges it faces, and outlines proposed solutions to enhance its effectiveness.

1. International Legal Framework for Climate Action

The international legal framework for climate action necessitates the intervention of international environmental law, due to the transboundary nature of climate change and its intertwined impacts on the environment, development, and human security. This has prompted the international community to develop a comprehensive international legal framework based on a set of principles, mechanisms, and agreements, aiming to coordinate collective efforts to address climate change and enhance international cooperation in this field.

1-1. Conceptual Framework for Climate Action and International Environmental Law

The conceptual framework of climate action and international environmental law forms the theoretical and legal basis for understanding the nature of the international response to climate change. This requires defining the concept of climate action and its governing principles, while highlighting the role of international environmental law in regulating relations between states and establishing legal obligations aimed at environmental

protection and sustainable development in the face of growing climate challenges.

1-1-1. Concept of Climate Action and Its Principles

Climate action is an evolving concept that has emerged in response to escalating climate threats over recent decades. It refers to the set of policies and measures aimed at reducing greenhouse gas emissions and strengthening the capacity of states and communities to adapt to the effects of climate change.

Climate Action: Definition and Characteristics

The concept of climate action is relatively recent and has received increasing attention in international literature and UN documents, with varying definitions depending on the reference sources:

According to the United Nations, climate action refers to taking "urgent measures to combat climate change and its impacts," highlighting the urgent nature of the interventions required to address increasing climate risks.¹

Within Sustainable Development Goal 13 (SDG 13), climate action encompasses efforts to reduce greenhouse gas emissions, adapt to climate change impacts, and enhance resilience to climate-related risks and disasters, reflecting both preventive and adaptive dimensions.²

The United Nations Environment Programme (UNEP) expands the concept to include the adoption of transformative policies towards a low-carbon economy, support for adaptation measures, and provision of environmental finance mechanisms, as essential elements of global climate action.³

Based on these definitions, a unified definition of climate action can be formulated as follows: *Climate action refers to the set of policies, measures, and legal and regulatory mechanisms adopted by the international community and individual states, aimed at*

mitigating climate change through the reduction of greenhouse gas emissions and the transition to a low-carbon economy, as well as adapting to its impacts and enhancing resilience to climate-related risks and disasters, thereby contributing to environmental protection and achieving fair and inclusive sustainable development for present and future generations.

Climate action is not merely a temporary environmental response; it constitutes a comprehensive strategy characterized by several key features:

- Climate action is based on two fundamental dimensions: **Mitigation** and **Adaptation**.
- It is a multidimensional concept encompassing environmental, economic, social, and developmental aspects.
- Implementation occurs through national and international mechanisms, including legislation, public policies, financing, technology transfer, and multilateral cooperation.
- It is closely linked to the Sustainable Development Goals and the principles of climate justice, particularly regarding the protection of the most vulnerable states and communities.

1-1-2. Principles of Climate Action

Climate action has gained a prominent position in the international system after the global community recognized that climate change constitutes a transboundary threat that cannot be addressed without broad international cooperation. Climate action is based on fundamental principles of international environmental law, including:

- **The Precautionary Principle**

At a general level, this principle implies that states agree to act cautiously and with foresight when making decisions concerning activities that may adversely impact the environment. A more specific interpretation indicates that the principle requires regulating, and possibly prohibiting, activities and substances that

may be harmful to the environment, even in the absence of conclusive or overwhelming evidence regarding the harm they may cause. As the Bergen Ministerial Declaration states, “lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation”⁴.

- **The Principle of Common but Differentiated Responsibilities**

This principle acknowledges that all states share a common responsibility to combat climate change, but their capacities and resources vary, meaning that developed and historically responsible countries should bear greater obligations compared to developing countries, in line with climate justice and historical responsibility considerations⁵.

- **The Principle of Sustainability**

This principle focuses on achieving a balance between environmental protection, economic development, and social equity, ensuring that the needs of current generations are met without compromising the ability of future generations to meet their own needs. It serves as a general framework guiding climate policies toward sustainable development⁶.

1-2. Concept and Importance of International Environmental Law

International environmental law forms the foundation for international coordination in addressing transboundary environmental challenges threatening the planet, such as climate change, pollution, and biodiversity loss. This section presents the fundamentals of this branch of law by defining its scope, highlighting its significance, and providing an overview of climate change and its impacts as a major global environmental issue that necessitates a coordinated international legal response.

1-2-1. Definition of International Environmental Law

International environmental law is a branch of international law focused on the standards and agreements aimed at protecting the environment and addressing

transboundary environmental issues. It encompasses treaties related to air, water, biodiversity, and climate change and relies on international cooperation to develop effective policies that address environmental problems and ensure the sustainability of natural resources.⁷

It has also been defined as a set of legal rules and principles governing interactions among states regarding environmental matters. This branch seeks to regulate the sustainable use of natural resources and reduce environmental degradation, relying on international treaties, agreements, and judicial decisions to promote environmental protection from harmful human activities and provide a legal framework for environmental responsibility.⁸

International environmental law also includes treaties and agreements aiming to protect the environment and promote sustainable development at the global level, such as the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD), alongside standards and principles designed to regulate state relations on environmental issues.⁹

1-2-2. Importance of International Environmental Law

- **Regulating International Cooperation:** It enhances cooperation among states to address global environmental challenges such as climate change, air pollution, and biodiversity loss.
- **Defining Legal Obligations:** It establishes the rights and duties of states in environmental protection, providing a legal framework for implementation and accountability.
- **Promoting Sustainable Development:** It supports balancing economic development and environmental protection, fostering sustainability for future generations.
- **Raising Global Awareness:** It contributes to spreading awareness of environmental issues and

promoting international understanding of the importance of environmental cooperation.¹⁰

2. International Mechanisms for Addressing Climate Change

Over the past decades, the international community has adopted a set of legal instruments to tackle climate change, foremost among them international agreements that form the main framework guiding climate commitments.

2-1. International Agreements on Climate Change

• The United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC is an international treaty aimed at addressing climate change by enhancing international cooperation and developing effective strategies to mitigate its impacts. Adopted on May 9, 1992, and entering into force on March 21, 1994, the convention serves as the primary framework for international climate negotiations.

Key Objectives of the UNFCCC:

- Stabilizing greenhouse gas concentrations at levels preventing dangerous anthropogenic interference with the climate system.
- Enhancing adaptation capacity, particularly supporting developing countries.
- Promoting national and regional measures to mitigate greenhouse gas emissions.

Achieved Outcomes:

The convention laid the groundwork for annual conferences, fostering international climate dialogue. It led to the adoption of the Kyoto Protocol in 1997, the first legally binding international agreement to reduce greenhouse gas emissions, and the Paris Agreement in 2015, marking a significant evolution in the global climate approach. It also increased global awareness of climate change and the importance of international cooperation.

• Kyoto Protocol to the UNFCCC

The Kyoto Protocol, adopted on December 11, 1997, in Kyoto, Japan, is one of the most prominent international agreements addressing climate change. It entered into force on February 16, 2005, after ratification by 55 countries representing at least 55% of global greenhouse gas emissions in 1990. The protocol aims to reduce greenhouse gas emissions by developed countries as part of the international community's efforts to combat global warming.

Key Objectives of the Kyoto Protocol:

- **Emission Reduction:** The protocol established targets to reduce greenhouse gas emissions by 5% to 8% compared to 1990 levels during the commitment period from 2008 to 2012.
- **Flexible Mechanisms:** It introduced flexible mechanisms to enable countries to achieve targets effectively, including **emissions trading, clean development projects, and joint implementation initiatives.**
- **Raising Environmental Awareness:** The protocol sought to enhance global understanding of the necessity to address climate change.

Outcomes Achieved:

The Kyoto Protocol increased international awareness of climate change and the importance of cooperation. Some countries achieved significant progress in reducing emissions, while flexible mechanisms encouraged investment in renewable energy projects and emission mitigation.

Challenges Faced:

- **Non-Compliance by Some States:** The U.S. withdrawal in 2001 negatively impacted effectiveness, alongside other states failing to meet obligations.
- **Exclusion of Developing Countries:** The protocol did not cover developing countries, raising debates over climate justice as these

nations were experiencing emission increases.

- **Debate Over Mechanism Effectiveness:** Some critics argued that flexible mechanisms allowed high-emission countries to avoid actual responsibilities.

Following the Kyoto Protocol commitment period, international dialogue continued under the UNFCCC, leading to the adoption of the **Paris Agreement** in 2015, representing an evolution in global climate change governance. The Kyoto Protocol remains a milestone in environmental history, laying the foundations for international cooperation and emphasizing collective responsibility.

2-2. International Climate Change Conferences

International environmental law has evolved significantly, especially after the entry into force of the Paris Agreement in 2015. This binding treaty aims to limit the global temperature rise to below 2°C above pre-industrial levels, striving to reduce it further to 1.5°C.¹¹ It represents a major step toward strengthening legal obligations of states, including flexible mechanisms allowing countries to set **Nationally Determined Contributions (NDCs)** according to local circumstances.¹²

The UN has convened annual climate conferences under the UNFCCC framework¹³ since 1995, starting with the **Berlin COP** to negotiate legally binding measures for developed countries to reduce greenhouse gas emissions⁽¹⁴⁾ through to **COP28 in Dubai, 2023**, reflecting the continued UN efforts. Key conferences include:

2-2-1. COP21 – Paris 2015

Held in Paris from November 12 to 30, 2015, COP21 involved approximately 195 countries and numerous environmental stakeholders. The conference resulted in international commitments to limit global temperature rise to below 2°C, promote

renewable energy investment, and reforest degraded areas. One notable outcome was the establishment of a five-year review mechanism for national commitments, with the first mandatory review scheduled for 2025¹⁵.

According to French Foreign Minister Laurent Fabius, the most important achievement was the adoption of an international climate agreement, opened for signature on April 22, 2016, in New York. This agreement clarified operational procedures for implementing the Paris Agreement, formalized in COP24 in Katowice, Poland (2018) and completed in COP26 in Glasgow, Scotland (2021), emphasizing:

- Shared responsibility among all countries, differentiated according to capabilities.
- Developed countries' commitment to financially support developing countries, pledging at least **\$100 billion annually from 2020**, although methods of implementation remain under discussion¹⁶.

With regard to Algeria, by ratifying the United Nations Framework Convention on Climate Change (UNFCCC) in April 1993, the country voluntarily committed itself to the provisions of the Convention, particularly those relating to the stabilization of greenhouse gas emissions in order to prevent dangerous anthropogenic interference with the climate system. Climate change has thus become a relatively new and significant concern for Algeria.

In this context, the project *ALG/98/G31* was financed under the provisions of the Global Environment Facility (GEF) to enable the preparation of Algeria's Initial National Communication. Furthermore, pursuant to the UNFCCC, Algeria has fulfilled its obligations as set out in Articles 4 and 12 of the Convention,

as well as Decision 10/CP.2 adopted by the Conference of the Parties in Geneva in 1996. These obligations include:¹⁷

- the preparation of a national inventory of greenhouse gas emissions in accordance with the methodological guidelines (1996 version) of the Intergovernmental Panel on Climate Change (IPCC);
- the development of a national action plan for the mitigation of greenhouse gas emissions and adaptation to reduce the impacts of climate change on natural resources and socio-economic development.

2-2-2. COP26 – Glasgow 2021

COP26 gathered 120 countries in Glasgow, UK, to discuss climate change and define actionable climate indicators. The **Glasgow Climate Pact** emerged from intensive negotiations during COP26, laying the groundwork for accelerating Paris Agreement implementation, despite current emission reductions being insufficient to maintain a habitable climate.

Key highlights included:¹⁸

- Reaffirmation of the Paris Agreement goal to limit global temperature rise to below 2°C and strive for 1.5°C.
- Commitment to reduce CO₂ emissions by 45% and achieve near-zero net emissions by mid-century.
- Gradual phase-out of coal and elimination of ineffective fossil fuel subsidies, issues previously unaddressed in earlier COPs.¹⁹

2-2-3. COP28 – Dubai 2023

Held from November 30 to December 12, 2023, COP28 in Dubai served as a vital international platform for discussing climate challenges and enhancing cooperation among states. As the **28th session of the COP**, it included governments, private sector representatives, civil society, and scientists.

Primary Objectives:

- **Assessing Progress:** Evaluate countries' achievement of Paris Agreement goals, including emission reduction commitments.
- **Enhancing National Commitments:** Encourage new, more ambitious national climate plans.
- **Providing Financial and Technical Support:** Discuss methods to increase support for developing countries to adapt and achieve sustainable development.
- **Accelerating Transition to Clean Energy:** Focus on renewable energy adoption and emissions reduction technologies.

Key Outcomes of COP28:

- Strengthened climate targets and encouragement for updated national plans.
- Increased financial support for developing countries' mitigation and adaptation projects.
- Promotion of renewable energy transition and public-private partnerships.
- Adoption of strategies to enhance countries' adaptive capacity, including technical support and capacity building.
- Emphasis on climate justice, prioritizing support for the most vulnerable countries.
- Enhanced international cooperation, facilitating knowledge and technology exchange to address climate challenges.

These outcomes reflect the international community's commitment to combating climate change and achieving sustainable development goals, although persistent challenges demand continued efforts and effective collaboration.

Additionally, policy innovations demonstrate the growing role of international law in strengthening environmental action. Successful national examples, such as Germany and Denmark's renewable energy policies, illustrate how

legal frameworks can organize energy systems and achieve sustainability, highlighting the importance of aligning national legislation with international standards to achieve climate objectives²⁰.

Second: The Contribution of Climate Action to Supporting Sustainable Development

Pathways and the Challenges It Faces

This section aims to clarify the contribution of climate action to supporting sustainable development pathways, then highlight the challenges hindering climate action and propose effective solutions to overcome them.

1. Climate Action as a Mechanism to Support the Achievement of Sustainable Development Goals

Climate action is a crucial element in achieving the Sustainable Development Goals (SDGs), as it is directly linked to SDG 13 (Climate Action), while also extending to other goals such as ecosystem protection (SDG 15), clean energy (SDG 7), and green economy and decent work (SDG 8). From the perspective of climate justice, climate action enables developing countries to enhance their adaptive capacity and reduce the gap between them and developed nations.

1-1. The Interconnection Between Climate Action and SDG 13

Climate action is directly related to SDG 13 by striving to reduce emissions, strengthen adaptive capacity to climate change impacts, and adopt long-term environmental protection policies. This goal serves as a central axis supporting other goals by mitigating climate risks that threaten economic and social development.

1-3. Contribution of Climate Action to Ecosystem Protection (SDG 15)

Climate action helps curb land and forest degradation and enhances biodiversity conservation. Limiting global warming reduces risks of droughts, floods, and forest fires, thereby contributing to the

protection and balance of natural ecosystems.

1-4. Supporting the Transition to Clean and Renewable Energy (SDG 7)

Climate action encourages investment in clean energy sources such as solar, wind, and green hydrogen, reducing greenhouse gas emissions, increasing energy efficiency, and decreasing reliance on fossil fuels, thereby promoting environmental and economic sustainability.

1-5. Promoting a Green Economy and Creating Jobs (SDG 8)

Climate action supports the green economy by creating new jobs in renewable energy, sustainable transportation, and environmental innovation. It helps build low-carbon economies that provide decent work opportunities and enable sustainable economic growth.

1-6. Enhancing Climate Justice and Reducing the Gap Between Countries

Climate action allows developing countries to improve their adaptive capacity, providing financial and technological support mechanisms, thus narrowing the gap with developed nations. This step is essential for achieving fairness in bearing the burdens of climate change and its impacts.

2. Challenges Facing Climate Action and Proposed Solutions

Numerous challenges continue to hinder climate action and impede the achievement of the Sustainable Development Goals. This section highlights these challenges and outlines proposed solutions to overcome them.

2-1. Challenges in Addressing Climate Change

Despite progress in international climate action, many legal, financial, and technological challenges remain.

2-1-1. Legal and Financial Challenges

a. Legal Challenges

International agreements face difficulties ensuring actual compliance

from countries, particularly those dependent on polluting industries. Moreover, domestic laws in these countries are often not aligned with rapidly changing climate phenomena.

- **Non-compliance by some countries:** Weak commitment by some states to implement their pledges under international climate agreements represents a core challenge affecting global climate action effectiveness. Countries heavily reliant on fossil fuels face internal and external pressures that make fulfilling commitments difficult, as these sectors are closely tied to government revenue and employment opportunities. Reports from the International Energy Agency indicate that many countries have struggled to meet their targets under the Paris Agreement. For instance, some oil- and gas-producing nations find it challenging to reduce production due to structural dependence on these resources for economic growth. These challenges underscore the importance of strengthening international monitoring mechanisms and developing more effective assessment tools to ensure compliance and progress in emission reduction²¹.
- **Inadequacy of domestic laws to keep pace with rapid climate changes:** The inability of domestic legislation to adapt to rapid climate changes weakens the effectiveness of environmental policies. Climate change involves continuous transformations requiring flexible and updatable regulatory frameworks. However, many national legislations remain rigid or outdated, resulting in legal gaps that hinder climate commitments enforcement. There is thus an urgent need for periodic and

comprehensive legislative reviews to align with international standards and enhance effectiveness.

b. Financial Challenges

Financing remains a major barrier to implementing climate strategies. Developing countries, in particular, require continuous financial support for projects necessary to adapt to climate change. International agreements, such as the Paris Agreement, place clear obligations on developed nations to provide necessary funding. Developing countries often face difficulties accessing sufficient finance for renewable energy projects, delaying²² implementation of climate strategies. Therefore, mechanisms must ensure sufficient funding to support the development and deployment of climate technologies and accelerate technological innovation²³.

2-1-2. Technological Challenges

Economically weak countries face obstacles in adopting innovative technologies and modern environmental policies. This disparity in technological capacities makes it difficult to scale effective solutions for climate change.²⁴

Key challenges include:

- **Limited investment in environmental technology:** Developing countries require significant investments in renewable energy infrastructure, such as solar, wind, and hydropower. Despite their importance in reducing fossil fuel reliance, these countries often lack sufficient financial resources to cover costs, hindering their transition to clean energy and low-carbon economies²⁵.
- **Low energy efficiency capabilities:** Even if some countries aim to improve energy efficiency, challenges persist due to outdated infrastructure incompatible with modern technologies that reduce

consumption and increase efficiency. Reports indicate that many African countries, highly vulnerable to climate impacts, struggle with sustainable electricity distribution, increasing energy loss and hindering efficiency improvement.²⁶

- **Continued reliance on fossil fuels:** Many economically weak countries remain in a "fossil fuel trap," heavily dependent on extracting and selling resources like oil and gas. Transforming these economies requires substantial investment in training, capacity building, and comprehensive economic restructuring to ensure job creation in sustainable environmental sectors. Without such transformation, greenhouse gas emissions continue, exacerbating global warming.²⁷

2-2. Proposed Solutions to Enhance the Effectiveness of Climate Action

Given legal, financial, and technological challenges, it is necessary to adopt an integrated package of solutions to enhance climate action effectiveness and ensure its contribution to sustainable development. This requires developing legal and financial frameworks to guarantee commitment and effective implementation of climate pledges, alongside supporting technology transfer and capacity building, facilitating a transition toward a more sustainable and equitable green economy.

2-2-1. Strengthening Legal and Financial Frameworks for Climate Action

Developing legal and financial frameworks is essential to enhance climate action effectiveness and achieve the SDGs. Legally, it is necessary to strengthen international commitment through stricter monitoring and accountability mechanisms, ensuring implementation of climate pledges, particularly those under the Paris Agreement. National legislation should be

aligned with international obligations through periodic reviews, accommodating climate developments and enforcing deterrent penalties for environmental violations.

Financially, bridging the financing gap requires activating international climate finance mechanisms, such as the Green Climate Fund, and increasing contributions from developed nations according to the principle of common but differentiated responsibilities. Encouraging public-private partnerships and expanding green finance and green bonds are effective solutions to provide resources for adaptation and mitigation projects, particularly in developing countries. This also promotes climate justice and enables these nations to implement development strategies without compromising their economic growth.

2-2-2. Supporting Technology Transfer, Capacity Building, and Green Economy Transition

Technology transfer and capacity building are key to overcoming technological barriers, particularly in developing countries. This requires international cooperation to facilitate access to clean technologies, including renewable energy, energy efficiency, and modern digital solutions, while addressing intellectual property constraints relevant to climate action.

Investing in education, training, and human capacity development is crucial for preparing national personnel capable of managing and operating advanced environmental technologies, developing smart energy systems, and improving resource efficiency. Transitioning to a green economy provides strategic opportunities for countries to diversify economic structures, reduce fossil fuel dependence, and create sustainable jobs in renewable energy, sustainable transportation, and environmental innovation.

Combining technological support, capacity building, and structural economic transformation enhances climate action

effectiveness, making it a practical tool to support sustainable development pathways and balance environmental protection with economic and social growth.

Conclusion

In conclusion, this study has highlighted the pivotal role of climate action as a fundamental tool for supporting sustainable development pathways. Its impact extends beyond Sustainable Development Goal (SDG) 13, which focuses on climate action, to include the protection of ecosystems, the promotion of clean energy, and the advancement of a green economy. Climate action also facilitates climate justice by narrowing the gap between developed and developing countries through financial support and technological assistance. However, efforts in climate action face legal, financial, and technological challenges, particularly in developing countries, underscoring the need for integrated and sustainable policies that effectively combine environmental, economic, and social dimensions to achieve comprehensive development.

Study Findings:

- There is a strong interconnection between climate action and other Sustainable Development Goals, making it a central tool for supporting economic, social, and environmental development.
- Legal, financial, and technological challenges hinder the effectiveness of climate action, especially in developing countries.
- Weak adherence to international agreements, gaps in national legislation, insufficient funding, and limited capacity to invest in

environmental technologies impede the achievement of sustainable development objectives.

- Integrating climate action with comprehensive policies in law, finance, and technology enhances the prospects of achieving the SDGs.

Study Recommendations:

- Strengthen legal and regulatory frameworks to ensure compliance with international climate agreements and review national legislation to keep pace with climate changes.
- Activate international climate financing through green funds and public-private partnerships to support adaptation and renewable energy projects.
- Support technology transfer and build national capacities to facilitate the adoption of environmental innovations and improve resource efficiency.
- Promote the transition to a green economy by diversifying economic sectors, creating sustainable employment opportunities, and reducing reliance on fossil fuels.
- Enhance climate justice by providing financial and technical support to developing countries to help them address climate challenges without compromising their economic growth.

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